

salesforce

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# Salesforce Summer '19 Release Notes

Salesforce, Summer '19

Blaze new trails to connected customer experiences



 @salesforcedocs

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# SALESFORCE SUMMER '19 RELEASE NOTES

The Summer '19 release increases productivity and delivers personalized customer journeys with the latest Customer Success Platform innovations.

## IN THIS SECTION:

### [How to Use the Release Notes](#)

Our release notes offer brief, high-level descriptions of enhancements and new features. We include setup information, tips to help you get started, and best practices to ensure your continued success.

### [How and When Do Features Become Available?](#)

Some features in Summer '19 affect all users immediately after the release goes live. Consider communicating these changes to your users beforehand so that they're prepared. Other features require direct action by an administrator before users can benefit from the new functionality.

### [Supported Browsers](#)

We've made some changes to our supported browsers documentation, making it easier to find what you need. Supported browsers for Salesforce vary depending on whether you use Salesforce Classic or Lightning Experience.

### [Salesforce Overall: New Tools to Transition to Lightning Experience and Empower Productivity](#)

We turn on Lightning Experience for all orgs, and introduce new tools to help you manage your transition. Plus, we provide customizable prompts to get your users engaged with all that's great in the new Salesforce. Land on the same record page when switching from Salesforce Classic to Lightning Experience. Run the full desktop version of Lightning Experience on iPad devices. See and do more with related lists when you turn on Enhanced Related Lists. Streamline appointment scheduling with a self-service interface and more Salesforce integrations in Lightning Scheduler. Send survey invites for free and get more responses with customized email invitations in Salesforce Surveys. Make the most of your browser space with a right-aligned utility bar in Lightning Console. Find what you need fast with search results that reflect how you navigate, and easily see which objects were searched in your search results. Access even more recent items in the Lightning Experience navigation bar. And that's only half of it.

### [Lightning Experience: A Modern and Intelligent User Experience](#)

Lightning Experience is a completely reimagined interface. Even better, it's built on our UI platform, so the experience can grow and evolve with your needs. Check out the new features and considerations in this release.

### [Salesforce Essentials: Introducing Dialer, Chat, Messaging, and More](#)

You have more options to add functionality to Essentials through add-ons, like Dialer, Chat and Messaging, and increased storage. Import opportunities using the Data Import Wizard to bring your in-progress deals to Salesforce. Embed automated tasks in your website or help center, recommend next steps to your team when working with customers, and merge cases.

### [Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

Set up and test bots faster and with fewer utterances. Use Data Checker to set up your predictions for success. Improve your forecasting with support for quarterly forecasts and data segments. And, Einstein shines intelligence across more core Salesforce applications, increasing their brilliance.

### [Sales: High Velocity Sales Enhancements, Einstein Activity Metrics, Customizable Product Schedules, and New Einstein Features for CPQ and Pardot](#)

Link sales cadences to address complex sales processes. Activity Metrics gives Einstein Activity Capture users a complete view of their activity data. Customizable product schedules can support more complex sales processes related to incoming revenue and outgoing orders. Drive sales teams to more intelligent pricing with CPQ Einstein Pricing Guidance. And use Einstein Campaign Insights to find similarities among prospects who engage with your campaigns.

### [Service: Smarter Bot Routing and Dialog Review, Improved Field Service Dispatching, and Easy Setup for Skills-Based Routing](#)

Review Einstein Bot dialogs with ease in a visual map, and use new smart routing features to escalate bot conversations to the right experts. Work faster in the Field Service Lightning dispatcher console with a pop-out map, long-term Gantt view, and new drag-and-drop scheduling options. Set up skills-based routing in a jiffy with a handsome setup screen. Finally, explore a smorgasbord of other productivity-boosting features for agents, including the ability to proactively reach out to customers with critical service updates, create more intelligent macros with conditional expressions, and merge duplicate cases.

### [Analytics: Row-Level Formulas \(Beta\), Report Notifications, Templates with Predictive Analytics, Einstein Predictions Service](#)

Bring the power of row-level formulas to every record in a report. Set conditions in reports, and receive emails when the conditions are met. Add predictive analytics to your apps with templates. Embed Einstein Discovery predictions anywhere. And much more!

### [Communities: Increased Developer Productivity, Mobile Publisher Enhancements, and Record List Improvements](#)

Summer '19 is a boon for developers, who can now work more efficiently on communities using a host of new API enhancements. Our mobile team has been hard at work improving the Salesforce Mobile Publisher for Community Cloud. Community users can also take advantage of new list view improvements, such as pinned list views, custom mass actions, and custom list views on tasks.

### [Files: Asset Files Updates and More File Sharing](#)

Finding and making asset files is getting smoother and faster. Identify asset files in an instant with the new UI indicator. Make a new asset file right from the Asset Library with the click of a button. We've increased file sharing limits.

### [Mobile: Do More on the Go](#)

Salesforce mobile apps help your users stay productive throughout their busy days, no matter where they are. So we've been hard at work adding new ways to help your users outside of the office.

### [Industries: Ready-Made Solutions for Your Line of Business](#)

Salesforce goes industry-specific with tailored solutions for financial services and health care. In this release, Financial Services Cloud gets new insurance capabilities; Health Cloud gets new data models to help manage provider relationships and life sciences programs; and users can book financial and health appointments with Lightning Scheduler.

### [myTrailhead: Your Content and Brand on Trailhead](#)

With myTrailhead, you can offer your users the same skill-based, gamified learning experience as Salesforce Trailhead with content that you create for your company. You can also brand myTrailhead with your company logo, banner image, and color.

### [Customization: Einstein Prediction Builder, Einstein Next Best Action, and Flow Enhancements](#)

Make sure your data leads to quality predictions and be more precise with filter conditions in Einstein Prediction Builder. Get better recommendations and predictions with Einstein Next Best Action. Build flows more easily with a more robust Flow Builder and a host of new features.

### [Security and Identity: OAuth Custom Scopes, Case-Insensitive Filter-Preserving Encryption, Session-Security-Level Policies, and Event Manager](#)

You can now use OAuth custom scopes to define a connected app's access to an external entity's protected data. Filter the data you encrypt with the case-insensitive deterministic encryption scheme. Require users to have a high-assurance session security level before accessing certain Setup pages or objects. And monitor events using a new dashboard with Event Manager.

### [Deployment: New Change Set Components](#)

New components are available for deployment.

### [Salesforce IoT: Strategic Name Change](#)

IoT Insights has a new name: Event Insights.

### [Development: Creating Your Own Salesforce App](#)

Whether you're using Lightning components, Visualforce, Apex, or our APIs with your favorite programming language, these enhancements help you develop amazing applications, integrations, and packages for resale to other organizations.

### [Marketing: Einstein Next Best Action Connector for Interaction Studio and Distributed Marketing Quick Send for Email](#)

Marketing Cloud is the premier platform for delighting customers with 1:1 customer journeys. It enables you to build a single view of your customer, leveraging data from any source. Plan and optimize unique customer journeys based on your business objectives. Deliver personalized content across every channel and device at precisely the right time. Measure the impact of each interaction on your business so that you can optimize your approach in real time and deliver better results.

### [B2B Commerce: Create Self-Service Storefronts for Business Buyers](#)

Quickly build self-service ecommerce storefronts that enable retailers, wholesalers, or distributors to purchase goods or services from your brand. B2B Commerce is a managed package that simplifies online buying with features designed for business-to-business use cases. Deliver custom catalogs, complex product configurations, account hierarchies, contract pricing, reorders, and more. Easily create a unique branded storefront user experience with responsive page templates.

### [Critical Updates](#)

This release includes new critical updates for Lightning Experience, External Profiles, Aura Components, and HTTPS Connections. Also check out the previously released and enforced critical updates sections.

### [Help and Training](#)

We added lots of great new content, including new guides; Trailhead modules, trails, and projects; and instructional videos. We also updated our trust and compliance documentation.

### [Other Salesforce Products and Services](#)

## How to Use the Release Notes

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Our release notes offer brief, high-level descriptions of enhancements and new features. We include setup information, tips to help you get started, and best practices to ensure your continued success.

- We offer [PDF](#) and [HTML](#) versions.
- For the HTML version, your browser's settings determine the language you see. To change the language, scroll to the bottom, click **Change Language**, and select a language.
- The release notes include details about new and modified feature. For information on known issues, visit the [Salesforce Known Issues site](#).

 **Note:** Until the new release is available to you, links from release notes to Salesforce Help, implementation guides, developer guides, and other documentation don't work. And sometimes the links point to material from the previous release.

Some of our documentation has preview versions available several weeks before the release. To access a preview version on [Salesforce Developers](#), select **Preview** from the Documentation Version dropdown list.

### IN THIS SECTION:

#### [Use Filters to Zero In on the News That Matters Most](#)

The filters narrow down the list of release notes on the right side of your screen, not the content on the left.

#### [Know What's in Salesforce Lightning Experience and What's in Salesforce Classic](#)

Everybody's excited about Lightning Experience and everything it offers. But we also understand that lots of orgs continue to use Salesforce Classic—either exclusively or in tandem with Lightning Experience as it evolves.

#### [You Asked for It!](#)

We delivered the features you asked for on IdeaExchange.

### [Get Ready for the Release](#)

Reading the release notes is a great step in preparing for the release. These other resources help get you, your org, and your users ready for what's coming your way. We add resources throughout the release when they become available, so check back often.

### [Release Note Changes](#)

Read about changes to the release notes, with the most recent changes first.

### [Your Feedback Matters](#)

We know how important our documentation is to your company's success. We want to know what works for you and what doesn't.

## Use Filters to Zero In on the News That Matters Most

The filters narrow down the list of release notes on the right side of your screen, not the content on the left.

### Experience

See which features are available in Lightning Experience, the Salesforce app (Mobile), and Salesforce Classic.

### Edition

Which feature enhancements are available to you depends on your edition. Filter the release notes to show only the enhancements that are available in your edition.

### Feature Impact

Some features require you to enable or configure them before users can get the benefits. As an admin, filter the release notes to focus on or hide just those features. Or maybe you want to see only the features that are automatically enabled for your users.

### Product Area

See only the products that your org uses. If your org does sales but not support, set up your release notes so that only the sales-related news appears.

To narrow down the list of release notes, click **Show Filters** on the right side.

**Experience**

- Lightning Experience
- Mobile
- Salesforce Classic

**Edition**

Professional Edition ▼

**Feature Impact**

Enabled for users ▼

**Product Area**

- Analytics
- API
- Chatter
- Email Integration
- Communities
- Data.com
- Force.com Customization
- Force.com Development
- Mobile
- Sales
- Service
- Work.com

[Fewer Product Areas](#) [Reset](#)

You can share your filtered list of release notes with anyone. Select filters, copy the URL, and then distribute that URL however you want.

# Know What's in Salesforce Lightning Experience and What's in Salesforce Classic

Everybody's excited about Lightning Experience and everything it offers. But we also understand that lots of orgs continue to use Salesforce Classic—either exclusively or in tandem with Lightning Experience as it evolves.

One key to success during this time of transition is understanding what's available in one, both, or all the Salesforce experiences. To guide you, we added experience information to the applicable release notes at the highest level: for entire clouds or for individual features within clouds. Let's look at a couple of examples.

- A new Service Cloud feature is available in *both desktop experiences*, so the **Where** section of the release note says, "This change applies to Lightning Experience and Salesforce Classic."
- A new Sales Cloud feature is available in Lightning Experience *only*, so the **Where** section of the release note says, "This change applies to Lightning Experience only."

If a *key* feature is also available in the Salesforce app, we mention that in the **Where** section of the release note. But you can also check the Mobile section for a complete list of what's new.

## You Asked for It!

We delivered the features you asked for on IdeaExchange.

IdeaExchange	Idea delivered
<b>Salesforce Overall</b>	
<a href="#">Allow iPad Browsers to View Lightning Experience</a>	<a href="#">Access Lightning Experience from Safari on iPad Devices (Beta)</a>
<a href="#">Related Lists Filterable by User</a>	<a href="#">Zoom Through Related Lists with Quick Filters</a>
<a href="#">More Than 4 Fields on Related List in Lightning Experience</a>	<a href="#">Power Up Your Related Lists with Enhanced Related Lists (Beta)</a>
<b>Sales</b>	
<a href="#">Forecast Quota – Have a UI in Product Quota User Interface</a> <a href="#">Quotas for Professional Edition</a> <a href="#">Professional Edition – Quota</a>	<a href="#">Keep Sales Quotas in Sight with a Few Clicks in Lightning Experience</a>
<a href="#">Filter to view "My Team's Activities" in the Task list view</a> <a href="#">My Team Tasks</a>	<a href="#">Increase Manager Productivity with a New Task Filter</a>
<a href="#">Add images while composing HTML emails</a> <a href="#">Improved HTML email editor</a>	<a href="#">Show What You Mean in Emails with Images</a>
<a href="#">Email address hyperlink not available on Lightning Experience Contact list view</a> <a href="#">Click to email on related list in Lightning Experience</a> <a href="#">Allow user to click on any email address and prepare a "Send" item</a> <a href="#">Click on any email address on any page to create history</a>	<a href="#">Let Reps Choose Which Email Composer to Use When Clicking Email Addresses</a>

**IdeaExchange****Idea delivered**

Letterhead should be available in Lightning email functionality	Use Enhanced Letterheads to Increase the Effectiveness of Lightning Email Templates
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Allow inline images in email templates and when sending an email	Include Images in Your Email Templates and Letterheads
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**Service**

Data Category Column For Knowledge and Article Reporting Report on Data Categories Across All Article Types on Knowledge report	Gain Insights with Enhanced Report Relationships (partially delivered)
--	--

Cut and Paste Images and Text into Knowledge Article	Paste Images into Article Rich Text Fields (partially delivered)
--	--

Salesforce Knowledge – Arabic Support	Engage Global Customers with Articles in Right-to-Left Languages
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Case Merge Button	Merge Cases into a Single Record (Beta)
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**Analytics**

Custom calculations on reports - at the row level (not summary)	Evaluate Each Record in Reports with Row-Level Formulas (Beta)
---	--

Wave Analytics - Report Filter Logic (using And & OR)	Work with Filter Logic in the Explorer
---	--

Wave Lens Filter for "Does Not Contain" on Text Fields	
--	--

**Security and Identity**

Event Monitoring - Reduce the 24h Delay	Stream and Store Event Data in Near Real-Time (Beta)
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## Get Ready for the Release

Reading the release notes is a great step in preparing for the release. These other resources help get you, your org, and your users ready for what's coming your way. We add resources throughout the release when they become available, so check back often.

## What's New This Release

- [Release Overview Deck \(ROD\)](#). Create internal training for your users, review setup screens, and learn how to use features.
- [Release Matrix](#). Quickly see which features immediately affect your users.
- [Summer '19 Pre-release Signup](#). Sign up for a pre-release org to get early access to the new features.
- [Release Readiness Live](#). Register and make the most of the new features.
- [Release Demos](#). Get quick video overviews of what's coming this release.
- [Summer '19 Release Website](#). Check out the new features.
- [Summer '19 Release Highlights Module](#). Get the Summer '19 Trailhead badge.
- [Release in a Box](#). Use this kit to prepare and present the new release to your org and users.

## Release Readiness Essentials

- [Release Readiness Trailblazers](#). Access resources and experts for all things release readiness.
- [Release Milestones](#). See key dates for the release.

- [Trust Status Maintenances](#). See Sandbox and other release dates and times. Click Instances and your instance to see your maintenance dates.
- [Sandbox Refresh Calculator](#). Plan if and when you need to refresh your existing Sandbox orgs.
- [Sandbox Preview Video](#). Learn how to navigate the Sandbox preview process.
- [Sandbox Preview Instructions](#). Get early access to new features in your sandbox.
- [Customer Success Event Calendar](#). Register for release overview webinars and access recordings.
- [Certification Release Maintenance Schedule](#). Keep your certification updated in Trailhead.
- [Prepare for Salesforce Releases](#). Use Trailhead to create your release strategy.
- [Releases Email Journey](#). Prepare for releases by subscribing to emails.

## Release Note Changes

Read about changes to the release notes, with the most recent changes first.

### October 7, 2019

#### [Turn On Lightning Experience \(Previously Released Critical Update\) Delayed Until January 2020](#)

Announced that auto-activation of the Turn on Lightning Experience critical update will be delayed.

### September 4, 2019

#### [Require Customize Application Permission for Direct Read Access to Custom Settings \(Critical Update\)](#)

Added the recommendation to use the ViewAllCustomSettings permission to provide users with read access to custom settings after this critical update.

### August 28, 2019

#### [Review Trust and Compliance Documentation and Acceptable Use and External-Facing Services Policy](#)

Added acceptable use and external-facing services policy changes.

### August 14, 2019

#### [Handle Service Requests Better and Faster with Lightning Flow for Financial Services Cloud](#)

Added a See Also link to the Financial Services Cloud Upgrade Guide.

#### [Improve Email Security with Redesigned DKIM Keys \(Previously Released Critical Update\)](#)

Added release note for a previously released critical update and clarified auto-activation date.

#### [Restrict Use of Salesforce Classic HTML-Based Email Templates to Secure Browsers \(Previously Released Critical Update\)](#)

Added release note for a previously released critical update and clarified auto-activation date.

#### [“Check for Null Record Variables or Null Values of Lookup Relationship Fields in Process and Flow Formulas” \(Critical Update, Postponed\)](#)

Added release note for a postponed auto-activation date.

#### [Combine Related Data in New Ways with Joins on page 255](#)

Added a release note announcing the new ways to join two sets of data.

#### [Summarize Your Data in a New Dataset with Groups and Aggregates on page 256](#)

Added a release note announcing how to use aggregation to roll up a large dataset.

**Complete Your Data by Replacing Nulls on page 257**

Added a release note announcing the ability to replace null values with another value.

**Manipulate Strings with New Recipe Functions on page 258**

Added a release note announcing a series of new recipe functions.

## August 7, 2019

**Quickly Create Cases Without Interrupting Your Workflow**

Added a release note announcing the addition of a **Save & New** button to the New Case and Edit Case windows.

**Fortify Your Sales Data with Einstein Discovery for Sales Analytics**

Added a release note announcing the Einstein Discovery for Sales Analytics template.

**Create Objects from Spreadsheets**

Added a release note announcing that you can now create custom objects by importing spreadsheets.

**Gain Insight into Your Company's Installed AppExchange Packages**

Added a release note announcing App Analytics.

**Get Data Protection and Privacy by Default**

Added a link to a related Knowledge Article.

**Require Customize Application Permission for Direct Read Access to Custom Settings (Critical Update)**

Added a release note about this critical update for custom settings.

## July 31, 2019

**See Reminders to Continue Your Transition to Lightning Experience**

The release note was removed because the feature has been replaced.

**Get Guidance to Prepare Your Org for Lightning Experience**

Added a release note announcing a series of prompts to help orgs prepare for the Turn on Lightning Experience Critical Update.

**The `ActivityDateTime` Field is Available on More Activity Objects**

Use the `ActivityDateTime` field on the `LookedUpFromActivity`, `OpenActivity`, and `ActivityHistory` objects to see an event's due date time.

**API Only Users Can Access Only Salesforce APIs (Previously Released Critical Update)**

Added a release note for this critical update created in the Spring '19 release.

**Enjoy Surveys' New Look**

Added a release note about the change in the look and feel of the Build Tab in the Survey Builder.

**Visualforce: Introducing Live Controller (Pilot), Update Your Guest Access to Private Static Resources, CKEditor Replaces FCKEditor**

Fixed broken link for *Visualforce Developer Guide: Quick Start: Get Started with Live Controller in Lightning Experience*.

## July 24, 2019

**Update Hard-Coded URLs for Lightning Experience (Beta)**

Added a release note to announce that the Lightning Exchange Configuration Converter now scans your org for hard-coded references to your original URL and updates them to work with your MyDomain.

**Make Sure Your AppExchange Packages are Ready for Lightning Experience (Beta)**

Added a release note to announce that the Lightning Exchange Configuration Converter now scans metadata about installed packages and makes recommendations for preparing packages for Lightning Experience.

**Plan for Einstein Analytics Classic Designer's Retirement**

Updated Einstein Analytics Classic Designer retirement date to November 2019.

**Changed Aura Components**

Added a change to the `lightning:inputRichText` component.

**Changed Lightning Web Components**

Added a change to the `lightning-input-rich-text` component.

**Rich Text Editors Get an Upgrade**

Added a change to the use of `<s>` and `<strike>` tags in rich text editors.

## July 17, 2019

**Get Salesforce for Outlook v3.4.7 Updates**

Salesforce for Outlook v3.4.7 fixes compatibility issues that occurred after Microsoft® released Windows® 10 version 1903.

**Protect Your Custom Settings and Custom Metadata Values**

Added a release note to introduce two Schema Settings options to control access to custom settings and custom metadata values.

**Global Value Set Behavior Is Standardized in Managed Packages**

Global value set behavior in managed packages changed in the Summer '19 release.

**New Omni-Channel Fields**

Added the `PreferredUserId` field on the `AgentWork` object and the `PendingServiceRouting` object. Added the `DropAdditionalSkillsTimeout` field on the `QueueRoutingConfig` object. Added the `IsAdditionalSkill` field on the `SkillRequirement` object.

**Changed Calls**

Updated a release note to clarify that the `apiName` for a global quick action can include the prefix `Global.` in a request body for `describeQuickActions()` and `performQuickActions()` calls.

**Behavior for List Prices of Renewed or Amended Subscriptions Has Changed**

Added a release note to explain new behavior for calculating the quote line list price for renewed and amended subscriptions.

## July 10, 2019

**DOM Inspection Tests Are Subject to Change**

Added this reminder that the structure of the DOM in Lightning Experience can change.

**Analyze Your Automated Business Processes in Automation Home (Beta)**

Changed the required user permissions for viewing all charts to include the View All Data permission.

**Open Hyperlinks in Formula Fields Correctly (Critical Update, Postponed)**

Added a critical update to the postponed list that was originally scheduled for activation this release.

**Manage Messaging Agents' Permissions**

Clarified an optional setting available for Messaging.

**Help Customers as a Team**

Clarified how to use chat conferencing and how it benefits support agents.

**Removed the Message that Displays for External Links**

Removed the release note that announced the message that displays in Chrome when you click an external link in Lightning Experience because the message has been removed.

**Delete Private Datasets of Other Users**

Added a release note announcing that you can delete a dataset from another user's My Private App.

## July 3, 2019

**Analyze Your Automated Business Processes in Automation Home (Beta)**

Changed the required user permission for viewing all charts to View Setup and Configuration.

**Merge Cases into a Single Record (Beta)**

Added See Also links to help topics.

**Integrate Einstein Predictions Using Prediction Events**

Added release notes for AIPredictionEvent. AIPredictionEvent is a standard platform event that notifies subscribers when Einstein features have written prediction results back to AI prediction fields.

**Removed release notes for Apple Business Chat support**

Messaging no longer supports Apple Business Chat.

**Analytics Mobile Apps: Upgrade to the Summer '19 Versions of Einstein Analytics for iOS and Android**

Added screenshots of Summer '19 features.

**Einstein Insights: "Contact Is Leaving" Insights Are Retired**

Added a topic about retiring an Einstein insight.

**Select the Salesforce Release for a Scratch Org**

During a Salesforce release transition, you can select the version for a scratch org: preview or previous.

## June 26, 2019

**Analytics Mobile Apps: Upgrade to the Summer '19 Versions of Einstein Analytics for iOS and Android**

Einstein Analytics for Android and iOS version 7.0 are generally available from the App Store and Google Play.

**Style Dashboard Controls with Enhancements to Global Filters and List, Date, and Range Widgets**

Clarified styling options for list, date, and range widgets and clarified pick initial values behavior for global filters. Updated screenshots based on new labels and behavior in the product.

**New Omni-Channel Fields**

Added the OriginalGroupId field on the AgentWork object and the GroupId field on the PendingServiceRouting object.

**Turn On Lightning Experience (Previously Released Critical Update) Delayed Until January 2020**

Clarified that the update auto-activates on a rolling basis in Winter '20.

**Gain Insight into Managed Package Usage with App Analytics**

Updated release note to indicate that AppExchange App Analytics is now generally available.

**Sales Cloud Einstein: Get Ready for Global Models**

Added link to details on opting out of including your data in global model.

**Share Market Development Fund Objects with Account Relationships**

Updated release note to clarify that org-wide default sharing settings are now editable on marketing budgets, fund allocations, fund requests, and fund claims.

**Actions and Buttons Tab Generally Available**

Added a release note to announce that the Actions and Buttons tab of the Lightning Experience Configuration Converter has graduated from beta status to generally available.

**Remove Instance Names from URLs for Visualforce, Community Builder, Site.com Studio, and Content Files (Critical Update, Postponed)**

Added release note with postponed auto-activation date.

**Stabilize the Hostname for My Domain URLs in Sandboxes (Critical Update, Postponed)**

Added release note with postponed auto-activation date.

## June 19, 2019

**Get Lightning Experience on Your Phone with Lightning on Mobile (Pilot)**

Added new release note announcing the Lightning on Mobile pilot.

**Find All You Need to Close Deals in Salesforce Inbox**

Changed the iOS version for Inbox Now availability to 8.0.0 and updated graphics to reflect current icons.

**Help Customers as a Team**

Added new release note describing initiating a conference or chat.

**Manage Messaging Agents' Permissions**

Added new release note announcing enhancements to Messaging.

**Reinvent Learning at Your Company**

Clarified how myTrailhead becomes available to customers.

**Update and Deploy Lightning Communities with ExperienceBundle (Developer Preview)**

Removed mention of scratch org definition files, which aren't supported.

**Try New Lightning Features with the Lightning Extension for Chrome**

Added new release note announcing the Lightning Extension for Chrome.

**View Data Updates in Real Time with Live Controller (Pilot)**

This feature isn't ready for a beta release, so we've changed it to pilot.

**Get a Downloadable Report on JavaScript Buttons**

Added new release note announcing an enhancement to the Lightning Experience Configuration Converter.

**Embed Your Einstein Discovery Predictions Anywhere**

Add release note for Einstein Prediction Service Scoring API.

**User and Custom Object Access Settings Default to Private**

Added information about the default external access level for the User object.

**Manage Room and Equipment Booking with Asset Scheduling**

Added a release note to announce the availability of Asset Scheduling.

## June 12, 2019

**Merge Cases into a Single Record (Beta)**

Added information on how to turn on Merge Cases (beta).

**Enable Testing a Sandbox Community in the Mobile Publisher Project for Communities App**

Added new release note announcing availability of sandbox community URL in the Mobile Publisher Project for Communities app.

**Brand Assets with New Fields in Your Salesforce Lightning Communities App**

Added new release note announcing the new field for a privacy policy URL for the Salesforce Lightning Communities app for iOS and Android.

**Unlock Your App with Biometric ID for Android and iOS**

Added new release note announcing Biometric ID for the Lightning Communities app on iOS and Android.

**New and Changed Objects**

Updated release note with UI\_RENDER\_TIME deprecation.

**Unlock Your App with the Speed and Security of Biometric ID**

Added new release note announcing Biometric ID for the Salesforce app on iOS.

**Manage Navigation with the pageReference Class**

Added new release note announcing availability of pageRef class for navigation in the Salesforce app platform.

**Salesforce App Version Numbers Are Now Aligned with Desktop**

Added new release note announcing alignment of desktop and mobile Salesforce version numbers.

**Changed Aura Components**

Added information about lightning:map usage and variant usage for the following components: lightning:checkboxGroup, lightning:combobox, lightning:dualListbox, lightning:input, lightning:inputAddress, lightning:inputLocation, lightning:inputName, lightning:radioGroup, and lightning:textarea

**Changed Lightning Web Components**

Added information about lightning-map usage and variant usage for the following components: lightning-checkbox-group, lightning-combobox, lightning-dual-listbox, lightning-input, lightning-input-address, lightning-input-location, lightning-input-name, lightning-radio-group, and lightning-textarea.

**Enable Improved Caching of Org Schema (Critical Update, Postponed)**

Updated release note to indicate that the critical update is postponed to Winter '19.

**Use Sharing Sets with Leads**

Added information about enabling sharing sets for leads.

**Block Certain Fields in the User Record for Orgs with Communities and Portals (Critical Update)**

Salesforce is giving customers the option to enable a user setting that allows the hiding of certain personal information fields on the user records in orgs with communities or portals. The fields are hidden from view when external users are accessing user records. External users can still see their own user records.

**Let Reps Choose Which Email Composer to Use When Clicking Email Addresses**

Added information about requirements for using this feature.

## June 5, 2019

**Help and Training**

Added information about our latest content enhancements, including new guides; Trailhead modules, trails, and projects; and instructional videos.

**Updates to Engagement History Dashboards**

Added clarifying information about integration and security users that are added to your account to support the Engagement History Dashboard feature.

**Removed: Your Utility Items Are All Right (Aligned)**

This feature isn't quite ready for showtime, so we're removing it for now while we make improvements. We'll let you know when it's back up.

**New Record Creation Pages Stay in Browser History**

Added a release note about addressable URLs for the "new" standard action.

**Changed Aura Components**

Added a release note about a change to `force:recordEdit`.

## May 29, 2019

**AppExchange: Find the Right Salesforce Consultant for Your Project**

Added a release note announcing the AppExchange Consultant Finder and enhancements to consultant listings.

**Create Events with New Event Action in Today**

Added note about label change in Today app, per customer support/high priority customer request.

**Keep Notifications Coming from the Salesforce Inbox Android App on page 161**

Added a release note announcing the update to the Salesforce Inbox Android app to comply with push notification framework changes required by Google.

**Build Integrations with the Health Cloud Business APIs**

Clarified the use case of Business APIs and fixed typos.

**Create Lookups to Market Development Fund Objects**

Added a release note about the ability to create lookups to Market Development Fund objects from standard or custom objects.

**Expand and Collapse Bundles in Large Quote Experience**

Added a note about contacting Salesforce CPQ support to enable expanding and collapse bundles in Large Quote Experience. Also added information about the new Line Editor package setting Default Bundle Setting.

**Changed SAML ACS URLs for SSO**

Added a note about changes to the SAML Assertion Consumer Service (ACS) URLs. When you configure SSO in a new org, subdomain and community URLs don't contain the `so=orgID` suffix.

## May 22, 2019

**Manage Queue and Skill Assignments for Your Agents in Omni-Channel Supervisor**

Added information about how to enable Change Queues and Change Skills in Omni-Channel Supervisor settings.

**Data.com Prospector and Data.com Clean Are Being Retired**

Added information about the retirement of Data.com licenses and handling of current licenses.

**Use source Commands for the Full Application Life Cycle (Generally Available)**

The `source` commands are generally available.

**Discover New and Changed Salesforce CLI Commands**

Added information about updates to the `source` commands.

**Get Increased Usage-Based Entitlements for Processes and Flows in Enterprise and Unlimited Editions**

The base entitlement allocations for flow interviews per month were greatly increased. Clarified that the entire org shares the additional allocations from purchased user licenses. Also moved the topic into the "Other Changes for Lightning Flow" section.

**Improved Save-Time Validation for Aura Components**

Added details for potential error messages.

**Enable Logout Event Streaming Using a New UI (Beta)**

Changed how the feature is enabled. Old value: Contact Salesforce to Enable. New value: Requires Administrator Setup.

**Stream and Store Event Data in Near Real-Time (Beta)**

Changed how the feature is enabled. Old value: Contact Salesforce to Enable. New value: Requires Administrator Setup.

**Create Transaction Security Policies to Protect Any Object (Beta)**

Changed how the feature is enabled. Old value: Contact Salesforce to Enable. New value: Requires Administrator Setup.

**Enable Login Event Storage Using a New UI**

Changed how the feature is enabled. Old value: Contact Salesforce to Enable. New value: Requires Administrator Setup.

**View Changes to Transaction Security Policies in Setup Audit Trail**

Changed how the feature is enabled. Old value: Contact Salesforce to Enable. New value: Enabled for Administrators/Developers.

**Give New Community Users Access to Field Service Lightning Objects**

Community users do not have default create, read, edit, or delete access for certain Field Service Lightning objects.

**Do More with the New Salesforce CMS (Beta) on page 302**

Added new sandbox availability for testing feature.

**Match Production Licenses for Orgs on Different Releases**

Added information about the matching change.

**Assign Territories More Easily in Lightning Experience**

Updated the How and When Do Features Become Available table to Enabled for administrators/developers.

**Use Salesforce CLI for Sandbox Operations (Beta) and Discover New and Changed Salesforce CLI Commands**

Added information about the new Salesforce CLI functionality for working with sandbox orgs.

**Changed Aura Components and Changed Lightning Web Components**

Added information about a change to `lightning:inputField`, `lightning:outputField`, `lightning-input-field`, and `lightning-output-field`.

**Add a Namespace Prefix to pageReference.state Properties and Query Parameters (Critical Update, Enforced)**

Added reference to a Winter '19 critical update that's enforced in Summer '19.

## May 15, 2019

**Explore Pardot Data on Salesforce Campaigns**

Added release note in the Lightning App Builder section that points to an existing release note about the Engagement History Dashboard component.

**You Asked for It!**

Added Ideas that we delivered.

**Changed Data Type for Fields in Apex Unexpected Exception Event Type on page 435**

Changed the data type from String to Text for `EXCEPTION_MESSAGE` and `STACK_TRACE` fields in Apex Unexpected Exception event type of `EventLogFile`.

**Stream and Store Event Data in Near Real-Time (Beta)**

Added support for Salesforce Classic.

**Create Transaction Security Policies to Protect Any Object (Beta)**

Added support for Salesforce Classic.

**Enable Login Event Storage Using a New UI**

Added support for Salesforce Classic. Added a "See Also" link.

**Manage Event Monitoring Events in One Place**

Added support for Salesforce Classic and all editions.

**View Changes to Transaction Security Policies in Setup Audit Trail**

Added support for Salesforce Classic. Added a "See Also" link.

**Restrict Object Access with the Default External Identity User Profile**

Added release note about changes to the External Identity default profile.

**Changed SAML ACS URLs for SSO**

Added release note about a performance enhancement to ACS URLs for single sign-on (SSO). ACS URLs in new orgs do not contain the `so=orgID` suffix.

**Changed Calls**

Added information about changes to object types in the Tooling API and Enterprise WSDLs.

**Use Query Jobs with Bulk API 2.0 (Pilot)**

Added information about the Bulk API 2.0 Query pilot feature.

**Perform Mass Operations With A Single API Call (Pilot)**

Added information about the Mass Operations pilot feature.

**Salesforce Billing Summer '19 Pre-Installation Instructions**

Changed the title of Upgrade Avalara After Installing Salesforce Billing Summer '19 to Salesforce Billing Summer '19 Pre-Installation Instructions.

Added a note that the payment gateway packages for Cybersource, Authorize.net, Payeezy, and PayflowPro require updates to Version 4.0.

**Use Rich Text in Display Text Screen Components, Choice Labels, Help Text, and More**

Clarified that HTML is not supported in the rich text editor. Updated the screen shot because strikethrough is not a supported text format.

**Retiring Einstein Discovery Classic**

Added release note announcing the retirement of Einstein Discovery Classic.

**Embed Your Einstein Discovery Predictions Anywhere**

Removed entry for Einstein Prediction Service Scoring API.

**Ignore the Asset Resource Type When You Create a Service Resource**

Added release note in the Service Cloud section that announces that you can't use the Asset picklist option in the Resource Type field when you create a service resource in an org without Lightning Scheduler.

## May 14, 2019

**Logic Updated for Percent Fields in Price Action Formulas**

Added a release note describing changes in how CPQ price action formulas handle percent fields.

## May 8, 2019

**Assign Einstein Analytics Platform or Plus Permission Sets to Use Sales and Service Analytics Apps**

Added release note announcing that Analytics Growth and Plus customers no longer need to rely on separate licenses to use Sales Analytics and Service Analytics apps.

**Add In-App Guidance for Training, Onboarding, and News (Beta)**

Updated to indicate that the feature is available for Essentials editions.

**Integrate Health Cloud Using MuleSoft CAQH Connector**

Added information related to licensing agreements for CAQH.

**Build Mobile Apps that Display a User's Lightning Communities**

Updated to more accurately describe this as an API-only change for builders of any mobile apps, not as an update to the Salesforce app.

**CMS for Community Cloud Users Are Migrating to Salesforce CMS (Beta) on page 303**

Clarified the timing of availability of the feature after migration.

**View Records Using Full View (Beta)**

Changed Full Record View from general release to beta release.

**Power Up Your Related Lists with Enhanced Related Lists (Beta)**

Corrected Enhanced Related Lists release note to mention the feature is in beta.

**Invocable Actions**

Added new customNotificationAction to Invocable Actions release note.

**Changed Apex Classes**

Added a new method that returns all the describe field results for an object.

**Updated Topic Assignment Label**

Updated the UI label for clarity.

## May 1, 2019

**Discover New and Changed Salesforce CLI Commands**

We hid the `force:data:tree:import` command's `-c | --contenttype` parameter in `salesforcedx` v45 because we support only one file type, JSON. In `salesforcedx` v46, the default value for `force:project:create --template` is now `standard`.

**Eliminate the Guesswork for DX Project Structure**

Added a release note about the new default project structure in Salesforce CLI (`salesforcedx` v46) and Salesforce Extensions for Visual Studio Code.

**Streamline Customer Appointment Scheduling with Standard Flows and Templates for Lightning Scheduler**

Corrected the [How and When Do Features Become Available?](#) table entry for this feature.

**Optimize the User Experience in Custom Lightning Scheduler Flows with the `$Client.FormFactor` Global Variable**

Clarified that the `$Client.FormFactor` global variable is supported only in Decision elements. Also described where to reference the global variable.

**Find Actions by Type or Category When Building Flows**

In the Flow Builder toolbox, the Action and Subflow elements are now in the same category as the Screen element.

**Enable Logout Event Streaming Using a New UI (Beta)**

Updated information about who can use the setting.

**Increase Performance When Extracting Large Volumes of Google BigQuery Data**

Added a release note about the new Staging extract mode for the Google BigQuery connector.

**Other Changes in the Field Service Lightning Mobile App**

Corrected the release note to reflect that users can unlock the app, not log in to it, using Touch ID and Face ID. Android devices also support Touch ID.

**Hide and Lock Quote Fields with the Page Security Plugin**

Added a release note about new functions in the CPQ Javascript Page Security Plugin.

**Retrieve Quote Terms with Quote Term Reader API**

Added a release note about the new Quote Term Reader API.

**Disable the API Enabled User Permission Defaults for External Profiles (Critical Update)**

Added a release note regarding a critical update that disables the API enabled user permission for external profiles.

**Take Advantage of Free Survey Responses**

Updated the release note to mention that each org receives up to 300 survey responses for free.

**Handle Service Requests Better and Faster with Lightning Flow for Financial Services Cloud**

Updated the release note to mention that the flows are available in English.

**Metadata API**

Added release notes for new fields supporting Einstein Next Best Action on the existing RecommendationStrategy metadata type.

**Require TLS 1.2 for HTTPS Connections (Critical Update)**

Changed the critical update's enforcement date to October 25, 2019.

**Require TLS 1.2 for HTTPS Connections in Communities and Sites (Critical Update)**

Changed the critical update's enforcement date to October 25, 2019.

## April 24, 2019

**Choose the Publishing Behavior for Your Platform Event**

Updated incorrect statement regarding the publishing behavior of platform events not being supported through Salesforce APIs.

## April 22, 2019

**Salesforce Summer '19 Release Notes**

Published preview release notes.

## Your Feedback Matters

We know how important our documentation is to your company's success. We want to know what works for you and what doesn't.

- **Trailblazer Community**—Post your feedback in the [Release Readiness Trailblazers](#) group. To help us track and respond to your feedback, use a hashtag that indicates the release, such as #Summer19Feedback.
- **Feedback forms**—As you're working with our documentation in Salesforce Help, release notes, or developer guides, look for the feedback form and vote up or down. Add comments if you have them.
- **Twitter**—When you follow @salesforcedocs on Twitter, you receive notices whenever we publish new documentation or make significant updates to existing documentation. Tweet us at [@salesforcedocs](#).

## How and When Do Features Become Available?

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Some features in Summer '19 affect all users immediately after the release goes live. Consider communicating these changes to your users beforehand so that they're prepared. Other features require direct action by an administrator before users can benefit from the new functionality.

## Supported Browsers

We've made some changes to our supported browsers documentation, making it easier to find what you need. Supported browsers for Salesforce vary depending on whether you use Salesforce Classic or Lightning Experience.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Supported Browsers for Lightning Experience</a>	✓			
<a href="#">Supported Browsers for Salesforce Classic</a>	✓			
<a href="#">Supported Browsers for Einstein Analytics</a>	✓			

## Salesforce Overall

We turn on Lightning Experience for all orgs, and introduce new tools to help you manage your transition. Plus, we provide customizable prompts to get your users engaged with all that's great in the new Salesforce. Land on the same record page when switching from Salesforce Classic to Lightning Experience. Run the full desktop version of Lightning Experience on iPad devices. See and do more with related lists when you turn on Enhanced Related Lists. Streamline appointment scheduling with a self-service interface and more Salesforce integrations in Lightning Scheduler. Send survey invites for free and get more responses with customized email invitations in Salesforce Surveys. Make the most of your browser space with a right-aligned utility bar in Lightning Console. Find what you need fast with search results that reflect how you navigate, and easily see which objects were searched in your search results. Access even more recent items in the Lightning Experience navigation bar. And that's only half of it.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Get Lightning Experience on Your Phone with Lightning on Mobile (Pilot)</a>		✓		
<a href="#">Keep Record Context When Switching from Salesforce Classic to Lightning Experience</a>	✓			
<a href="#">Access Lightning Experience from Safari on iPad Devices (Beta)</a>			✓	
<a href="#">Power Up Your Related Lists with Enhanced Related Lists (Beta)</a>	✓			
<a href="#">Zoom Through Related Lists with Quick Filters</a>	✓			
<a href="#">Search Picklist Fields in List Views</a>	✓			
<a href="#">New Record Creation Pages Stay in Browser History</a>	✓			

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Try New Lightning Features with the Lightning Extension for Chrome</a>	✓			
<b>Lightning Scheduler: Inbound Appointment Scheduling, Event Management, Action Plans, and More</b>				
<a href="#">Streamline Customer Appointment Scheduling with Lightning Scheduler</a>			✓	
<a href="#">Manage Calendar Availability with Event Management</a>			✓	
<a href="#">Pair Your Action Plans with Lightning Scheduler</a>			✓	
<a href="#">Partner Your Salesforce Surveys with Lightning Scheduler</a>			✓	
<a href="#">Manage Room and Equipment Booking with Asset Scheduling</a>			✓	
<a href="#">Optimize User Experience with the Right Flow Screens for Different Devices (Beta)</a>			✓	
<a href="#">Easily Find the Right Invocable Action for Lightning Scheduler in Flow Builder</a>			✓	
<b>Salesforce Surveys: Free Sending, Customized Email Invitations, and an Improved User Experience</b>				
<a href="#">Send Surveys for Free</a>			✓	
<a href="#">Take Advantage of Free Survey Responses</a>	✓			
<a href="#">Send Customized Email Invitations for Improved Response Rates</a>	✓			
<a href="#">Generate Survey Invitations for Leads</a>	✓			
<a href="#">Say More with an Increased Character Limit for Questions and Responses</a>	✓			
<a href="#">Work with Surveys More Easily on Mobile Devices</a>	✓			
<a href="#">Enjoy Surveys' New Look</a>	✓			
<b>Console</b>				
<a href="#">Detect Popped-Out Utilities with New Lightning Console JavaScript APIs</a>		✓		
<b>Search</b>				

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Find What You Need Fast with Search Results That Reflect How You Navigate</a>	✓			
<a href="#">See Which Objects Were Searched at a Glance</a>	✓			
<a href="#">Get Search Results for More Objects</a>		✓		
<a href="#">See More in Item Menus on the Navigation Bar</a>	✓			
<a href="#">Assign Custom Colors to Hyperlinks</a>			✓	
<a href="#">Themes and Branding Accessibility Label Improvements</a>		✓		
<a href="#">The Lightning Experience Header Is Hidden When You Print from Your Browser</a>	✓			
<a href="#">View Records Using Full View (Beta)</a>			✓	
<a href="#">Set Org Defaults for How Activities Display on Record Pages</a>	✓			
<a href="#">Rich Text Editors Get an Upgrade</a>			✓	
<a href="#">Open Hyperlinks in Formula Fields Correctly (Critical Update, Postponed)</a>			✓	

## Lightning Experience

Lightning Experience is a completely reimagined interface. Even better, it's built on our UI platform, so the experience can grow and evolve with your needs. Check out the new features and considerations in this release.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Lightning Experience Features in This Release</a>			✓	
<a href="#">What's Different or Not Available in Summer '19 Lightning Experience Features</a>			✓	

## Essentials

You have more options to add functionality to Essentials through add-ons, like Dialer, Chat and Messaging, and increased storage. Import opportunities using the Data Import Wizard to bring your in-progress deals to Salesforce. Embed automated tasks in your website or help center, recommend next steps to your team when working with customers, and merge cases.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Unify Your Team's Phones with Dialer</a>			✓	
<a href="#">Offer Your Customers Instant Conversation with Chat and Messaging</a>			✓	
<a href="#">Store More Data in Salesforce</a>			✓	
<a href="#">Grow Salesforce with Your Business</a>			✓	
<a href="#">Bring Your Opportunities to Salesforce Essentials</a>		✓		
<a href="#">Boost Your Help Center with Chat and Contact Requests</a>		✓		
<a href="#">Guide Users Through Simple Tasks with Embedded Flows</a>			✓	
<a href="#">Give Every Customer All-Star Attention with Einstein Next Best Action</a>			✓	
<a href="#">Merge Cases to Declutter Your Case List (Beta)</a>		✓		
<a href="#">Add In-App Guidance for Training, Onboarding, and News (Beta)</a>		✓		
<a href="#">Join Customer Conversations on YouTube and Instagram</a>			✓	

## Sales

Link sales cadences to address complex sales processes. Activity Metrics gives Einstein Activity Capture users a complete view of their activity data. Customizable product schedules can support more complex sales processes related to incoming revenue and outgoing orders. Drive sales teams to more intelligent pricing with CPQ Einstein Pricing Guidance. And use Einstein Campaign Insights to find similarities among prospects who engage with your campaigns.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">High Velocity Sales</a>				

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<b>Use Person Accounts with High Velocity Sales</b>			✓	
<b>Assign Prospects to Any High Velocity Sales User</b>	✓			
<b>Give New Users a Great Start to High Velocity Sales</b>	✓			
<b>Work Queue</b>				
Sort Work Queue Leads	✓			
Customize the Details Reps See in the Work Queue			✓	
<b>Sales Cadences</b>				
Link Sales Cadences	✓			
Reach Out to Prospects with Fewer Clicks			✓	
Preview Email Templates and Call Scripts in the Sales Cadence Builder	✓			
Sales Cadences Standard Invocable Actions Categorized for Flows		✓		
Other Changes to Sales Cadences	✓			
<b>Use Open CTI with High Velocity Sales</b>			✓	
<b>Track Emails Consistently in High Velocity Sales</b>		✓		
<b>Sales Cloud Einstein</b>				
<b>Einstein Forecasting</b>				
Support for Quarterly Forecasting (Beta)				✓
Segment Your Data for Better Forecast Predictions			✓	
<b>Einstein Opportunity Scoring</b>	✓			
<b>Global Models</b>		✓		
<b>Einstein Activity Capture</b>			✓	
<b>Einstein Automated Contacts</b>		✓		
<b>Einstein Insights</b>	✓			
<b>Core Sales Features</b>				



Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
Get the Complete Picture About Your Activity Data with Activity Metrics (Generally Available)			✓	
Control with Whom to Share Activities			✓	
Sync Events and Contacts in Essentials (available within 24 hours after the release)			✓	
Sync the Contacts You Want with Improved Filters		✓		
Test Sync Functionality in Sandbox			✓	
Find Details About Activity Dates for Records in Salesforce Help		✓		
<b>Email Experience</b>				
Show What You Mean in Emails with Images	✓			
Let Reps Choose Which Email Composer to Use When Clicking Email Addresses	✓			
Mark Email Address Fields as Read-Only to Prevent Changes		✓		
Privacy Plug-Ins No Longer Block Salesforce Functionality		✓		
Send List Emails as Company Community Users	✓			
Get Consistent From Addresses and Clearer Alerts for Bounced Email Messages			✓	
<b>Email Templates</b>				
Use Enhanced Letterheads to Increase the Effectiveness of Lightning Email Templates		✓		
Find Existing Letterheads in a New Location in Salesforce Classic	✓			
Include Images in Your Email Templates and Letterheads		✓		
See the Entire Email Template in the Sales Console	✓			
Keep Messaging on Target in Case Emails	✓			

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
Improve Email Security with Redesigned DKIM Keys (Previously Released Critical Update)			✓	
Restrict Use of Salesforce Classic HTML-Based Email Templates to Secure Browsers (Previously Released Critical Update)			✓	
<b>Activities</b>				
Increase Manager Productivity with a New Task Filter	✓			
Choose to Get Task Notifications by Email	✓			
Share Task List Views Easily	✓			
<b>Notes: Pop Out Notes from the Utility Bar</b>			✓	
<b>Lightning Dialer</b>				
Use a Custom Picklist for Call Results			✓	
Pop Out Lightning Dialer from the Utility Bar	✓			
Report Issues About Call Quality with Ease	✓			
Add Telephone Numbers to Call Lists from Record Pages	✓			
Get Email Notifications About Minutes Usage		✓		
<b>Inbox App</b>				
Find All You Need to Close Deals in Salesforce Inbox	✓			
Set Up Inbox Mobile Apps with a Clearer Setup Assistant Page			✓	
Keep Notifications Coming from the Salesforce Inbox Android App	✓			
<b>Calendar</b>				
Filter and Search Events in List Views	✓			
Create an Event Series from Anywhere with Quick Actions			✓	
<b>Quip for Sales</b>		✓		

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<b>Lightning Data: Choose Which Records to Target or Skip</b>			✓	
<b>Data.com Prospector and Data.com Clean Are Being Retired</b>			✓	
<b>Gmail Integration</b>				
<b>Log Emails from Gmail to Salesforce with Fewer Clicks</b>	✓			
<b>View Location in Email Tracking from Gmail</b>	✓			
<b>Integration with Microsoft®</b>				
<b>Outlook® Integration</b>				
Log Emails from Outlook to Salesforce with Fewer Clicks	✓			
Access Tracking Details for an Individual Email in Outlook			✓	
View Location in Email Tracking from Outlook	✓			
Schedule Emails to Send Later and Log to Salesforce When Sent	✓			
<b>Salesforce for Outlook</b>				
Get Salesforce for Outlook v3.4.7 Updates	✓			
Learn About Salesforce for Outlook v3.4.6	✓			
Expand Your Horizons with Salesforce Cloud-Based Product Alternatives			✓	
<b>Salesforce CPQ and Billing: Pricing Guidance, Improved Invoice Line Crediting, and Reliable Amendments and Renewals for Large Contracts</b>				
<b>Salesforce CPQ</b>				
Suggest Ideal Prices with Pricing Guidance	✓			
Manage Larger Contracts with Large-Scale Amendment and Renewal Quoting		✓		
Maintain Percent of Total Relationships on Renewals When Contracting from Orders			✓	

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Renew and Co-Terminate Contracts from Opportunity and Account Pages with CPQ Lightning</a>	✓			
<a href="#">Logic Updated for Percent Fields in Price Action Formulas</a>	✓			
<a href="#">Hide and Lock Quote Fields with the Page Security Plugin</a>		✓		
<a href="#">Retrieve Quote Terms with Quote Term Reader API</a>		✓		
Other Changes in Salesforce CPQ				
<b>Salesforce Billing</b>				
<a href="#">Salesforce Billing Summer '19 Pre-Installation Instructions</a>	✓			
<a href="#">Manage Invoice Credits All in One Place</a>	✓			
<a href="#">Enter the CVV in the Payment Center</a>	✓			
<b>Pardot</b>				
<a href="#">Monitor Prospect Engagement with Campaign Insights (Generally Available)</a>			✓	
<a href="#">Explore Marketing Report Data on Campaign Records</a>			✓	
<a href="#">Use Behavior Scoring with Workflows and Process Builder</a>	✓			
<a href="#">View Engagement Activities in Related Lists</a>	✓			
<a href="#">Use Quick Filters on Pardot Views</a>	✓			
<a href="#">Ease into Lightning Experience</a>			✓	
<a href="#">B2B Marketing Analytics Legacy App Is Retiring</a>			✓	
<a href="#">Get All Your Pardot Release Notes in One Place</a>	✓			

## Service

Review Einstein Bot dialogs with ease in a visual map, and use new smart routing features to escalate bot conversations to the right experts. Work faster in the Field Service Lightning dispatcher console with a pop-out map, long-term Gantt view, and new drag-and-drop

scheduling options. Set up skills-based routing in a jiffy with a handsome setup screen. Finally, explore a smorgasbord of other productivity-boosting features for agents, including the ability to proactively reach out to customers with critical service updates, create more intelligent macros with conditional expressions, and merge duplicate cases.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<b>Einstein for Service</b>				
<b>Intelligently Transfer Bot Sessions During Conversations</b>			✓	
<b>Understand Conversation Design with a Dialog Map</b>		✓		
<b>Set Up Bots Faster and with Less Preparation</b>		✓		
<b>Customize Bot Actions with Profiles</b>		✓		
<b>Give Agents the Right Steps and Top Results from Einstein Next Best Action</b>			✓	
<b>Optimize Button in Einstein Case Classification Was Removed</b>		✓		
<b>Field Service</b>				
<b>Field Service Mobile App</b>				
Streamline Mobile Navigation with Deep Linking			✓	
Choose When to Send Service Appointment Notifications			✓	
Upload Multiple Images to Get the Full Picture	✓			
View Files on Android	✓			
Other Changes in the Field Service Lightning Mobile App			✓	
<b>Schedule Smarter with Enhanced Optimization (Beta)</b>			✓	
<b>Create and Manage Service Crews with Crew Management (Generally Available)</b>			✓	
<b>See Further into the Future on the Gantt</b>			✓	
<b>Work Faster in the Dispatcher Console Map</b>		✓		

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Set Scheduling Limits for Different Types of Work</a>			✓	
<a href="#">Monitor Optimization Requests from the Dispatcher Console</a>		✓		
<a href="#">Select a Scheduling Policy When Booking Appointments</a>			✓	
<a href="#">Automatically Create Time Sheets for your Service Resources (Beta)</a>				✓
<a href="#">Sort Related Lists in Service Reports</a>	✓			
<a href="#">Get Started with Shifts</a>			✓	
<a href="#">Shower Productive Users with Confetti</a>			✓	
<a href="#">Give New Community Users Access to Field Service Lightning Objects</a>	✓			
<a href="#">Ignore the Asset Resource Type When You Create a Service Resource</a>		✓		
<b>Channels</b>				
<b>Messaging</b>				
<a href="#">Messaging is the New LiveMessage</a>			✓	
<a href="#">Reach Out to Your Customers with Agent Initiated Conversations (Open Beta)</a>			✓	
<a href="#">Connect to Your Customers with WeChat (Pilot)</a>			✓	
<a href="#">Protect Your Customers' Sensitive Data</a>			✓	
<a href="#">Messaging Transcript Improvements</a>			✓	
<a href="#">Respond Lightning Fast with Quick Text</a>			✓	
<a href="#">Encrypt Conversations</a>			✓	
<a href="#">Messaging Invocable Action for Flows</a>			✓	
<a href="#">Read Languages in the Direction They Were Intended</a>			✓	
<a href="#">Manage Messaging Agents' Permissions</a>			✓	
<b>Chat</b>				
<a href="#">Chat is the New Live Agent</a>			✓	

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
Help Customers as a Team			✓	
Conversational Conferencing Improvements			✓	
Chat Enhancements			✓	
<b>Social Customer Service</b>				
Display Facebook Reviews Using the Recommendation Format		✓		
Approve and Reject Social Feed Posts in Bulk		✓		
Move to an Instagram Business Account for the Latest API			✓	
<b>Phone</b>				
Make and Receive Calls in Service Console with Dialer		✓		
Create a Call Center with the Updated Voice Support Setup Flow		✓		
<b>Embedded Service for Mobile Apps</b>		✓		
<b>Embedded Service for Web</b>				
Embedded Services is the New Snap-Ins			✓	
Let Customers Manage Appointments			✓	
Allow Customers to Leave and Return to the Embedded Service Chat Dialog			✓	
Customize Your Chat Message with Lightning Web Components			✓	
Support File Based Flows			✓	
Embedded Service Flow Improvements			✓	
<b>Knowledge</b>				
<b>Improve Your Authoring Experience with Inline Editing</b>			✓	
<b>Gain Insights with Enhanced Report Relationships</b>			✓	
<b>Search Knowledge Articles from Any Object</b>			✓	

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Use the Restore, Delete, and Submit for Translation Actions in Lightning Experience</a>			✓	
<a href="#">Paste Images into Article Rich Text Fields</a>	✓			
<a href="#">Send Case Emails with Community and Site Article URLs in Lightning Experience</a>			✓	
<a href="#">Manage Promoted Search Terms in Lightning Experience</a>			✓	
<a href="#">Manage Knowledge Workflow Actions in Lightning Experience</a>			✓	
<a href="#">Engage Global Customers with Articles in Right-to-Left Languages</a>	✓			
<a href="#">Use the Upgraded Rich Text Editor</a>	✓			
<a href="#">Create Knowledge Actions and Global Quick Actions</a>			✓	
<a href="#">More Lookup Features for Lightning Knowledge</a>			✓	
<b>Routing</b>				
<a href="#">Set Up Skills-Based Routing Without Code Using Attribute-Based Routing (Beta)</a>			✓	
<a href="#">Specify Which Routing Skills Are Additional</a>			✓	
<a href="#">Manage Queue and Skill Assignments for Your Agents in Omni-Channel Supervisor</a>	✓			
<a href="#">Prompt Before Logging Out Agents of Other Browser Tabs</a>			✓	
<a href="#">Use a Flow to Route Work Items Based on Skills</a>			✓	
<b>Case Management</b>				
<b>Lightning Flow for Service</b>				
<a href="#">Put Einstein Next Best Action Recommendations at Your Agents' Fingertips</a>			✓	

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
Stay on Track with Quick Actions in the Actions & Recommendations Component			✓	
Show More Guidance on More Pages			✓	
Reorder the List to Your Liking			✓	
<b>Cases</b>				
Merge Cases into a Single Record (Beta)		✓		
See Files Attached to Email Messages in the Case's Files Related List			✓	
Easily Insert Files When Composing a Case-Related Email			✓	
Have More Control over Your Email Template Library		✓		
Quickly Create Cases Without Interrupting Your Workflow	✓			
View Case Milestones in Lightning Experience	✓			
<b>Productivity</b>				
Power Up Your Macros with Conditional Instructions	✓			
Find the Right Quick Text Fast	✓			
Invocable Actions		✓		
Quip for Service		✓		

## Analytics

Bring the power of row-level formulas to every record in a report. Set conditions in reports, and receive emails when the conditions are met. Add predictive analytics to your apps with templates. Embed Einstein Discovery predictions anywhere. And much more!

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<b>Reports and Dashboards</b>				
<b>Reports</b>				
Evaluate Each Record in Reports with Row-Level Formulas (Beta)			✓	

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
Make Data Stand Out with Conditional Formatting (Generally Available)	✓			
Find Records Faster with Search	✓			
Work with Formulas in the Fields Pane	✓			
Create Historical Tracking Reports In Lightning		✓		
Export Joined Reports with Formatting	✓			
View Content in Report Tables Better	✓			
Say Goodbye to the Small Formula Editor	✓			
<b>Dashboards</b>				
Sort Dashboard Components by Groups and Measures	✓			
Show Subtotals on First-Level Groups in Lightning Tables	✓			
Resize Columns in Lightning Tables	✓			
<b>Subscriptions</b>				
Get Notified When Reports Conditions Are Met	✓			
Get Better Dashboard Charts and Tables in Subscription Emails	✓			
<b>Einstein Analytics</b>				
<b>Analytics Setup and Data Integration</b>				
Connect to Your Data in Oracle Eloqua and NetSuite (Generally Available)		✓		
Sync More Data Through Amazon Redshift Connections		✓		
Increase Performance When Extracting Large Volumes of Google BigQuery Data		✓		
Set Connection Mode for Connected Salesforce Objects in One Place		✓		
Combine Related Data in New Ways with Joins		✓		

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
Summarize Your Data in a New Dataset with Groups and Aggregates		✓		
Complete Your Data by Replacing Nulls		✓		
Manipulate Strings with New Recipe Functions		✓		
Capture Newly Added Fields in Recipes		✓		
Delete Private Datasets of Other Users		✓		
Identify Nulls and Empty Strings in the Recipe Preview		✓		
Take Note of the Consistent Labels for Google Analytics and BigQuery Connections		✓		
Check Out the Simplified Monitor		✓		
Launch the Recipe Field Preview Faster		✓		
Speed Up Data Loads with Concurrent Dataflow Runs		✓		
<b>Analytics Prebuilt Apps and Templates</b>				
Fortify Your Sales Data with Einstein Discovery for Sales Analytics		✓		
Assign Einstein Analytics Platform or Plus Permission Sets to Use Sales and Service Analytics Apps		✓		
Get Actionable Insights About Your Environmental Data with Analytics for Sustainability		✓		
Maximize Fundraising with New Analytics App		✓		
Measure and Improve Public Sector Service Delivery with Public Sector Case Analytics		✓		
Financial Services Analytics Templates Have New Names and Licensing		✓		
Filter the Template Picker by Tag to Find the Analytics App You Want to Create Fast		✓		
Other Enhancements: Predictive Analytics in Templates, Easy Dashboard Embedding (not immediately available)		✓		

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<b>Analytics App Building</b>				
Work with Filter Logic in the Explorer	✓			
Add Custom Formulas to Columns Faster	✓			
Sort on Dimensions Easily	✓			
Use Dot Series in Combo and Time Combo Charts	✓			
Style Dashboard Controls with Enhancements to Global Filters and List, Date, and Range Widgets	✓			
Debug Steps with the Dashboard Inspector	✓			
Plan for Einstein Analytics Classic Designer's Retirement	✓			
Predict Seasonal Data with New SAQL Timeseries Options		✓		
Get the Power of Aggregateflex Steps in Values Tables		✓		
Revert to Previously Saved Versions of Dashboards, Lenses, and Dataflows Using Asset History (Pilot)		✓		
Share Assets Between Apps with New Analytics Templates Framework Capability		✓		
Other Enhancements in App Building	✓			
<b>Einstein Discovery</b>				
Build Ethical and Accountable Models with Protected Fields (not immediately available)		✓		
Gain Deeper Insight into Your Model with Enhanced Model Metrics (not immediately available)		✓		
Experiment with Your Data Using Sandboxes (not immediately available)		✓		
Refine Your Stories Using Field-Level Correlations and Improvements (not immediately available)		✓		

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Deploy Predictions on Salesforce Records Without Writing Code (Pilot)</a> (not immediately available)		✓		
<a href="#">Display Einstein Discovery Predictions in Lightning Experience Record Pages</a> (not immediately available)		✓		
<a href="#">Get Better Insights with Smart Bucketing</a> (not immediately available)		✓		
<a href="#">Predict Quantities Using Whole Numbers</a> (not immediately available)		✓		
<a href="#">Monitor the Accuracy of Deployed Models in Real Time (Pilot)</a> (not immediately available)		✓		
<a href="#">Generate Predictions Natively in Analytics Dataflows</a> (not immediately available)		✓		
<a href="#">Improve Story Accuracy With Optimized Feature Selection</a> (not immediately available)		✓		
<a href="#">Gain Insights from Smaller Einstein Analytics Datasets</a> (not immediately available)		✓		
<a href="#">Retiring Einstein Discovery Classic</a> (not immediately available)		✓		
<b>Extending Analytics</b>				
<a href="#">Embed Your Einstein Discovery Predictions Anywhere</a> (not immediately available)		✓		
<a href="#">Quickly Build Contextual Filters for Dashboards Embedded in Record Pages</a>		✓		
<b>Analytics for End Users</b>				
<a href="#">Get Started, Educate Yourself, and Stay Informed with the Learn Tab</a>	✓			
<a href="#">Drive Adoption and Engagement with In-Dashboard Video Onboarding</a>	✓			
<a href="#">Additional Enhancements Across Analytics</a>	✓			
<a href="#">Analytics Mobile Apps: Upgrade to the Summer '19 Versions of Einstein Analytics for iOS and Android</a>	✓			

## Communities

Summer '19 is a boon for developers, who can now work more efficiently on communities using a host of new API enhancements. Our mobile team has been hard at work improving the Salesforce Mobile Publisher for Community Cloud. Community users can also take advantage of new list view improvements, such as pinned list views, custom mass actions, and custom list views on tasks.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<b>Mobile Communities</b>				
<b>Build Mobile Apps that Display a User's Lightning Communities</b>				
<b>Display Optimized Images on Mobile Devices</b> (available within 24 hours after the release)	✔			
<b>Lightning Communities</b>				
<b>Do More with the New Salesforce CMS (Beta)</b>		✔		
<b>CMS for Community Cloud Users Are Migrating to Salesforce CMS (Beta)</b> (available within 24 hours after the release)			✔	
<b>Control Who Does What in Salesforce CMS (Beta)</b>		✔		
<b>Streamline User Creation and Management of External Users</b>		✔		
<b>Get More Control with Community Flow Page URLs</b>		✔		
<b>Currency Field Is Available in Account and Opportunity Layouts</b>			✔	
<b>Community Builder No Longer Supported in Microsoft Internet Explorer 11</b>		✔		
<b>Create a Report from Your Community (Beta)</b>				✔
<b>Lightning Components in Community Builder</b>				
<b>Set Up Quick Actions in Case Views</b>		✔		
<b>Set Up Mass Quick Actions in Communities</b>		✔		

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
Set Up Global Quick Actions in Communities		✓		
Use Custom Task List Views in Record List Components		✓		
Customize Your User Settings		✓		
Quickly Build Contextual Filters for Einstein Analytics Dashboards		✓		
Take Control of the Hover State in the Tile Menu (Beta)		✓		
Streamline Customer Appointment Scheduling with Lightning Scheduler			✓	
Give Your Users More Display Options in Record Lists		✓		
Customize the Submit Button on Your Community Contact Support Forms			✓	
Enhance Your Custom Lightning Community by Using Pages from Other Templates		✓		
Add Deflection Tracking to More Communities		✓		
Add a Button to Let Community Members Request a Call from Support			✓	
<b>Developer Productivity</b>				
Update and Deploy Lightning Communities with ExperienceBundle (Developer Preview)			✓	
Create and Publish Communities with Chatter REST API		✓		
Experience More Consistent Navigation in Lightning Communities		✓		
Future-Proof Your Linking with Navigation API Calls		✓		
<b>Partner Communities</b>				
Share Market Development Fund Objects with Account Relationships	✓			

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
Run Reports on Account Relationships	✓			
Update Account Relationship Data Sharing Rules		✓		
Easily Track Your Channel Program Members' History	✓			
Add More Channel Program Members with Increased Limits		✓		
Track Stages of Market Development Funds Using Path	✓			
Create Lookups to Market Development Fund Objects	✓			
Enable Partners to Send Emails from Cases		✓		
Tailor Product Schedules to Your Business Processes			✓	
<b>Sharing and Security</b>				
Start with More Restrictive Profiles for Standard External Community Profiles		✓		
Use Sharing Sets with Leads		✓		
Communities Support Right-to-Left Languages for Password Resets (Beta)	✓			
Increase Password Complexity Requirements for Communities			✓	
Customize Passwordless Login and Verify Pages		✓		
View the Number of Failed Community Login Attempts		✓		
Customer Community Plus and Customer Community Plus Login Licenses Are No Longer API Enabled by Default		✓		
Set External Access Levels for More Objects				✓
Verify Standard Page Access for Authenticated Users		✓		

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">\$Site.AdminEmailAddress Is Deprecated</a>		✓		
<b>Critical Updates</b>				
<a href="#">Enable External Org-Wide Defaults in Orgs with Communities or Portals (Critical Update, Enforced)</a>			✓	
<a href="#">Require TLS 1.2 for HTTPS Connections in Communities and Sites (Critical Update)</a>			✓	
<a href="#">Disable the API Enabled User Permission Defaults for External Profiles (Critical Update)</a>			✓	
<a href="#">Restrict the Use of Standard External Profiles for Self-Registration, Login, and Assignment to Users (Critical Update)</a>			✓	
<a href="#">Block Certain Fields in the User Record for Orgs with Communities and Portals (Critical Update)</a>			✓	
<b>Other Changes in Communities</b>				
<a href="#">Improve Your Sales Process by Using Path with Leads in the Salesforce App</a>			✓	
<a href="#">Link Takes Users Directly to Their Profile Page</a>	✓			
<a href="#">Receive (or Not to Receive) Email Notifications for Best Answers</a>	✓			
<a href="#">Use Any Google Analytics Custom Dimension</a>		✓		
<a href="#">Add Static Resources to CORS Whitelist</a>			✓	
<a href="#">Create More Roles and Add More Person Account Users with Increased Limits</a>		✓		

## Files

Finding and making asset files is getting smoother and faster. Identify asset files in an instant with the new UI indicator. Make a new asset file right from the Asset Library with the click of a button. We've increased file sharing limits.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Create Asset Files Right from Your Asset Library</a>	✓			
<a href="#">File Sharing Limits Increased</a>	✓			

## Mobile

Salesforce mobile apps help your users stay productive throughout their busy days, no matter where they are. So we've been hard at work adding new ways to help your users outside of the office.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Salesforce App</a>				
<b>Everything That's New in the Salesforce App</b>				
<a href="#">Improve Your Sales Process by Using Path with Leads in the Salesforce App</a>			✓	
<a href="#">Celebrate When Path Users Reach Sales Milestones on the Road</a>			✓	
<a href="#">Maintain Partner Relationships in the Salesforce App</a>			✓	
<a href="#">Create an Event Series with Quick Actions</a>				
<a href="#">Meet the Updated Salesforce App Requirements</a>	✓			
<a href="#">Salesforce App Version Numbers Are Now Aligned with Desktop</a>	✓			
<a href="#">Manage Navigation with the pageReference Class</a>		✓		
<a href="#">Create Events with New Event Action in Today</a>	✓			
<a href="#">Keep Users in the Know with Notification Builder</a>			✓	
<a href="#">Push Notifications No Longer Sent to Inactive Users</a>		✓		
<a href="#">Locate Notification Invocable Actions Quickly for Flows</a>		✓		

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
Unlock Your App with the Speed and Security of Biometric ID	✓			
<b>Mobile Publisher</b>				
Unlock Your App with Biometric ID for Android and iOS	✓			
Enable Testing a Sandbox Community in the Mobile Publisher Project for Communities App	✓			
Brand Assets with New Fields in Your Salesforce Lightning Communities App	✓			

## Industries

Salesforce goes industry-specific with tailored solutions for financial services and health care. In this release, Financial Services Cloud gets new insurance capabilities; Health Cloud gets new data models to help manage provider relationships and life sciences programs; and users can book financial and health appointments with Lightning Scheduler.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<b>Financial Services Cloud</b>				
<b>Insurance for Financial Services Cloud</b>				
Plan, Perform, and Stay Smart with the Insurance App			✓	
Deepen Customer Relationships with the Person Life Event Component			✓	
Get a 360-Degree View of Policyholders with the Policy Component			✓	
Handle Service Requests Better and Faster with Lightning Flow for Financial Services Cloud (not immediately available)			✓	
Empower Customers to Schedule Appointments with Lightning Scheduler			✓	
Connect Action Plans to Appointments with Lightning Scheduler			✓	
Create Action Plans for More Objects		✓		

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">See More on the Relationship Map with Usability Enhancements</a>			✓	
<a href="#">Boost Predictive Power for Retail Bankers with Einstein Analytics for Financial Services Enhancements (not immediately available)</a>				
<a href="#">Financial Services Cloud Has New Objects</a>		✓		
<b>Health Cloud</b>				
<a href="#">Increase Engagement with Life Sciences Program Management</a>		✓		
<a href="#">Create a Directory of Providers with the Provider Relationship Management Data Model</a>			✓	
<a href="#">Empower Patients and Members to Schedule Appointments with Lightning Scheduler</a>				
<a href="#">Scroll Through Patient Timeline Events</a>	✓			
<a href="#">Integrate Health Cloud Using MuleSoft CAQH Connector</a>				
<a href="#">Make Processes Easier for Customers with Flows</a>	✓			
<a href="#">Build Integrations with the Health Cloud Business APIs</a>				
<a href="#">Health Cloud Has New and Changed Objects</a>		✓		
<a href="#">New and Changed Health Cloud Lightning Components</a>			✓	

## myTrailhead

With myTrailhead, you can offer your users the same skill-based, gamified learning experience as Salesforce Trailhead with content that you create for your company. You can also brand myTrailhead with your company logo, banner image, and color.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Reinvent Learning at Your Company</a>			✓	

## Customization

Make sure your data leads to quality predictions and be more precise with filter conditions in Einstein Prediction Builder. Get better recommendations and predictions with Einstein Next Best Action. Build flows more easily with a more robust Flow Builder and a host of new features.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<b>Einstein Prediction Builder</b>				
<a href="#">Catch Errors Before They Happen with Data Checker in Einstein Prediction Builder</a>			✓	
<a href="#">Fine-Tune Your Filters with Custom Logic in Einstein Prediction Builder</a>			✓	
<b>Einstein Next Best Action</b>				
<a href="#">Create Expressions for Filtering Recommendations More Easily in Next Best Action Strategies</a>		✓		
<a href="#">Dynamically Deliver and Enhance Next Best Action Recommendations from Salesforce Objects or External Data Sources</a>		✓		
<a href="#">Use the Map Element to Add Simple Enhancements or Map Recommendation Fields to Flow Input Variables</a>		✓		
<a href="#">Package Next Best Action Strategies for Distribution</a>		✓		
<b>Lightning Flow</b>				
<a href="#">Analyze Your Automated Business Processes in Automation Home (Beta)</a>		✓		
<b>Process Builder</b>				
<a href="#">Prevent Invalid Processes from Being Saved</a>		✓		

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
Reference Custom Metadata Type Records in Process Builder		✓		
Integrate Einstein Predictions Using Prediction Events		✓		
<b>Process and Flow Design</b>				
Manipulate Complex Internet Data in Flows Without Code Using Apex-Defined Data Types		✓		
Make Dependent Picklist Screen Components Required		✓		
Access the Flow Interview Start Time with a New System Variable		✓		
Add Quip Documents and Chat to Your Processes and Flows		✓		
Keep Users in the Know with Notification Builder			✓	
<b>Flow Builder</b>				
Create Flows from Flow Templates		✓		
See Only Available Building Blocks for Your Flow Type in Flow Builder		✓		
Build Flows Faster with a Full-Featured, Easier Experience		✓		
Use Rich Text in Display Text Screen Components, Choice Labels, Help Text, and More		✓		
Include Images in Rich Text Controls (Beta)		✓		
Find Actions by Type or Category When Building Flows		✓		
<b>Lightning Scheduler Flows</b>				
Streamline Customer Appointment Scheduling with Standard Flows and Templates for Lightning Scheduler	✓			
Optimize the User Experience in Custom Lightning Scheduler Flows with the \$Client.FormFactor Global Variable		✓		

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<b>New Flow Content</b>				
Explore our New Trail: Build Flows with Flow Builder		✓		
Get up to Speed Easily Before You Set Up and Use Flow Features		✓		
<b>Other Changes for Lightning Flow</b>				
Get Increased Usage-Based Entitlements for Processes and Flows in Enterprise and Unlimited Editions	✓			
Misconfigured Values in Flow Assignments Now Result in Errors		✓		
Create and Debug Flows More Efficiently with New Errors, Warnings, and Debug Details		✓		
Improved Validation and Error Messages for Flow Assignment Elements		✓		
Get More Intuitive Dependent Picklist Labels		✓		
Remove EventSubscription and EventDelivery from Existing Packages		✓		
<b>Critical Updates for Lightning Flow</b>				
Evaluate Criteria Based on Original Record Values in Process Builder (Critical Update)		✓		
Use the BR() Function in Flows and Processes Correctly (Critical Update)		✓		
Improve Security by Requiring User Access to Apex Classes Invoked by Flow (Critical Update)		✓		
"Check for Null Record Variables or Null Values of Lookup Relationship Fields in Process and Flow Formulas" (Critical Update, Postponed)			✓	
<b>Retiring Features</b>				
Flow Builder Is Replacing Cloud Flow Designer		✓		
Process Visualizer Is Retiring		✓		

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
Swing Flows Is Retiring		✓		
<b>Lightning App Builder</b>				
Get More Options When Creating Record Pages			✓	
Quickly Build Contextual Filters for Einstein Analytics Dashboards		✓		
Display Einstein Discovery Predictions in Lightning Experience Record Pages		✓		
View Quip Notifications Directly in Salesforce		✓		
Track Individual Emails in the Outlook			✓	
Explore Pardot Data on Salesforce Campaigns			✓	
Switch Between Pinned and Non-Pinned Page Templates			✓	
<b>Salesforce Connect</b>				
Track Data Changes to External Objects More Easily (Generally Available)		✓		
Build Picklists on External Objects from OData Adapters		✓		
Get More Records for External Object Reports	✓			
Choose from Expanded Authentication Protocols for Your External Services			✓	
Related Updates for Developers		✓		
<b>Data Protection and Privacy</b>				
Track Customer Consent with Authorization Form Objects		✓		
Classify Your Sensitive Data to Support Your Data Management Policies (Generally Available)		✓		
Add Credit Score and Influencer Information to Your Data Privacy Records	✓			

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Customize Data Sensitivity Values for Fields</a>		✓		
<a href="#">Get Data Protection and Privacy by Default</a>	✓			
<b>Objects and Fields</b>				
<a href="#">Show Einstein Predictions in Formula Fields</a>	✓			
<a href="#">Work with More Custom Objects in Your Org</a>			✓	
<a href="#">Monitor and Accelerate Removing Deleted Custom Fields from Your Org</a>			✓	
<a href="#">Global Value Set Behavior Is Standardized in Managed Packages</a>			✓	
<b>Sharing</b>				
<a href="#">Safeguard Your Data by Setting External Access Levels for More Standard Objects (Beta)</a>				✓
<a href="#">User and Custom Object Access Settings Default to Private</a>			✓	
<a href="#">External Org-Wide Defaults Are Enabled in Orgs with Communities or Portals (Critical Update)</a>			✓	
<b>Globalization</b>				
<a href="#">Go Global with New International Date and Time Formats (Pilot)</a>			✓	
<a href="#">Connect with More Customers with New Platform Languages</a>	✓			
<a href="#">Get Things Right with Right-to-Left Languages (Beta)</a>	✓			
<a href="#">AppExchange</a>	✓			
<b>General Setup</b>				
<a href="#">Add Flexibility to Your Permission Set Group with Muted Permissions (Pilot)</a>				✓
<a href="#">Create Objects from Spreadsheets</a>		✓		

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">Standard Invocable Actions for Session-Based Permission Sets Are Categorized for Flows</a>		✓		
<a href="#">Gain Insight into Your Company's Installed AppExchange Packages</a>		✓		
<a href="#">Set Up Quip Faster</a>		✓		
<a href="#">Add Salesforce Users to Your Quip Site Faster</a>		✓		
<a href="#">Use More Characters in a Big Object's Index</a>		✓		
<a href="#">Define More Field Types for Big Objects</a>		✓		
<a href="#">Enable Enhanced Permission Set Component Views</a>		✓		
<a href="#">Enhanced External Services: Get Better Connections for a Better Tomorrow (Pilot)</a>				✓
<a href="#">Updated Topic Assignment Label</a>	✓			
<a href="#">Match Production Licenses for Orgs on Different Releases</a>		✓		
<a href="#">Add a Namespace Prefix to pageReference.state Properties and Query Parameters (Critical Update, Enforced)</a>			✓	
<a href="#">Protect Your Custom Settings and Custom Metadata Values</a>		✓		
<a href="#">Require Customize Application Permission for Direct Read Access to Custom Settings (Critical Update)</a>		✓		

## Security and Identity

You can now use OAuth custom scopes to define a connected app's access to an external entity's protected data. Filter the data you encrypt with the case-insensitive deterministic encryption scheme. Require users to have a high-assurance session security level before accessing certain Setup pages or objects. And monitor events using a new dashboard with Event Manager.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<b>Authentication and Identity</b>				
Customize OAuth Scopes		✓		
Add Lightning Login to My Domain			✓	
Choose from More Authentication Protocols for Named Credentials			✓	
Reset Passwords with Right-to-Left Languages	✓			
Increase Password Complexity			✓	
See Failed Login Attempts		✓		
Customize Verify Page at Login		✓		
Password Page for Login Discovery		✓		
Enable Contactless Users			✓	
Enable Logout Event Streaming Using a New UI (Beta)			✓	
Changed SAML ACS URLs		✓		
Restricted Access in Default External Identity Profile		✓		
Learn About Mobile-First Identity		✓		
Learn About Connected Apps		✓		
<b>Salesforce Shield</b>				
<b>Shield Platform Encryption: More Encryption Stats, More Fields, and Case-Insensitive Filter-Preserving Encryption Generally Available</b>				
See More Statistics About Your Encrypted Data			✓	
Encrypt Your Chat Transcripts			✓	
Encrypt Data in Your Scratch Orgs				
Get Exact Matching with Case-Insensitive Deterministic Encryption (Generally Available)			✓	
Encrypt Activity Subject Data			✓	
Encrypt Your Email Messages (Generally Available)			✓	

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<b>Event Monitoring: Lightning Page View EPT Improvement, Real-Time Event Monitoring (Beta), Enhanced Transaction Security (Beta), and Event Manager</b>				
Stream and Store Event Data in Near Real-Time (Beta)			✓	
Create Transaction Security Policies to Protect Any Object (Beta)			✓	
Enable Login Event Storage Using a New UI			✓	
Manage Event Monitoring Events in One Place		✓		
View Changes to Transaction Security Policies in Setup Audit Trail		✓		
Get More Relevant Effective Page Times in Lightning Page View Logs		✓		
Changed Data Type for Fields in Apex Unexpected Exception Event Type		✓		
<b>Other Changes</b>				
<b>Require TLS 1.2 for HTTPS Connections (Critical Update)</b>			✓	
<b>Manage Access to Certificates and Event Log Files with Session-Security-Level Policies</b>		✓		
<b>Stabilize the Hostname for My Domain URLs in Sandboxes (Critical Update, Postponed)</b>				

## Deployment

New components are available for deployment.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<b>New and Changed Components for Change Sets</b>		✓		

## Salesforce IoT

IoT Insights has a new name: Event Insights.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">IoT Insights Is Now Event Insights</a>			✓	

## Development

Whether you're using Lightning components, Visualforce, Apex, or our APIs with your favorite programming language, these enhancements help you develop amazing applications, integrations, and packages for resale to other organizations.

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<b>Lightning Components</b>				
<a href="#">Make Long-Running Callouts with Continuations</a>		✓		
<a href="#">Use Lightning Web Components in Standalone Aura Apps</a>		✓		
<a href="#">Use Lightning Web Components in Visualforce Pages</a>		✓		
<a href="#">Add Lightning Web Components to Apps with Lightning Out (Beta)</a>		✓		
<a href="#">DOM Inspection Tests Are Subject to Change</a>		✓		
<a href="#">Improved Save-Time Validation for Aura Components</a>		✓		
<a href="#">Prevent Creation of Function Expressions in Dynamically Created Aura Components (Critical Update)</a>			✓	
<a href="#">Disable Access to Non-global Apex Controller Methods in Managed Packages (Previously Released Critical Update)</a>			✓	
<a href="#">Use without sharing for @AuraEnabled Apex Controllers with Implicit Sharing (Critical Update, Postponed)</a>			✓	
<a href="#">Extend Email Integrations with Lightning Web Components</a>			✓	

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<b>Configure Your Component for Different Devices</b>		✓		
<b>Test JavaScript for Lightning Locker Compatibility</b>		✓		
<b>Add Static Resources to CORS Whitelist</b>			✓	
<b>Einstein Platform Services</b>				
<b>Training Requests from Paid Plans Are Prioritized</b>		✓		
<b>Number of API Calls to Return Examples Is Limited to 30 Calls Per Month</b>		✓		
<b>Einstein Vision: Dataset Maximum Size Increased, New language Field</b>				
Maximum Image Dataset Size Increased to 2 GB		✓		
Exceeding the Maximum Dataset Size Returns an Error		✓		
API Response JSON Contains a New language Field		✓		
API Response JSON Contains a New numOfDuplicates Field		✓		
<b>Einstein Language: Dataset Maximum Size Increased, New language Parameter and Field</b>				
Maximum Text Dataset Size Increased to 2 GB		✓		
Exceeding the Maximum Dataset Size Returns an Error		✓		
Use the Optional language Parameter When Creating a Text Dataset		✓		
API Response JSON Contains a New language Field		✓		
API Response JSON Contains a New numOfDuplicates Field		✓		
<b>Visualforce</b>				
<b>View Data Updates in Real Time with Live Controller (Pilot)</b>			✓	
<b>Update Your Guest User Access to Private Static Resources</b>			✓	

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
<a href="#">CKEditor Replaces FCKEditor for Rich-Text Editing in Visualforce Pages</a>			✓	
<a href="#">Remove Instance Names from URLs for Visualforce, Community Builder, Site.com Studio, and Content Files (Critical Update, Postponed)</a>			✓	
<b>Apex</b>				
<a href="#">Enforce Field-Level Security in Apex (Pilot)</a>		✓		
<a href="#">Use Platform Cache with Scratch Orgs</a>		✓		
<a href="#">Fire Platform Events from Batch Apex Classes (Generally Available)</a>		✓		
<a href="#">Enable Improved Caching of Org Schema (Critical Update, Postponed)</a>		✓		
<b>API</b>				
<a href="#">Limit User Access When Delegating Access to Metadata (Generally Available)</a>				
<a href="#">Use Query Jobs with Bulk API 2.0 (Pilot)</a>				
<a href="#">Perform Mass Operations With A Single API Call (Pilot)</a>				
<a href="#">API Only Users Can Access Only Salesforce APIs (Previously Released Critical Update)</a>			✓	
<b>Custom Metadata Types</b>				
<a href="#">Reference Custom Metadata Type Records in Process Builder</a>		✓		
<a href="#">Get More Custom Metadata Types</a>		✓		
<a href="#">Monitor Custom Metadata Type Use in System Overview</a>		✓		
<a href="#">Custom Metadata Type Creation Visibility Option Updated to New Functionality</a>		✓		
<b>Salesforce CLI (not immediately available)</b>				

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
Run Salesforce CLI Commands Faster with oclif		✓		
Eliminate the Guesswork for DX Project Structure		✓		
Use source Commands for the Full Application Life Cycle (Generally Available)		✓		
<b>Scratch Orgs</b>				
Select the Salesforce Release for a Scratch Org		✓		
Create Environments with More Scratch Org Features		✓		
Configure Scratch Orgs with Einstein Bots		✓		
<b>Sandboxes</b>				
Use Salesforce CLI for Sandbox Operations (Beta)		✓		
<b>Salesforce Extensions for VS Code</b>				
Force.com IDE Is Being Retired in October 2019		✓		
Get a Better Editing Experience with the Aura Extension for VS Code		✓		
<b>Developer Console</b>				
Format Your Code with Prettier in Developer Console		✓		
Enqueued Time Field in Tests Tab Is Accurate in All Time Zones		✓		
<b>Debugging</b>				
Store More and Larger Debug Logs		✓		
<b>Packaging</b>				
Track Leads and Manage Licenses for Second-Generation Managed Packages (Beta)				✓
Customize How Unlocked Packages Are Installed and Upgraded			✓	

Feature	Enabled for users	Enabled for administrators/ developers	Requires administrator setup	Contact Salesforce to enable
Modify and Debug Namespaced Unlocked Packages More Easily			✓	
Other Enhancements in Unlocked Packages			✓	
<b>AppExchange Partners</b>				
See the Health of Your AppExchange Listing with Marketplace Analytics		✓		
Gain Insight into Managed Package Usage with App Analytics				✓
Test Your Package Versions with ISV Hammer (Pilot)				✓
<b>Change Data Capture</b>				
Process Change Event Messages in Apex Triggers		✓		
Compose Streams of Change Data Capture Notifications with Custom Channels		✓		
Receive Change Event Notifications for More Objects		✓		
Use transactionKey Instead of isTransactionEnd for Synchronizing Changes Within Transaction Boundaries		✓		
<b>Platform Events</b>				
Choose the Publishing Behavior for Your Platform Event		✓		
Process Smaller Event Batches in Platform Event Triggers and Recover from Exceptions		✓		
Get Notified of Asynchronous Platform Event Publish Errors (Beta)		✓		
Receive Streaming Events in Your Lightning Web Component		✓		

## Supported Browsers

We've made some changes to our supported browsers documentation, making it easier to find what you need. Supported browsers for Salesforce vary depending on whether you use Salesforce Classic or Lightning Experience.

### IN THIS SECTION:

#### [Supported Browsers for Lightning Experience](#)

See the supported browsers and limitations for Lightning Experience.

#### [Supported Browsers for Salesforce Classic](#)

Salesforce Classic supports Microsoft® Internet Explorer® 11 and Apple® Safari® version 12.x on macOS. The most recent stable versions of Microsoft Edge, Mozilla® Firefox®, and Google Chrome™ are also supported.

#### [Supported Browsers for Einstein Analytics](#)

The supported browsers for Einstein Analytics are Microsoft® Edge, Microsoft Internet Explorer® 11, and the most recent stable versions of Mozilla® Firefox® and Google Chrome™. Analytics isn't supported on Apple® Safari®.

## Supported Browsers for Lightning Experience

See the supported browsers and limitations for Lightning Experience.

**Where:** Lightning Experience is available in the Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

### Note:

- Salesforce doesn't support non-browser applications that embed WebView or similar controls to render content for Salesforce Classic, Lightning Experience, or Salesforce mobile web. Examples of approaches that embed this type of control include Salesforce Mobile SDK, Microsoft's WebBrowser Control, Electron's embedded Chromium browser, iOS's UIWebView and WKWebView, and Android's WebView.
- You can't access Lightning Experience in a mobile browser. Instead, we recommend using the Salesforce app when you're working on a mobile device. For a list of supported mobile browsers on Salesforce, see [Requirements for the Salesforce App](#).

### Important: Support for Internet Explorer 11 to access Lightning Experience is retiring beginning in Summer '16.

- You can continue to use IE11 to access Lightning Experience until December 16, 2017.
- If you opt in to [Extended Support for IE11](#), you can continue to use IE11 to access Lightning Experience until December 31, 2020.
- IE11 has [significant performance issues](#) in Lightning Experience.
- It is strongly recommended that you do not use Internet Explorer 11 with Community Builder.
- This change doesn't impact Salesforce Classic.

	Microsoft® Internet Explorer®	Microsoft® Edge	Google Chrome™	Mozilla® Firefox®	Apple® Safari®
Lightning Experience	IE 11 (EOL December 31, 2020)	Latest	Latest	Latest	12.x+

	Microsoft® Internet Explorer®	Microsoft® Edge	Google Chrome™	Mozilla® Firefox®	Apple® Safari®
Lightning Communities	IE 11	Latest	Latest	Latest	12.x+
Special setup considerations?	No	No	No	No	No
Limitations?	Yes	Yes	No	Yes	Yes

 **Note:** The term “latest” is defined by the browser vendors. Check with your browser vendor to determine the latest version available.

## Supported Browsers for Salesforce Classic

Salesforce Classic supports Microsoft® Internet Explorer® 11 and Apple® Safari® version 12.x on macOS. The most recent stable versions of Microsoft Edge, Mozilla® Firefox®, and Google Chrome™ are also supported.

**Where:** Salesforce Classic is available in all editions.

 **Note:** Using Salesforce Classic in a mobile browser isn't supported. Instead, we recommend using the Salesforce app when you're working on a mobile device. To see the mobile browsers that are supported for Salesforce, check out [Requirements for the Salesforce App](#).

	Microsoft Internet Explorer	Microsoft Edge	Google Chrome	Mozilla Firefox	Apple Safari
Salesforce Classic	IE 11	Latest	Latest	Latest	12.x+
Salesforce Console	IE 11	Latest	Latest	Latest	No
Special setup considerations?	Yes	No	No	Yes	No
Limitations?	Yes	Yes	No	No	Yes

 **Note:** The term “latest” is defined by the browser vendors. Check with your browser vendor to determine the latest version available.

## Supported Browsers for Einstein Analytics

The supported browsers for Einstein Analytics are Microsoft® Edge, Microsoft Internet Explorer® 11, and the most recent stable versions of Mozilla® Firefox® and Google Chrome™. Analytics isn't supported on Apple® Safari®.

# Salesforce Overall: New Tools to Transition to Lightning Experience and Empower Productivity

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We turn on Lightning Experience for all orgs, and introduce new tools to help you manage your transition. Plus, we provide customizable prompts to get your users engaged with all that's great in the new Salesforce. Land on the same record page when switching from Salesforce Classic to Lightning Experience. Run the full desktop version of Lightning Experience on iPad devices. See and do more with related lists when you turn on Enhanced Related Lists. Streamline appointment scheduling with a self-service interface and more Salesforce integrations in Lightning Scheduler. Send survey invites for free and get more responses with customized email invitations in Salesforce Surveys. Make the most of your browser space with a right-aligned utility bar in Lightning Console. Find what you need fast with search results that reflect how you navigate, and easily see which objects were searched in your search results. Access even more recent items in the Lightning Experience navigation bar. And that's only half of it.

## IN THIS SECTION:

### [Lightning Experience Transition: Critical Update and Transition Tools](#)

In Winter '20, we're turning on Lightning Experience for all orgs. So take advantage of the time now to prepare your org and users. We've got just what you need for the job with the new Lightning Experience Transition Assistant and its collection of handy transition tools.

### [Lightning Experience Adoption: In-App Guidance and Help Menu](#)

Add custom prompts to onboard and train users, highlight configuration changes and news, introduce new features, and more. Know that you're seeing content that's relevant to your workspace with enhancements to the Help Menu.

### [Get Lightning Experience on Your Phone with Lightning on Mobile \(Pilot\)](#)

Lightning Experience has come to mobile! The next evolution of the Salesforce mobile app brings Lightning apps and Lightning record page customizations and components to the Salesforce mobile experience. Enhancements to the Lightning App Builder make it easier for you to create custom mobile experiences. Your customers can have a truly seamless and customized experience across their desktop and mobile devices.

### [Keep Record Context When Switching from Salesforce Classic to Lightning Experience](#)

When you switch from Salesforce Classic to Lightning Experience, you land on the same page in Lightning Experience, if it exists. If the same page doesn't exist in Lightning Experience, you are redirected to your default landing page, which is determined by the org default or your customizations.

### [Access Lightning Experience from Safari on iPad Devices \(Beta\)](#)

Give your users the ability to run the full desktop version of Lightning Experience on their iPad device when they're away from their desktop or laptop.

### [Power Up Your Related Lists with Enhanced Related Lists \(Beta\)](#)

Take your related lists to the next level. With Enhanced Related Lists, you can show up to 10 columns, resize and sort your columns, perform mass actions, and wrap text.

### [Zoom Through Related Lists with Quick Filters](#)

Use quick filters in your related lists to find the data that you're looking for. Related list quick filters are different from regular list view filters in that they aren't saved, persist only throughout your current session, and can't be shared.

### [Search Picklist Fields in List Views](#)

You don't have to manually pick through your list views to find the picklist values you're looking for. List view search now includes picklists in your query results. Dependent picklists and picklists with translated values aren't searchable.

### [New Record Creation Pages Stay in Browser History](#)

Now when you use the New standard action to create a record, the page to create a new record stays in your browser history. When you refresh the page or go backward or forward through your browser history, your browser remembers what page you were on. The new record flow applies to both standard and custom objects.

### [Try New Lightning Features with the Lightning Extension for Chrome](#)

Are you an early adopter of the latest and greatest technology ... or do you want to become one? With the Lightning Extension for Chrome, you can gain access to the latest Lightning features and try them before everyone else.

### [Lightning Scheduler: Inbound Appointment Scheduling, Event Management, Action Plans, and More](#)

Schedule inbound appointments with Lightning Scheduler's self-service interface embedded in a website or via Communities. Manage calendar availability with Event Management. Plus, Lightning Scheduler now partners with Action Plans and Salesforce Surveys.

### [Salesforce Surveys: Free Sending, Customized Email Invitations, and an Improved User Experience](#)

Create surveys and send invitations for free, then pay based on the number of responses you receive after the free allotment. Send personalized email invitations to participants. Enhance the user experience with an increased character limit for questions, response choices, and participant comments. It's also easier for participants to work with surveys on mobile devices.

### [Lightning Console Apps: Detect Popped-Out Utilities with New API](#)

A new API method tells you when a utility is popped out.

### [Search: Search Results That Reflect How You Navigate and More Details About Your Search Results](#)

Search results prioritize what's in an app's navigation bar, so searching is more relevant to the way your users work. On the search results page, see how many results were found for each object. Also, more objects are searchable.

### [See More in Item Menus on the Navigation Bar](#)

We increased the number of recent items shown in item menus from three to five. We also made some styling enhancements, including bold section names and separators, to make it easier to tell the different sections apart.

### [Assign Custom Colors to Hyperlinks](#)

Complete the look and feel of your company's theming and branding in Lightning Experience by defining a hyperlink color.

### [Themes and Branding Accessibility Label Improvements](#)

To improve the usability of the Themes and Branding setup screen, we updated the label Accessible Brand Color to Accessibility Override. We also changed the checkbox label from Override to Override accessible brand color. And we updated the Accessibility Override tooltip.

### [The Lightning Experience Header Is Hidden When You Print from Your Browser](#)

All you want is what's on the page. The Lightning Experience header, including the search box and navigation bar, is no longer included when you print from your browser.

### [View Records Using Full View \(Beta\)](#)

Now you have two record page view default options. Choose between the current view—now called Grouped view—and the new Full view. Full view displays all details and related lists on the same page. If you're transitioning to Lightning Experience, this view is similar to Salesforce Classic.

### [Set Org Defaults for How Activities Display on Record Pages](#)

Control how your users view activities on record pages. Set the default view to the newer expandable activity timeline, or choose the activities related lists view that will feel familiar to Salesforce Classic users. Users can switch between options whenever they want.

### [Rich Text Editors Get an Upgrade](#)

Rich text editors that are using CKEditor have been upgraded to CKEditor version 4.11.2.

[Open Hyperlinks in Formula Fields Correctly \(Critical Update, Postponed\)](#)

This critical update, released in Winter '19, was scheduled for auto-activation in Summer '19, but has been postponed to Spring '20.

## Lightning Experience Transition: Critical Update and Transition Tools

In Winter '20, we're turning on Lightning Experience for all orgs. So take advantage of the time now to prepare your org and users. We've got just what you need for the job with the new Lightning Experience Transition Assistant and its collection of handy transition tools.

### IN THIS SECTION:

[Turn On Lightning Experience \(Previously Released Critical Update\) Delayed Until January 2020](#)

Previously, we announced that this critical update would activate with Winter '20. Out of an abundance of caution, we have decided to delay auto-activation of this update. It will now activate for your org within 72 hours of January 7, 2020.

[Transition Assistant: Everything You Need in One Place](#)

Looking for help moving your org from Salesforce Classic to Lightning Experience? The Lightning Experience Transition Assistant is your central hub for all the recommended activities, tools, and resources for a successful transition. The Transition Assistant replaces the Lightning Experience Migration Assistant. The latest version of the Transition Assistant has streamlined navigation and some new and reorganized steps.

[Turn On Lightning Experience and Don't Look Back](#)

As of October 12, 2019, you can't turn off Lightning Experience after it's been turned on. The Turn on Lightning Experience toggle is grayed out in the Lightning Experience Transition Assistant. You and your users can still switch between Salesforce Classic and Lightning Experience.

[Use the Readiness Check to Guide Your Lightning Experience Transition](#)

Run the Lightning Experience Readiness Check to get the latest Lightning Experience news on features that we evaluate. The Readiness Report has been enhanced with a new section on Report Builder.

[Lightning Experience Configuration Converter: Scanning and Preparing Visualforce Pages, Hard-Coded URLs, AppExchange Packages, and More](#)

Streamline and automate common transition tasks using the Lightning Experience Configuration Converter. We've enhanced the support for Visualforce pages and JavaScript buttons, and made the Actions and Buttons tab generally available. And the tool now helps with AppExchange packages and hard-coded URLs.

[Get Guidance to Prepare Your Org for Lightning Experience](#)

Don't know what to do first to prepare your org for Lightning Experience? Admins in orgs where Lightning Experience isn't turned on yet will see a series of suggested actions to help them with recommended transition steps. If now isn't a good time to complete the suggested action, you can opt to get a reminder at a later time.

## Turn On Lightning Experience (Previously Released Critical Update) Delayed Until January 2020

Previously, we announced that this critical update would activate with Winter '20. Out of an abundance of caution, we have decided to delay auto-activation of this update. It will now activate for your org within 72 hours of January 7, 2020.

**Where:** This change applies to Group, Developer, Professional, Enterprise, Performance, and Unlimited editions for all orgs that don't yet have Lightning Experience turned on.

**When:** This update was introduced under Critical Updates on January 28, 2019. The update starts auto-activating on a rolling basis in starting January 7, 2020

**Who:** Admins with the Modify All Data and Customize Application permissions see the critical update in Setup.

This update applies to all users with the Lightning Experience User permission enabled, including all users with standard profiles and users with custom profiles or permission sets that have the Lightning Experience User permission enabled. Custom profiles created before Winter '16 do not include the Lightning Experience User permission. Starting with Winter '16, any custom profile that was cloned from a standard profile does include the user permission, but admins can edit the profile to disable the permission.

**Why:** As part of our release process, we conduct rigorous testing and build in multiple checkpoints to ensure quality. We've discovered a potential technical issue unrelated to Lightning Experience that could impact your general experience with the Winter '20 release. To prioritize customer success, we're applying an abundance of caution and delaying some post-release activities, including the Lightning Experience critical update.

**How:** You can self-enable Lightning Experience before January and we encourage you to do so to take advantage of everything it has to offer. As you know, Salesforce Lightning is the future of the Salesforce user experience and platform and it benefits everyone, from business leaders and users to admins and IT teams.

From Setup, enter *Critical Updates* in the Quick Find box, and then select **Critical Updates**. For Turn on Lightning Experience, click **Review**. When you're ready to turn on Lightning Experience, you can activate the update either in Critical Updates or Lightning Experience in setup. We recommend that you test this update in a sandbox or Developer Edition org before activating the update in production.

We provide several tools that automate and speed up the transition process, including the [Lightning Experience Transition Assistant](#). You can also visit the [Lightning Now Trailblazer Community](#) to get answers from Lightning Experience experts.

## Transition Assistant: Everything You Need in One Place

Looking for help moving your org from Salesforce Classic to Lightning Experience? The Lightning Experience Transition Assistant is your central hub for all the recommended activities, tools, and resources for a successful transition. The Transition Assistant replaces the Lightning Experience Migration Assistant. The latest version of the Transition Assistant has streamlined navigation and some new and reorganized steps.

### IN THIS SECTION:

#### [Drive Your Transition with the Lightning Experience Transition Assistant](#)

The Transition Assistant puts you in the driver's seat on the journey to Lightning Experience. Get guidance on key activities, from evaluating readiness and building a business case, preparing your implementation and going live, to tracking and driving user adoption. And ultimately, turning off Salesforce Classic.

#### [Navigate Between Lightning Experience Transition Assistant Phases](#)

Now you can move back and forth between the phases in the Transition Assistant without going to the home page. New navigation links are available at the top of each page.

#### [Work With New and Reorganized Steps in the Lightning Experience Transition Assistant](#)

To help with your Lightning Experience transition, we added a few more tools to the Transition Assistant. We also rearranged some activities to refine the sequence of stages and steps in each phase of the transition.

#### [Where to Find the Tools That You Used to Access in the Migration Assistant](#)

All the tools, features, and settings that you used to access in the Lightning Experience Migration Assistant are now available in the Transition Assistant.

## Drive Your Transition with the Lightning Experience Transition Assistant

The Transition Assistant puts you in the driver's seat on the journey to Lightning Experience. Get guidance on key activities, from evaluating readiness and building a business case, preparing your implementation and going live, to tracking and driving user adoption. And ultimately, turning off Salesforce Classic.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Who:** To use the Transition Assistant, you must have the View Setup and Configuration and Customize Application user permissions. My Domain must be deployed in your org to use some of the tools in the Transition Assistant.

**Why:** For easier manageability, the Transition Assistant breaks up the process into three phases. Each phase walks you through the steps and tools that speed up the work.

Quick Find / Search...

Expand All | Collapse All

**Lightning Experience Transition Assistant**

Switch to the modern, intelligent Salesforce.

[Get Started](#)

**Salesforce Mobile Quick Start**

**Home**

**Administer**

- Manage Users
- Manage Apps
- Manage Territories
- Company Profile
- Data Classification
- Security Controls
- Domain Management
- Communication Templates
- Translation Workbench
- Data Management
- Mobile Administration
- Desktop Administration
- Outlook Integration and Sync
- Gmail Integration and Sync

## Lightning Experience Transition Assistant

### The Path to Lightning Experience

The Transition Assistant guides you through your company's journey to Lightning Experience.

For easier manageability, we break up the transition into three phases. Come here during each phase to get step-by-step guidance and tools that speed you through the process.

#### Follow the Path

**1**

**Discover Phase**

Understand the benefits, assess readiness, and align with stakeholders.

[Go to Steps](#)

**2**

**Roll Out Phase**

Plan your rollout strategy, prepare your org, start change management activities, then go live!

[Go to Steps](#)

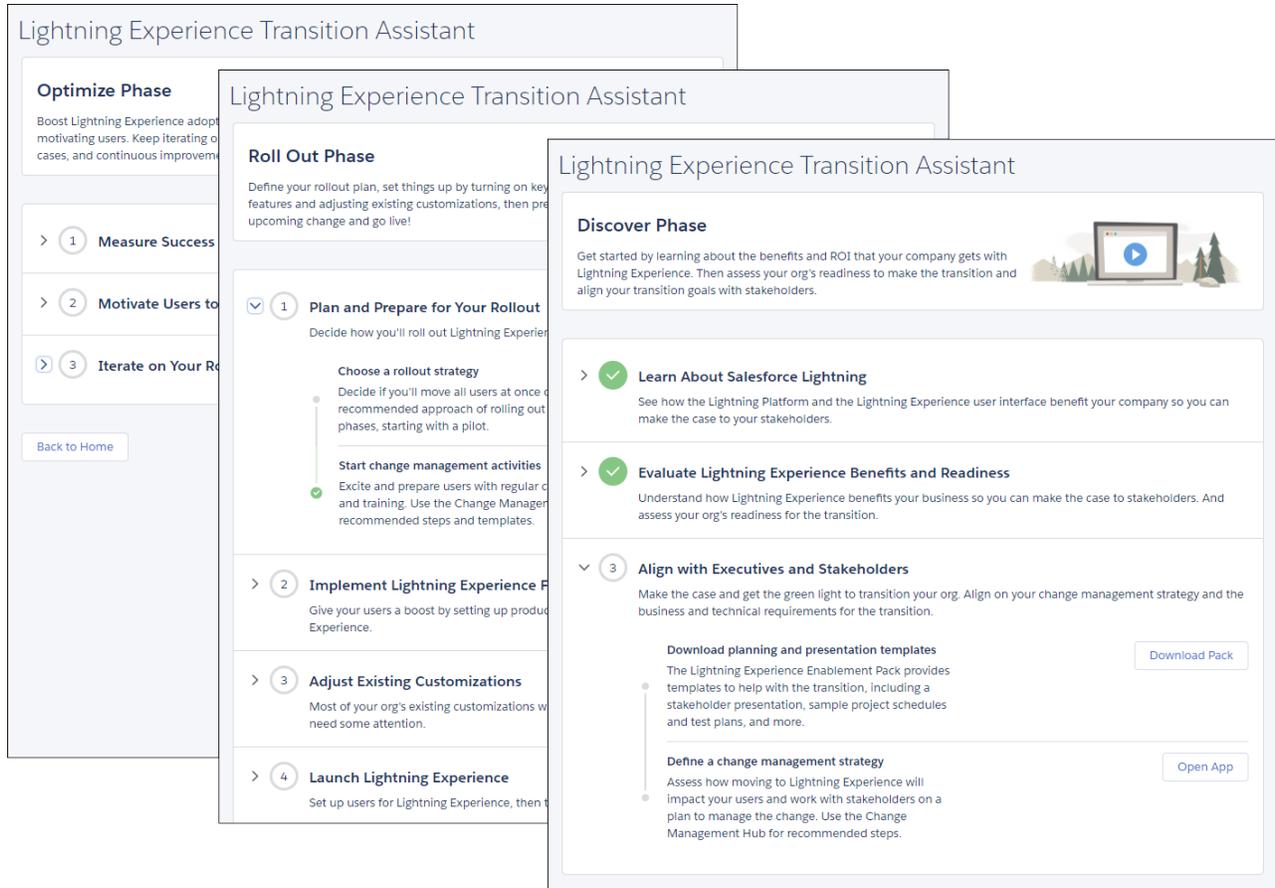
**3**

**Optimize Phase**

Drive adoption, measure success, and keep iterating to deliver the best experience.

[Go to Steps](#)

In each phase, activities are organized into a series of stages that keep things organized, help you monitor your progress, and inspire confidence that nothing important has been overlooked.



**How:** To access the Transition Assistant from Setup in Salesforce Classic, click **Get Started** in the Lightning Experience Transition Assistant tile. From Setup in Lightning Experience, click the **Lightning Experience Transition Assistant** link at the top of the menu.

## Navigate Between Lightning Experience Transition Assistant Phases

Now you can move back and forth between the phases in the Transition Assistant without going to the home page. New navigation links are available at the top of each page.

## Work With New and Reorganized Steps in the Lightning Experience Transition Assistant

To help with your Lightning Experience transition, we added a few more tools to the Transition Assistant. We also rearranged some activities to refine the sequence of stages and steps in each phase of the transition.

**Why:** Here's what has changed.

### Discover Phase

- The Plan stage has moved to the Discover phase, so you can define your rollout plan, then ask stakeholders to validate it during the Align stage.
- The step for defining a change management strategy is now in the Plan stage.

### Roll Out Phase

- This phase begins with a new stage that's focused on change management and preparing your users for the move to Lightning Experience.
- The Implement stage includes new steps for defining your org's default record page experience, including the way data is organized and activities are managed. You can ease the transition for users by delivering a record experience that's closer to what's in Salesforce Classic.
- The step for setting up My Domain is now in the Implement stage.

### Optimize Phase

- The Motivate stage includes a new step for customizing the Lightning Experience Help Menu.
- Complete your journey to Lightning Experience by turning off Salesforce Classic for your org. This step is now the final stage in the journey.

## Where to Find the Tools That You Used to Access in the Migration Assistant

All the tools, features, and settings that you used to access in the Lightning Experience Migration Assistant are now available in the Transition Assistant.

Tools, Features, and Settings	Migration Assistant Location	Transition Assistant Location	How to Use in Transition Assistant
Lightning Experience Readiness Check	Check Readiness tab	Discover phase > Evaluate stage	In the Check your Lightning Experience readiness step, click <b>Check Readiness</b> .
Lightning Experience Preview	Preview tab	Discover phase > Evaluate stage	In the Preview Lightning Experience step, click <b>Preview</b> .
Switch Users to Lightning Experience	Set Up Users tab	Roll Out phase > Launch stage	In the Make Lightning Experience the default interface step, click <b>Switch Users</b> .
Encourage Users to Stay in Lightning Experience	Set Up Users tab	Optimize phase > Motivate stage	In the Switch users to Lightning Experience on a regular schedule step, turn the option on or off.
Keep Lightning Experience Users in Lightning Experience Only	Set Up Users tab	Optimize phase > Motivate stage	In the Make Lightning Experience your org's only experience step, turn the option on or off.
Turn on Lightning Experience	Turn It On tab	Roll Out phase > Launch stage	In the Turn on Lightning Experience step, turn the option on or off.

## Turn On Lightning Experience and Don't Look Back

As of October 12, 2019, you can't turn off Lightning Experience after it's been turned on. The Turn on Lightning Experience toggle is grayed out in the Lightning Experience Transition Assistant. You and your users can still switch between Salesforce Classic and Lightning Experience.

**Where:** This change applies to Lightning Experience in Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Turn On Lightning Experience \(Previously Released Critical Update\) Delayed Until January 2020](#)

[Salesforce Help: Turn on Lightning Experience for Your Org \(can be outdated or unavailable during release preview\)](#)

## Use the Readiness Check to Guide Your Lightning Experience Transition

Run the Lightning Experience Readiness Check to get the latest Lightning Experience news on features that we evaluate. The Readiness Report has been enhanced with a new section on Report Builder.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Run the Readiness Check from Setup. In the Lightning Experience Transition Assistant tile, click **Get Started**. On the Discover Phase tile, click **Go to steps**. Expand the Evaluate Lightning Experience Benefits and Readiness stage, then click **Check Readiness**.

## Lightning Experience Configuration Converter: Scanning and Preparing Visualforce Pages, Hard-Coded URLs, AppExchange Packages, and More

Streamline and automate common transition tasks using the Lightning Experience Configuration Converter. We've enhanced the support for Visualforce pages and JavaScript buttons, and made the Actions and Buttons tab generally available. And the tool now helps with AppExchange packages and hard-coded URLs.

### IN THIS SECTION:

#### [Prepare Visualforce Pages for Lightning Experience \(Beta\)](#)

Most Visualforce pages work in Lightning Experience, but we're making it easier to find and update the ones that don't. Visit the Visualforce Pages tab in the Lightning Experience Configuration Converter to search your org to get a report on your org's Visualforce pages. Scan your production org to out which pages your users view the most—and which they don't use at all.

#### [Update Hard-Coded URLs for Lightning Experience \(Beta\)](#)

Hard-coded references to your org's original URL might not work when you enable My Domain. Use the Hard-Coded URLs tab in the Lightning Experience Configuration Converter to root out all your hard-coded URLs, and then update them with a single click.

#### [Make Sure Your AppExchange Packages are Ready for Lightning Experience \(Beta\)](#)

Visit the AppExchange Packages tab in the Lightning Experience Configuration Converter to scan your installed package metadata and prepare your AppExchange packages for Lightning Experience. Find out which packages are ready for Lightning Experience. Get recommendations on updating, replacing, or verifying the rest.

#### [Get a Downloadable Report on JavaScript Buttons](#)

Share the Lightning Experience Configuration Converter's JavaScript Button scan results with other members of your team more easily than ever. In addition to getting scan results in the Configuration Converter, you can also see the results in a CSV file that we email to you.

#### [Actions and Buttons Tab Generally Available](#)

The Actions and Buttons tab in the Lightning Experience Configuration Converter, which was released as a beta feature in Winter '19, is now generally available. Scan your org for standard, custom, and global actions and buttons, and easily move them from Salesforce Classic actions and buttons to Lightning Experience actions. Move all actions and buttons at once, or let the tool guide you through the move process for each object.

## Prepare Visualforce Pages for Lightning Experience (Beta)

Most Visualforce pages work in Lightning Experience, but we're making it easier to find and update the ones that don't. Visit the Visualforce Pages tab in the Lightning Experience Configuration Converter to search your org to get a report on your org's Visualforce pages. Scan your production org to out which pages your users view the most—and which they don't use at all.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Professional, Performance, Unlimited, and Developer editions.

 **Note:** As a beta feature, the Visualforce Pages feature in the Lightning Experience Configuration Converter is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for Visualforce Pages in the [Lightning Exp Configuration Converter Trailblazer Community](#).

**Who:** The Visualforce Pages feature requires the Customize Application and Modify All Data permissions.

**Why:** Results are organized into list views based on user profile and recent usage and prioritized by highest user impact and lowest level of effort. New list views show Visualforce pages your users haven't accessed in the last 90 days when you scan your production org. Apply Lightning Stylesheets with the click of a button. For updates that the tool can't complete, the Configuration Converter provides instructions for manual fixes. The Visualforce tab in the Configuration Converter replaces the Visualforce Check and the Visualforce Readiness PDF report generated by the Lightning Experience Readiness Check.

**How:** The Lightning Experience Configuration Converter is a standalone tool that lives outside of Salesforce. We recommend that you run it in a sandbox or Developer org first, and then migrate your changes to your production org. To get started, visit <https://lightning-configuration.salesforce.com/> and log in with your org credentials.

## Update Hard-Coded URLs for Lightning Experience (Beta)

Hard-coded references to your org's original URL might not work when you enable My Domain. Use the Hard-Coded URLs tab in the Lightning Experience Configuration Converter to root out all your hard-coded URLs, and then update them with a single click.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Professional, Performance, Unlimited, and Developer editions that have enabled My Domain.

 **Note:** As a beta feature, the Hard-Coded URLs tab in the Lightning Experience Configuration Converter is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for Hard-Coded URLs tab in the [Lightning Exp Configuration Converter Trailblazer Community](#).

**Who:** The Hard-Coded URLs feature requires the Customize Application and Modify All Data permissions.

**How:** The tool replaces static references to your original URL with new My Domain URLs. You can select individual URLs and replace them one at a time, or replace all hard-coded URLs at once.

The Configuration Converter is a standalone tool that lives outside of Salesforce. We recommend that you run it in a sandbox or Developer org first, and then migrate your changes to your production org. To get started, visit <https://lightning-configuration.salesforce.com/> and log in with your org credentials.

## Make Sure Your AppExchange Packages are Ready for Lightning Experience (Beta)

Visit the AppExchange Packages tab in the Lightning Experience Configuration Converter to scan your installed package metadata and prepare your AppExchange packages for Lightning Experience. Find out which packages are ready for Lightning Experience. Get recommendations on updating, replacing, or verifying the rest.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Professional, Performance, Unlimited, and Developer editions.

 **Note:** As a beta feature, the AppExchange Packages tab in the Lightning Experience Configuration Converter is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for the AppExchange Packages tab in the [Lightning Exp Configuration Converter Trailblazer Community](#).

**How:** The Configuration Converter is a standalone tool that lives outside of Salesforce. We recommend that you run it in a sandbox or Developer org first and then migrate your changes to your production org. To get started, visit <https://lightning-configuration.salesforce.com/> and log in with your org credentials.

## Get a Downloadable Report on JavaScript Buttons

Share the Lightning Experience Configuration Converter's JavaScript Button scan results with other members of your team more easily than ever. In addition to getting scan results in the Configuration Converter, you can also see the results in a CSV file that we email to you.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Professional, Performance, Unlimited, and Developer editions.

**Who:** The JavaScript buttons feature requires the Customize Application and Modify All Data permissions.

**How:** The Configuration Converter is a standalone tool that lives outside of Salesforce. We recommend that you run it in a sandbox or Developer org first, and then migrate your changes to your production org. To get started, visit <https://lightning-configuration.salesforce.com/> and log in with your org credentials.

## Actions and Buttons Tab Generally Available

The Actions and Buttons tab in the Lightning Experience Configuration Converter, which was released as a beta feature in Winter '19, is now generally available. Scan your org for standard, custom, and global actions and buttons, and easily move them from Salesforce Classic actions and buttons to Lightning Experience actions. Move all actions and buttons at once, or let the tool guide you through the move process for each object.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Professional, Performance, Unlimited, and Developer editions.

**Who:** The Actions and Buttons feature requires the Customize Application and Modify All Data permissions.

**How:** The Configuration Converter is a standalone tool that lives outside of Salesforce. We recommend that you run it in a sandbox or Developer org first, and then migrate your changes to your production org. To get started, visit <https://lightning-configuration.salesforce.com/> and log in with your org credentials.

## Get Guidance to Prepare Your Org for Lightning Experience

Don't know what to do first to prepare your org for Lightning Experience? Admins in orgs where Lightning Experience isn't turned on yet will see a series of suggested actions to help them with recommended transition steps. If now isn't a good time to complete the suggested action, you can opt to get a reminder at a later time.

**Where:** This change applies to Group, Developer, Professional, Enterprise, Performance, and Unlimited editions for orgs that don't yet have Lightning Experience turned on yet.

**When:** The first prompt appears in August, 2019. The timing of subsequent prompts depends on when the recommended action is completed.

**Who:** Only admins with the Modify All Data and Customize Application user permissions see the reminders.

**Why:** If completed in a timely manner, the suggested actions will help you prepare your org for when the [Turn on Lightning Experience Critical Update](#) is activated in Winter '20.

**How:** You can control the prompts. From Setup, enter *User Interface* in the Quick Find box, and then select **User Interface**. To stop showing prompts to admins, select **Disable Lightning Experience Transition Admin Reminders**.

Turning off this series of prompts also turns off the “Lightning Experience Turns On Soon” reminders that provide a countdown to the auto-activation date of the related Turn on Lightning Experience critical update.

## Lightning Experience Adoption: In-App Guidance and Help Menu

Add custom prompts to onboard and train users, highlight configuration changes and news, introduce new features, and more. Know that you're seeing content that's relevant to your workspace with enhancements to the Help Menu.

### IN THIS SECTION:

#### [Add In-App Guidance for Training, Onboarding, and News \(Beta\)](#)

Use clicks, not code to create in-app guidance to engage directly with your users. Write your own content, and include action buttons to an important URL of your choice in the prompts. You can pick the target audience and specify where the prompts appear and for how long.

#### [Focus on Prompts with a Keyboard Shortcut](#)

Use the Ctrl+F6 (Windows) or Cmd+F6 (macOS) keyboard shortcut to switch focus to the in-app guidance prompt on the page.

#### [Onboarding & Assistance Is Now User Engagement in Setup](#)

The setup home for Adoption Assistance, Help Menu, and In-App Guidance has a new name: User Engagement.

#### [Help Menu: Results Filtered by Edition, Quick Links for Trailhead, Help, and Support](#)

Enhancements to the Help Menu make it easier to find the right answers to your questions quickly.

## Add In-App Guidance for Training, Onboarding, and News (Beta)

Use clicks, not code to create in-app guidance to engage directly with your users. Write your own content, and include action buttons to an important URL of your choice in the prompts. You can pick the target audience and specify where the prompts appear and for how long.

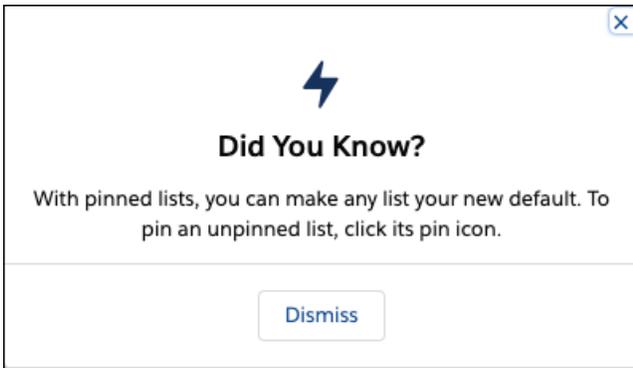
**Where:** This change applies to Lightning Experience in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** As a beta feature, Prompts is a preview and isn't part of the “Services” under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature.

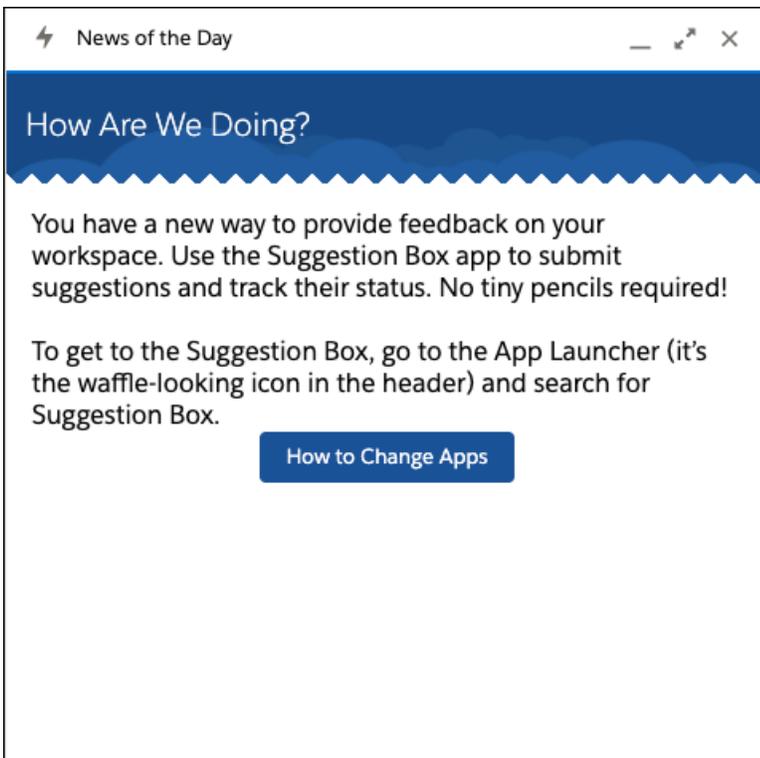
**Who:** All admins can add and edit prompts. Give other users the ability to manage prompts by assigning them the Manage Prompts and Modify Metadata user permissions.

**Why:** Add prompts to onboard and train users, highlight configuration changes and news, introduce new features, and more.

Choose between two types of prompts. You can place the floating prompt in the top or bottom on the left or right, or in the center. The floating prompt stays in your placed position.



The docked prompt stays in the bottom right, but a user can minimize or maximize it.



Salesforce helps to ensure that your users have the best experience by preventing multiple prompts from appearing at once. Salesforce also detects how users interact with prompts to determine whether to show the prompt again or stop showing it after the user has completed the desired action.

Track how your prompts are doing by reviewing the views and action button click metrics on the setup page.

**How:** From Setup in Lightning Experience, enter *In-App Guidance* in the Quick Find box, and then select **In-App Guidance**. Click **Add Prompts** to open the prompt authoring bar in a new browser tab. Navigate to the app and page where you want to place the prompt, and click **Add Prompt**. A window opens to walk you through the steps and preview your prompt.

SEE ALSO:

[Salesforce Help: Define Prompts in Lightning Experience \(Beta\) \(can be outdated or unavailable during release preview\)](#)

[Knowledge Article: In-App Guidance Prompts Beta FAQ](#)

## Focus on Prompts with a Keyboard Shortcut

Use the Ctrl+F6 (Windows) or Cmd+F6 (macOS) keyboard shortcut to switch focus to the in-app guidance prompt on the page.

**Where:** This change applies to Lightning Experience in Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

## Onboarding & Assistance Is Now User Engagement in Setup

The setup home for Adoption Assistance, Help Menu, and In-App Guidance has a new name: User Engagement.

**Where:** This change applies to Lightning Experience in Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** From Setup in Lightning Experience, enter *User Engagement* in the Quick Find box, and then select **User Engagement**.

## Help Menu: Results Filtered by Edition, Quick Links for Trailhead, Help, and Support

Enhancements to the Help Menu make it easier to find the right answers to your questions quickly.

IN THIS SECTION:

[See Search Results Relevant to Your Edition in the Help Menu](#)

Help Menu search results are filtered to show Salesforce documentation relevant only to your org's edition. When you search, know that you're seeing content that applies to you.

[Get to Trailhead and Support with Links in the Help Menu](#)

In response to customer feedback, we revised the Help Menu's More Resources section to make it consistent with the rest of the user interface. You use a Search Documentation link instead of a button, and we added a link to Trailhead. The link to Salesforce Support is visible to users, not just admins.

[Open Salesforce Help from the Help Menu](#)

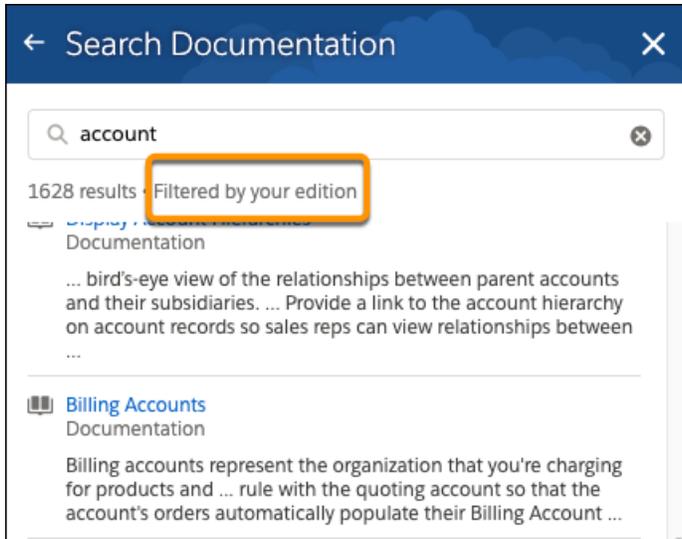
If you need a quick way to get to Salesforce Help, look no further than the Help Menu. Links to Salesforce Help are part of the Help Menu search results.

## See Search Results Relevant to Your Edition in the Help Menu

Help Menu search results are filtered to show Salesforce documentation relevant only to your org's edition. When you search, know that you're seeing content that applies to you.

**Where:** This change applies to Lightning Experience in Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** The search results view are filtered by your edition.



## SEE ALSO:

[Help Menu: Results Filtered by Edition, Quick Links for Trailhead, Help, and Support](#)

[Salesforce Help: Find Help in Lightning Experience \(can be outdated or unavailable during release preview\)](#)

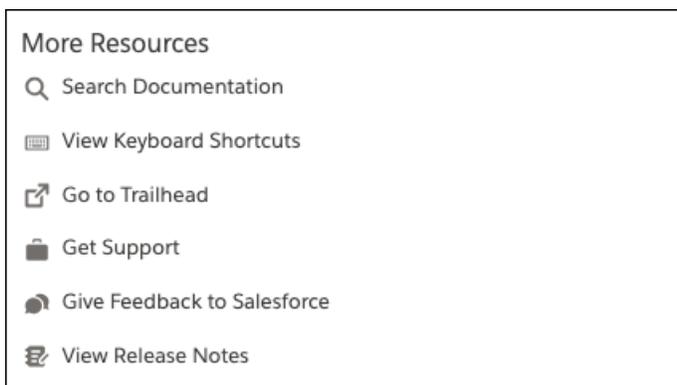
[Salesforce Help: Define Custom Help for the Lightning Experience Help Menu \(can be outdated or unavailable during release preview\)](#)

## Get to Trailhead and Support with Links in the Help Menu

In response to customer feedback, we revised the Help Menu's More Resources section to make it consistent with the rest of the user interface. You use a Search Documentation link instead of a button, and we added a link to Trailhead. The link to Salesforce Support is visible to users, not just admins.

**Where:** This change applies to Lightning Experience in Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** Links to keyboard shortcuts, Trailhead, Salesforce support, and feedback to Salesforce are always displayed to users. As an admin, you always see all resources.



**How:** You can hide some Salesforce resources. From Setup in Lightning Experience, enter *Help Menu* in the Quick Find box, and then select **Help Menu**. Turn off **Show Salesforce Help Content to Users**. When you turn it off, the Getting Started section, the Help for This Page section, and the ability to search Salesforce documentation are hidden from users.

SEE ALSO:

[Help Menu: Results Filtered by Edition, Quick Links for Trailhead, Help, and Support](#)

[Salesforce Help: Find Help in Lightning Experience \(can be outdated or unavailable during release preview\)](#)

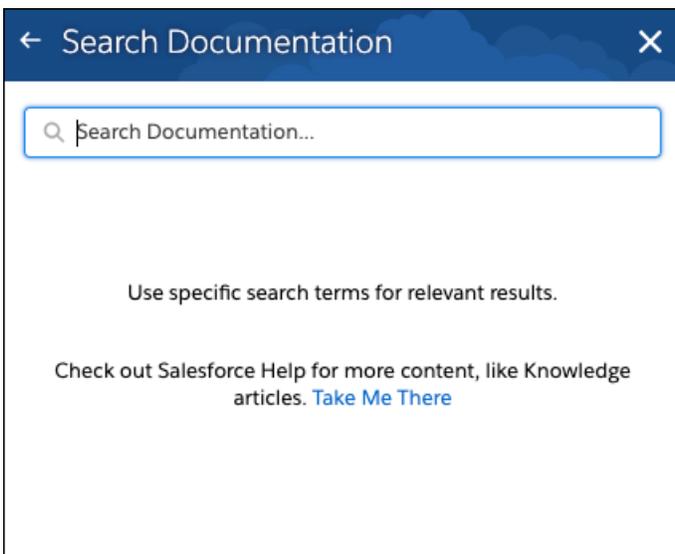
[Salesforce Help: Define Custom Help for the Lightning Experience Help Menu \(can be outdated or unavailable during release preview\)](#)

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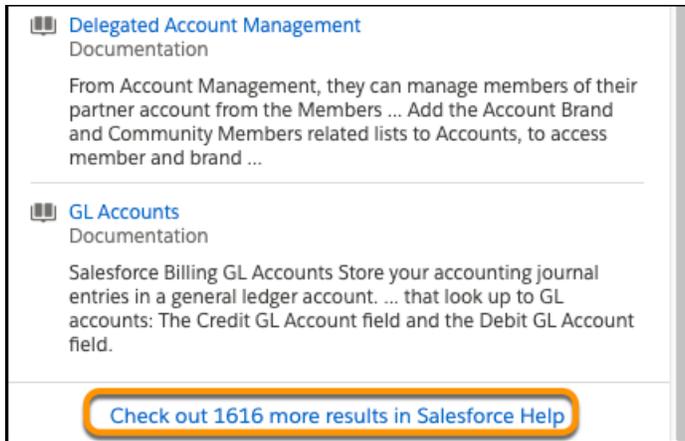
If you need a quick way to get to Salesforce Help, look no further than the Help Menu. Links to Salesforce Help are part of the Help Menu search results.

**Where:** This change applies to Lightning Experience in Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** When you click **Search Documentation** under More Resources, the search tips include a link to open Salesforce Help in a new browser tab.



A link to open Salesforce Help also appears in the footer of the search results.



## SEE ALSO:

[Help Menu: Results Filtered by Edition, Quick Links for Trailhead, Help, and Support](#)

[Salesforce Help: Find Help in Lightning Experience \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Define Custom Help for the Lightning Experience Help Menu \(can be outdated or unavailable during release preview\)](#)

## Get Lightning Experience on Your Phone with Lightning on Mobile (Pilot)

Lightning Experience has come to mobile! The next evolution of the Salesforce mobile app brings Lightning apps and Lightning record page customizations and components to the Salesforce mobile experience. Enhancements to the Lightning App Builder make it easier for you to create custom mobile experiences. Your customers can have a truly seamless and customized experience across their desktop and mobile devices.

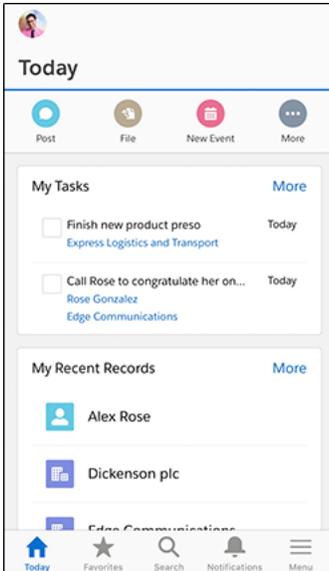
**Where:** This change applies to Lightning Experience and the Salesforce downloadable apps in Developer Edition.

**Note:** We provide Lightning on Mobile to selected customers through a pilot program that requires agreement to specific terms and conditions. Lightning on Mobile is subject to change and isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

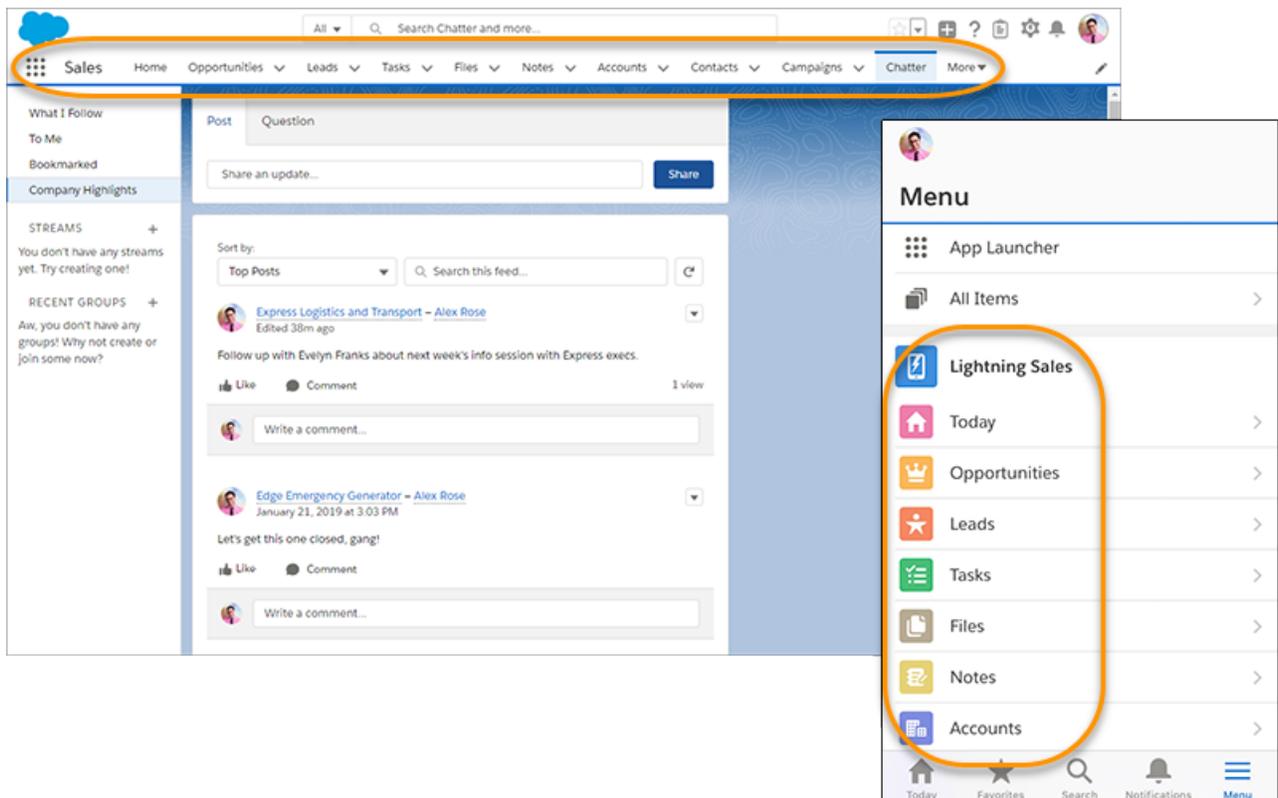
**When:** The features associated with the all-new Salesforce mobile app will be available in all Developer Edition orgs on June 17, 2019.

**Why:** Enhanced navigation and support for the App Launcher, record pages, and mobile-only components is just the beginning.

When you log in, you see the new navigation bar where you find your favorites, Search, notifications, and a link to the menu.



When you tap **Menu**, you're in the mobile version of one of your Lightning Experience apps. And you can now access your profile from the new profile icon at the top. The items you see in the app's menu on your mobile device match the navigation bar menu items in the app's desktop version.



You can use the App Launcher to tap and switch between all your Lightning apps, just like in Lightning Experience.

What else is new?

- You can now access your profile from the profile icon at the top of the screen.

- The hamburger (☰) is gone from the header, but the features are still available. To access app menu items, tap **Menu** on the navigation bar. To switch users or orgs, or access Feedback, Settings, or Help, tap the profile icon.
- On pages that support it, the action bar is now at the top of the screen. It shows the first three actions from the page layout, instead of the first four.

**How:** To participate in the pilot, use an existing Developer Edition org, or sign up for a new one at <https://developer.salesforce.com/signup>. It's free!

In your Developer org, create a permission set just for this pilot. Under System Permissions, enable the **Lightning on Mobile** perm. Download Salesforce for Android or iOS from Google Play or the App Store and log in with your Developer org credentials. The Salesforce mobile browser app isn't supported.

If you would like to participate in the pilot using your sandbox or production org, submit a pilot nomination request at <https://sfdc.co/PilotNewSalesforceMobile>.

The changes we mentioned are just the beginning. To find out about all the new features, check out the pilot release notes in the [Lightning on Mobile - Customer Pilot](#) Trailblazer community.

## Keep Record Context When Switching from Salesforce Classic to Lightning Experience

When you switch from Salesforce Classic to Lightning Experience, you land on the same page in Lightning Experience, if it exists. If the same page doesn't exist in Lightning Experience, you are redirected to your default landing page, which is determined by the org default or your customizations.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

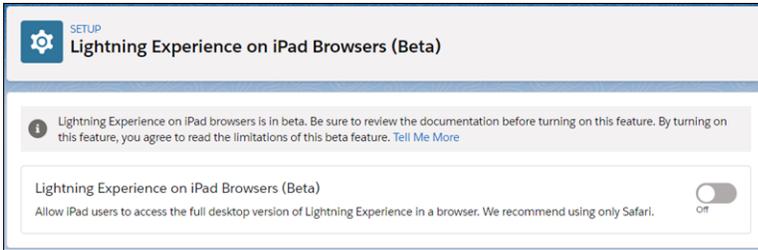
## Access Lightning Experience from Safari on iPad Devices (Beta)

Give your users the ability to run the full desktop version of Lightning Experience on their iPad device when they're away from their desktop or laptop.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** As a beta feature, Lightning Experience on iPad Browser is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for Lightning Experience on iPad Browser in the IdeaExchange.

**How:** In Setup, enter *Lightning Experience* in the Quick Find box, and then select **Lightning Experience on iPad Browsers (Beta)**.



SEE ALSO:

[Salesforce Help: Lightning Experience on iPad Browsers \(Beta\) \(can be outdated or unavailable during release preview\)](#)

[IdeaExchange: Allow iPad browsers to view Lightning Experience](#)

## Power Up Your Related Lists with Enhanced Related Lists (Beta)

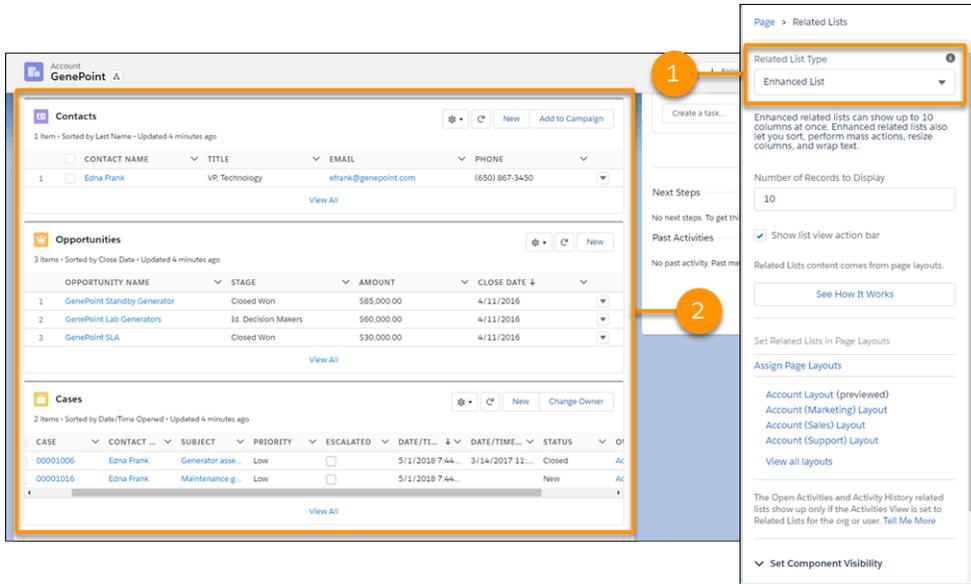
Take your related lists to the next level. With Enhanced Related Lists, you can show up to 10 columns, resize and sort your columns, perform mass actions, and wrap text.

**Where:** This change applies to Lightning Experience in Essential, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** As a beta feature, Enhanced Related Lists is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for Enhanced Related Lists in the IdeaExchange.

**How:** From the related lists component in the Lightning App Builder, select **Enhanced List** from the Related List Type dropdown (1). You can customize how many records to display at once, and choose whether to show the list view action bar.

Choosing Enhanced List affects all related lists in the component (2). To customize which columns appear in a particular related list, edit the related list in the page layout editor and add more fields.



SEE ALSO:

[Salesforce Help: Customize Related Lists \(can be outdated or unavailable during release preview\)](#)

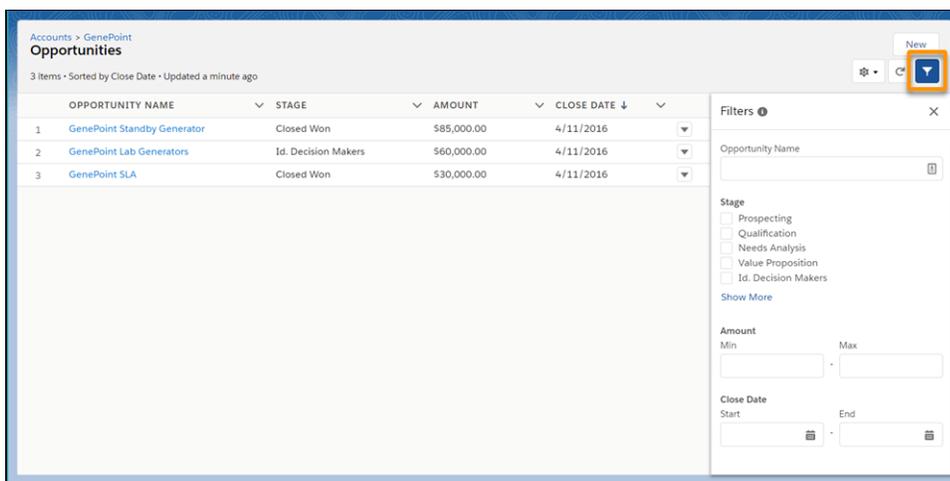
[IdeaExchange: More Than 4 Fields on Related List in Lightning Experience](#)

## Zoom Through Related Lists with Quick Filters

Use quick filters in your related lists to find the data that you're looking for. Related list quick filters are different from regular list view filters in that they aren't saved, persist only throughout your current session, and can't be shared.

**Where:** This change applies to Lightning Experience in Essential, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Open a related list, and select  to add quick filters.



 **Note:** Quick filters aren't available for the Assets, File, Other Related People, and Attachments related lists. Quick filters also aren't available for formula fields. For Enterprise Territory Management users, quick filters are available only for Accounts and only in the Assigned Territories and Users in Assigned Territories related lists.

SEE ALSO:

[IdeaExchange: Related Lists Filterable by User](#)

## Search Picklist Fields in List Views

You don't have to manually pick through your list views to find the picklist values you're looking for. List view search now includes picklists in your query results. Dependent picklists and picklists with translated values aren't searchable.

**Where:** This change applies to Lightning Experience in Essential, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

## New Record Creation Pages Stay in Browser History

Now when you use the New standard action to create a record, the page to create a new record stays in your browser history. When you refresh the page or go backward or forward through your browser history, your browser remembers what page you were on. The new record flow applies to both standard and custom objects.

**Where:** This change applies to Lightning Experience in Essential, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

## Try New Lightning Features with the Lightning Extension for Chrome

Are you an early adopter of the latest and greatest technology ... or do you want to become one? With the Lightning Extension for Chrome, you can gain access to the latest Lightning features and try them before everyone else.

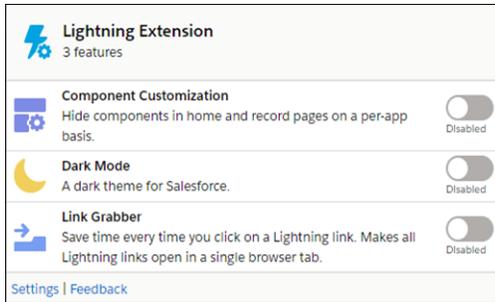
**Where:** This change applies to Lightning Experience in all editions.

**Why:** The Lightning Extension lets us roll out new features on a continuous basis. The initial release of the Lightning Extension contains three new features.

- The Component Customization feature helps declutter your screen. Use the  icon in the header to hide components on record and home pages.
- The Dark Mode feature gives Salesforce a dark theme that's easy on the eyes.
- The Link Grabber feature makes all Lightning links open in a single browser tab.

 **Note:** Dark Mode doesn't support dashboards or Einstein Analytics.

**How:** Download the Lightning Extension on the Chrome Web Store. From the Lightning Extension features panel, choose which features to turn on.



## SEE ALSO:

[External Link: Download the Lightning Extension from the Chrome Web Store](#)

[Salesforce Help: Try New Features with the Lightning Extension for Chrome \(can be outdated or unavailable during release preview\)](#)

## Lightning Scheduler: Inbound Appointment Scheduling, Event Management, Action Plans, and More

Schedule inbound appointments with Lightning Scheduler's self-service interface embedded in a website or via Communities. Manage calendar availability with Event Management. Plus, Lightning Scheduler now partners with Action Plans and Salesforce Surveys.

## IN THIS SECTION:

### [Streamline Customer Appointment Scheduling with Lightning Scheduler](#)

Your customers and prospects can quickly schedule appointments with Lightning Scheduler's self-service interface. It's easy to search and select the right person, topic, location, and date and time. Need to reschedule or cancel? No problem. Customers can schedule and modify appointments through Embedded Services in your company's website or via Communities. To get started, you can clone and modify out-of-the-box standard flows, or create your own flows in Flow Builder.

### [Manage Calendar Availability with Event Management](#)

The Event Management preference lets you see appointments created in Lightning Scheduler on your Salesforce calendar. That way, you can view your schedule in one place. And if you're using Microsoft or Google calendars, you can add those events to your Salesforce calendar too, with calendar sync tools.

### [Pair Your Action Plans with Lightning Scheduler](#)

Enhance collaboration and productivity by pairing Action Plans with Lightning Scheduler. Use Lightning Scheduler to set up appointments based on status changes to action plans. And apply Action Plans templates for customer appointments to accounts, opportunities, and leads.

### [Partner Your Salesforce Surveys with Lightning Scheduler](#)

Trigger Lightning Scheduler appointment invitations based on customer survey results. Or quickly gain insight into customer satisfaction by sending a survey after a customer appointment.

### [Manage Room and Equipment Booking with Asset Scheduling](#)

It's a breeze to book assets, such as meeting rooms and equipment, with the new Asset field on Service Resource. And you can stay on top of usage via a monthly usage-based entitlements summary.

### [Optimize User Experience with the Right Flow Screens for Different Devices \(Beta\)](#)

Configure your custom Lightning Scheduler flows to display the flow screens for different form factors, depending on the device that's running the flow: small (phone), medium (tablet), or large (desktop).

[Easily Find the Right Invocable Action for Lightning Scheduler in Flow Builder](#)

Invocable actions in Flow Builder are now categorized to make them easier to find. Choose the Appointments invocable action to see all available actions to build a Lightning Scheduler flow.

## SEE ALSO:

[Empower Customers to Schedule Appointments with Lightning Scheduler](#)

## Streamline Customer Appointment Scheduling with Lightning Scheduler

Your customers and prospects can quickly schedule appointments with Lightning Scheduler's self-service interface. It's easy to search and select the right person, topic, location, and date and time. Need to reschedule or cancel? No problem. Customers can schedule and modify appointments through Embedded Services in your company's website or via Communities. To get started, you can clone and modify out-of-the-box standard flows, or create your own flows in Flow Builder.

**Where:** This change applies to Lightning Experience in Enterprise and Unlimited editions.

## Manage Calendar Availability with Event Management

The Event Management preference lets you see appointments created in Lightning Scheduler on your Salesforce calendar. That way, you can view your schedule in one place. And if you're using Microsoft or Google calendars, you can add those events to your Salesforce calendar too, with calendar sync tools.

**Where:** This change applies to Lightning Experience in Enterprise and Unlimited editions.

**How:** In Lightning Scheduler, enable the Event Management preference.

 **Note:** Appointments created in Lightning Scheduler are view only in Salesforce calendar. Modify or cancel appointments in Lightning Scheduler.

## SEE ALSO:

[Salesforce Help: Manage Appointments with Lightning Scheduler \(can be outdated or unavailable during release preview\)](#)

## Pair Your Action Plans with Lightning Scheduler

Enhance collaboration and productivity by pairing Action Plans with Lightning Scheduler. Use Lightning Scheduler to set up appointments based on status changes to action plans. And apply Action Plans templates for customer appointments to accounts, opportunities, and leads.

**Where:** This change applies to Lightning Experience in Enterprise and Unlimited editions where Financial Services Cloud is enabled.

**How:** Use configuration tools, such as Flow Builder or Process Builder, or Apex code to invoke action plans based on appointments or to create appointments based on status changes to action plans.

## SEE ALSO:

[Salesforce Help: Manage Appointments with Lightning Scheduler \(can be outdated or unavailable during release preview\)](#)

[Connect Action Plans to Appointments with Lightning Scheduler](#)

## Partner Your Salesforce Surveys with Lightning Scheduler

Trigger Lightning Scheduler appointment invitations based on customer survey results. Or quickly gain insight into customer satisfaction by sending a survey after a customer appointment.

**Where:** This change applies to Lightning Experience in Enterprise and Unlimited editions.

SEE ALSO:

[Salesforce Help: Salesforce Surveys \(can be outdated or unavailable during release preview\)](#)

## Manage Room and Equipment Booking with Asset Scheduling

It's a breeze to book assets, such as meeting rooms and equipment, with the new Asset field on Service Resource. And you can stay on top of usage via a monthly usage-based entitlements summary.

**Where:** This new feature applies to Lightning Experience and is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** Add the Asset field to the Service Resource page layout and select a Resource Type of Asset.

## Optimize User Experience with the Right Flow Screens for Different Devices (Beta)

Configure your custom Lightning Scheduler flows to display the flow screens for different form factors, depending on the device that's running the flow: small (phone), medium (tablet), or large (desktop).

**Where:** This change applies to Lightning Experience in Enterprise and Unlimited editions.

 **Note:** As a beta feature, the global form factor variable is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature.

SEE ALSO:

[Optimize the User Experience in Custom Lightning Scheduler Flows with the \\$Client.FormFactor Global Variable](#)

## Easily Find the Right Invocable Action for Lightning Scheduler in Flow Builder

Invocable actions in Flow Builder are now categorized to make them easier to find. Choose the Appointments invocable action to see all available actions to build a Lightning Scheduler flow.

**Where:** This change applies to Lightning Experience in Enterprise and Unlimited editions.

SEE ALSO:

[Find Actions by Type or Category When Building Flows](#)

## Salesforce Surveys: Free Sending, Customized Email Invitations, and an Improved User Experience

Create surveys and send invitations for free, then pay based on the number of responses you receive after the free allotment. Send personalized email invitations to participants. Enhance the user experience with an increased character limit for questions, response choices, and participant comments. It's also easier for participants to work with surveys on mobile devices.

### IN THIS SECTION:

#### [Send Surveys for Free](#)

Licenses can be tricky, so we got rid of them. You no longer need a license to create and send surveys. Anyone who has been assigned one of the provided four profiles can create and send unlimited surveys for free.

#### [Take Advantage of Free Survey Responses](#)

Each Salesforce org receives up to 300 survey responses for free. After the first 300, you can purchase an add-on response pack based on the number of responses you receive.

#### [Send Customized Email Invitations for Improved Response Rates](#)

Send customized emails that contain a link to a survey question or to launch a survey. You can send email invitations to leads, contacts, and users in your org.

#### [Generate Survey Invitations for Leads](#)

You can now generate a unique survey invitation for a lead directly from the record by clicking **Get Survey Invitation**.

#### [Say More with an Increased Character Limit for Questions and Responses](#)

Survey creators and participants now have more words to play with. We increased the character limit for questions from 255 characters to 1,000. You can also expand the wording for multiple choice, picklist, and radio response choices from 50 to 250 characters. And let your respondents speak their mind. Participant responses can now be up to 4,000 characters.

#### [Work with Surveys More Easily on Mobile Devices](#)

Gather participants' responses even when they're on the move. We improved the readability of surveys on mobile devices and made it easier for participants to respond.

#### [Enjoy Surveys' New Look](#)

We refreshed the look and feel of the Build tab in the Survey Builder. Participants also see the changes when responding to a survey.

## Send Surveys for Free

Licenses can be tricky, so we got rid of them. You no longer need a license to create and send surveys. Anyone who has been assigned one of the provided four profiles can create and send unlimited surveys for free.

**Where:** This change applies to Lightning Experience in Performance, Partner Developer, Enterprise, Developer, and Unlimited editions where Salesforce Surveys is enabled.

**How:** Enable surveys, and assign one of the profiles to users who create and send surveys.

- Contract manager
- Marketing user
- Standard user

- System administrator

**SEE ALSO:**

[Salesforce Help: Give Users Permission to Create and Send Surveys \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Let Users with a Custom Profile Create and Send Surveys \(can be outdated or unavailable during release preview\)](#)

## Take Advantage of Free Survey Responses

Each Salesforce org receives up to 300 survey responses for free. After the first 300, you can purchase an add-on response pack based on the number of responses you receive.

**Where:** This change applies to Lightning Experience in Performance, Partner Developer, Enterprise, Developer, and Unlimited editions where Salesforce Surveys is enabled.

## Send Customized Email Invitations for Improved Response Rates

Send customized emails that contain a link to a survey question or to launch a survey. You can send email invitations to leads, contacts, and users in your org.

**Where:** This change applies to Lightning Experience in Performance, Partner Developer, Enterprise, Developer, and Unlimited editions where Salesforce Surveys is enabled.

**How:** To email a survey invitation, in the active version of the survey, click **Open**. On the Send tab, click **Send Email**.

**Send Email**

**Who are the recipients and what do they see?**  
Add recipients, customize content, and use merge fields in your email.  
You can work with the HTML and preview your email's content.

From\*

To

Subject

Font  Size  **B** *I* U **A**

Hello {{{Recipient.FirstName}}}

{{{SurveyQuestion.QuestionName}}}

{{{SurveyQuestion.QuestionHtmlContent}}}

Thank you,  
{{{Organization.Name}}}

SEE ALSO:

[Salesforce Help: Send Survey Invitations by Email \(can be outdated or unavailable during release preview\)](#)

## Generate Survey Invitations for Leads

You can now generate a unique survey invitation for a lead directly from the record by clicking **Get Survey Invitation**.

**Where:** This change applies to Lightning Experience in Performance, Partner Developer, Enterprise, Developer, and Unlimited editions where Salesforce Surveys is enabled.

SEE ALSO:

[Salesforce Help: Generate Individual Survey Invitations for Contacts, Person Accounts, and Leads \(can be outdated or unavailable during release preview\)](#)

## Say More with an Increased Character Limit for Questions and Responses

Survey creators and participants now have more words to play with. We increased the character limit for questions from 255 characters to 1,000. You can also expand the wording for multiple choice, picklist, and radio response choices from 50 to 250 characters. And let your respondents speak their mind. Participant responses can now be up to 4,000 characters.

**Where:** This change applies to Lightning Experience in Performance, Partner Developer, Enterprise, Developer, and Unlimited editions where Salesforce Surveys is enabled.

## Work with Surveys More Easily on Mobile Devices

Gather participants' responses even when they're on the move. We improved the readability of surveys on mobile devices and made it easier for participants to respond.

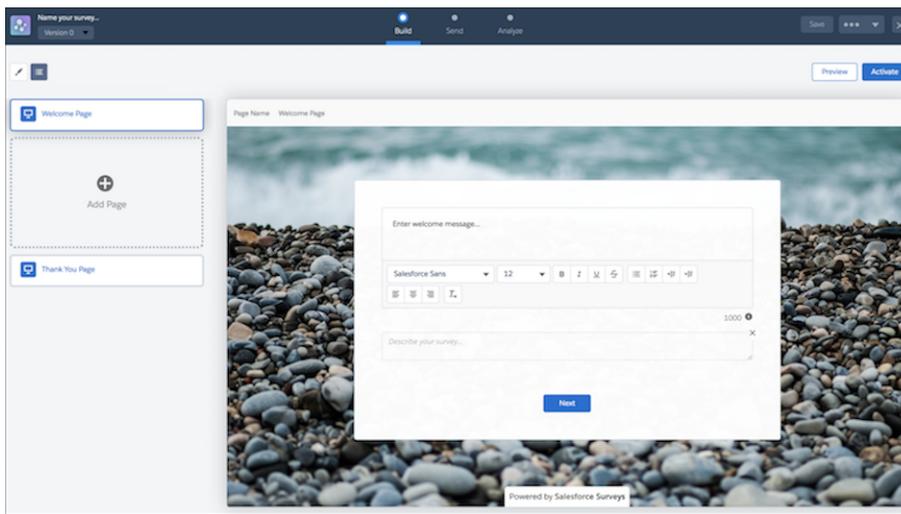
**Where:** This change applies to Lightning Experience in Performance, Partner Developer, Enterprise, Developer, and Unlimited editions where Salesforce Surveys is enabled.

## Enjoy Surveys' New Look

We refreshed the look and feel of the Build tab in the Survey Builder. Participants also see the changes when responding to a survey.

**Where:** This change applies to Lightning Experience in Performance, Partner Developer, Enterprise, Developer, and Unlimited editions where Salesforce Surveys is enabled.

**Why:** The Build tab is your starting point for creating a survey.



## Lightning Console Apps: Detect Popped-Out Utilities with New API

A new API method tells you when a utility is popped out.

 **Note:** Lightning console apps don't yet have full parity with Salesforce Classic console apps. For example, some features in Salesforce Classic console apps, such as push notifications, aren't available in Lightning console apps. [Learn more.](#)

IN THIS SECTION:

[Detect Popped-Out Utilities with New Lightning Console JavaScript APIs](#)

Detect whether a utility is popped out with new and updated methods in the Lightning Console JavaScript API.

## Detect Popped-Out Utilities with New Lightning Console JavaScript APIs

Detect whether a utility is popped out with new and updated methods in the Lightning Console JavaScript API.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions. Lightning console apps are available for an extra cost to users with Salesforce Platform user licenses for certain products. Some restrictions apply. For pricing details, contact your Salesforce account executive.

SEE ALSO:

[Lightning Console JavaScript API](#)

## Search: Search Results That Reflect How You Navigate and More Details About Your Search Results

Search results prioritize what's in an app's navigation bar, so searching is more relevant to the way your users work. On the search results page, see how many results were found for each object. Also, more objects are searchable.

IN THIS SECTION:

[Find What You Need Fast with Search Results That Reflect How You Navigate](#)

How you work is also how you search. That's why the items in an app's navigation bar now help determine your top search results in Lightning Experience. And because your users can personalize an app's navigation bar, they have more say in how they search in Lightning Experience. An app's navigation bar affects search results only for the app currently in use.

[See Which Objects Were Searched at a Glance](#)

On the search results page, it's easier for users to see which objects were searched and how many results were found. No more wasted time guessing.

[Get Search Results for More Objects](#)

The following objects are now searchable: Authorization Form, Authorization Form Consent, Authorization Form Data Use, Authorization Form Text, Award, Business License, and Enhanced Letterhead.

## Find What You Need Fast with Search Results That Reflect How You Navigate

How you work is also how you search. That's why the items in an app's navigation bar now help determine your top search results in Lightning Experience. And because your users can personalize an app's navigation bar, they have more say in how they search in Lightning Experience. An app's navigation bar affects search results only for the app currently in use.

**Where:** This change applies to Lightning Experience in all editions.

SEE ALSO:

[Salesforce Help: Personalize the Navigation Bar in Lightning Experience \(can be outdated or unavailable during release preview\)](#)

## See Which Objects Were Searched at a Glance

On the search results page, it's easier for users to see which objects were searched and how many results were found. No more wasted time guessing.

**Where:** This change applies to Lightning Experience in all editions.

**Why:** The Top Results page shows the best results for the objects you use most. In the sidebar, objects are listed in order of relevance, so the best matches are at the top, just like they are in the search results pane. Previously, objects in the sidebar were listed in the same order as your Lightning Experience navigation tabs.

SEARCH RESULTS		<b>Accounts</b>			
Top Results		5 Results • Sorted by Relevance ▼			
Accounts	5	<b>ACCOUNT NAME</b> ▼	<b>PHONE</b> ▼	<b>INDUSTRY</b> ▼	<b>BILLING CITY</b> ▼
Contacts	5+	Acme HQ	(415) 555-9055	Manufacturing	New York
Opportunities	3	Acme Palo Alto	(650) 555-9875	Manufacturing	Palo Alto
Groups	2	Acme Los Angeles	(213) 555-8976	Manufacturing	Queens
Price Books	1	Acme New York	(212) 555-4545	Manufacturing	Trenton
Files	1	Acme Shipping	(510) 555-5465	Shipping	Oakland
Chatter	0				
Dashboards	0				
People	0				
<a href="#">Show More</a>					

When you have more than five results, we show "5+" on the Top Results page. Click the object name to see the complete list.

SEARCH RESULTS		<b>Contacts</b>		
Top Results		8 Results • Sorted by Relevance ▼		
Contacts	8	<b>NAME</b> ▼	<b>ACCOUNT NAME</b> ▼	<b>PHONE</b> ▼
<a href="#">Expand List</a>		John Smith	Acme HQ	(916) 555-4654
		Jason Price	Acme HQ	(916) 555-6000
		Andrea Bowden	Acme HQ	(415) 555-2324
		Jessyca Berger	Acme HQ	(916) 555-8733
		Ed Smith	Acme New York	(916) 555-8272
		Howard Jones	Acme HQ	(916) 555-7565
		Leanne Tomlin	Acme HQ	(916) 555-8284
		Edward Stamos	Acme HQ	(916) 555-5567

Don't see what you're looking for? Click **Expand List** and select another object. If an object doesn't have a count next to it, click the object's name to search it.

SEE ALSO:

[Salesforce Help: Filter and Sort Search Results in Lightning Experience \(can be outdated or unavailable during release preview\)](#)

## Get Search Results for More Objects

The following objects are now searchable: Authorization Form, Authorization Form Consent, Authorization Form Data Use, Authorization Form Text, Award, Business License, and Enhanced Letterhead.

**Where:** Authorization Form, Authorization Form Consent, Authorization Form Data Use, and Authorization Form Text are searchable in Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions except Essentials.

Enhanced Letterhead is searchable in Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

Award and Business License are searchable in Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Enterprise, Performance, and Unlimited editions with Health Cloud installed or in Professional, Enterprise, and Unlimited editions with Financial Services Cloud installed.

### SEE ALSO:

[Track Customer Consent with Authorization Form Objects](#)

[Use Enhanced Letterheads to Increase the Effectiveness of Lightning Email Templates](#)

[Health Cloud Has New and Changed Objects](#)

[Financial Services Cloud Has New Objects](#)

[Salesforce Help: Searchable Fields by Object in Salesforce Classic \(can be outdated or unavailable during release preview\)](#)

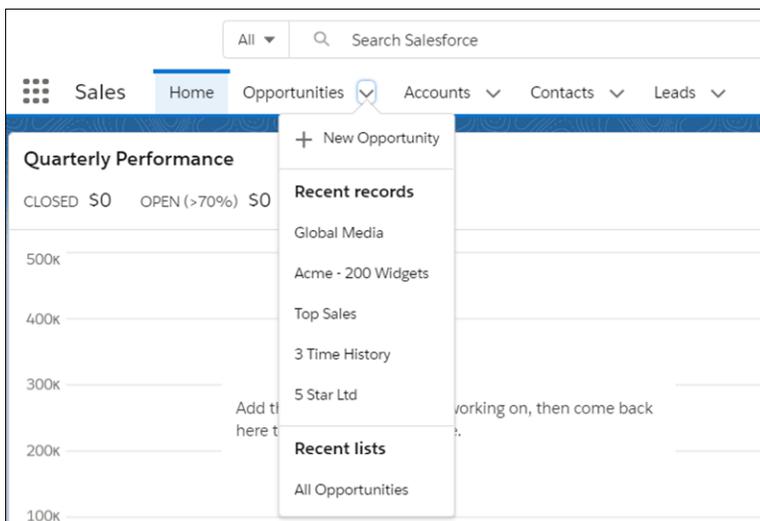
[Salesforce Help: Searchable Fields by Object in Lightning Experience \(can be outdated or unavailable during release preview\)](#)

## See More in Item Menus on the Navigation Bar

We increased the number of recent items shown in item menus from three to five. We also made some styling enhancements, including bold section names and separators, to make it easier to tell the different sections apart.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** An object's item menu now displays up to five items each in the Favorites, Recent records, and Recent lists sections.

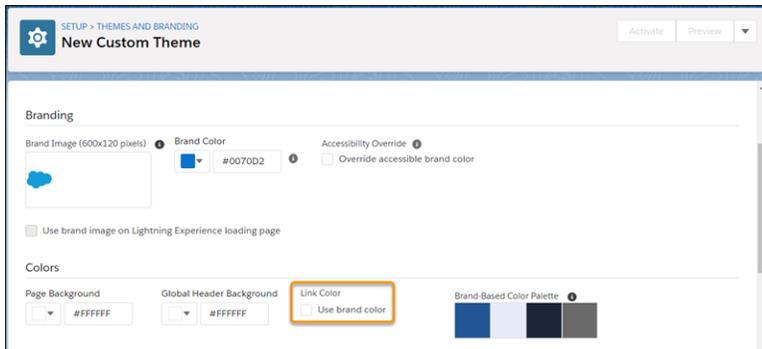


## Assign Custom Colors to Hyperlinks

Complete the look and feel of your company's theming and branding in Lightning Experience by defining a hyperlink color.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** In Setup, enter *Themes and Branding* in the Quick Find box, and then select **Themes and Branding**. Update an existing custom theme or create a new one. For Link Color, select **Use brand color**.



SEE ALSO:

[Salesforce Help: Brand Your Org in Lightning Experience \(can be outdated or unavailable during release preview\)](#)

## Themes and Branding Accessibility Label Improvements

To improve the usability of the Themes and Branding setup screen, we updated the label Accessible Brand Color to Accessibility Override. We also changed the checkbox label from Override to Override accessible brand color. And we updated the Accessibility Override tooltip.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Salesforce Help: Brand Your Org in Lightning Experience \(can be outdated or unavailable during release preview\)](#)

## The Lightning Experience Header Is Hidden When You Print from Your Browser

All you want is what's on the page. The Lightning Experience header, including the search box and navigation bar, is no longer included when you print from your browser.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

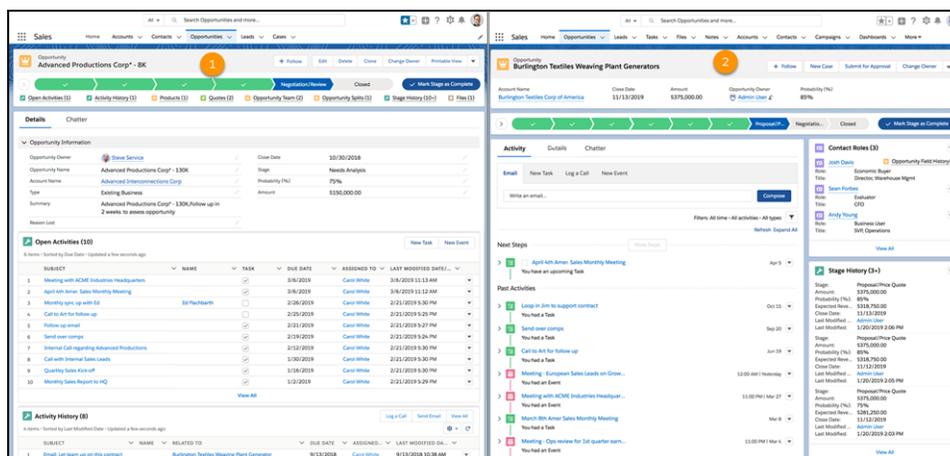
## View Records Using Full View (Beta)

Now you have two record page view default options. Choose between the current view—now called Grouped view—and the new Full view. Full view displays all details and related lists on the same page. If you're transitioning to Lightning Experience, this view is similar to Salesforce Classic.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Note:** As a beta feature, Full view is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for Full view in the [Lightning Now group](#) in the Trailblazer Community.

**Why:** We're giving you more out-of-the-box options so that you can choose a view that fits your users' business needs and preferences. In addition to the view that currently exists, we've added Full view, an alternative view. Full view (1) displays all details and related lists on the same page. Grouped view (2), the original Lightning Experience record view, focuses on specifics by grouping information across tabs and columns.



**How:** If you're already using Lightning Experience, you can change your org's default record view in Setup. If you turn on Lightning Experience after Summer '19, you configure these settings in the Lightning Experience Transition Assistant before you enable Lightning Experience, or in Setup after enabling Lightning Experience.

In Setup, enter *Record Page Settings* in the Quick Find box, and select **Record Page Settings**.

 **Note:** To maintain performance quality, Full view is not available for all org configurations (for example, if your org has a large number of fields or related lists).

## SEE ALSO:

[Set Org Defaults for How Activities Display on Record Pages](#)

[Get More Options When Creating Record Pages](#)

[Salesforce Help: Lightning Experience Record Page Views \(can be outdated or unavailable during release preview\)](#)

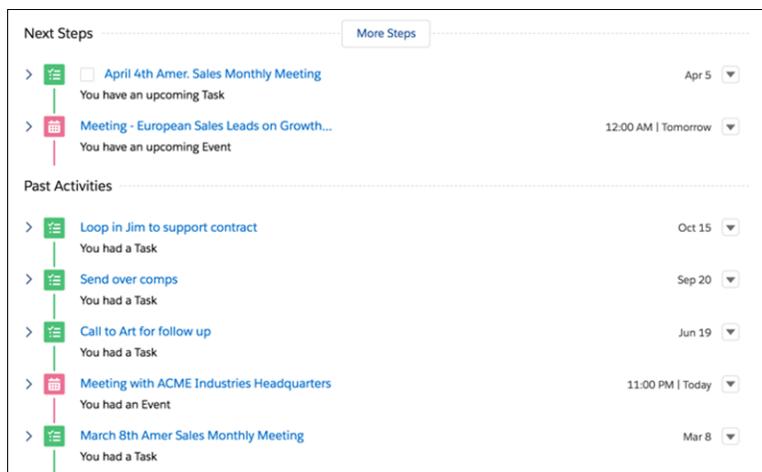
[Salesforce Help: Create and Configure Lightning Experience Record Pages \(can be outdated or unavailable during release preview\)](#)

## Set Org Defaults for How Activities Display on Record Pages

Control how your users view activities on record pages. Set the default view to the newer expandable activity timeline, or choose the activities related lists view that will feel familiar to Salesforce Classic users. Users can switch between options whenever they want.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** Activity timeline shows details for each task, event, and email in an expandable timeline view.



Related lists shows details for each task, event, and email in the Open Activities and Activity History related lists. Users who are familiar with Salesforce Classic might feel more at home working with the related lists activities view.

**Open Activities (10)**  
6 Items - Sorted by Due Date - Updated a few seconds ago

	SUBJECT	NAME	TASK	DUE DATE	ASSIGNED TO	LAST MODIFIED DATE/...
1	Meeting with ACME Industries Headquarters		<input checked="" type="checkbox"/>	3/6/2019	Carol White	3/6/2019 11:13 AM
2	April 4th Amer. Sales Monthly Meeting		<input checked="" type="checkbox"/>	3/6/2019	Carol White	3/6/2019 11:12 AM
3	Monthly sync up with Ed	Ed Flachbarth	<input type="checkbox"/>	2/26/2019	Carol White	2/21/2019 5:30 PM
4	Call to Art for follow up		<input type="checkbox"/>	2/25/2019	Carol White	2/21/2019 5:25 PM
5	Follow up email		<input checked="" type="checkbox"/>	2/21/2019	Carol White	2/21/2019 5:27 PM
6	Send over comps		<input checked="" type="checkbox"/>	2/19/2019	Carol White	2/21/2019 5:24 PM
7	Internal Call regarding Advanced Productions		<input checked="" type="checkbox"/>	2/12/2019	Carol White	2/21/2019 5:30 PM
8	Call with Internal Sales Leads		<input checked="" type="checkbox"/>	1/30/2019	Carol White	2/21/2019 5:30 PM
9	Quarterly Sales Kick-off		<input checked="" type="checkbox"/>	1/16/2019	Carol White	2/21/2019 5:30 PM
10	Monthly Sales Report to HQ		<input checked="" type="checkbox"/>	1/2/2019	Carol White	2/21/2019 5:29 PM

[View All](#)

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**Activity History (8)**  
4 Items - Sorted by Last Modified Date - Updated a few seconds ago

	SUBJECT	NAME	RELATED TO	DUE DATE	ASSIGNED TO	LAST MODIFIED DA...
1	Email: Let team up on this contract		Burlington Textiles Weaving Plant Generator	9/13/2018	Carol White	9/13/2018 10:38 AM
2	Email: Meeting on 11/04/18		Burlington Textiles Weaving Plant Generator	9/13/2018	Carol White	9/13/2018 10:36 AM
3	Email: Follow up email		Burlington Textiles Weaving Plant Generator	9/13/2018	Carol White	9/13/2018 10:32 AM
4	Review contract with Client		Burlington Textiles Weaving Plant Generator	9/13/2018	Carol White	9/13/2018 10:37 AM

**How:** To change the default activities view, in Setup, enter *Record Page Settings* in the Quick Find box, and select **Record Page Settings**.

Default Activities View

Choose the default way users work with activities on record pages. Users can change this preference in their user settings. [Tell Me More](#)



**Related Lists**  
Give users a view of their activities with the Open Activities and Activity History related lists.



**Activity Timeline**  
Give users a timeline view where they can manage their current and past activities.

**1** If Einstein Activity Capture is enabled, the Activity Timeline option is required.

**Note:** If you turn on Lightning Experience after Summer '19, you configure these settings in the Lightning Experience Transition Assistant before you enable Lightning Experience, or in Setup after enabling Lightning Experience.

SEE ALSO:

[View Records Using Full View \(Beta\)](#)

[Salesforce Help: Activities View \(can be outdated or unavailable during release preview\)](#)

## Rich Text Editors Get an Upgrade

Rich text editors that are using CKEditor have been upgraded to CKEditor version 4.11.2.

**Where:** Rich text editors are available in Lightning Experience, Salesforce Classic, and the Salesforce app in all editions.

**Why:** CKEditor version 4.11.2 is the latest non-vulnerable version, fixing a handful of bugs and introducing minor updates.

In Lightning Experience and the Salesforce app, CKEditor is used by:

- Email Composer
- Lightning Knowledge
- Lightning Components (`ui:inputRichText`)

In Salesforce Classic, CKEditor is used by:

- Chatter Publisher
- Custom Fields
- Flow Builder
- Groups
- Idea Themes
- Knowledge Article

 **Note:** Strikethrough text uses `<strike>` tags. The `<s>` tag is converted into a `<strike>` tag to support saving of rich text area fields across Lightning Experience, Salesforce Classic, and the Salesforce app. The `<strike>` tag is no longer converted to an `<s>` tag when switching from Salesforce Classic to Lightning Experience and then editing the field.

SEE ALSO:

[Salesforce Help: Rich Text Editors \(can be outdated or unavailable during release preview\)](#)

[CKEditor Blog: CKEditor 4.11.2 released](#)

## Open Hyperlinks in Formula Fields Correctly (Critical Update, Postponed)

This critical update, released in Winter '19, was scheduled for auto-activation in Summer '19, but has been postponed to Spring '20.

**Where:** This change applies to Lightning Experience and the Salesforce app in all editions.

## Lightning Experience: A Modern and Intelligent User Experience

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Lightning Experience is a completely reimagined interface. Even better, it's built on our UI platform, so the experience can grow and evolve with your needs. Check out the new features and considerations in this release.

IN THIS SECTION:

[Lightning Experience Features in This Release](#)

Lightning Experience is a completely reimagined interface. Even better, it's built on our UI platform, so the experience can grow and evolve with your needs. Check out the new features and considerations in this release.

[What's Different or Not Available in Summer '19 Lightning Experience Features](#)

For new Lightning Experience features and enhancements, review these sections to see if any functionality that's critical to your business is limited or unavailable in this release.

## Lightning Experience Features in This Release

Lightning Experience is a completely reimagined interface. Even better, it's built on our UI platform, so the experience can grow and evolve with your needs. Check out the new features and considerations in this release.

[Lightning Experience: A Modern and Intelligent User Experience](#)

[B2B Commerce: Create Self-Service Storefronts for Business Buyers](#)

## Salesforce Overall

- Get Lightning Experience on Your Phone with Lightning on Mobile (Pilot)
- Keep Record Context When Switching from Salesforce Classic to Lightning Experience
- Access Lightning Experience from Safari on iPad Devices (Beta)
- Power Up Your Related Lists with Enhanced Related Lists (Beta)
- Zoom Through Related Lists with Quick Filters
- Search Picklist Fields in List Views
- New Record Creation Pages Stay in Browser History
- Try New Lightning Features with the Lightning Extension for Chrome
- Lightning Console Apps: Detect Popped-Out Utilities with New API
- See More in Item Menus on the Navigation Bar
- Assign Custom Colors to Hyperlinks
- Themes and Branding Accessibility Label Improvements
- The Lightning Experience Header Is Hidden When You Print from Your Browser
- View Records Using Full View (Beta)
- Set Org Defaults for How Activities Display on Record Pages
- Rich Text Editors Get an Upgrade
- Open Hyperlinks in Formula Fields Correctly (Critical Update, Postponed)

### **Lightning Experience Transition: Critical Update and Transition Tools**

- Turn On Lightning Experience (Previously Released Critical Update) Delayed Until January 2020
- Transition Assistant: Everything You Need in One Place
- Turn On Lightning Experience and Don't Look Back
- Use the Readiness Check to Guide Your Lightning Experience Transition
- Lightning Experience Configuration Converter: Scanning and Preparing Visualforce Pages, Hard-Coded URLs, AppExchange Packages, and More
- Get Guidance to Prepare Your Org for Lightning Experience

### **Lightning Experience Adoption: In-App Guidance and Help Menu**

- Add In-App Guidance for Training, Onboarding, and News (Beta)
- Focus on Prompts with a Keyboard Shortcut
- Onboarding & Assistance Is Now User Engagement in Setup
- Help Menu: Results Filtered by Edition, Quick Links for Trailhead, Help, and Support

### **Lightning Scheduler: Inbound Appointment Scheduling, Event Management, Action Plans, and More**

- Streamline Customer Appointment Scheduling with Lightning Scheduler
- Manage Calendar Availability with Event Management
- Pair Your Action Plans with Lightning Scheduler
- Partner Your Salesforce Surveys with Lightning Scheduler
- Manage Room and Equipment Booking with Asset Scheduling

[Optimize User Experience with the Right Flow Screens for Different Devices \(Beta\)](#)

[Easily Find the Right Invocable Action for Lightning Scheduler in Flow Builder](#)

### **Salesforce Surveys: Free Sending, Customized Email Invitations, and an Improved User Experience**

[Send Surveys for Free](#)

[Take Advantage of Free Survey Responses](#)

[Send Customized Email Invitations for Improved Response Rates](#)

[Generate Survey Invitations for Leads](#)

[Say More with an Increased Character Limit for Questions and Responses](#)

[Work with Surveys More Easily on Mobile Devices](#)

[Enjoy Surveys' New Look](#)

### **Search**

[Find What You Need Fast with Search Results That Reflect How You Navigate](#)

[See Which Objects Were Searched at a Glance](#)

[Get Search Results for More Objects](#)

## **Essentials**

[Unify Your Team's Phones with Dialer](#)

[Offer Your Customers Instant Conversation with Chat and Messaging](#)

[Store More Data in Salesforce](#)

[Grow Salesforce with Your Business](#)

[Bring Your Opportunities to Salesforce Essentials](#)

[Boost Your Help Center with Chat and Contact Requests](#)

[Guide Users Through Simple Tasks with Embedded Flows](#)

[Give Every Customer All-Star Attention with Einstein Next Best Action](#)

[Merge Cases to Declutter Your Case List \(Beta\)](#)

[Add In-App Guidance for Training, Onboarding, and News \(Beta\)](#)

[Join Customer Conversations on YouTube and Instagram](#)

## **Sales**

[High Velocity Sales: Person Account Support, New User Welcome Experience, and Improvements to Sales Cadences](#)

[Lightning Data: Choose Which Records to Target or Skip](#)

[Data.com Prospector and Data.com Clean Are Being Retired](#)

### **Sales Cloud Einstein**

[Einstein Forecasting: Quarterly Forecasting Support and Data Segments](#)

[Einstein Opportunity Scoring: Easily Understand Why Some Scores Aren't Shown](#)

[Sales Cloud Einstein: Get Ready for Global Models](#)

[Einstein Activity Capture: Better Setup, Improved Control of Sharing, and Activity Metrics](#)

Einstein Automated Contacts: Smart Email Matching Is Retired

Einstein Insights: "Contact Is Leaving" Insights Are Retired

### **Core Sales Features**

Products: Tailor Product Schedules to Your Business Processes

Collaborative Forecasts: Opportunity List Improvements, Quotas in Setup, and a One-Page View of Territory Forecasts

Enterprise Territory Management: More to Do and See in Lightning Experience

Path: Celebrate Sales Milestones

Other Changes in Core Sales Features

### **Productivity Features**

Einstein Activity Capture: Clearer Setup, More Sharing Control, Activity Metrics

Email Experience: Adding Images, Read-Only Recipients, and Choosing a Default Email Composer

Email Templates: Enhanced Letterheads and Images

Activities and Tasks: New Filter, Task Notifications, and Packageable Task List Views

Notes: Pop Out Notes from the Utility Bar

Lightning Dialer: Custom Call Results, Call Panel Pop-Out, and Call Quality Reporting

Salesforce Inbox App: Daily Events and Insights in One Place and Updated Inbox Setup Assistant

Calendar: Event List Views and Event Series Available on Quick Actions

Quip for Sales: Standardize Sales Processes Using Quip

### **Gmail Integration**

Log Emails from Gmail to Salesforce with Fewer Clicks

View Location in Email Tracking from Gmail

### **Integration with Microsoft®**

Outlook Integration: Faster Email Logging and Email Tracking Improvements

Salesforce for Outlook: Latest Versions and Email Integration Alternatives

### **Salesforce CPQ and Billing: Pricing Guidance, Improved Invoice Line Crediting, and Reliable Amendments and Renewals for Large Contracts**

Salesforce CPQ: Pricing Guidance for Ideal Discounts, Reliable Amendments and Renewals for Large Contracts, and Improved Percent of Total Relationships on Order Products

Salesforce Billing: Bulk Invoice Line Crediting in the Credit Center and Sending CVVs in the Payment Center

### **Pardot**

Monitor Prospect Engagement with Campaign Insights (Generally Available)

Explore Marketing Report Data on Campaign Records

Use Behavior Scoring with Workflows and Process Builder

View Engagement Activities in Related Lists

Use Quick Filters on Pardot Views

B2B Marketing Analytics Legacy App Is Retiring

Get All Your Pardot Release Notes in One Place

## Service

### Einstein for Service

- [Intelligently Transfer Bot Sessions During Conversations](#)
- [Understand Conversation Design with a Dialog Map](#)
- [Set Up Bots Faster and with Less Preparation](#)
- [Customize Bot Actions with Profiles](#)
- [Give Agents the Right Steps and Top Results from Einstein Next Best Action](#)
- [Optimize Button in Einstein Case Classification Was Removed](#)

### Field Service

- [Field Service Lightning Mobile App: Deep Linking, Appointment Notifications on Dispatch, and Enhancements to Image Upload](#)
- [Schedule Smarter with Enhanced Optimization \(Beta\)](#)
- [Create and Manage Service Crews with Crew Management \(Generally Available\)](#)
- [See Further into the Future on the Gantt](#)
- [Work Faster in the Dispatcher Console Map](#)
- [Set Scheduling Limits for Different Types of Work](#)
- [Monitor Optimization Requests from the Dispatcher Console](#)
- [Select a Scheduling Policy When Booking Appointments](#)
- [Automatically Create Time Sheets for your Service Resources \(Beta\)](#)
- [Sort Related Lists in Service Reports](#)
- [Get Started with Shifts](#)
- [Shower Productive Users with Confetti](#)
- [Give New Community Users Access to Field Service Lightning Objects](#)
- [Ignore the Asset Resource Type When You Create a Service Resource](#)

### Channels

- [Messaging: A New Name for LiveMessage, Outbound Messages, and Sensitive Data Screening](#)
- [Chat: A New Name for Live Agent, Improvements to Conversational Conferencing, Seconds in the Timestamp, and Alert Sounds](#)
- [Social Customer Service: Facebook Recommendation Format and Bulk Actions on Posts](#)
- [Phone: Dialer for Essentials and Voice Support Setup Flow Updates](#)
- [Embedded Service for Mobile Apps: Give Customers a Great Mobile Chat Experience](#)
- [Embedded Service for Web: A New Name for Snap-Ins, Appointment Management, and Customized Chat Experiences](#)

### Knowledge

- [Improve Your Authoring Experience with Inline Editing](#)
- [Gain Insights with Enhanced Report Relationships](#)
- [Search Knowledge Articles from Any Object](#)
- [Use the Restore, Delete, and Submit for Translation Actions in Lightning Experience](#)
- [Paste Images into Article Rich Text Fields](#)

[Send Case Emails with Community and Site Article URLs in Lightning Experience](#)

[Manage Promoted Search Terms in Lightning Experience](#)

[Manage Knowledge Workflow Actions in Lightning Experience](#)

[Engage Global Customers with Articles in Right-to-Left Languages](#)

[Use the Upgraded Rich Text Editor](#)

[Create Knowledge Actions and Global Quick Actions](#)

[More Lookup Features for Lightning Knowledge](#)

### **Routing**

[Set Up Skills-Based Routing Without Code Using Attribute-Based Routing \(Beta\)](#)

[Specify Which Routing Skills Are Additional](#)

[Manage Queue and Skill Assignments for Your Agents in Omni-Channel Supervisor](#)

[Prompt Before Logging Out Agents of Other Browser Tabs](#)

[Use a Flow to Route Work Items Based on Skills](#)

### **Case Management**

[Lightning Flow for Service: All the Right Guidance, All in One Place](#)

[Cases: Case Merging, Improvements to Files, Template Enhancement](#)

[Agent Productivity: Conditional Macros and Improved Quick Text Searching in Lightning Experience](#)

## **Analytics**

### **Reports and Dashboards**

[Reports: Row-Level Formulas \(Beta\), Search, Lightning Historical Tracking](#)

[Dashboards: Sorting Overhauled, Table Subtotals, Table Column Resizing](#)

[Subscriptions: Better Charts on Dashboard Subscription Emails and Conditions for Report Notifications](#)

### **Einstein Analytics**

[Analytics Setup and Data Integration: More Data Sources, More Syncing, Fewer Sync Conflicts](#)

[Analytics Prebuilt Apps: New Templates, Filter Template Picker by Tag, Predictive Analytics](#)

[Analytics App Building: Improved Filters, Asset Sharing, Global Filter Enhancements](#)

[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

[Extending Analytics: Einstein Prediction Service, Embedded Dashboard Filter Builder](#)

[Analytics for End Users: Learn Tab, In-Dashboard Customized Onboarding, Mobile Apps](#)

## **Communities**

### **Lightning Communities**

[Do More with the New Salesforce CMS \(Beta\)](#)

[CMS for Community Cloud Users Are Migrating to Salesforce CMS \(Beta\)](#)

[Control Who Does What in Salesforce CMS \(Beta\)](#)

[Streamline User Creation and Management of External Users](#)

- Get More Control with Community Flow Page URLs
- Currency Field Is Available in Account and Opportunity Layouts
- Community Builder No Longer Supported in Microsoft Internet Explorer 11
- Create a Report from Your Community (Beta)

### **Lightning Components in Community Builder**

- Set Up Quick Actions in Case Views
- Set Up Mass Quick Actions in Communities
- Set Up Global Quick Actions in Communities
- Use Custom Task List Views in Record List Components
- Customize Your User Settings
- Quickly Build Contextual Filters for Einstein Analytics Dashboards
- Take Control of the Hover State in the Tile Menu (Beta)
- Streamline Customer Appointment Scheduling with Lightning Scheduler
- Give Your Users More Display Options in Record Lists
- Customize the Submit Button on Your Community Contact Support Forms
- Enhance Your Custom Lightning Community by Using Pages from Other Templates
- Add Deflection Tracking to More Communities
- Add a Button to Let Community Members Request a Call from Support

### **Developer Productivity**

- Update and Deploy Lightning Communities with ExperienceBundle (Developer Preview)
- Create and Publish Communities with Chatter REST API
- Experience More Consistent Navigation in Lightning Communities
- Future-Proof Your Linking with Navigation API Calls

### **Partner Communities**

- Share Market Development Fund Objects with Account Relationships
- Run Reports on Account Relationships
- Update Account Relationship Data Sharing Rules
- Easily Track Your Channel Program Members' History
- Add More Channel Program Members with Increased Limits
- Track Stages of Market Development Funds Using Path
- Create Lookups to Market Development Fund Objects
- Enable Partners to Send Emails from Cases
- Tailor Product Schedules to Your Business Processes

### **Sharing and Security**

- Start with More Restrictive Profiles for Standard External Community Profiles
- Use Sharing Sets with Leads
- Communities Support Right-to-Left Languages for Password Resets (Beta)

Increase Password Complexity Requirements for Communities

Customize Passwordless Login and Verify Pages

View the Number of Failed Community Login Attempts

Customer Community Plus and Customer Community Plus Login Licenses Are No Longer API Enabled by Default

Set External Access Levels for More Objects

Verify Standard Page Access for Authenticated Users

`$Site.AdminEmailAddress` Is Deprecated

### **Critical Updates**

Enable External Org-Wide Defaults in Orgs with Communities or Portals (Critical Update, Enforced)

Require TLS 1.2 for HTTPS Connections in Communities and Sites (Critical Update)

Disable the API Enabled User Permission Defaults for External Profiles (Critical Update)

Restrict the Use of Standard External Profiles for Self-Registration, Login, and Assignment to Users (Critical Update)

Block Certain Fields in the User Record for Orgs with Communities and Portals (Critical Update)

### **Other Changes in Communities**

Improve Your Sales Process by Using Path with Leads in the Salesforce App

Link Takes Users Directly to Their Profile Page

Receive (or Not to Receive) Email Notifications for Best Answers

Use Any Google Analytics Custom Dimension

Add Static Resources to CORS Whitelist

Create More Roles and Add More Person Account Users with Increased Limits

## **Files**

Create Asset Files Right from Your Asset Library

File Sharing Limits Increased

## **Mobile**

### **Mobile Publisher**

Unlock Your App with Biometric ID for Android and iOS

Enable Testing a Sandbox Community in the Mobile Publisher Project for Communities App

Brand Assets with New Fields in Your Salesforce Lightning Communities App

## **myTrailhead**

Reinvent Learning at Your Company

## **Customization**

Salesforce Connect: External Change Data Capture, External Object Picklists, External Object Reporting, and Named Credential Authentication Protocols

[AppExchange: Find the Right Salesforce Consultant for Your Project](#)

### **Einstein Prediction Builder**

[Catch Errors Before They Happen with Data Checker in Einstein Prediction Builder](#)

[Fine-Tune Your Filters with Custom Logic in Einstein Prediction Builder](#)

### **Einstein Next Best Action**

[Create Expressions for Filtering Recommendations More Easily in Next Best Action Strategies](#)

[Dynamically Deliver and Enhance Next Best Action Recommendations from Salesforce Objects or External Data Sources](#)

[Use the Map Element to Add Simple Enhancements or Map Recommendation Fields to Flow Input Variables](#)

[Package Next Best Action Strategies for Distribution](#)

### **Lightning Flow**

[Analyze Your Automated Business Processes in Automation Home \(Beta\)](#)

[Process Builder](#)

[Process and Flow Design](#)

[Flow Builder](#)

[Lightning Scheduler Flows](#)

[New Flow Content](#)

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[Retiring Features](#)

### **Lightning App Builder**

[Get More Options When Creating Record Pages](#)

[Quickly Build Contextual Filters for Einstein Analytics Dashboards](#)

[Display Einstein Discovery Predictions in Lightning Experience Record Pages](#)

[View Quip Notifications Directly in Salesforce](#)

[Track Individual Emails in the Outlook](#)

[Explore Pardot Data on Salesforce Campaigns](#)

[Switch Between Pinned and Non-Pinned Page Templates](#)

### **Data Protection and Privacy**

[Track Customer Consent with Authorization Form Objects](#)

[Classify Your Sensitive Data to Support Your Data Management Policies \(Generally Available\)](#)

[Add Credit Score and Influencer Information to Your Data Privacy Records](#)

[Customize Data Sensitivity Values for Fields](#)

[Get Data Protection and Privacy by Default](#)

### **Objects and Fields**

[Show Einstein Predictions in Formula Fields](#)

[Work with More Custom Objects in Your Org](#)

### **Sharing**

Safeguard Your Data by Setting External Access Levels for More Standard Objects (Beta)

User and Custom Object Access Settings Default to Private

External Org-Wide Defaults Are Enabled in Orgs with Communities or Portals (Critical Update)

### **Globalization**

Go Global with New International Date and Time Formats (Pilot)

Connect with More Customers with New Platform Languages

Get Things Right with Right-to-Left Languages (Beta)

### **General Setup**

Add Flexibility to Your Permission Set Group with Muted Permissions (Pilot)

Create Objects from Spreadsheets

Standard Invocable Actions for Session-Based Permission Sets Are Categorized for Flows

Gain Insight into Your Company's Installed AppExchange Packages

Set Up Quip Faster

Add Salesforce Users to Your Quip Site Faster

Use More Characters in a Big Object's Index

Define More Field Types for Big Objects

Enable Enhanced Permission Set Component Views

Enhanced External Services: Get Better Connections for a Better Tomorrow (Pilot)

Updated Topic Assignment Label

Match Production Licenses for Orgs on Different Releases

Add a Namespace Prefix to pageReference.state Properties and Query Parameters (Critical Update, Enforced)

Protect Your Custom Settings and Custom Metadata Values

Require Customize Application Permission for Direct Read Access to Custom Settings (Critical Update)

## **Security and Identity**

### **Authentication and Identity**

Give a Connected App Permission to Access External Resources with Custom Scopes

Use Lightning Login with My Domain Login Discovery

Choose from More Authentication Protocols for Named Credentials

Reset Passwords with Right-to-Left Languages (Beta)

Enhance Security with Increased Password Complexity

See the Number of Failed Login Attempts on a User Account

Create Your Own Verify Page for Community Passwordless Logins

Meet the New Password Reset Page for Login Discovery

Enable Contactless External Identity Users from the UI

Enable Logout Event Streaming Using a New UI (Beta)

Changed SAML ACS URLs for SSO

[Restrict Object Access with the Default External Identity User Profile](#)

[Learn About Mobile-First Identity with Trailhead](#)

[Learn About Connected App Basics with Trailhead](#)

### **Salesforce Shield**

[Shield Platform Encryption: More Encryption Stats, More Fields, and Case-Insensitive Filter-Preserving Encryption Generally Available](#)

[Event Monitoring: Lightning Page View EPT Improvement, Real-Time Event Monitoring \(Beta\), Enhanced Transaction Security \(Beta\), and Event Manager](#)

### **Other Changes**

[Require TLS 1.2 for HTTPS Connections \(Critical Update\)](#)

[Manage Access to Certificates and Event Log Files with Session-Security-Level Policies](#)

[Stabilize the Hostname for My Domain URLs in Sandboxes \(Critical Update, Postponed\)](#)

## **Deployment**

[New and Changed Components for Change Sets](#)

## **Salesforce IoT**

[IoT Insights Is Now Event Insights](#)

## **Development**

[Lightning Components: Lightning Web Components in More Places](#)

[Visualforce: Introducing Live Controller \(Pilot\), Update Your Guest Access to Private Static Resources, CKEditor Replaces FCKEditor](#)

[Apex](#)

[API](#)

[Salesforce CLI: Faster Load Times, Expanded Project Scaffolding](#)

[Scratch Orgs: New Features](#)

[Salesforce Extensions for VS Code: Enhanced Aura Components Support, Upcoming Force.com IDE Retirement](#)

### **Einstein Platform Services**

[Training Requests from Paid Plans Are Prioritized](#)

[Number of API Calls to Return Examples Is Limited to 30 Calls Per Month](#)

[Einstein Vision: Dataset Maximum Size Increased, New language Field](#)

[Einstein Language: Dataset Maximum Size Increased, New language Parameter and Field](#)

### **Custom Metadata Types**

[Reference Custom Metadata Type Records in Process Builder](#)

[Get More Custom Metadata Types](#)

[Monitor Custom Metadata Type Use in System Overview](#)

[Custom Metadata Type Creation Visibility Option Updated to New Functionality](#)

### **Sandboxes**

[Use Salesforce CLI for Sandbox Operations \(Beta\)](#)

### **Developer Console**

[Format Your Code with Prettier in Developer Console](#)

[Enqueued Time Field in Tests Tab Is Accurate in All Time Zones](#)

### **Debugging**

[Store More and Larger Debug Logs](#)

### **Packaging**

[Track Leads and Manage Licenses for Second-Generation Managed Packages \(Beta\)](#)

[Customize How Unlocked Packages Are Installed and Upgraded](#)

[Modify and Debug Namespaced Unlocked Packages More Easily](#)

[Other Enhancements in Unlocked Packages](#)

### **AppExchange Partners**

[See the Health of Your AppExchange Listing with Marketplace Analytics](#)

[Gain Insight into Managed Package Usage with App Analytics](#)

[Test Your Package Versions with ISV Hammer \(Pilot\)](#)

### **Change Data Capture**

[Process Change Event Messages in Apex Triggers](#)

[Compose Streams of Change Data Capture Notifications with Custom Channels](#)

[Receive Change Event Notifications for More Objects](#)

[Use transactionKey Instead of isTransactionEnd for Synchronizing Changes Within Transaction Boundaries](#)

### **Platform Events**

[Choose the Publishing Behavior for Your Platform Event](#)

[Process Smaller Event Batches in Platform Event Triggers and Recover from Exceptions](#)

[Get Notified of Asynchronous Platform Event Publish Errors \(Beta\)](#)

[Receive Streaming Events in Your Lightning Web Component](#)

### **New and Changed Items for Developers**

[Lightning Components: New and Changed Items](#)

[Apex: New and Changed Items](#)

[API: New and Changed Items](#)

[Salesforce CLI: New and Changed Commands](#)

## **Doc Content**

[Access Salesforce Extensions for VS Code Documentation on a New Site](#)

[Integrate Salesforce and Other Apps Using Updates to the Integration Patterns and Practices Guide](#)

[Pardot Documentation: Improved Resources for Login Security, Engagement Studio, and Engagement History](#)

[Introducing the Outlook Integration Implementation Guide](#)

[Introducing the Email Integration Security Guide](#)

[Explore Features with Trailhead](#)

[Watch Videos \(English Only\)](#)

## What's Different or Not Available in Summer '19 Lightning Experience Features

For new Lightning Experience features and enhancements, review these sections to see if any functionality that's critical to your business is limited or unavailable in this release.

Each section corresponds to a topic within [What are the Gaps Between Lightning Experience and Salesforce Classic](#) in Salesforce Help, which includes the full list of feature gaps and differences.

### Org Setup

- Managing deleted custom fields and the Purge button are available only in Salesforce Classic.

## Salesforce Essentials: Introducing Dialer, Chat, Messaging, and More

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You have more options to add functionality to Essentials through add-ons, like Dialer, Chat and Messaging, and increased storage. Import opportunities using the Data Import Wizard to bring your in-progress deals to Salesforce. Embed automated tasks in your website or help center, recommend next steps to your team when working with customers, and merge cases.

### IN THIS SECTION:

#### [Unify Your Team's Phones with Dialer](#)

Consolidate your company's phone calls to one phone number with Dialer, so incoming calls have a better chance of connecting to someone on your team. Personalize conversations based on past call history, take notes, and finalize a deal or case details, all within Salesforce. Don't make your customers wait by turning on Contact Requests. Customers can request that someone gets back to them later. Requests are tracked, so anyone on your team can take care of them when they have the time. Align your customers' phone experience with your company by uploading your own recorded messages and wait music.

#### [Offer Your Customers Instant Conversation with Chat and Messaging](#)

Wow your customers with Chat and Messaging. Embed web chat into your website or help center with the option to let customers log a case when your team's away. Facebook Messenger for Essentials connects your business's Facebook page to Salesforce, so messages to your page don't go unseen. And the cherry on top... your team doesn't have to leave Salesforce. Chats and messages are delivered to team members alongside their other work in Salesforce, so they can handle cases, chats, messages, and everything else side by side.

#### [Store More Data in Salesforce](#)

Increase your file and data storage limits with the click of a button. With the file and data storage add-ons, you can create more records, share more files, and support your growing business.

#### [Grow Salesforce with Your Business](#)

When you want more from Essentials, help yourself to additional functionality on the checkout page. You'll find new add-ons, including Chat and Messaging, Dialer, file storage, and data storage.

#### [Bring Your Opportunities to Salesforce Essentials](#)

Import your opportunities into Salesforce Essentials using the Data Import Wizard. Choose to import all your opportunities or only the ones with unique names.

### [Boost Your Help Center with Chat and Contact Requests](#)

Two more components are available for you to drag and drop into your self-service help center to give your customers more ways to help themselves. Use the Embedded Service Chat component to add a chat button to your help center so that customers can chat with your team. Add the Contact Request Button & Flow component to let your customers request help from your team.

### [Guide Users Through Simple Tasks with Embedded Flows](#)

Save your team's time and add more value to your self-service offerings with embedded flows. Embed flows into your website or help center to help your customers and visitors complete common tasks, such as reporting an issue, indicating interest in your product or service, or troubleshooting a problem. Your flows can create Salesforce records in the background, like contacts, leads, or cases, so that your team has everything they need to get the job done.

### [Give Every Customer All-Star Attention with Einstein Next Best Action](#)

Give the right recommendations to the right customers at the right time with Einstein Next Best Action. Create and display offers and actions for your team so that they always know what to do next. Your suggestions can guide your team through offering a potential customer a discount, suggesting add-on services related to a customer's account, or helping a customer troubleshoot an issue with your product.

### [Merge Cases to Declutter Your Case List \(Beta\)](#)

Get rid of accidental copycats in your case list by merging up to three cases into one case. If the to-be-merged cases have different information in their case fields, you can choose which version you want to use in the merged case.

### [Add In-App Guidance for Training, Onboarding, and News \(Beta\)](#)

Create in-app guidance for your users with just a few clicks. You can write audience-specific content and add action buttons to lead users to important information.

### [Join Customer Conversations on YouTube and Instagram](#)

Turn YouTube and Instagram posts into cases or leads with Social Customer Service. Bringing all your social media platforms into Essentials means your team can moderate and respond to more comments faster than ever before.

## Unify Your Team's Phones with Dialer

Consolidate your company's phone calls to one phone number with Dialer, so incoming calls have a better chance of connecting to someone on your team. Personalize conversations based on past call history, take notes, and finalize a deal or case details, all within Salesforce. Don't make your customers wait by turning on Contact Requests. Customers can request that someone gets back to them later. Requests are tracked, so anyone on your team can take care of them when they have the time. Align your customers' phone experience with your company by uploading your own recorded messages and wait music.

**How:** Get Dialer for your team by going to **Setup > Manage Subscription** and purchasing the Dialer for Essentials add-on. Make sure to add inbound and outbound licenses and minute bundles. Then turn it on from the Dialer setup page.

SEE ALSO:

[Salesforce Help: Dialer for Essentials \(can be outdated or unavailable during release preview\)](#)

## Offer Your Customers Instant Conversation with Chat and Messaging

Wow your customers with Chat and Messaging. Embed web chat into your website or help center with the option to let customers log a case when your team's away. Facebook Messenger for Essentials connects your business's Facebook page to Salesforce, so messages to your page don't go unseen. And the cherry on top... your team doesn't have to leave Salesforce. Chats and messages are delivered to team members alongside their other work in Salesforce, so they can handle cases, chats, messages, and everything else side by side.

**How:** You get one license for free, so you can start right away. And you can buy more licenses for your team as needed. To purchase Chat and Messaging, go to **Setup > Manage Subscription**.

SEE ALSO:

[Salesforce Help: Chat and Messaging in Salesforce Essentials \(can be outdated or unavailable during release preview\)](#)

## Store More Data in Salesforce

Increase your file and data storage limits with the click of a button. With the file and data storage add-ons, you can create more records, share more files, and support your growing business.

**How:** Go to **Setup > Manage Subscription** and select the add-on for File or Data Storage.

## Grow Salesforce with Your Business

When you want more from Essentials, help yourself to additional functionality on the checkout page. You'll find new add-ons, including Chat and Messaging, Dialer, file storage, and data storage.

**How:** Go to **Setup > Manage Subscription** and select the add-ons that you want to purchase.

## Bring Your Opportunities to Salesforce Essentials

Import your opportunities into Salesforce Essentials using the Data Import Wizard. Choose to import all your opportunities or only the ones with unique names.

**How:** From Setup, enter *Data Import Wizard* in the Quick Find box, then select **Data Import Wizard**.

SEE ALSO:

[Salesforce Help: Importing Data Into Salesforce Essentials \(can be outdated or unavailable during release preview\)](#)

## Boost Your Help Center with Chat and Contact Requests

Two more components are available for you to drag and drop into your self-service help center to give your customers more ways to help themselves. Use the Embedded Service Chat component to add a chat button to your help center so that customers can chat with your team. Add the Contact Request Button & Flow component to let your customers request help from your team.

**How:** To use the Embedded Service Chat component, you need to add a trusted site to your help center. The URL you need can be found in your embedded chat code snippet as `baseLiveAgentURL`. To use the Contact Request Button & Flow component, make sure that you've created a flow in the Flow Builder. We recommend creating a simple flow that lets your customers enter their contact information and a description of their issue.

SEE ALSO:

[Salesforce Help: Create CSP Trusted Sites to Access Third-Party Apps \(can be outdated or unavailable during release preview\)](#)

## Guide Users Through Simple Tasks with Embedded Flows

Save your team's time and add more value to your self-service offerings with embedded flows. Embed flows into your website or help center to help your customers and visitors complete common tasks, such as reporting an issue, indicating interest in your product or service, or troubleshooting a problem. Your flows can create Salesforce records in the background, like contacts, leads, or cases, so that your team has everything they need to get the job done.

**How:** Create a flow with the type Screen Flow using the Flow Builder. Then head to the Embedded Service page in Setup. Create a new deployment, and select **Start** under Flow Settings.

SEE ALSO:

[Salesforce Help: Add a Flow to Your Website \(can be outdated or unavailable during release preview\)](#)

## Give Every Customer All-Star Attention with Einstein Next Best Action

Give the right recommendations to the right customers at the right time with Einstein Next Best Action. Create and display offers and actions for your team so that they always know what to do next. Your suggestions can guide your team through offering a potential customer a discount, suggesting add-on services related to a customer's account, or helping a customer troubleshoot an issue with your product.

SEE ALSO:

[Put Einstein Next Best Action Recommendations at Your Agents' Fingertips](#)

[Salesforce Help: Get Started with Einstein Next Best Action \(can be outdated or unavailable during release preview\)](#)

## Merge Cases to Declutter Your Case List (Beta)

Get rid of accidental copycats in your case list by merging up to three cases into one case. If the to-be-merged cases have different information in their case fields, you can choose which version you want to use in the merged case.

SEE ALSO:

[Merge Cases into a Single Record \(Beta\)](#)

[Merge Cases into a Single Record \(Beta\)](#)

## Add In-App Guidance for Training, Onboarding, and News (Beta)

Create in-app guidance for your users with just a few clicks. You can write audience-specific content and add action buttons to lead users to important information.

## Join Customer Conversations on YouTube and Instagram

Turn YouTube and Instagram posts into cases or leads with Social Customer Service. Bringing all your social media platforms into Essentials means your team can moderate and respond to more comments faster than ever before.

**How:** From Setup, select **Channels** then select **Social Customer Service** under Social.

SEE ALSO:

[Add Social Accounts to Social Customer Service](#)

## Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts

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Set up and test bots faster and with fewer utterances. Use Data Checker to set up your predictions for success. Improve your forecasting with support for quarterly forecasts and data segments. And, Einstein shines intelligence across more core Salesforce applications, increasing their brilliance.

### Sales

#### **Einstein Opportunity Scoring: Easily Understand Why Some Scores Aren't Shown**

When an opportunity score isn't shown to sales reps because they have limited access to Einstein Opportunity Scoring, the score value is now marked as hidden.

#### **Sales Cloud Einstein: Get Ready for Global Models**

Einstein intelligence is built on data. And the more data Einstein has, the more powerful the predictions are. But not everyone has enough data to build a predictive model of their own. To give more customers meaningful artificial intelligence, we're building global predictive models that all customers can use. Global model looks for aggregate, anonymous trends across many Salesforce customers, so the first step is to gather data from multiple Salesforce orgs. We'll use the data to build global models.

#### **Einstein Activity Capture: Better Setup, Improved Control of Sharing, and Activity Metrics**

It's now easier to create and edit Einstein Activity Capture configurations. Decide what it means to share activities with everyone. And, Activity Metrics is generally available with some key improvements.

#### **Einstein Automated Contacts: Smart Email Matching Is Retired**

The Smart Email Matching option that helps improve opportunity contact role suggestions is no longer available.

#### **Einstein Insights: "Contact Is Leaving" Insights Are Retired**

The "Contact is leaving" opportunity and account insights are no longer available.

#### **Support for Quarterly Forecasting (Beta)**

If you use a quarterly forecasting schedule, you can now use the power of Einstein to improve forecasting accuracy, predict results, and track how sales teams are doing.

#### **Segment Your Data for Better Forecast Predictions**

Improve your forecasting model by sorting your opportunities into relevant groups, such as by region or product line.

#### **Monitor Prospect Engagement with Campaign Insights (Generally Available)**

Not only is Pardot Einstein Campaign Insights now generally available, we made it better. In addition to prospect details and list email engagement, find insights for other marketing assets. Get a bigger picture view with new explanations that feature activity around marketing forms and landing pages.

#### **Use Behavior Scoring with Workflows and Process Builder**

When a prospect shows all the right buying signals, you don't have time to waste with administrative tasks, like assigning leads and posting to Chatter. Use Einstein Behavior Scoring as part of your rule criteria in Process Builder and Workflows to automate the day-to-day. With these tools, you get the best leads to your sales team faster.

## Service

### **Intelligently Transfer Bot Sessions During Conversations**

Transfer each bot session to the right agent or queue by overriding the default queue on Chat buttons or the channel ID for Messaging. Create rule actions that route conversations to agents in specialized queues.

### **Understand Conversation Design with a Dialog Map**

Spot each conversation's turns, references, and rule conditions with an easy-to-use visual representation. Build and create dialogs in Dialog Details, then switch to Map to see the conversation's configuration and framework. Dialog Map is read-only, so you can't create or update dialogs from it.

### **Set Up Bots Faster and with Less Preparation**

Jumpstart bot implementations without adding 20 utterances or turning on Einstein to create an intent model for your bot. On dialog intents, you can choose to enter a few keywords that exactly match utterances used by customers. This "exact match" option helps you test and deploy simple bots faster. Exact match ignores capitalization but doesn't overlook spaces or punctuation.

### **Customize Bot Actions with Profiles**

Expand your bots' capabilities and give them access to features like Field Service Lightning by assigning them custom profiles. Each bot now has a Bot User, which specifies what a bot can do based on licenses, permissions, and objects. By default, each bot has a Basic Chatbot User profile, but we recommend that you create a custom profile to broaden your bot's behavior.

### **Give Agents the Right Steps and Top Results from Einstein Next Best Action**

Combine recommendations from Einstein Next Best Action with other guidance, and show it all in a single place: the Actions & Recommendations component. Create actions and offers as recommendations. Refine and personalize them with action strategies that use business rules, Einstein predictive models, and other data sources. Present the best options with other actions so that your workers can find the right steps fast.

### **Optimize Button in Einstein Case Classification Was Removed**

To simplify the Case Classification setup, we streamlined some options and removed the Optimize button.

### **Put Einstein Next Best Action Recommendations at Your Agents' Fingertips**

Combine the top recommendations from your Einstein Next Best Action strategies with other next steps that your agents can take. When your strategies produce recommendations, they appear in a tab on the Actions & Recommendations component. You no longer need a separate Next Best Action component to show them to your agents.

## Analytics

### **Build Ethical and Accountable Models with Protected Fields**

Create accountable AI models that detect and flag potentially biased variables. With protected fields, you can declare protected values to exclude from your models and receive notice of problematic correlations.

### **Gain Deeper Insight into Your Model with Enhanced Model Metrics**

Use the new Overview and Prediction Examination tabs to get more feedback about your model so that you can refine it to get better predictions.

### **Experiment with Your Data Using Sandboxes**

Einstein Discovery stories are now included in full copy sandboxes. Copy a story and the data to a sandbox to test it. No need to recreate the story from scratch.

### **Refine Your Stories Using Field-Level Correlations and Improvements**

Get help to optimize data analysis in your story with the Story Setup wizard. It shows you how each field correlates to the story outcome, identifies redundant or outlier data that you can exclude, and suggests bucketing improvements.

### **Deploy Predictions on Salesforce Records Without Writing Code (Pilot)**

You can now write scores automatically to selected Salesforce fields. Easily integrate predictions without involving Process Builder or a managed package with a trigger.

### **Display Einstein Discovery Predictions in Lightning Experience Record Pages**

Add Einstein Discovery predictions as a standard Lightning component in any record detail page. In the Lightning App Builder, drag the new Einstein Predictions component onto your record page. Then simply choose a prediction definition, set prediction units, and select display settings. On the record page, predictions are updated in real time, and no writeback to Salesforce is necessary.

### **Get Better Insights with Smart Bucketing**

Better bucketing improves your story insights. Einstein Discovery uses an unsupervised learning algorithm that analyzes numeric columns in your story. It suggests better buckets to use, such as different ranges for age or postal code data.

### **Predict Quantities Using Whole Numbers**

Calculations often result in fractions. But certain predictions make sense only when expressed as whole numbers, say the number of orders per month or the number of customers entering a store. Display them as whole numbers using automatic rounding.

### **Monitor the Accuracy of Deployed Models in Real Time (Pilot)**

Determine the accuracy of your model by comparing predicted outcomes with actual ones. Then use this feedback to fine-tune your model and get better predictions.

### **Generate Predictions Natively in Analytics Dataflows**

For Einstein Analytics dataflows, to score a dataset, add the new prediction transformation in the dataflow editor. Specify the name of the prediction definition to use and the name and label of the new dataset column to contain the score.

### **Improve Story Accuracy With Optimized Feature Selection**

Einstein Discovery now generates stories with numeric outcomes faster by selecting just the features and variables required to build the model. The story creation process is streamlined and quicker. Optimized feature selection applies to regression stories but is not for classification.

### **Gain Insights from Smaller Einstein Analytics Datasets**

Don't have a lot of data? No problem. Descriptive insights require only a minimum of 50 rows of data. Predictive insights require a minimum of 400 rows of data. Select the dataset during story setup. If it contains fewer than 400 rows, Einstein Discovery generates insights for descriptive insights but doesn't generate a model for predictions and improvements.

### **Retiring Einstein Discovery Classic**

We plan to retire Einstein Discovery Classic in Spring '20. Current Einstein Discovery Classic users need the Einstein Analytics Plus license (required for Einstein Discovery in Analytics) to recreate datasets and stories in Analytics Studio. Einstein Discovery Classic will be replaced with the new experience in all Developer Orgs with the Summer '19 release.

### **Embed Your Einstein Discovery Predictions Anywhere**

After deploying models with Einstein Discovery, use the Einstein Predictions Service Scoring API to embed your predictions into any website or application. Use the Scoring API REST endpoint to access the deployed Einstein Discovery predictive modes. Send model input variables, and get back predictions, reasons for the predictions, and recommendations on how to improve the predictions. Via embedding, you can score records located inside or outside of Salesforce.

## Customization

### **Catch Errors Before They Happen with Data Checker in Einstein Prediction Builder**

Don't wait until you're done setting up a prediction to find out you don't have enough records in your dataset or that the prediction quality is low. Einstein can determine how many example records and how many true and false values you need to make a useful prediction. Use Data Checker to get this information as you go. Find out early on that you don't have enough records in your filtered dataset so that you can adjust your segment or example filters, and then recheck your data.

### **Fine-Tune Your Filters with Custom Logic in Einstein Prediction Builder**

When you build a prediction, you use filters to define the set of records in your data set that your prediction is based on. Now you can apply custom logic to your filter conditions to be more precise about the set of records that you want to include.

### **Create Expressions for Filtering Recommendations More Easily in Next Best Action Strategies**

Einstein Next Best action now lets you create expressions for filtering recommendations more quickly and accurately. Expressions use resources, operators, and values, and you can build them in two different modes: simple and advanced. Simple is declarative: just select or search to build your formula. Need a more complex expression? Advanced is the way to go: type your expression following the formatting and syntax guidelines you'll find on the screen.

### **Dynamically Deliver and Enhance Next Best Action Recommendations from Salesforce Objects or External Data Sources**

Now, instead of relying on static, pre-created recommendations, you can get dynamic recommendations and AI-driven predictions using two new elements: Generate and Enhance.

### **Use the Map Element to Add Simple Enhancements or Map Recommendation Fields to Flow Input Variables**

The new Map element lets you use formulas to create new fields and modify existing fields without having to use Apex code.

### **Package Next Best Action Strategies for Distribution**

Packaging lets strategy builders distribute their Next Best Action strategies easily and at scale. Enterprise developers can package strategies for use in multiple Salesforce orgs, and independent software vendors (ISVs) can add strategies to AppExchange for distribution to their customers. You can package your strategies and certain dependencies and distribute them in both managed and unmanaged packages. Change sets are also supported.

### **Show Einstein Predictions in Formula Fields**

Einstein Prediction Builder generates probabilities and predictions, like how much a customer is likely to pay for a service. When creating a custom formula field, you can now reference AI prediction fields.

## Development

### **Training Requests from Paid Plans Are Prioritized**

Training requests from customers with a paid plan are prioritized before requests from customers on a free plan. A training request is any call to a `/train` or `/retrain` resource. You could experience a delay in training if you're on the free tier of service and other requests are in the queue.

### **Number of API Calls to Return Examples Is Limited to 30 Calls Per Month**

Each Einstein Platform Services account is now limited to 30 calls per calendar month to Einstein Vision and Einstein Language endpoints that return examples. This limit applies across all APIs that return examples. If you exceed this limit, you receive an error message.

### **Einstein Vision: Dataset Maximum Size Increased, New language Field**

Tap into the power of AI and train deep-learning models to recognize and classify images at scale. You can use pre-trained classifiers or train your own custom classifiers to solve unique use cases.

### **Einstein Language: Dataset Maximum Size Increased, New language Parameter and Field**

Use the Einstein Language APIs to build natural language processing into your apps and unlock powerful insights within text. The language APIs include the Einstein Intent API and the Einstein Sentiment API.

## Sales: High Velocity Sales Enhancements, Einstein Activity Metrics, Customizable Product Schedules, and New Einstein Features for CPQ and Pardot

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Link sales cadences to address complex sales processes. Activity Metrics gives Einstein Activity Capture users a complete view of their activity data. Customizable product schedules can support more complex sales processes related to incoming revenue and outgoing orders. Drive sales teams to more intelligent pricing with CPQ Einstein Pricing Guidance. And use Einstein Campaign Insights to find similarities among prospects who engage with your campaigns.

### IN THIS SECTION:

#### [High Velocity Sales: Person Account Support, New User Welcome Experience, and Improvements to Sales Cadences](#)

High Velocity Sales (HVS) now supports person accounts and third-party calling solutions. Sales managers and reps can also assign prospects to any HVS user, not just the record owner. New users are greeted with resources to get up and running quickly. And we added lots of new sales cadence features, including the ability to chain together different sales cadences.

#### [Sales Cloud Einstein: Quarterly Forecasting, Data Segmentation, and Global Models](#)

Einstein Forecasting welcomes quarterly forecasts and data segmentation. Learn about global data models. Plus, enhancements to Einstein Activity Capture improve setup and sharing options.

#### [Core Sales Features: Customizable Product Schedules, Quotas in Setup, a New View of Territory Forecasts, and Confetti to Celebrate](#)

Customize product schedules to support your business processes. Manage sales quotas without Data Loader or the API. Users see all their territory forecasts on one page. And help your teams celebrate successes.

#### [Productivity Features: Improved Einstein Activity Capture, New Customizations with Email and Templates, and Enhancements to Inbox](#)

Einstein Activity Capture brings better sharing control and improved setup. Add images to email, and get enhanced letterheads in email templates. Use Inbox Now to see all the details and insights about the day's activities.

#### [Lightning Data: Choose Which Records to Target or Skip](#)

You now have more control over Lightning Data updates and assessments. For instance, you can avoid running Lightning Data rules uselessly on old leads. Or skip the rule for records updated by other systems or when your company's security or compliance policies prohibit data flow between certain records and a data service. For each Lightning Data rule, create a custom checkbox field, name it as specified, and add it to your records. The rule runs on records with the checkbox selected, and skips the rest.

#### [Data.com Prospector and Data.com Clean Are Being Retired](#)

Data.com Prospector and Data.com Clean licenses can't be renewed after July 31, 2019. These products are scheduled for retirement on July 31, 2020. Current licenses will be honored.

#### [Gmail Integration: Faster Email Logging and Email Tracking Improvements](#)

Sales reps can opt to keep the options for logging an email to Salesforce open as they move through their email. Email tracking, available with an Inbox license, includes location information. Tracking information for emails sent from Gmail is available in the Salesforce activity timeline.

#### [Integration with Microsoft: Faster Email Logging and Email Tracking Improvements](#)

Log emails from Microsoft® Outlook® to Salesforce with fewer clicks. Get more focused information about tracked emails. Plus, learn about the latest Salesforce for Outlook version. Or give up Salesforce for Outlook upgrades altogether by moving to a cloud-based alternative.

### [Salesforce CPQ and Billing: Pricing Guidance, Improved Invoice Line Crediting, and Reliable Amendments and Renewals for Large Contracts](#)

Drive your sales team to close deals by providing them with pricing guidance based on historical deals and product pricing trends. Amend and renew large contracts with lower risk of timeouts. Credit multiple invoice lines at once, and apply credit tax all in one convenient location.

### [Pardot: Data Visualization for Sales Users, New Einstein Insights, and More Goodies](#)

Engagement History features now include dashboards for campaign records and prospect activity related lists for marketing asset records. Use Einstein Behavior Scoring values to tailor automated processes and find new campaign insights about marketing forms and landing pages. Plus, you can find Quick Filters and Full view options on some Pardot Lightning app objects.

## High Velocity Sales: Person Account Support, New User Welcome Experience, and Improvements to Sales Cadences

High Velocity Sales (HVS) now supports person accounts and third-party calling solutions. Sales managers and reps can also assign prospects to any HVS user, not just the record owner. New users are greeted with resources to get up and running quickly. And we added lots of new sales cadence features, including the ability to chain together different sales cadences.

High Velocity Sales and its features are available for an extra cost. For pricing details, contact your Salesforce account executive. Lightning Dialer is also available for an extra cost as an add-on license.

### IN THIS SECTION:

#### [Use Person Accounts with High Velocity Sales](#)

Sales teams using a business to consumer model can now include person accounts in sales cadences and all other High Velocity Sales activities. Accelerate your inside sales process for person accounts with the HVS app, and let sales reps easily track their sales outreach to person accounts with the Work Queue.

#### [Assign Prospects to Any High Velocity Sales User](#)

When sales managers and reps add a prospect to a sales cadence, they can now assign the sales cadence steps to someone other than the record owner. The prospect appears in the work queue of the assignee. Assigning another user is especially useful when a queue owns the lead. When your account owners own their contacts but don't do direct sales, managers can assign another HVS user to take the contact through the sales steps.

#### [Give New Users a Great Start to High Velocity Sales](#)

New users have a slew of resources available to them when starting with High Velocity Sales. Our new welcome experience includes links to training videos, Trailhead content, and in-app user assistance. Sales managers and reps can pace themselves on what they need to know to work effectively with High Velocity Sales.

#### [Work Queue: Sorting and Customization](#)

Sales reps can sort leads to organize their work queue. Admins can customize which information reps see for each lead.

#### [Sales Cadences: Linking, Prospect Status, and Template Previews](#)

Sales managers can link sales cadences together. Managers and sales reps can view prospect status on lead, contact, and person account records. Managers can preview call scripts and email templates right in the Sales Cadence Builder.

#### [Use Open CTI with High Velocity Sales](#)

Do you use a calling solution other than Lightning Dialer? If so, we're happy to report that High Velocity Sales can support third-party computer telephony integration (CTI) providers as part of the in-app calling experience.

### Track Emails Consistently in High Velocity Sales

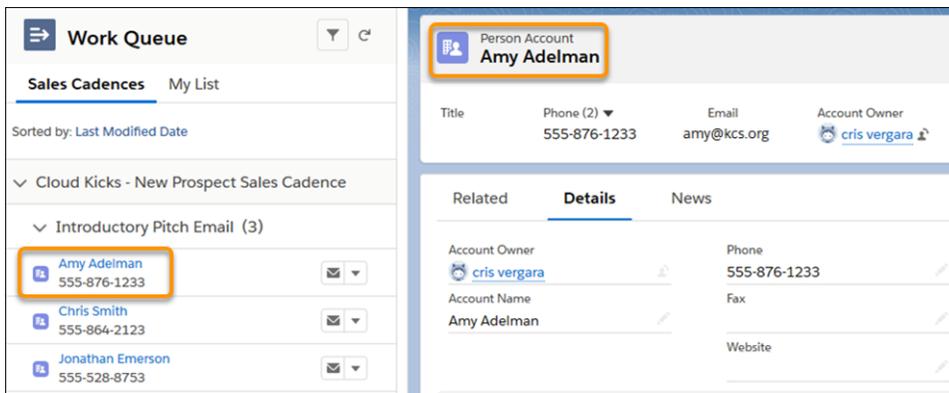
Regardless of whether sales reps are sending emails from the Work Queue or from the Outlook and Gmail integrations, they can view email tracking information and choose to log the email to Salesforce. By having a consistent experience, reps can easily switch between the email applications without missing a beat.

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Sales teams using a business to consumer model can now include person accounts in sales cadences and all other High Velocity Sales activities. Accelerate your inside sales process for person accounts with the HVS app, and let sales reps easily track their sales outreach to person accounts with the Work Queue.

**Where:** This change applies to High Velocity Sales in Lightning Experience. High Velocity Sales is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**Why:** When sales users add person accounts to sales cadences, they appear in the work queue just like leads and contacts.

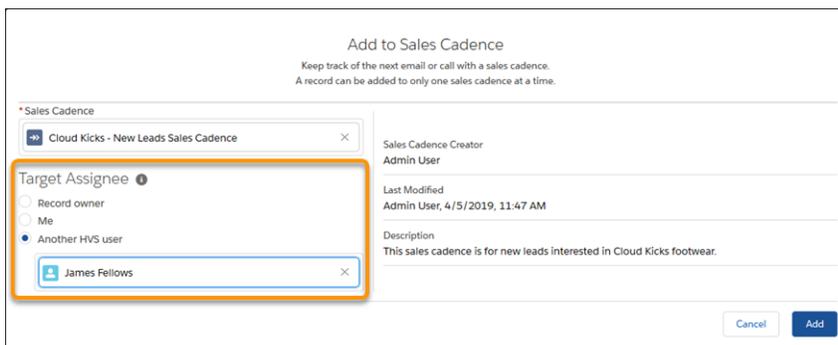


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When sales managers and reps add a prospect to a sales cadence, they can now assign the sales cadence steps to someone other than the record owner. The prospect appears in the work queue of the assignee. Assigning another user is especially useful when a queue owns the lead. When your account owners own their contacts but don't do direct sales, managers can assign another HVS user to take the contact through the sales steps.

**Where:** This change applies to High Velocity Sales in Lightning Experience. High Velocity Sales is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** When adding leads, contacts, or person accounts to a sales cadence, choose the record owner or any other High Velocity Sales user to move the target through the sales cadence steps.

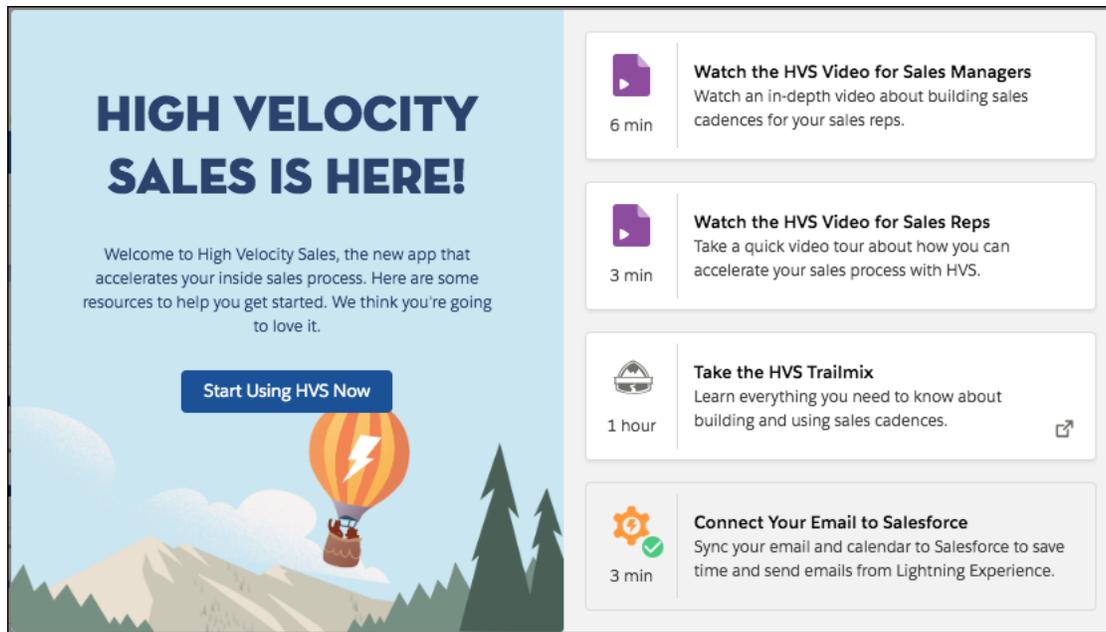


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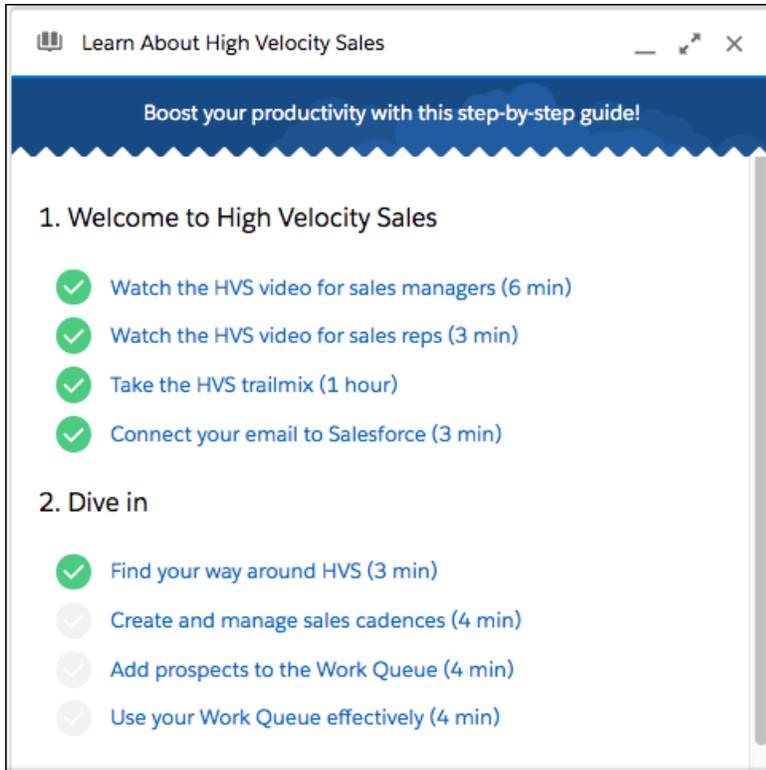
**Where:** This change applies to High Velocity Sales in Lightning Experience. High Velocity Sales is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**Why:** Users are presented with a welcome mat the first time they open the High Velocity Sales app.



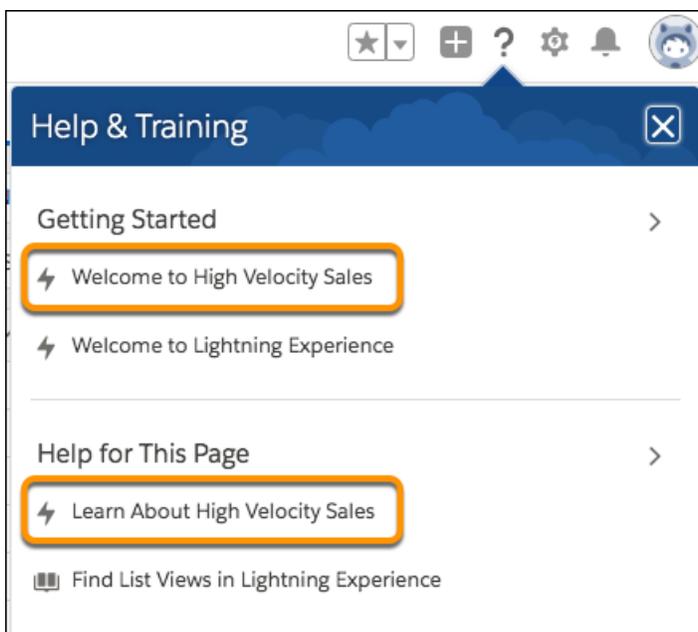
Users see different resources depending on whether they're a sales manager or a sales rep.

After users see the welcome mat, they get access to the docked assistant.



The docked assistant shows everything available in the welcome mat and also a few more resources. With the “Dive in” content, sales reps and managers are given a tour of the product’s major features without leaving the app. Users can walk through the fundamentals of setting up and using High Velocity Sales with in-app assistance at their side.

The welcome mat and docked assistant are always accessible from the Help Menu.



## Work Queue: Sorting and Customization

Sales reps can sort leads to organize their work queue. Admins can customize which information reps see for each lead.

### IN THIS SECTION:

#### [Sort Work Queue Leads](#)

Sales reps can sort the work queue to match their work preferences, whether to contact the most recently added people or follow up on ones that haven't been contacted lately.

#### [Customize the Details Reps See in the Work Queue](#)

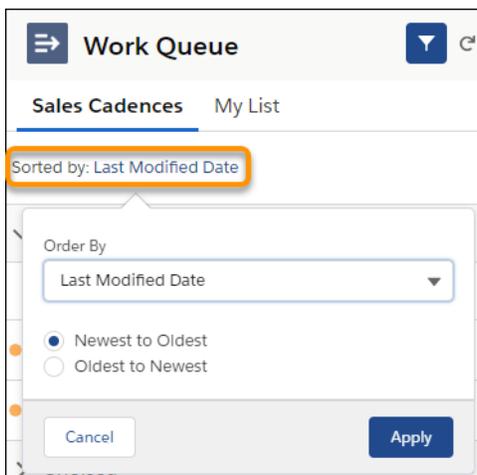
Highlight the information that your sales reps need when working on their work queue. In the compact layout, select up to three fields to display in the work queue, and list them first. The icon and the first field are hyperlinks to the record.

### Sort Work Queue Leads

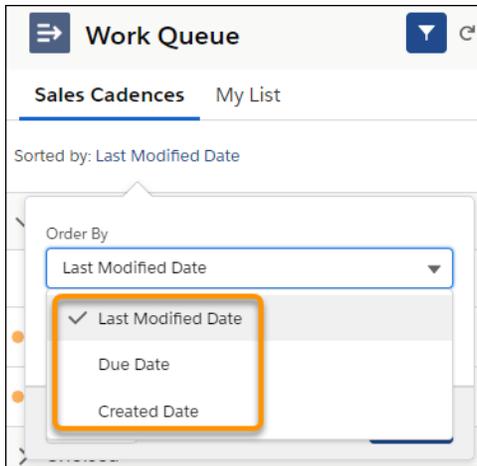
Sales reps can sort the work queue to match their work preferences, whether to contact the most recently added people or follow up on ones that haven't been contacted lately.

**Where:** This change applies to High Velocity Sales in Lightning Experience. High Velocity Sales is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** Click the **Sorted by** link to change the direction of the sort.



Click the **Order By** dropdown list to change what is being sorted.

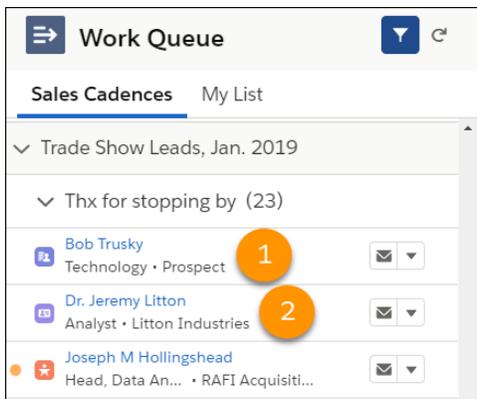


## Customize the Details Reps See in the Work Queue

Highlight the information that your sales reps need when working on their work queue. In the compact layout, select up to three fields to display in the work queue, and list them first. The icon and the first field are hyperlinks to the record.

**Where:** This change applies to High Velocity Sales in Lightning Experience. High Velocity Sales is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**Why:** Your reps have the lead information they need at a glance.



You can configure different fields for different entities and record types. For example, the person account entry (1) shows the industry and status while the contact entry (2) shows the title and company.

**How:** In Setup, click **Object Manager** and then click the name of the entity whose layout you want to edit. Click **Compact Layouts** and then click the name of the compact layout you want to edit. Click **Edit**. In Available Fields and Selected Fields, select and order the fields you want to appear in the compact layout.

SEE ALSO:

[Salesforce Help: Customize the Work Queue \(can be outdated or unavailable during release preview\)](#)

## Sales Cadences: Linking, Prospect Status, and Template Previews

Sales managers can link sales cadences together. Managers and sales reps can view prospect status on lead, contact, and person account records. Managers can preview call scripts and email templates right in the Sales Cadence Builder.

### IN THIS SECTION:

#### [Link Sales Cadences](#)

Sales managers can create more customized sales outreach playbooks by connecting multiple sales cadences together. When prospects go through one sales cadence, they're automatically added to the next one. Sales managers can design one sales cadence for hot leads and connect it to a sales cadence for leads that don't convert during the first one.

#### [Reach Out to Prospects with Fewer Clicks](#)

When sales reps view a prospect's detail page, they can see exactly where the prospect is in their sales cadence and perform the next sales outreach. Just add the Sales Cadence Steps component to your Lead, Contact, or Person Account page layout.

#### [Preview Email Templates and Call Scripts in the Sales Cadence Builder](#)

When sales managers create sales cadences, they can instantly see the email templates and call scripts they've assigned to each step, right in the Sales Cadence Builder.

#### [Sales Cadences Standard Invocable Actions Categorized for Flows](#)

Invocable actions and quick actions available for building flows are now categorized to make them easier to find. For sales cadences, invocable actions include Assign Target to Sales Cadence and Remove Target From Sales Cadence.

#### [Other Changes to Sales Cadences](#)

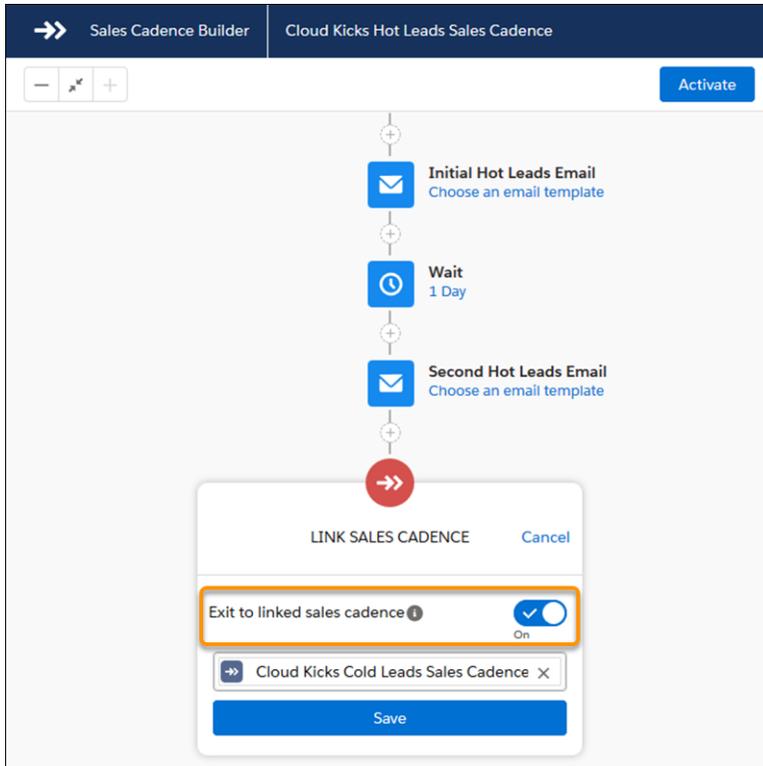
Check out these additional sales cadence enhancements.

## Link Sales Cadences

Sales managers can create more customized sales outreach playbooks by connecting multiple sales cadences together. When prospects go through one sales cadence, they're automatically added to the next one. Sales managers can design one sales cadence for hot leads and connect it to a sales cadence for leads that don't convert during the first one.

**Where:** This change applies to High Velocity Sales in Lightning Experience. High Velocity Sales is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** To link the end step of a sales cadence to another sales cadence, turn on **Exit to linked sales cadence** and choose an active sales cadence.

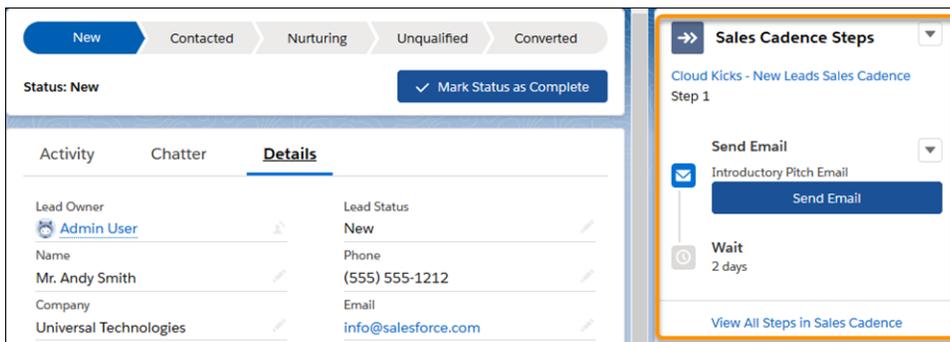


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When sales reps view a prospect’s detail page, they can see exactly where the prospect is in their sales cadence and perform the next sales outreach. Just add the Sales Cadence Steps component to your Lead, Contact, or Person Account page layout.

**Where:** This change applies to High Velocity Sales in Lightning Experience. High Velocity Sales is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**Why:** Let sales reps see and act on the prior and future sales steps for each prospect, even when they’re viewing a record detail page instead of the Work Queue.

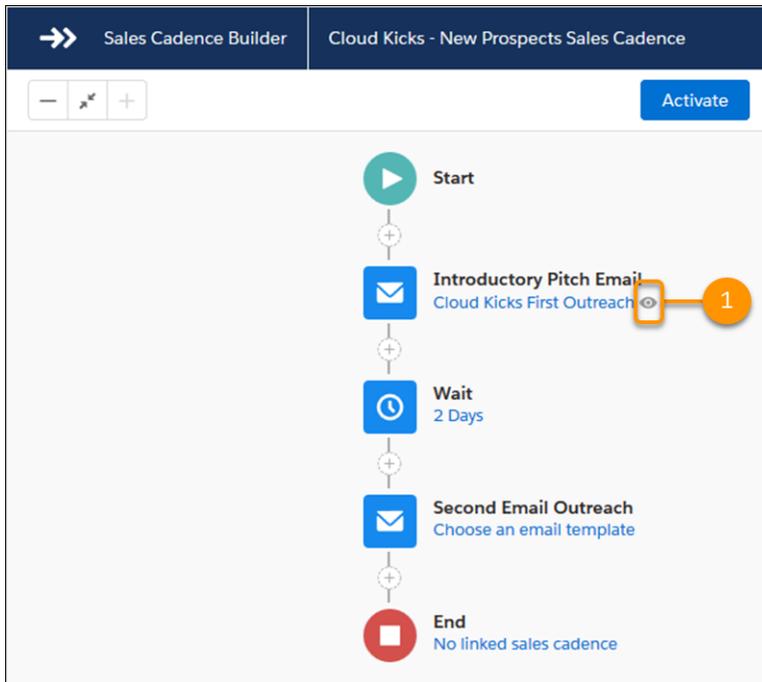


### Preview Email Templates and Call Scripts in the Sales Cadence Builder

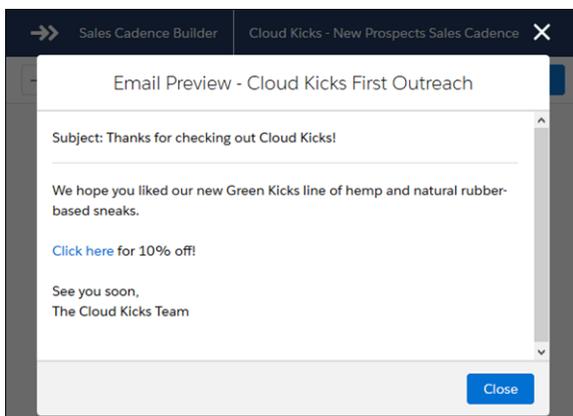
When sales managers create sales cadences, they can instantly see the email templates and call scripts they’ve assigned to each step, right in the Sales Cadence Builder.

**Where:** This change applies to High Velocity Sales in Lightning Experience. High Velocity Sales is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** To view an email template or call script, click the preview icon (1) next to the template name.



The preview appears in the Sales Cadence Builder.



## Sales Cadences Standard Invocable Actions Categorized for Flows

Invocable actions and quick actions available for building flows are now categorized to make them easier to find. For sales cadences, invocable actions include Assign Target to Sales Cadence and Remove Target From Sales Cadence.

**Where:** This change applies to High Velocity Sales in Lightning Experience. High Velocity Sales is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** When you're building a flow related to a sales cadence, drag the Action flow element onto the Flow Builder canvas. Under Filter By, select the category you want. Use search to find the invocable action or quick action you want to add to your flow, or view a list of all available flows.

SEE ALSO:

[Find Actions by Type or Category When Building Flows](#)

[Salesforce Help: Build a Flow \(can be outdated or unavailable during release preview\)](#)

## Other Changes to Sales Cadences

Check out these additional sales cadence enhancements.

**Where:** These changes apply to High Velocity Sales in Lightning Experience. High Velocity Sales is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**Why:** We've made some small but important changes to HVS to make it more user-friendly and enhance performance.

- Sales managers can zoom and drag on the Sales Cadence Builder canvas.
- Sales managers can remove up to 200 targets from a sales cadence at once.
- Deleting sales cadences and adding or removing more than 20 targets are now asynchronous. If an error occurs, the sales manager receives an email.
- Sales cadences are now limited to 100 steps. Previously, there was no limit.

## Use Open CTI with High Velocity Sales

Do you use a calling solution other than Lightning Dialer? If so, we're happy to report that High Velocity Sales can support third-party computer telephony integration (CTI) providers as part of the in-app calling experience.

**Where:** This change applies to High Velocity Sales in Lightning Experience. High Velocity Sales is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** You can integrate your CTI solution with High Velocity Sales if:

- Your org is using Open CTI for Lightning Experience.
- Your CTI uses click-to-dial.
- The saveLog() Open CTI method is used to save a task with a call task type on the related record after the call.

Reach out to your CTI provider to confirm compatibility with High Velocity Sales. There are a few updates they can make to provide the best user experience.

SEE ALSO:

[Salesforce Help: Open CTI and High Velocity Sales \(can be outdated or unavailable during release preview\)](#)

[Developer Documentation: High Velocity Sales \(HVS\) Methods for Lightning Experience \(can be outdated or unavailable during release preview\)](#)

## Track Emails Consistently in High Velocity Sales

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## Sales Cloud Einstein: Quarterly Forecasting, Data Segmentation, and Global Models

Einstein Forecasting welcomes quarterly forecasts and data segmentation. Learn about global data models. Plus, enhancements to Einstein Activity Capture improve setup and sharing options.

### IN THIS SECTION:

#### [Einstein Forecasting: Quarterly Forecasting Support and Data Segments](#)

Companies that use a quarterly forecasting schedule can now use Einstein Forecasting, and you can also sort your opportunities into relevant groups.

#### [Einstein Opportunity Scoring: Easily Understand Why Some Scores Aren't Shown](#)

When an opportunity score isn't shown to sales reps because they have limited access to Einstein Opportunity Scoring, the score value is now marked as hidden.

#### [Sales Cloud Einstein: Get Ready for Global Models](#)

Einstein intelligence is built on data. And the more data Einstein has, the more powerful the predictions are. But not everyone has enough data to build a predictive model of their own. To give more customers meaningful artificial intelligence, we're building global predictive models that all customers can use. Global model looks for aggregate, anonymous trends across many Salesforce customers, so the first step is to gather data from multiple Salesforce orgs. We'll use the data to build global models.

#### [Einstein Activity Capture: Better Setup, Improved Control of Sharing, and Activity Metrics](#)

It's now easier to create and edit Einstein Activity Capture configurations. Decide what it means to share activities with everyone. And, Activity Metrics is generally available with some key improvements.

#### [Einstein Automated Contacts: Smart Email Matching Is Retired](#)

The Smart Email Matching option that helps improve opportunity contact role suggestions is no longer available.

#### [Einstein Insights: "Contact Is Leaving" Insights Are Retired](#)

The "Contact is leaving" opportunity and account insights are no longer available.

## Einstein Forecasting: Quarterly Forecasting Support and Data Segments

Companies that use a quarterly forecasting schedule can now use Einstein Forecasting, and you can also sort your opportunities into relevant groups.

### IN THIS SECTION:

#### [Support for Quarterly Forecasting \(Beta\)](#)

If you use a quarterly forecasting schedule, you can now use the power of Einstein to improve forecasting accuracy, predict results, and track how sales teams are doing.

#### [Segment Your Data for Better Forecast Predictions](#)

Improve your forecasting model by sorting your opportunities into relevant groups, such as by region or product line.



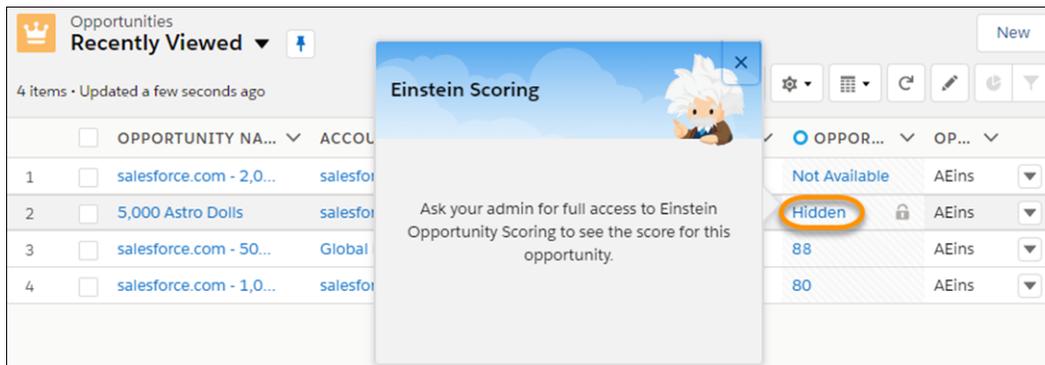
## Einstein Opportunity Scoring: Easily Understand Why Some Scores Aren't Shown

When an opportunity score isn't shown to sales reps because they have limited access to Einstein Opportunity Scoring, the score value is now marked as hidden.

**Where:** This change applies to Sales Cloud Einstein in Lightning Experience. Sales Cloud Einstein is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**Who:** If your company has at least one Sales Cloud Einstein license and met specific requirements, we gave you the ability to let all users see opportunity scores. Sales reps who are assigned a Sales Cloud Einstein license see scores on all opportunities, while all other reps see scores on some opportunities.

**Why:** When sales reps see hidden scores, it's easier for them to understand that they have the limited version of opportunity scoring. For reps to get full access to Einstein Opportunity Scoring, assign a Sales Cloud Einstein license to them.



In Salesforce Classic, reps still see a blank value for scores they don't have access to.

SEE ALSO:

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

[Salesforce Help: Manage Whether All Users See Einstein Opportunity Scores \(can be outdated or unavailable during release preview\)](#)

## Sales Cloud Einstein: Get Ready for Global Models

Einstein intelligence is built on data. And the more data Einstein has, the more powerful the predictions are. But not everyone has enough data to build a predictive model of their own. To give more customers meaningful artificial intelligence, we're building global predictive models that all customers can use. Global model looks for aggregate, anonymous trends across many Salesforce customers, so the first step is to gather data from multiple Salesforce orgs. We'll use the data to build global models.

**Where:** This change applies to Sales Cloud Einstein in Lightning Experience and Salesforce Classic. Sales Cloud Einstein is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**When:** We aren't using org data to create global models right away. Keep an eye out for communications from Salesforce with more details and steps for opting out from having your data included.

**Who:** Global models will be based on data from orgs that have at least one Sales Cloud Einstein license and have enabled at least one Sales Cloud Einstein feature.

**Why:** We want you to feel comfortable with global models, so we're taking it slow and letting you control whether your data is included. Rest assured that if your data is included, it remains as secure as ever and is never shared with other customers.

SEE ALSO:

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)  
[Knowledge Article: Sales Cloud Einstein: Global Model Opt-Out Process \(can be temporarily unavailable\)](#)

## Einstein Activity Capture: Better Setup, Improved Control of Sharing, and Activity Metrics

It's now easier to create and edit Einstein Activity Capture configurations. Decide what it means to share activities with everyone. And, Activity Metrics is generally available with some key improvements.

SEE ALSO:

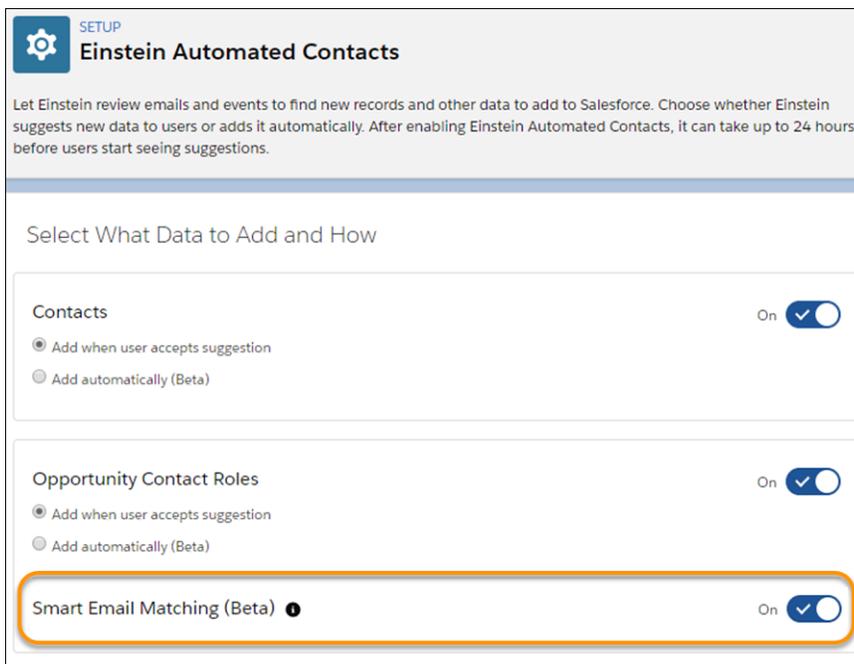
[Einstein Activity Capture: Clearer Setup, More Sharing Control, Activity Metrics](#)  
[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

## Einstein Automated Contacts: Smart Email Matching Is Retired

The Smart Email Matching option that helps improve opportunity contact role suggestions is no longer available.

**Where:** This change applies to Lightning Experience in Professional, Performance, and Unlimited editions.

**How:** No action is required.



SEE ALSO:

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

## Einstein Insights: “Contact Is Leaving” Insights Are Retired

The “Contact is leaving” opportunity and account insights are no longer available.

**Where:** This change applies to Sales Cloud Einstein in Lightning Experience. Sales Cloud Einstein is available for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** No action is required.

SEE ALSO:

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

## Core Sales Features: Customizable Product Schedules, Quotas in Setup, a New View of Territory Forecasts, and Confetti to Celebrate

Customize product schedules to support your business processes. Manage sales quotas without Data Loader or the API. Users see all their territory forecasts on one page. And help your teams celebrate successes.

IN THIS SECTION:

[Products: Tailor Product Schedules to Your Business Processes](#)

Spare your sales team the grunt work of managing complex sales processes for incoming revenue and outgoing orders. Enable customizable product schedules to use custom fields, validation rules, and Apex triggers and to optimize schedule layout and buttons. Enabling customizable product schedules disables Salesforce Classic actions on product schedules, and makes them read-only. In addition, Line Item Schedule is added to the object manager, but it's unavailable in Process Builder and Workflow.

[Collaborative Forecasts: Opportunity List Improvements, Quotas in Setup, and a One-Page View of Territory Forecasts](#)

Forecast users get an enhanced opportunity list. You can manage sales quotas without Data Loader or the API. And users can switch to a summary view of their territory forecasts.

[Enterprise Territory Management: More to Do and See in Lightning Experience](#)

Use Object Manager to customize Enterprise Territory Management. And forecast users get another view of their territory forecasts.

[Path: Celebrate Sales Milestones](#)

Help your teams celebrate their successes. Toss some virtual confetti when reps reach a designated path stage, for example, winning an opportunity. You can choose the frequency, such as always for those hard-won victories or only sometimes for daily occurrences. Celebrations don't work on the status Converted on leads.

[Other Changes in Core Sales Features](#)

You can now assign territories on the Account page in Lightning Experience. Reps can use the Partners related list to maintain relationships between opportunities and business or person accounts in Lightning Experience. Searching for contacts to create opportunity contact roles in Lightning Experience is easier, too. You can include the Account Currency field in account and opportunity layouts. To let reps manually share accounts with territory groups, make sure that you enable the critical update for Enterprise Territory Management. And Customizable Forecasting and the original territory management feature are scheduled for retirement.

## Products: Tailor Product Schedules to Your Business Processes

Spare your sales team the grunt work of managing complex sales processes for incoming revenue and outgoing orders. Enable customizable product schedules to use custom fields, validation rules, and Apex triggers and to optimize schedule layout and buttons. Enabling customizable product schedules disables Salesforce Classic actions on product schedules, and makes them read-only. In addition, Line Item Schedule is added to the object manager, but it's unavailable in Process Builder and Workflow.

**Where:** This change applies to Lightning Experience and all versions of the Salesforce app in Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** Make it easy for sales teams to work with complex sales models. Streamline and automate processes by customizing product schedule layouts and fields (1) and adding custom buttons (2) and Apex triggers. Improve tracking and forecasting by adding validation rules.

SCHEDULE DATE	REVENUE	BILLING DATE	STATUS	NOTES
4/25/2019	USD 0.00	4/20/2019	Paid	Ramp
5/25/2019	USD 200,000.00	5/20/2019	Sent	Catch up
6/25/2019	USD 100,000.00	6/20/2019		
7/25/2019	USD 100,000.00	7/20/2019		
8/25/2019	USD 100,000.00	8/20/2019		
9/25/2019	USD 100,000.00	9/20/2019		

**How:** In Setup, use the Quick Find box to find *Product Schedules Settings*. Select **Enable customization of product schedules**. Then apply custom fields, Apex triggers, validation rules, and required fields, and adjust the layout and buttons as needed.

Details	Details
Fields & Relationships	Description
Page Layouts	API Name
Lightning Record Pages	OpportunityLineItemSchedule
Buttons and Links	Custom
Compact Layouts	Singular Label
Field Sets	Line Item Schedule
Object Limits	Plural Label
Triggers	Line Item Schedule
Validation Rules	Deployment Status
	Help Settings
	Standard salesforce.com Help Window

You can now customize the layout of the OpportunityLineItemSchedule related list on the OpportunityLineItem page in Lightning Experience regardless of whether you've enabled customizable product schedules.

Customizable product schedules don't support record types. In default product schedules, you can use custom fields and customize the layout, but if you've applied required fields, validation rules, or Apex triggers, they're bypassed when they're first inserted.

SEE ALSO:

[Salesforce Help: Enable Product Schedules \(can be outdated or unavailable during release preview\)](#)

## Collaborative Forecasts: Opportunity List Improvements, Quotas in Setup, and a One-Page View of Territory Forecasts

Forecast users get an enhanced opportunity list. You can manage sales quotas without Data Loader or the API. And users can switch to a summary view of their territory forecasts.

## IN THIS SECTION:

[Get More from the Forecasts Page in Lightning Experience](#)

By selecting wrapped text in the opportunity list, forecast users can see all the information they need. No more clipped opportunity names, for example. Forecast users can also personalize their view by adjusting the column widths. And quick actions let users edit, delete, and change owners of opportunities without leaving the forecasts page. No setup is required.

[Keep Sales Quotas in Sight with a Few Clicks in Lightning Experience](#)

Say goodbye to Data Loader and the API, at least when it comes to managing quota data. Now you can easily add and update quotas on the new Forecasts Quotas page in Setup.

[Switch Up Your Territory Forecasts View](#)

Forecast users can see all their territory forecasts in the single-page summary view. Summary view shows forecasts for the top-level territories that users are assigned to in each branch of the territory hierarchy. Then users drill down to see their assigned child territories and the other child territories of the top-level territories. And if you're using product family territory forecasts, summary view makes it easy to see how multiple territories' forecasts roll up to a product family total.

## SEE ALSO:

[Get Things Right with Right-to-Left Languages \(Beta\)](#)

## Get More from the Forecasts Page in Lightning Experience

By selecting wrapped text in the opportunity list, forecast users can see all the information they need. No more clipped opportunity names, for example. Forecast users can also personalize their view by adjusting the column widths. And quick actions let users edit, delete, and change owners of opportunities without leaving the forecasts page. No setup is required.

**Where:** These changes apply to Lightning Experience in Professional, Performance, and Developer editions and in Enterprise and Unlimited editions with the Sales Cloud.

**Why:** Working with the opportunity list is easier with these features.

The screenshot shows a table with three columns: OPPORTUNITY NAME, OWNER FULL NAME, and TERRITORY. The first row has 'Acme - 1,200 Widgets' in the first column, 'Norman, Amy' in the second, and 'SAC' in the third. A red box highlights the first row's first column, with a red circle '1' next to it. A red circle '2' is next to the column header 'OPPORTUNITY NAME'. A red circle '3' is next to the quick action menu icon in the third column header. A dropdown menu is open over the first row, showing 'Wrap text' (checked), 'Clip text', and 'Change Owner'.

OPPORTUNITY NAME	OWNER FULL NAME	TERRITORY ...
Acme - 1,200 Widgets	Norman, Amy	SAC
Acme - 200 Widgets	Norman, Amy	SAC
Acme - 600 Widgets	Norman, Amy	CA
Acme - 250 Widgets	Norman, Amy	SAC
Global Media - 400 Widgets (not including previous order for 5,000 Widgets)	Norman, Amy	Canada

- Wrapped text (1)
- Adjustable column width (2)
- Quick actions: Edit, Delete, and Change Owner (3)

**Note:** The default for each new session is standard column widths and clipped text. A user's changes don't persist past the current session.

## SEE ALSO:

[Get Things Right with Right-to-Left Languages \(Beta\)](#)

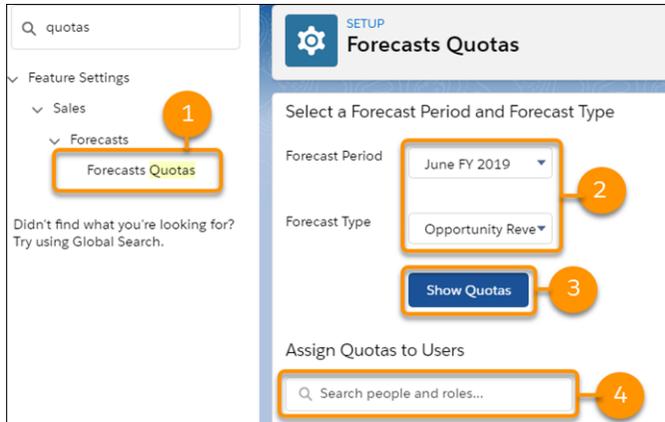
## Keep Sales Quotas in Sight with a Few Clicks in Lightning Experience

Say goodbye to Data Loader and the API, at least when it comes to managing quota data. Now you can easily add and update quotas on the new Forecasts Quotas page in Setup.

**Where:** This change applies to Lightning Experience in Professional, Performance, and Developer editions and in Enterprise and Unlimited editions with the Sales Cloud.

**Who:** Users with the Manage Quotas and View All Forecasts permissions can manage quotas in Setup for all users in the forecast hierarchy.

**How:** First, make sure that you've enabled quotas. If quotas are enabled, you're good to go.



- Use the Quick Find box in Setup to get to the Forecasts Quotas page (1).
- Select the forecast period and forecast type of the quotas you want to manage (2), and then click **Show Quotas** (3). If you select a product family forecast type, you specify a product family.
- Search for (4) and select the users, roles, or territories whose quotas you want to manage.

	NAME	QUOTA	CURRENCY	ROLE	MANAGER N...
3	Barry Brown	100,000	USD	Meridian Partne...	
4	Beverly Shaw	100,000	USD	RVP East	Nigel Roberts

- Click **Edit Selected Rows** (5), enter quota amounts or quantities (6), and save your changes. You can also click the pencil icon in quota and currency fields.

#### SEE ALSO:

[Salesforce Help: Enable Quotas in Collaborative Forecasts \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Manage Quota Data for Collaborative Forecasts in Setup \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Manage Quota Data for Collaborative Forecasts via Data Loader or the API \(can be outdated or unavailable during release preview\)](#)

## Switch Up Your Territory Forecasts View

Forecast users can see all their territory forecasts in the single-page summary view. Summary view shows forecasts for the top-level territories that users are assigned to in each branch of the territory hierarchy. Then users drill down to see their assigned child territories and the other child territories of the top-level territories. And if you're using product family territory forecasts, summary view makes it easy to see how multiple territories' forecasts roll up to a product family total.

**Where:** This change applies to Lightning Experience in Performance and Developer editions and in Enterprise and Unlimited editions with the Sales Cloud.

**Why:** Let's say your territory hierarchy has two branches: Canada and US. CA is a child territory of US, and SAC is a child territory of CA. Amy is assigned as forecast manager to all four territories.

PERIOD	Closed Only
Total: 1 Period	\$11,917.00
Period 1 FY 2019	\$11,917.00
Canada (Amy Norman)	\$150.00
US (Amy Norman)	\$11,767.00

Amy's summary view shows forecasts for Canada and US (1), the top-level territories that she's assigned to in each branch of the hierarchy. She can drill down to the CA and SAC forecasts (2). By contrast, the individual territories view shows forecasts for only one branch of the hierarchy, and Amy needs to switch pages to see the other branch.

#### How:

MY SUMMARY VIEW
Summary View

INDIVIDUAL TERRITORIES

- CA (Amy Norman)
- Canada (Amy Norman)
- SAC (Amy Norman)
- US (Amy Norman)

If territory forecasts are enabled, forecast users can see a summary view (3) of their territory forecasts page.

 **Note:** Shared forecasts don't include a summary view.

#### SEE ALSO:

[Salesforce Help: Territory Forecasts \(can be outdated or unavailable during release preview\)](#)

## Enterprise Territory Management: More to Do and See in Lightning Experience

Use Object Manager to customize Enterprise Territory Management. And forecast users get another view of their territory forecasts.

#### IN THIS SECTION:

[Do More with Territory-Management Setup in Lightning Experience](#)

Now that Object Manager includes Enterprise Territory Management objects, you don't have to switch to Salesforce Classic to customize the feature. For example, edit your Territory Model field labels and your Territory page layout without leaving Lightning Experience. No setup is required.

[Broaden Your Perspective on Territory Forecasts](#)

If your team uses territory forecasts, they can now view them another way. By switching to summary view, reps and forecast managers get forecasts for all their territories on one page.

## SEE ALSO:

[Zoom Through Related Lists with Quick Filters](#)

[Assign Territories More Easily in Lightning Experience](#)

[Enable Manual Account Sharing in Enterprise Territory Management \(Previously Released Critical Update\)](#)

**Do More with Territory-Management Setup in Lightning Experience**

Now that Object Manager includes Enterprise Territory Management objects, you don't have to switch to Salesforce Classic to customize the feature. For example, edit your Territory Model field labels and your Territory page layout without leaving Lightning Experience. No setup is required.

**Where:** This change applies to Lightning Experience in Performance and Developer editions and in Enterprise and Unlimited editions with the Sales Cloud.

**How:** Go to Setup, find territory-management objects in Object Manager, and edit away!

LABEL	API NAME
Work Order Line Item	WorkOrderLineItem
Work Order	WorkOrder
User Territory Association	UserTerritory2Association
User Provisioning Request	UserProvisioningRequest
User	User
Territory Model	Territory2Model
Territory	Territory2
Task	Task

The `ObjectTerritory2AssignmentRule` object was changed to support this functionality.

## SEE ALSO:

[Salesforce Help: Find Object Management Settings in Lightning Experience \(can be outdated or unavailable during release preview\)](#)

**Broaden Your Perspective on Territory Forecasts**

If your team uses territory forecasts, they can now view them another way. By switching to summary view, reps and forecast managers get forecasts for all their territories on one page.

**Where:** This change applies to Lightning Experience in Performance and Developer editions and in Enterprise and Unlimited editions with the Sales Cloud.

## SEE ALSO:

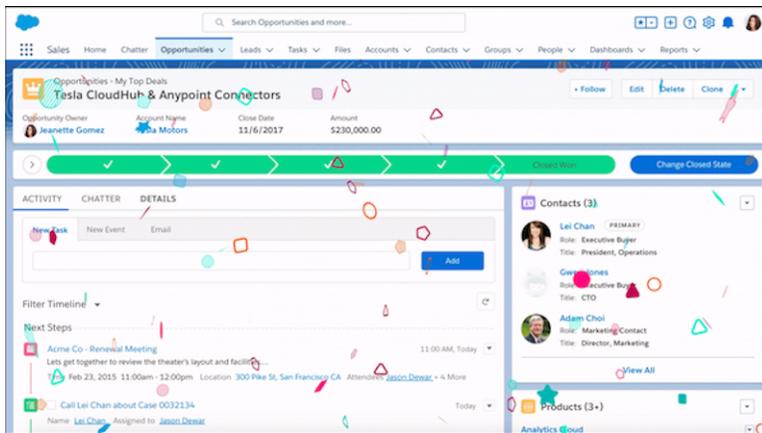
[Switch Up Your Territory Forecasts View](#)

## Path: Celebrate Sales Milestones

Help your teams celebrate their successes. Toss some virtual confetti when reps reach a designated path stage, for example, winning an opportunity. You can choose the frequency, such as always for those hard-won victories or only sometimes for daily occurrences. Celebrations don't work on the status Converted on leads.

**Where:** This change applies to Lightning Experience and all versions of the mobile app in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** A confetti celebration creates a little fun when reps reach a milestone.



**How:** In Setup, use the Quick Find box to find **Path Settings**. Enable Path and create a path, or edit one.

SEE ALSO:

[Salesforce Help: Guide Users with Path \(can be outdated or unavailable during release preview\)](#)

## Other Changes in Core Sales Features

You can now assign territories on the Account page in Lightning Experience. Reps can use the Partners related list to maintain relationships between opportunities and business or person accounts in Lightning Experience. Searching for contacts to create opportunity contact roles in Lightning Experience is easier, too. You can include the Account Currency field in account and opportunity layouts. To let reps manually share accounts with territory groups, make sure that you enable the critical update for Enterprise Territory Management. And Customizable Forecasting and the original territory management feature are scheduled for retirement.

IN THIS SECTION:

[Assign Territories More Easily in Lightning Experience](#)

You no longer have to switch to Salesforce Classic to manage territory assignments on the Account page. You can now edit the Assigned Territories related list in Lightning Experience. Previously, the related list was read-only in Lightning Experience.

[Maintain Partner Relationships in Lightning Experience](#)

Does your company collaborate with partners on opportunities or accounts? Lightning Experience users can now use the Partners related list to maintain partner relationships between opportunities and business or person accounts. You can customize the related list layout and configure partner roles.

[Add Opportunity Contact Roles More Efficiently in Lightning Experience](#)

No more tedious searching for contacts to create opportunity contact roles in Lightning Experience. All your contacts from the account are now prepopulated on the opportunity. Just select your contacts from the list and add their roles. Editing contact roles is also easier. With separate buttons for adding and editing, you can go directly to the editing area to make changes.

[Currency Field Is Available in Account and Opportunity Layouts](#)

You can now include the Account Currency field in account and opportunity layouts. Previously, the currency field was visible to users only while a record was being edited.

[Enable Manual Account Sharing in Enterprise Territory Management \(Previously Released Critical Update\)](#)

This update changes the `TerritoryManual` reason code in `AccountShare` records to `Territory2AssociationManual` and is required to let users share accounts manually with territory groups. After you activate the update in production, it can take up to two weeks before you see the changes.

[Customizable Forecasting Is Being Retired](#)

Customizable Forecasting is scheduled for retirement as of Summer '20. After the feature is retired, users can't access the Customizable Forecasting feature and its underlying data. We encourage you to migrate to Collaborative Forecasts.

[Original Territory Management Is Being Retired](#)

The original territory management feature is scheduled for retirement as of Summer '20. After the feature is retired, users can't access the original territory management feature and its underlying data. We encourage you to migrate to Enterprise Territory Management.

## Assign Territories More Easily in Lightning Experience

You no longer have to switch to Salesforce Classic to manage territory assignments on the Account page. You can now edit the Assigned Territories related list in Lightning Experience. Previously, the related list was read-only in Lightning Experience.

**Where:** This change applies to Lightning Experience in Performance and Developer editions and in Enterprise and Unlimited editions with the Sales Cloud.

**How:** If your Account page layout includes the Assigned Territories related list, no setup is required. Click **Assign Territories** and **Unassign** to manage assignments.

TERRITORY	TERRITORY M...	MODEL STATE	ASSIGNMENT ...
CA	North America	Active	3/20/2019 8:5...
Canada	North America	Active	3/20/201...
SAC	North America	Active	3/20/201...

**Note:** Only territories in the active territory model are available.

## Maintain Partner Relationships in Lightning Experience

Does your company collaborate with partners on opportunities or accounts? Lightning Experience users can now use the Partners related list to maintain partner relationships between opportunities and business or person accounts. You can customize the related list layout and configure partner roles.

**Where:** For orgs created in Summer '09 or later, this change applies to Lightning Experience and all versions of the Salesforce app in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions. For orgs created before Summer '09, this change applies to Lightning Experience and all versions of the Salesforce app in all editions.

SEE ALSO:

[Salesforce Help: View and Add Partners \(can be outdated or unavailable during release preview\)](#)

## Add Opportunity Contact Roles More Efficiently in Lightning Experience

No more tedious searching for contacts to create opportunity contact roles in Lightning Experience. All your contacts from the account are now prepopulated on the opportunity. Just select your contacts from the list and add their roles. Editing contact roles is also easier. With separate buttons for adding and editing, you can go directly to the editing area to make changes.

**Where:** This change applies to Lightning Experience and all versions of the Salesforce app in all editions.

**How:** To add a contact role from within an opportunity, click **Contact Roles**, and then click **Add Contact Roles**. A list of all the contacts for the account appears.

The screenshot shows the 'Add Contact Roles' dialog. At the top, there is a 'PRIMARY CONTACT (OPTIONAL)' field with a search icon and a close button (X). Below this is a table with two columns: '\*CONTACT' and 'ROLE'. The table contains six rows of contact information:

	*CONTACT	ROLE
1	Jeff Perry	Decision Maker
2	Anne Battel	Business User
3	Jane St. Edmunds	Executive Sponsor
4	Bob Vail	
5	Carol Garcia	
6	Rich Charleston	

Below the table, a dropdown menu is open, showing a list of roles: Economic Buyer, Economic Decision Maker, Evaluator, Executive Sponsor, Influencer, Technical Buyer, and Other. A mouse cursor is hovering over 'Technical Buyer', and a tooltip with the text 'Technical Buyer' is visible. At the bottom of the dialog are three buttons: 'Back', 'Cancel', and 'Save'.

To assign or edit a primary contact for an opportunity, or modify contact roles, click **Edit Contact Roles**. The current primary contact is shown, along with a list of the opportunity contact roles that have already been added.

**Edit Contact Roles**

PRIMARY CONTACT (OPTIONAL)

ES Jeff Perry ×

	*CONTACT	ROLE
1	Jeff Perry <span style="float: right;">✎</span>	Decision Maker
2	Jane St. Edmunds	Executive Sponsor
3	Bob Vail	Technical Buyer
4	Carol Garcia	Decision Maker
5	Rich Charleston	Technical Buyer
6	Anne Battel	Business User
7		

Add Row

Cancel Save

## Currency Field Is Available in Account and Opportunity Layouts

You can now include the Account Currency field in account and opportunity layouts. Previously, the currency field was visible to users only while a record was being edited.

**Where:** This change applies to Lightning Experience in Professional, Enterprise, Performance, Unlimited, and Developer editions.

## Enable Manual Account Sharing in Enterprise Territory Management (Previously Released Critical Update)

This update changes the `TerritoryManual` reason code in `AccountShare` records to `Territory2AssociationManual` and is required to let users share accounts manually with territory groups. After you activate the update in production, it can take up to two weeks before you see the changes.

**Where:** This update applies to Lightning Experience and Salesforce Classic in Performance and Developer editions and in Enterprise and Unlimited editions with the Sales Cloud.

**When:** You can activate this update in Spring '19 or Summer '19. We'll auto-activate this update on October 30, 2019.

**Why:** In Winter '19 and earlier:

- The `TerritoryManual` reason code was written to `AccountShare` records when you manually assigned an account to a territory.
- Manually sharing an account with territory groups wasn't available.

With this update activated:

- The `Territory2AssociationManual` reason code replaces all instances of `TerritoryManual`.

- The `Territory2AssociationManual` reason code is written to AccountShare records when you manually assign an account to a territory.
- Manually sharing an account with territory groups is available.

**How:** We recommend that you test this update in a sandbox or Developer Edition org before activating the update in production. To activate the update, go to Critical Updates in Setup, and then click **Activate** next to Enable Manual Account Sharing in Enterprise Territory Management. You can't deactivate the update after it's activated.

If you have Apex code or integrations that work directly with the AccountShare object, make sure that you update all instances of the `TerritoryManual` reason code to `Territory2AssociationManual`.

SEE ALSO:

[Critical Updates](#)

## Customizable Forecasting Is Being Retired

Customizable Forecasting is scheduled for retirement as of Summer '20. After the feature is retired, users can't access the Customizable Forecasting feature and its underlying data. We encourage you to migrate to Collaborative Forecasts.

**Where:** This change applies to Salesforce Classic in Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Review our documentation and follow the instructions for setting up Collaborative Forecasts. If you use the original territory management feature, we also encourage you to migrate to Enterprise Territory Management.

SEE ALSO:

[Knowledge article: Customizable Forecasting Will Be Retired in the Summer '20 Release](#)  
[Original Territory Management Is Being Retired](#)

## Original Territory Management Is Being Retired

The original territory management feature is scheduled for retirement as of Summer '20. After the feature is retired, users can't access the original territory management feature and its underlying data. We encourage you to migrate to Enterprise Territory Management.

**Where:** This change applies to Salesforce Classic in Performance and Developer editions and in Enterprise and Unlimited editions with the Sales Cloud.

**How:** Review our documentation and follow the instructions for setting up Enterprise Territory Management. If you use Customizable Forecasting, we also encourage you to migrate to Collaborative Forecasts.

SEE ALSO:

[Knowledge article: The Original Territory Management Module Will Be Retired in the Summer '20 Release](#)  
[Customizable Forecasting Is Being Retired](#)

## Productivity Features: Improved Einstein Activity Capture, New Customizations with Email and Templates, and Enhancements to Inbox

Einstein Activity Capture brings better sharing control and improved setup. Add images to email, and get enhanced letterheads in email templates. Use Inbox Now to see all the details and insights about the day's activities.

## IN THIS SECTION:

[Einstein Activity Capture: Clearer Setup, More Sharing Control, Activity Metrics](#)

It's now easier to create and edit Einstein Activity Capture configurations. Choose who to share activities with. Activity Metrics is generally available with some key improvements. Plus, Essentials edition and sandbox environments now support contact and event sync.

[Email Experience: Adding Images, Read-Only Recipients, and Choosing a Default Email Composer](#)

Add images to emails and increase the oomph of the message. Choose which email composer to open when you click an email address. Configure recipient fields to be read-only so that users can't change predefined entries.

[Email Templates: Enhanced Letterheads and Images](#)

Maintain consistent branding and compliance by including header and footer information in Lightning email templates with enhanced letterheads. Add images and global merge fields to letterheads and email templates, and amp up your messaging.

[Activities and Tasks: New Filter, Task Notifications, and Packageable Task List Views](#)

With a new My Team's filter, easily manage delegated tasks. Choose to get an email when someone assigns you a task. Share your list views using packaging.

[Notes: Pop Out Notes from the Utility Bar](#)

Your sales reps can more easily take notes now that the Notes composer pops out into its own window from the utility bar. Reps can move it around as needed, because it isn't docked to the bottom corner of the window.

[Lightning Dialer: Custom Call Results, Call Panel Pop-Out, and Call Quality Reporting](#)

Lightning Dialer now supports custom call results, and you can pop out the call panel from the utility bar. Reps can also report call quality problems directly from the call panel.

[Salesforce Inbox App: Daily Events and Insights in One Place and Updated Inbox Setup Assistant](#)

See all the details and insights about the day's activities from Inbox Now. Get more clarity about setting up Inbox mobile from the reworked Inbox Setup Assistant.

[Calendar: Event List Views and Event Series Available on Quick Actions](#)

Sales reps can view more events at a glance with event list views. They can also schedule repeating events using quick actions.

[Quip for Sales: Standardize Sales Processes Using Quip](#)

Boost productivity throughout the deal cycle with collaborative docs directly inside Sales Cloud. Configure the Quip Document Lightning component to deploy customizable Quip document templates in context of your Sales Cloud record pages. With Quip templates, you can even use mail-merge syntax to auto-fill new documents with data from corresponding Salesforce fields.

## Einstein Activity Capture: Clearer Setup, More Sharing Control, Activity Metrics

It's now easier to create and edit Einstein Activity Capture configurations. Choose who to share activities with. Activity Metrics is generally available with some key improvements. Plus, Essentials edition and sandbox environments now support contact and event sync.

## IN THIS SECTION:

[Create Configurations More Easily](#)

It's easier to walk through setup with separated steps for naming an Einstein Activity Capture configuration and reviewing the sync settings. Updated default settings give you the most effective configurations out of the box. Plus, we added text and visuals to detail what the settings do.

[Get the Complete Picture About Your Activity Data with Activity Metrics \(Generally Available\)](#)

When you include Activity Metrics fields on list views, page layouts, reports, triggers, processes, and so forth, the data reflects activities that were added to Salesforce manually and by Einstein Activity Capture. Activity Metrics is now generally available with several enhancements.

### [Control with Whom to Share Activities](#)

When email and events that are added to the activity timeline are shared with everyone, you can decide what “everyone” means. By default, everyone is all users in the company, but you can change it to include only Einstein Activity Capture users.

### [Sync Events and Contacts in Essentials](#)

The recent enhancements to Einstein Activity Capture have made their way to Essentials. When you sync events and contacts between sales reps' Google or Microsoft accounts and Salesforce, reps can get back to more important things, like selling.

### [Sync the Contacts You Want with Improved Filters](#)

When defining advanced sync settings for your Einstein Activity Capture configuration, it's now easier to set contact sync conditions. To sidestep errors, we give you examples of valid field values and point out if you entered an invalid value.

### [Test Sync Functionality in Sandbox](#)

Einstein Activity Capture's sync functionality is now available in sandbox environments. See how easy it is to set up Einstein Activity Capture, and get a preview of how sales reps use the feature. When testing in sandbox, no data is copied from production to sandbox. When you refresh the sandbox, Einstein Activity Capture is turned off, and all connected accounts from the sandbox are removed.

### [Find Details About Activity Dates for Records in Salesforce Help](#)

Einstein Activity Capture adds an activity to the timeline of a related Salesforce record only if the activity occurred within a specific date range. Details about date ranges for various records are no longer available on the Capture Settings page. Instead, you can find the information in Salesforce Help.

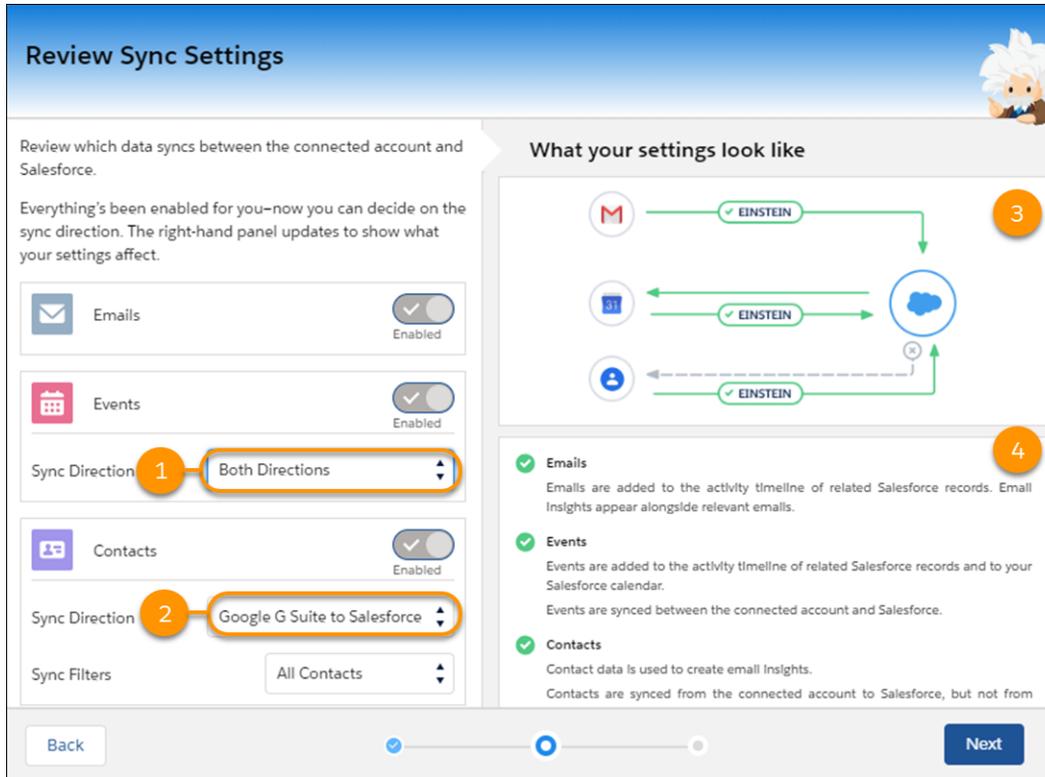
## Create Configurations More Easily

It's easier to walk through setup with separated steps for naming an Einstein Activity Capture configuration and reviewing the sync settings. Updated default settings give you the most effective configurations out of the box. Plus, we added text and visuals to detail what the settings do.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, and Unlimited editions.

**Why:** New configurations are automatically set to sync contacts and events to and from the user's connected account and Salesforce (1). You can still change the sync direction so that events and contacts sync only from the connected account to Salesforce (2).

A dynamic graphic (3) shows what your settings look like, and descriptions (4) explain more about what your settings do.



SEE ALSO:

[Salesforce Help: Create a Configuration for Einstein Activity Capture \(can be outdated or unavailable during release preview\)](#)

## Get the Complete Picture About Your Activity Data with Activity Metrics (Generally Available)

When you include Activity Metrics fields on list views, page layouts, reports, triggers, processes, and so forth, the data reflects activities that were added to Salesforce manually and by Einstein Activity Capture. Activity Metrics is now generally available with several enhancements.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, and Unlimited editions. Users can also see activity metrics if they switch back to Salesforce Classic.

**Who:** If you have at least one Einstein Activity Capture user through Sales Cloud Einstein, High Velocity Sales, or Inbox, you can use Activity Metrics.

**Why:** We made some improvements since the beta version of this feature.

- After you enable Activity Metrics, all users can use activity metric fields. Previously, only Einstein Activity Capture users could use the fields.
- If you use Einstein Activity Capture to sync events, you no longer have to worry about seeing duplicate events on the Activities dashboard, in the activity timeline, and within Activity Metric data.

**How:** From the Einstein Activity Capture settings, turn on Activity Metrics. Depending on how much data you have, it can take some time before the activity metrics fields are ready to use. We send a notification when they're available.

SEE ALSO:

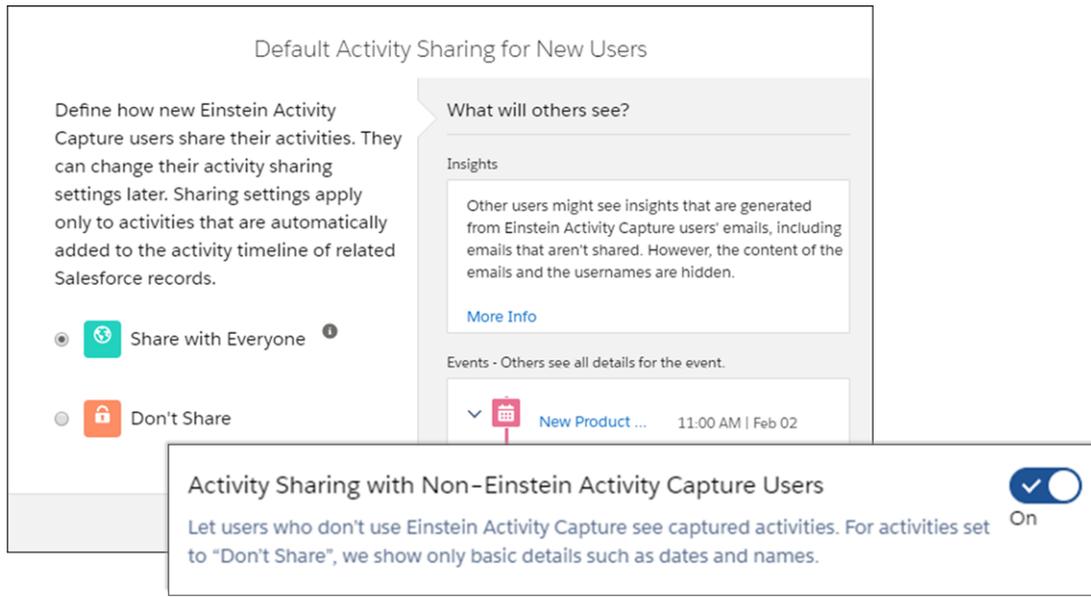
[Salesforce Help: Activity Metrics \(can be outdated or unavailable during release preview\)](#)

## Control with Whom to Share Activities

When email and events that are added to the activity timeline are shared with everyone, you can decide what “everyone” means. By default, everyone is all users in the company, but you can change it to include only Einstein Activity Capture users.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, and Unlimited editions.

**How:** From Setup, in the Quick Find box, enter *Einstein Activity Capture*, and then select **Settings**. On the Capture Setting tab, change how activities are shared with those who don't use Einstein Activity Capture.



SEE ALSO:

[Salesforce Help: Set Default Activity Sharing for Einstein Activity Capture Users \(can be outdated or unavailable during release preview\)](#)

## Sync Events and Contacts in Essentials

The recent enhancements to Einstein Activity Capture have made their way to Essentials. When you sync events and contacts between sales reps' Google or Microsoft accounts and Salesforce, reps can get back to more important things, like selling.

**Where:** This change applies to Lightning Experience in Essentials edition.

**When:** Available within 24 hours after the release.

**Who:** Contacts and events sync for users who meet the following criteria.

- You assign them to Einstein Activity Capture through the Inbox With Einstein Activity Capture permission set license.
- The email account on their user record is connected to Salesforce.
- You add them to an Einstein Activity Capture configuration that includes syncing.

**How:** From Setup, go to the Einstein Activity Capture settings page. Create a configuration that syncs contacts and events.

SEE ALSO:

[Salesforce Essentials: Introducing Dialer, Chat, Messaging, and More](#)

## Sync the Contacts You Want with Improved Filters

When defining advanced sync settings for your Einstein Activity Capture configuration, it's now easier to set contact sync conditions. To sidestep errors, we give you examples of valid field values and point out if you entered an invalid value.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, and Unlimited editions.

**How:** When editing a configuration, on the Advanced Sync Setting tab, enter the conditions that a contact must meet for it to sync.

The screenshot shows the 'Edit Sync Configuration' interface with the 'ADVANCED SYNC SETTINGS' tab selected. Under the 'Event Sync' section, there is a 'Filter by End Date' field set to 'TODAY'. Below this are three checkboxes: 'Sync private events' (unchecked), 'Remove deleted events' (unchecked), and 'Relate synced events to Salesforce records' (checked). The 'Contact Sync' section is titled 'Specify the conditions a contact must meet for it to sync' and contains a table with two conditions:

Field	Operator	Value	Example	Action
Contact Owner	equals	Jane Yoon	Example: abcde	Remove
Last Activity	greater or equal	May 1, 2010	Example: Mar 28, 2019	Remove

At the bottom of the table is a '+ Add Condition' button.

## Test Sync Functionality in Sandbox

Einstein Activity Capture's sync functionality is now available in sandbox environments. See how easy it is to set up Einstein Activity Capture, and get a preview of how sales reps use the feature. When testing in sandbox, no data is copied from production to sandbox. When you refresh the sandbox, Einstein Activity Capture is turned off, and all connected accounts from the sandbox are removed.

**Where:** This change applies to Lightning Experience in Professional, Enterprise, Performance, and Unlimited editions.

## Find Details About Activity Dates for Records in Salesforce Help

Einstein Activity Capture adds an activity to the timeline of a related Salesforce record only if the activity occurred within a specific date range. Details about date ranges for various records are no longer available on the Capture Settings page. Instead, you can find the information in Salesforce Help.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, and Unlimited editions.

SEE ALSO:

[Salesforce Help: Einstein Activity Capture Record Association \(can be outdated or unavailable during release preview\)](#)

## Email Experience: Adding Images, Read-Only Recipients, and Choosing a Default Email Composer

Add images to emails and increase the oomph of the message. Choose which email composer to open when you click an email address. Configure recipient fields to be read-only so that users can't change predefined entries.

### IN THIS SECTION:

#### [Show What You Mean in Emails with Images](#)

When you add images to emails, you increase the likelihood that recipients read—and remember—your message. Insert images from the web, your computer, or Salesforce files.

#### [Let Reps Choose Which Email Composer to Use When Clicking Email Addresses](#)

If you have defined the email quick action and it is in the Salesforce Mobile and Lightning Experience Action section of the global publisher layout, sales reps can choose which email composer opens when they click an email address. The Salesforce email composer opens by default. Reps can change their setting so that their default email composer opens instead.

#### [Mark Email Address Fields as Read-Only to Prevent Changes](#)

When you predefine an email address in an email, you don't have to worry about the email sender adding or removing recipients. Mark the To, Cc, or Bcc fields as read-only, and no one can change them.

#### [Privacy Plug-Ins No Longer Block Salesforce Functionality](#)

Some privacy plug-ins, such as disconnect.me, prevent ad and email tracking. But sometimes these plug-ins also block other Salesforce functionality. We updated our tracking functionality so that these privacy plug-ins only block email-tracking functionality and leave the rest of Salesforce alone. This update occurs automatically. You don't have to make any changes.

#### [Send List Emails as Company Community Users](#)

Users with a Community license can use Lightning Experience to send a list email to recipients on campaign, contact, lead, and person account lists. Or, they can choose individual records on a list view. A list email sends an individual email to each recipient on the list instead of one email to the entire group. Amp up a list email by using email templates and merge fields to customize each email.

#### [Get Consistent From Addresses and Clearer Alerts for Bounced Email Messages](#)

We improved the delivery notification emails that your sales reps receive when bounced emails are returned to the sender. The header From address is now "Mail Delivery System" <mailer-daemon@salesforce.com> and the envelope From address is always empty, or <>, making it easier to filter emails. The notification message better indicates that an email might have been received, for example, because the recipient had an automatic response set.

### SEE ALSO:

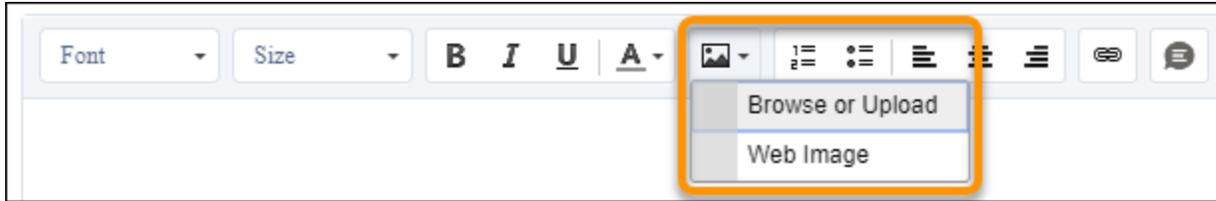
#### [Get Things Right with Right-to-Left Languages \(Beta\)](#)

## Show What You Mean in Emails with Images

When you add images to emails, you increase the likelihood that recipients read—and remember—your message. Insert images from the web, your computer, or Salesforce files.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Use the Images icon to upload a file or link to an image's URL in an email. You can't copy and paste images into the email.



## SEE ALSO:

[Include Images in Your Email Templates and Letterheads](#)

[Salesforce Help: Using Images in Emails, Email Templates, and Enhanced Letterheads \(can be outdated or unavailable during release preview\)](#)

[IdeaExchange: Add images while composing HTML emails](#)

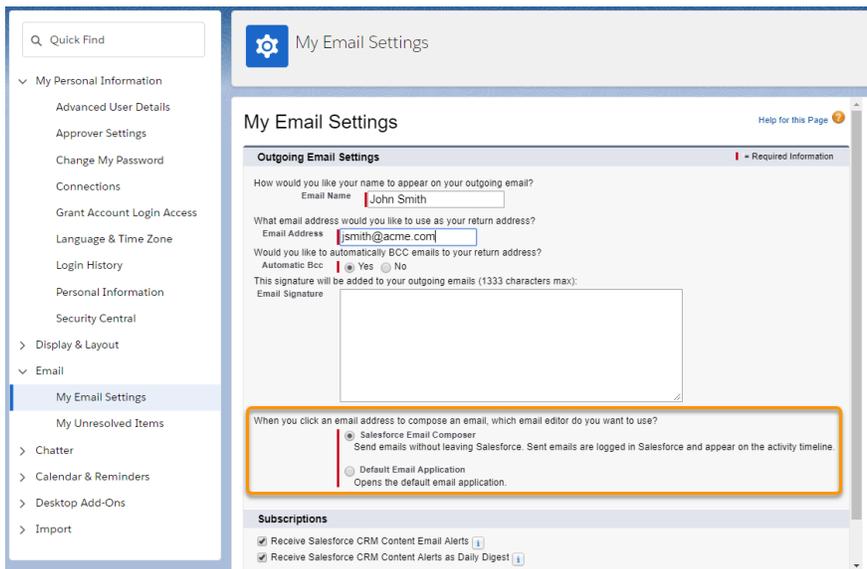
[IdeaExchange: Improved HTML email editor](#)

## Let Reps Choose Which Email Composer to Use When Clicking Email Addresses

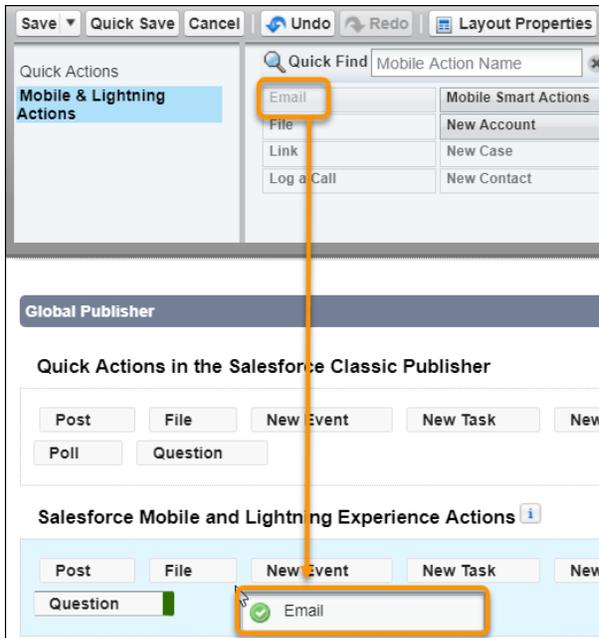
If you have defined the email quick action and it is in the Salesforce Mobile and Lightning Experience Action section of the global publisher layout, sales reps can choose which email composer opens when they click an email address. The Salesforce email composer opens by default. Reps can change their setting so that their default email composer opens instead.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** In personal settings, enter *My Email Settings* in the Quick Find box, then select **My Email Settings**. Select which composer you want to use when you click an email address.



-  **Note:** Before using this feature, confirm that the Global Publisher Layout has the email action in the Salesforce Mobile and Lightning Experience Action section. If the email action is not set up, reps don't see the option to choose the Salesforce email composer. If you want your users to be able to choose, set up the email action.



## SEE ALSO:

- [Salesforce Help: Edit Your Email Settings \(can be outdated or unavailable during release preview\)](#)
- [Salesforce Help: Guidelines for Working with Email \(can be outdated or unavailable during release preview\)](#)
- [Salesforce Help: Add Actions to Global Publisher Layouts \(can be outdated or unavailable during release preview\)](#)
- [IdeaExchange: Email address hyperlink not available on Lightning Experience Contact list view](#)
- [IdeaExchange: Click to email on related list in Lightning Experience](#)
- [IdeaExchange: Allow user to click on any email address and prepare a "Send" item](#)
- [IdeaExchange: Click on any email address on any page to create history](#)

## Mark Email Address Fields as Read-Only to Prevent Changes

When you predefine an email address in an email, you don't have to worry about the email sender adding or removing recipients. Mark the To, Cc, or Bcc fields as read-only, and no one can change them.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** In Setup, enter *Global Actions* in the Quick Find box and select **Global Actions**. Click **Layout** next to the Email action. Click an email address to select it, open the Properties window, and choose **Read-Only**. Click **OK** and save the change.

## SEE ALSO:

- [Salesforce Help: Field-Level Security \(can be outdated or unavailable during release preview\)](#)
- [Salesforce Help: Guidelines for Working with Email \(can be outdated or unavailable during release preview\)](#)

## Privacy Plug-Ins No Longer Block Salesforce Functionality

Some privacy plug-ins, such as disconnect.me, prevent ad and email tracking. But sometimes these plug-ins also block other Salesforce functionality. We updated our tracking functionality so that these privacy plug-ins only block email-tracking functionality and leave the rest of Salesforce alone. This update occurs automatically. You don't have to make any changes.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions.

SEE ALSO:

[Salesforce Help: Email Open Tracking \(can be outdated or unavailable during release preview\)](#)

## Send List Emails as Company Community Users

Users with a Community license can use Lightning Experience to send a list email to recipients on campaign, contact, lead, and person account lists. Or, they can choose individual records on a list view. A list email sends an individual email to each recipient on the list instead of one email to the entire group. Amp up a list email by using email templates and merge fields to customize each email.

**Where:** This change applies to Lightning Experience in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** List Email support is available to users in community-enabled orgs with the Company Community or Partner Relationship Management Permission Set Licenses.

SEE ALSO:

[Salesforce Help: Lightning Platform Starter and Lightning Platform Plus Details \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Send List Email in Lightning Experience \(can be outdated or unavailable during release preview\)](#)

## Get Consistent From Addresses and Clearer Alerts for Bounced Email Messages

We improved the delivery notification emails that your sales reps receive when bounced emails are returned to the sender. The header From address is now "Mail Delivery System" <mailer-daemon@salesforce.com> and the envelope From address is always empty, or <>, making it easier to filter emails. The notification message better indicates that an email might have been received, for example, because the recipient had an automatic response set.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** To enable delivery status notifications, from Setup, enter *Deliverability* in the Quick Find box, and then select **Deliverability**. Under Bounce Management, activate bounce management, and select **Return bounced emails to sender**.

SEE ALSO:

[Salesforce Help: Enable Email Bounce Handling \(can be outdated or unavailable during release preview\)](#)

## Email Templates: Enhanced Letterheads and Images

Maintain consistent branding and compliance by including header and footer information in Lightning email templates with enhanced letterheads. Add images and global merge fields to letterheads and email templates, and amp up your messaging.

## IN THIS SECTION:

[Use Enhanced Letterheads to Increase the Effectiveness of Lightning Email Templates](#)

Standardize the information in the header and footer of an email template with enhanced letterheads. Include your company's logo and contact information, or add legal disclaimers and subscription links. Create your enhanced letterhead in a rich text editor, or paste in your own custom HTML for full control of styling. Add merge fields, images, and links.

[Find Existing Letterheads in a New Location in Salesforce Classic](#)

Looking for the letterheads that you created in Salesforce Classic? They're still there in Setup, under the renamed menu option Classic Letterheads.

[Include Images in Your Email Templates and Letterheads](#)

Make your email messages stand out by including images in your emails templates and letterheads.

[See the Entire Email Template in the Sales Console](#)

When using the email template home page or opening an email template in Sales Console, users now see the whole screen. Previously, some information was cut off.

[Keep Messaging on Target in Case Emails](#)

Agents and reps using case emails can no longer use Save or Save As to edit or create email templates. The email templates you've created remain on target and aligned with your brand.

[Improve Email Security with Redesigned DKIM Keys \(Previously Released Critical Update\)](#)

As announced in Winter '19, to address potential security vulnerabilities with DomainKeys Identified Mail (DKIM) keys, we improved the way they're created. You no longer have to work with public and private keys. Instead, Salesforce publishes the TXT record containing your public key to DNS. We also added automatic key rotation to reduce the risk of your keys becoming compromised by a third party. After you enable this critical update, keys generated via the old method continue to work, but in Winter '20, you must generate any new keys using the more secure method. And, because sharing keys can introduce security vulnerabilities, we removed the ability to import DKIM keys.

[Restrict Use of Salesforce Classic HTML-Based Email Templates to Secure Browsers \(Previously Released Critical Update\)](#)

As announced in Summer '18, this critical update prevents using HTML-based email templates, such as custom, Visualforce, or standard HTML templates, from Microsoft Internet Explorer. Internet Explorer doesn't support the Salesforce Content Security Policy (CSP), so it can't provide the required browser protection. We recommend that you use a browser with CSP support, such as Microsoft Edge, Google Chrome, or Mozilla Firefox.

## SEE ALSO:

[Get Things Right with Right-to-Left Languages \(Beta\)](#)

*IdeaExchange*: [Allow inline images in email templates and when sending an email](#)

## Use Enhanced Letterheads to Increase the Effectiveness of Lightning Email Templates

Standardize the information in the header and footer of an email template with enhanced letterheads. Include your company's logo and contact information, or add legal disclaimers and subscription links. Create your enhanced letterhead in a rich text editor, or paste in your own custom HTML for full control of styling. Add merge fields, images, and links.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Who:** To create and edit enhanced letterheads, you need the Modify All Data permission or administrator rights. Anyone can use enhanced templates.

**How:** To add content, style, and images to your letterhead, open the App Launcher, and select **Enhanced Letterheads**.

To ensure content stays intact, the header and footer can't be edited when a user inserts a template with an associated enhanced letterhead.

 **Note:** You can edit the header and footer in the Cases email composer.

#### SEE ALSO:

[Include Images in Your Email Templates and Letterheads](#)

[Salesforce Help: Enhanced Letterheads in Lightning Experience \(can be outdated or unavailable during release preview\)](#)

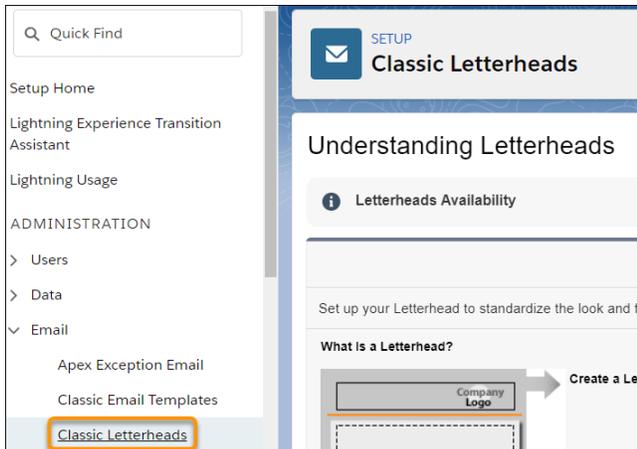
[IdeaExchange: Letterhead should be available in Lightning email functionality](#)

## Find Existing Letterheads in a New Location in Salesforce Classic

Looking for the letterheads that you created in Salesforce Classic? They're still there in Setup, under the renamed menu option Classic Letterheads.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Find your Classic letterheads in Setup.

**SEE ALSO:**

[Use Enhanced Letterheads to Increase the Effectiveness of Lightning Email Templates](#)

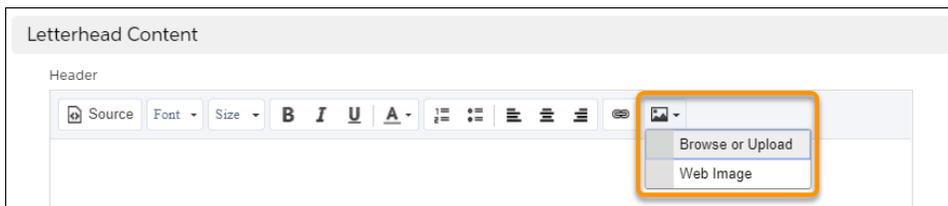
[Salesforce Help: Enhanced Letterheads in Lightning Experience \(can be outdated or unavailable during release preview\)](#)

**Include Images in Your Email Templates and Letterheads**

Make your email messages stand out by including images in your emails templates and letterheads.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** You can add an image from the web, your computer, or Salesforce files.

**SEE ALSO:**

[Show What You Mean in Emails with Images](#)

[Salesforce Help: Enhanced Letterheads in Lightning Experience \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Using Images in Emails, Email Templates, and Enhanced Letterheads \(can be outdated or unavailable during release preview\)](#)

[IdeaExchange: Allow inline images in email templates and when sending an email](#)

**See the Entire Email Template in the Sales Console**

When using the email template home page or opening an email template in Sales Console, users now see the whole screen. Previously, some information was cut off.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

### Keep Messaging on Target in Case Emails

Agents and reps using case emails can no longer use Save or Save As to edit or create email templates. The email templates you've created remain on target and aligned with your brand.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Have More Control over Your Email Template Library](#)

### Improve Email Security with Redesigned DKIM Keys (Previously Released Critical Update)

As announced in Winter '19, to address potential security vulnerabilities with DomainKeys Identified Mail (DKIM) keys, we improved the way they're created. You no longer have to work with public and private keys. Instead, Salesforce publishes the TXT record containing your public key to DNS. We also added automatic key rotation to reduce the risk of your keys becoming compromised by a third party. After you enable this critical update, keys generated via the old method continue to work, but in Winter '20, you must generate any new keys using the more secure method. And, because sharing keys can introduce security vulnerabilities, we removed the ability to import DKIM keys.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions.

**When:** This critical update is enforced in the Winter '20 release. We recently updated the auto-enforcement date to August 2019 to align with sandbox updates for Winter '20.

**How:** Enable this critical update to improve security and make it easier to create and maintain DKIM keys. From Setup, enter *Critical Updates* in the Quick Find box. Then select **Critical Updates**. For Enable Redesigned DomainKeys Identified Mail (DKIM) Key Feature with Increased Email Security, click **Activate**.

SEE ALSO:

[Winter '19 Release Notes: Improve Email Security with Redesigned DKIM Keys](#)

[Salesforce Help: Setting Up More Secure DKIM Keys \(can be outdated or unavailable during release preview\)](#)

### Restrict Use of Salesforce Classic HTML-Based Email Templates to Secure Browsers (Previously Released Critical Update)

As announced in Summer '18, this critical update prevents using HTML-based email templates, such as custom, Visualforce, or standard HTML templates, from Microsoft Internet Explorer. Internet Explorer doesn't support the Salesforce Content Security Policy (CSP), so it can't provide the required browser protection. We recommend that you use a browser with CSP support, such as Microsoft Edge, Google Chrome, or Mozilla Firefox.

**Where:** This change applies to Salesforce Classic in all editions, except Personal Edition.

**When:** This critical update is enforced in the Winter '20 release.

**How:** Although we recommend not using Internet Explorer for HTML-based templates, you can override this restriction. In Setup, under Session Settings, select **Override Restriction for Accessing HTML-Based Email Templates in Salesforce Classic Using Internet Explorer**.

SEE ALSO:

[Summer '18 Release Notes: Restrict Use of Salesforce Classic HTML-Based Email Templates to Secure Browsers \(Critical Update\)](#)

## Activities and Tasks: New Filter, Task Notifications, and Packageable Task List Views

With a new My Team's filter, easily manage delegated tasks. Choose to get an email when someone assigns you a task. Share your list views using packaging.

IN THIS SECTION:

[Increase Manager Productivity with a New Task Filter](#)

Sales managers want to focus on the tasks that their team is working on. Now it's easy to do with the My team's tasks filter.

[Choose to Get Task Notifications by Email](#)

Sales reps can control whether they're notified by email when they're assigned a task.

[Share Task List Views Easily](#)

Task list views are now packageable. You can distribute list views to other Salesforce users, both inside and outside of your company.

SEE ALSO:

[Get Things Right with Right-to-Left Languages \(Beta\)](#)

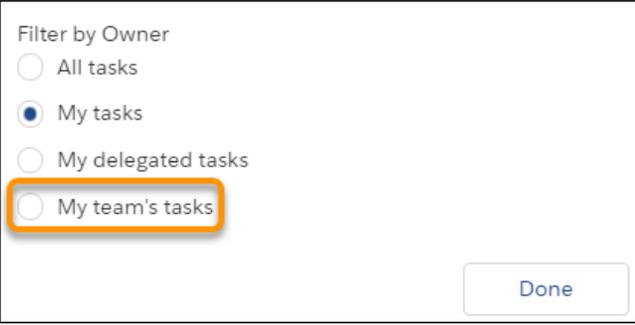
[Set Org Defaults for How Activities Display on Record Pages](#)

### Increase Manager Productivity with a New Task Filter

Sales managers want to focus on the tasks that their team is working on. Now it's easy to do with the My team's tasks filter.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, and Unlimited editions.

**Why:** Within your list view, select the **My team's tasks** filter.



Filter by Owner

- All tasks
- My tasks
- My delegated tasks
- My team's tasks

Done

## SEE ALSO:

[Salesforce Help: Create or Clone a List View in Lightning Experience](#) (can be outdated or unavailable during release preview)

[IdeaExchange: Filter to view "My Team's Activities" in the Task list view](#)

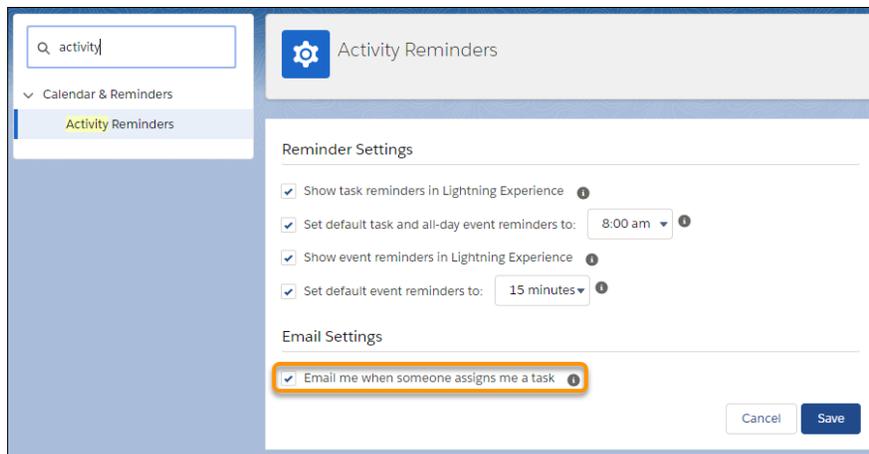
[IdeaExchange: My Team Tasks](#)

## Choose to Get Task Notifications by Email

Sales reps can control whether they're notified by email when they're assigned a task.

**Where:** This change applies to Lightning Experience in all editions.

**How:** In personal settings, enter *Activity* in the Quick Find box, then select **Activity Reminders**.



Select the option **Email me when someone assigns me a task**.

## SEE ALSO:

[Salesforce Help: Access Your Personal Settings in Lightning Experience](#) (can be outdated or unavailable during release preview)

## Share Task List Views Easily

Task list views are now packageable. You can distribute list views to other Salesforce users, both inside and outside of your company.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer edition. Package uploads and installs are available in Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** In Setup, enter *Packages* in the Quick Find box, then select **Packages**.

## SEE ALSO:

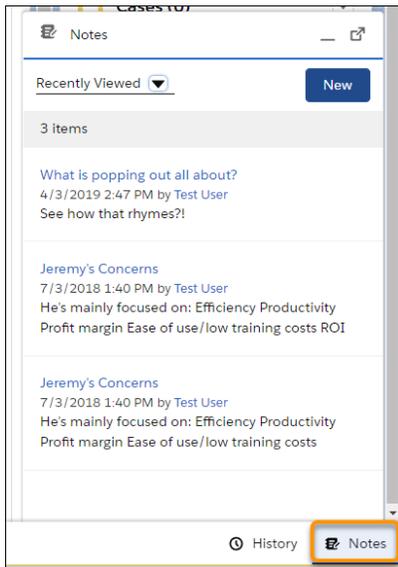
[Salesforce Help: Work with Packages](#) (can be outdated or unavailable during release preview)

## Notes: Pop Out Notes from the Utility Bar

Your sales reps can more easily take notes now that the Notes composer pops out into its own window from the utility bar. Reps can move it around as needed, because it isn't docked to the bottom corner of the window.

**Where:** This change applies to Lightning Experience in Essentials, Group, Professional, Enterprise, Performance, and Unlimited editions.

**Why:** With Notes in a separate window, reps can multitask in Salesforce.



**How:** To update a utility bar, in Setup, enter *App* in the Quick Find box, then select **App Manager**. Edit an existing utility bar, or create one. Add Notes to the bar from the Utility Items app setting. The Notes composer pops out automatically.

SEE ALSO:

[Salesforce Help: Set Default Activity Sharing for Einstein Activity Capture Users \(can be outdated or unavailable during release preview\)](#)

## Lightning Dialer: Custom Call Results, Call Panel Pop-Out, and Call Quality Reporting

Lightning Dialer now supports custom call results, and you can pop out the call panel from the utility bar. Reps can also report call quality problems directly from the call panel.

 **Note:** For now, we support outgoing calls only to the United States and Canada.

IN THIS SECTION:

[Use a Custom Picklist for Call Results](#)

Lightning Dialer supports custom picklists for call results, so your team can use the call result values that your company has already created.

[Pop Out Lightning Dialer from the Utility Bar](#)

We unchained the call panel! Your reps can now pop out the call panel from the utility bar.

### [Report Issues About Call Quality with Ease](#)

We've all suffered from a poor connection from time to time. When sales reps encounter the occasional call quality problem, they can report the issue to their Salesforce admin from the call panel.

### [Add Telephone Numbers to Call Lists from Record Pages](#)

Sales reps aren't limited to adding telephone numbers to call lists from list views. They can now add numbers from record detail pages as well.

### [Get Email Notifications About Minutes Usage](#)

Salesforce admins receive an email when their org is approaching the end of their available Lightning Dialer minutes for the current month. Another email is sent when there are no available minutes and reps are unable to make calls.

## Use a Custom Picklist for Call Results

Lightning Dialer supports custom picklists for call results, so your team can use the call result values that your company has already created.

**Where:** This change applies to Lightning Dialer in Lightning Experience. Lightning Dialer is available for an additional cost in Essentials, Professional, Enterprise, Performance, and Unlimited editions.

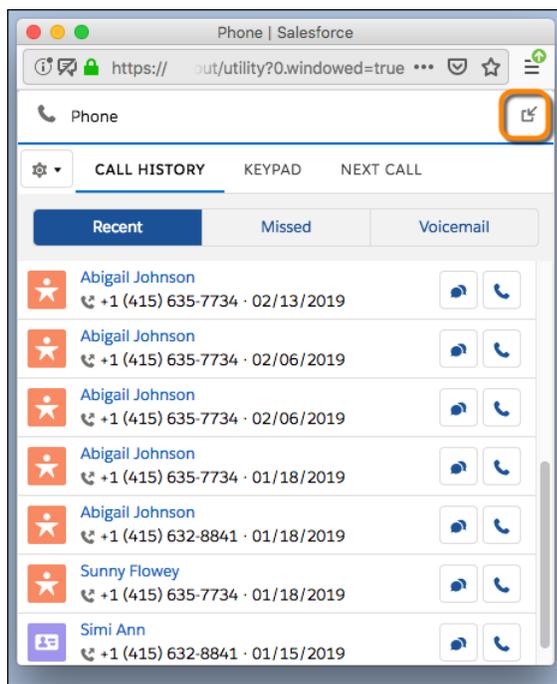
**How:** To select a custom picklist, in Setup, enter *Log a Call* in the Quick Find box, and then select **Log a Call**. The option to pick a custom picklist appears if your company has custom picklists defined on activities.

## Pop Out Lightning Dialer from the Utility Bar

We unchained the call panel! Your reps can now pop out the call panel from the utility bar.

**Where:** This change applies to Lightning Dialer in Lightning Experience. Lightning Dialer is available for an additional cost in Essentials, Professional, Enterprise, Performance, and Unlimited editions.

**How:** Click the icon at the top right of the call panel to pop out (or pop in) the call panel from the utility bar.



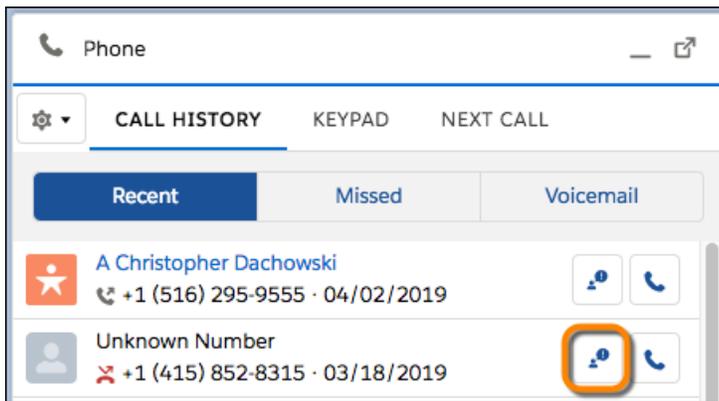
Reps can't pop the panel in or out during a call or call monitoring session.

## Report Issues About Call Quality with Ease

We've all suffered from a poor connection from time to time. When sales reps encounter the occasional call quality problem, they can report the issue to their Salesforce admin from the call panel.

**Where:** This change applies to Lightning Dialer in Lightning Experience. Lightning Dialer is available for an additional cost in Essentials, Professional, Enterprise, Performance, and Unlimited editions.

**How:** Report call issues from the Call History tab in the call panel.



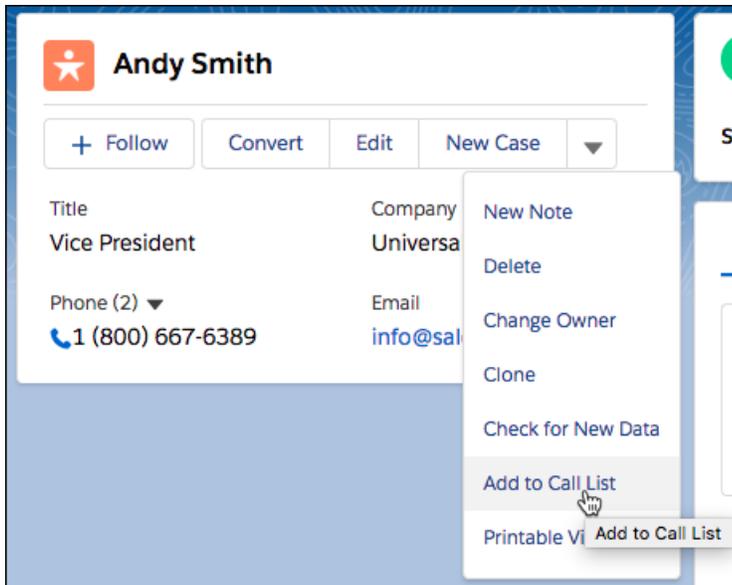
Salesforce admins can build reports on the VoiceCallQualityFeedback object to track call quality. These reports can be used to create support cases if problems continue.

## Add Telephone Numbers to Call Lists from Record Pages

Sales reps aren't limited to adding telephone numbers to call lists from list views. They can now add numbers from record detail pages as well.

**Where:** This change applies to Lightning Dialer in Lightning Experience. Lightning Dialer is available for an additional cost in Essentials, Professional, Enterprise, Performance, and Unlimited editions.

**How:** Select **Add to Call List** from a record detail page.



## Get Email Notifications About Minutes Usage

Salesforce admins receive an email when their org is approaching the end of their available Lightning Dialer minutes for the current month. Another email is sent when there are no available minutes and reps are unable to make calls.

**Where:** This change applies to Lightning Dialer in Lightning Experience. Lightning Dialer is available for an additional cost in Essentials, Professional, Enterprise, Performance, and Unlimited editions.

## Salesforce Inbox App: Daily Events and Insights in One Place and Updated Inbox Setup Assistant

See all the details and insights about the day's activities from Inbox Now. Get more clarity about setting up Inbox mobile from the reworked Inbox Setup Assistant.

 **Note:** Some services and subscriptions include this feature for an extra cost. For pricing details, contact your Salesforce account executive.

### IN THIS SECTION:

#### [Find All You Need to Close Deals in Salesforce Inbox](#)

Inbox Now is the new home base for the Salesforce Inbox app on iOS and Android devices. It provides a single place for sales reps to access details and intelligence about daily meetings, calls, and tasks. No more bouncing around multiple apps to find information about what's happening next, so reps can focus on customers and closing deals.

#### [Set Up Inbox Mobile Apps with a Clearer Setup Assistant Page](#)

We renamed and updated the Setup Assistant page for Inbox. Plus, the information more accurately reflects that the settings apply to Inbox mobile apps and legacy Inbox add-ins and extensions.

#### [Keep Notifications Coming from the Salesforce Inbox Android App](#)

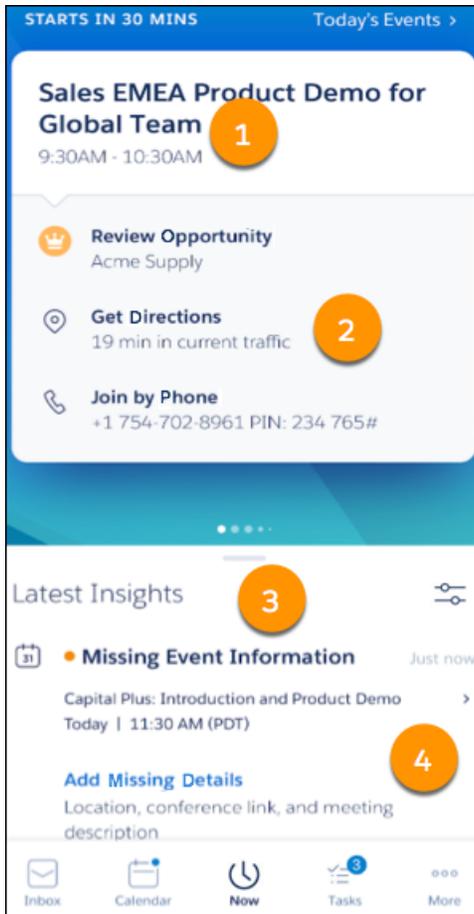
We updated the Salesforce Inbox app for Android to comply with the new push notification framework changes required by Google. To continue receiving push notifications from Salesforce Inbox on an Android device, sales reps need the latest version of the Salesforce Inbox app.

## Find All You Need to Close Deals in Salesforce Inbox

Inbox Now is the new home base for the Salesforce Inbox app on iOS and Android devices. It provides a single place for sales reps to access details and intelligence about daily meetings, calls, and tasks. No more bouncing around multiple apps to find information about what's happening next, so reps can focus on customers and closing deals.

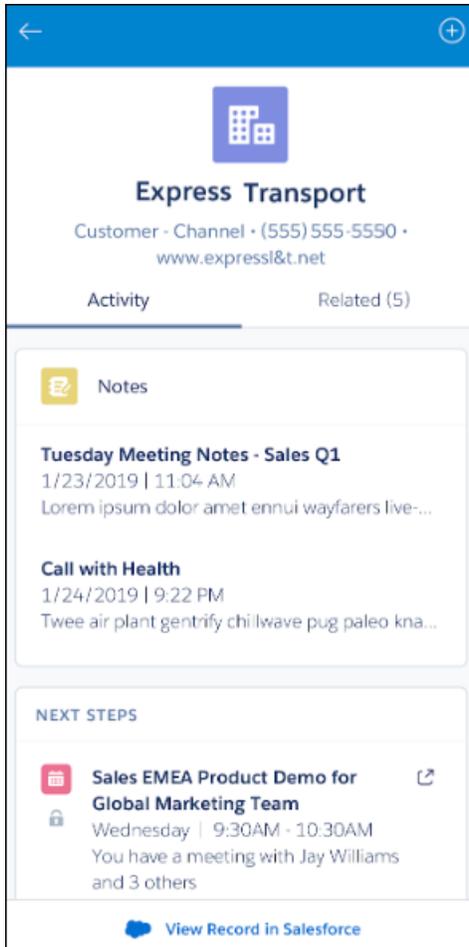
**Where:** This change applies to the Salesforce Inbox app on iPhone and Android phones, available for an extra cost in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** Inbox Now aggregates reps' calendar, email, and Salesforce data, making it easier to prepare for, engage, and follow up on critical customer communications and events.



Swipe left to see each meeting scheduled for today (1). Tap the actions (2) on an event to see a snapshot of the Salesforce record associated with the event, open a map with directions, or dial in with just one tap. See insights about events, emails, and Salesforce tasks (3), stay on top of details before events, and get nudged to complete important meeting follow-up activities. Each insight has unique actions to take to gain more information or to provide missing information, such as a dial-in number or location (4).

Reps have access to a snapshot of account, contact, or opportunity information for each event on their calendar. The new Record Overview provides activities, related records, Salesforce Classic, and new notes and access to the Quip app to see Quip-related notes.



**How:** Inbox Now is available to users by default in version 8.0.0 for iOS and version 5.0.0 for Android of the Salesforce Inbox app. To include email insights, enable Einstein Activity Capture in your org, and make sure that Email Insights is turned on.

SEE ALSO:

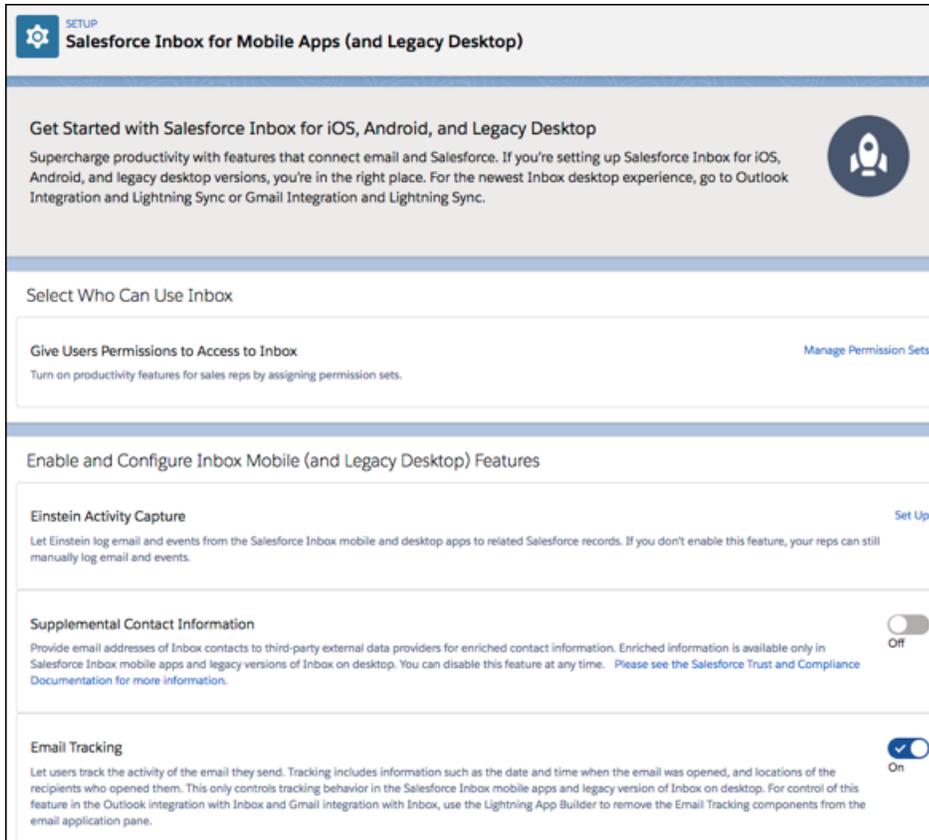
[Salesforce Help: Close Deals Faster with Inbox Now in the Salesforce Inbox App \(can be outdated or unavailable during release preview\)](#)

## Set Up Inbox Mobile Apps with a Clearer Setup Assistant Page

We renamed and updated the Setup Assistant page for Inbox. Plus, the information more accurately reflects that the settings apply to Inbox mobile apps and legacy Inbox add-ins and extensions.

**Where:** This change applies to the Salesforce Inbox app on iOS and Android devices, available for an extra cost in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** The Inbox Setup Assistant now shows only what's needed for the Salesforce Inbox on iOS and Android and legacy versions.



## Keep Notifications Coming from the Salesforce Inbox Android App

We updated the Salesforce Inbox app for Android to comply with the new push notification framework changes required by Google. To continue receiving push notifications from Salesforce Inbox on an Android device, sales reps need the latest version of the Salesforce Inbox app.

**Where:** This change applies to the Salesforce Inbox app on Android devices, available for an extra cost in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Tell reps to install version 4.7.4 or later of the Salesforce Inbox app for Android, which is available from the Google Play Store.

## Calendar: Event List Views and Event Series Available on Quick Actions

Sales reps can view more events at a glance with event list views. They can also schedule repeating events using quick actions.

### IN THIS SECTION:

#### [Filter and Search Events in List Views](#)

Gone are the days of sales reps scrolling endlessly through their calendars to find events. Reps can find exactly what they need by using filters to customize their list views. Reps can use predefined list views to review their daily agenda, upcoming events, or recent events.

#### [Create an Event Series from Anywhere with Quick Actions](#)

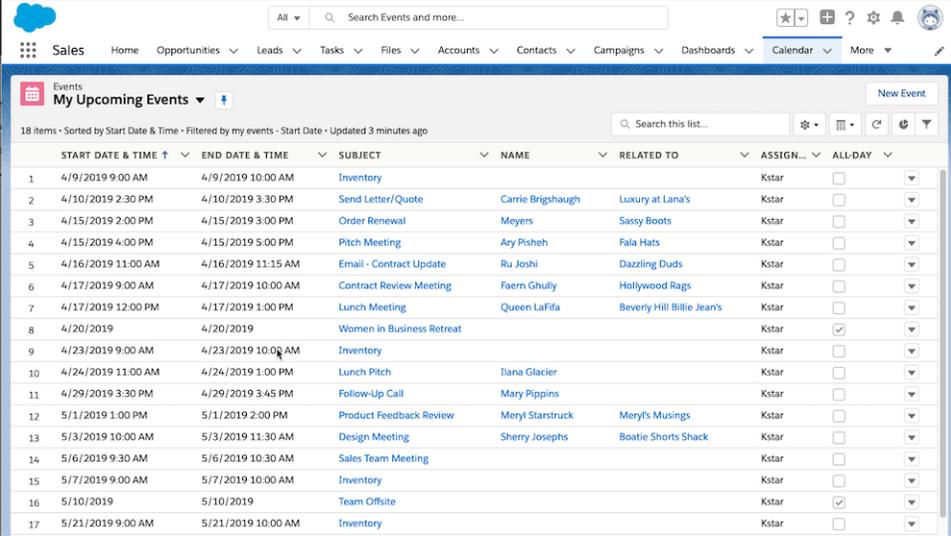
Let sales reps create a series of repeated events from wherever quick actions are available by adding the Repeat field to your quick action layouts. Previously, reps could create only single event records.

## Filter and Search Events in List Views

Gone are the days of sales reps scrolling endlessly through their calendars to find events. Reps can find exactly what they need by using filters to customize their list views. Reps can use predefined list views to review their daily agenda, upcoming events, or recent events.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** Reps can scan events and details easily without clicking through weeks or months to get a better idea of what their calendar looks like.



	START DATE & TIME	END DATE & TIME	SUBJECT	NAME	RELATED TO	ASSIGN...	ALL-DAY
1	4/9/2019 9:00 AM	4/9/2019 10:00 AM	Inventory			Kstar	<input type="checkbox"/>
2	4/10/2019 2:30 PM	4/10/2019 3:30 PM	Send Letter/Quote	Carrie Brigshaugh	Luxury at Lana's	Kstar	<input type="checkbox"/>
3	4/15/2019 2:00 PM	4/15/2019 3:00 PM	Order Renewal	Meyers	Sassy Boots	Kstar	<input type="checkbox"/>
4	4/15/2019 4:00 PM	4/15/2019 5:00 PM	Pitch Meeting	Ary Pisheh	Fala Hats	Kstar	<input type="checkbox"/>
5	4/16/2019 11:00 AM	4/16/2019 11:15 AM	Email - Contract Update	Ru Joshi	Dazzling Duds	Kstar	<input type="checkbox"/>
6	4/17/2019 9:00 AM	4/17/2019 10:00 AM	Contract Review Meeting	Faern Ghully	Hollywood Rags	Kstar	<input type="checkbox"/>
7	4/17/2019 12:00 PM	4/17/2019 1:00 PM	Lunch Meeting	Queen LaFifa	Beverly Hill Billie Jean's	Kstar	<input type="checkbox"/>
8	4/20/2019	4/20/2019	Women in Business Retreat			Kstar	<input checked="" type="checkbox"/>
9	4/23/2019 9:00 AM	4/23/2019 10:00 AM	Inventory			Kstar	<input type="checkbox"/>
10	4/24/2019 11:00 AM	4/24/2019 1:00 PM	Lunch Pitch	Ilana Glacier		Kstar	<input type="checkbox"/>
11	4/29/2019 3:30 PM	4/29/2019 3:45 PM	Follow-Up Call	Mary Pippins		Kstar	<input type="checkbox"/>
12	5/1/2019 1:00 PM	5/1/2019 2:00 PM	Product Feedback Review	Meryl Starstruck	Meryl's Musings	Kstar	<input type="checkbox"/>
13	5/3/2019 10:00 AM	5/3/2019 11:30 AM	Design Meeting	Sherry Josephs	Boatie Shorts Shack	Kstar	<input type="checkbox"/>
14	5/6/2019 9:30 AM	5/6/2019 10:30 AM	Sales Team Meeting			Kstar	<input type="checkbox"/>
15	5/7/2019 9:00 AM	5/7/2019 10:00 AM	Inventory			Kstar	<input type="checkbox"/>
16	5/10/2019	5/10/2019	Team Offsite			Kstar	<input checked="" type="checkbox"/>
17	5/21/2019 9:00 AM	5/21/2019 10:00 AM	Inventory			Kstar	<input type="checkbox"/>

## Create an Event Series from Anywhere with Quick Actions

Let sales reps create a series of repeated events from wherever quick actions are available by adding the Repeat field to your quick action layouts. Previously, reps could create only single event records.

**Where:** This change applies to Lightning Experience and all versions of the Salesforce app in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Salesforce Help: Create Global Quick Actions \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Create Object-Specific Quick Actions \(can be outdated or unavailable during release preview\)](#)

## Quip for Sales: Standardize Sales Processes Using Quip

Boost productivity throughout the deal cycle with collaborative docs directly inside Sales Cloud. Configure the Quip Document Lightning component to deploy customizable Quip document templates in context of your Sales Cloud record pages. With Quip templates, you can even use mail-merge syntax to auto-fill new documents with data from corresponding Salesforce fields.

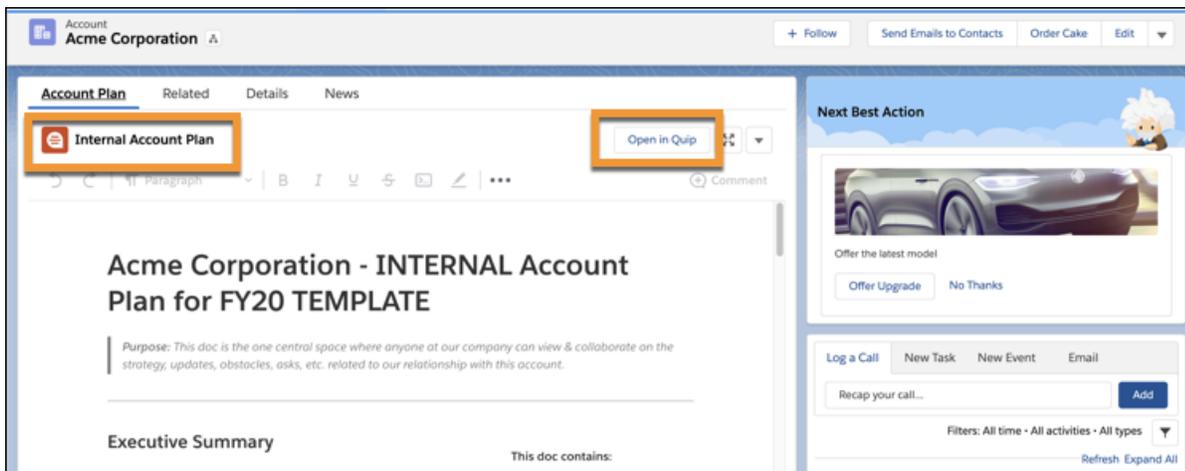
**Where:** This change applies to Lightning apps in Lightning Experience in Essentials, Professional, Performance, Unlimited, and Developer editions.

**Who:** This change is available with a Quip Enterprise plan or free trial.

**How:** If you haven't already done it, connect Salesforce to Quip. In Setup, enter *Quip* in the Quick Find box, and follow the steps. Then launch Lightning App Builder, and add the Quip Document component to the Sales page that you want to update.

You have a few options for how the document component behaves. For example, you can have the same Quip document attached to each record. Or you can use mail-merge syntax to auto-fill new documents from a template. You can even use different templates for different records. You can also assign a custom label to the embedded Quip document.

Here's an example of a Quip document embedded in the Account Plan tab of an Account. Its custom label is Internal Account Plan. You can edit the document directly in Salesforce or open it in Quip.



SEE ALSO:

- [Quip Support: The Quip Document Component for Salesforce: A Guide for Users](#)
- [Quip Support: The Quip Document Component for Salesforce: A Guide for Admins](#)
- [Quip Site: Quip for Sales](#)
- [Quip Blog: Introducing Quip for Sales: Drive Sales Productivity in Sales Cloud](#)

## Lightning Data: Choose Which Records to Target or Skip

You now have more control over Lightning Data updates and assessments. For instance, you can avoid running Lightning Data rules uselessly on old leads. Or skip the rule for records updated by other systems or when your company's security or compliance policies prohibit data flow between certain records and a data service. For each Lightning Data rule, create a custom checkbox field, name it as specified, and add it to your records. The rule runs on records with the checkbox selected, and skips the rest.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Professional, Enterprise, Performance, and Unlimited editions.

**How:**

1. Create a checkbox field, and name it according to the pattern *LD\_USE\_Data Source Name*. To find the data source name, in Setup, enter *External Data Sources*, and look for the name under the External Data Source column. Use the exact data source name, including uppercase and lowercase letters.
2. We suggest labeling the field using one of these patterns: *Match Using Data Service Provider Name* or *Enrich Using Data Service Provider Name*. The data *service* provider name is different from the data *source* name.

3. Add the field to the layout for the object targeted by the rule.

SEE ALSO:

[Salesforce Help: Activate the Data Integration Rule for a Data Service \(can be outdated or unavailable during release preview\)](#)

## Data.com Prospector and Data.com Clean Are Being Retired

Data.com Prospector and Data.com Clean licenses can't be renewed after July 31, 2019. These products are scheduled for retirement on July 31, 2020. Current licenses will be honored.

**Where:** This change applies to Lightning Experience and Salesforce Classic.

**Who:** Data.com Prospector licenses are available in **Contact Manager** (no Lead object), **Group, Professional, Enterprise, Performance**, and **Unlimited** editions. Data.com Clean licenses are available in **Professional, Enterprise, Performance**, and **Unlimited** editions.

SEE ALSO:

[Knowledge Article: Data.com Clean and Prospector Retirement](#)

## Gmail Integration: Faster Email Logging and Email Tracking Improvements

Sales reps can opt to keep the options for logging an email to Salesforce open as they move through their email. Email tracking, available with an Inbox license, includes location information. Tracking information for emails sent from Gmail is available in the Salesforce activity timeline.

IN THIS SECTION:

[Log Emails from Gmail to Salesforce with Fewer Clicks](#)

Sales reps work fast, and they need to log emails from Gmail to Salesforce fast, too. Reps can now see email logging options as they move through their email, reducing the clicks required to log an email.

[View Location in Email Tracking from Gmail](#)

Know when and where your prospects are engaging with your email communications. Geolocation in email tracking is already in the Salesforce Inbox apps on iOS and Android devices and now you can use it with the desktop integration for Gmail.

SEE ALSO:

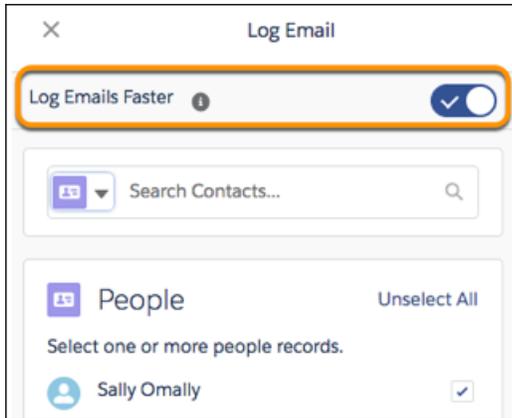
[Get Things Right with Right-to-Left Languages \(Beta\)](#)

## Log Emails from Gmail to Salesforce with Fewer Clicks

Sales reps work fast, and they need to log emails from Gmail to Salesforce fast, too. Reps can now see email logging options as they move through their email, reducing the clicks required to log an email.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Reps turn on **Log Emails Faster** available in Read mode. Reps no longer have to open the email or event and click **Log Email** or **Edit Logged Email** to access the logging options.



SEE ALSO:

[Salesforce Help: Log Emails and Events from Outlook and Gmail to Salesforce \(can be outdated or unavailable during release preview\)](#)

## View Location in Email Tracking from Gmail

Know when and where your prospects are engaging with your email communications. Geolocation in email tracking is already in the Salesforce Inbox apps on iOS and Android devices and now you can use it with the desktop integration for Gmail.

**Where:** This change applies to Salesforce Inbox on desktop, available for an extra cost in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Users with access to email tracking can see where the recipient opened the email.

## Integration with Microsoft: Faster Email Logging and Email Tracking Improvements

Log emails from Microsoft® Outlook® to Salesforce with fewer clicks. Get more focused information about tracked emails. Plus, learn about the latest Salesforce for Outlook version. Or give up Salesforce for Outlook upgrades altogether by moving to a cloud-based alternative.

IN THIS SECTION:

[Outlook Integration: Faster Email Logging and Email Tracking Improvements](#)

Sales reps can opt to keep the options for logging an email to Salesforce open as they move through their email. Email tracking, available with an Inbox license, includes location information. You can now view tracking information for an individual email, and tracking information for emails sent from Microsoft® Outlook® is available in the Salesforce activity timeline.

[Salesforce for Outlook: Latest Versions and Email Integration Alternatives](#)

Salesforce for Outlook v3.4.7 fixes an issue that prevented reps from typing into the side panel search box. Salesforce for Outlook v3.4.6 avoided showing an error message during installation. Continue checking the Summer '19 release notes to learn about other potential fixes. To get the latest features and do away with upgrading, consider moving to our cloud-based product alternatives: the Outlook Integration, Lightning Sync, and Einstein Activity Capture.

## Outlook Integration: Faster Email Logging and Email Tracking Improvements

Sales reps can opt to keep the options for logging an email to Salesforce open as they move through their email. Email tracking, available with an Inbox license, includes location information. You can now view tracking information for an individual email, and tracking information for emails sent from Microsoft® Outlook® is available in the Salesforce activity timeline.

### IN THIS SECTION:

#### [Log Emails from Outlook to Salesforce with Fewer Clicks](#)

Sales reps work fast, and they need to log emails from Microsoft® Outlook® to Salesforce fast, too. Reps can now see email logging options as they move through their email, reducing the clicks required to log an email.

#### [Access Tracking Details for an Individual Email in Outlook](#)

Sales reps can now see how a prospect or customer engaged with a specific email without searching through all tracked emails. As a rep moves through sent email, each email shows a summary of the tracking information with a link to more details.

#### [View Location in Email Tracking from Outlook](#)

Know when and where your prospects are engaging with your email communications. Geolocation in email tracking is already in the Salesforce Inbox apps on iOS and Android devices and now you can use it with the desktop integration for Outlook.

#### [Schedule Emails to Send Later and Log to Salesforce When Sent](#)

Don't let emails fall through the cracks! Set emails to log to Salesforce automatically when scheduled to be sent later. Reps can log necessary information without going back to the sent email and logging it manually.

### SEE ALSO:

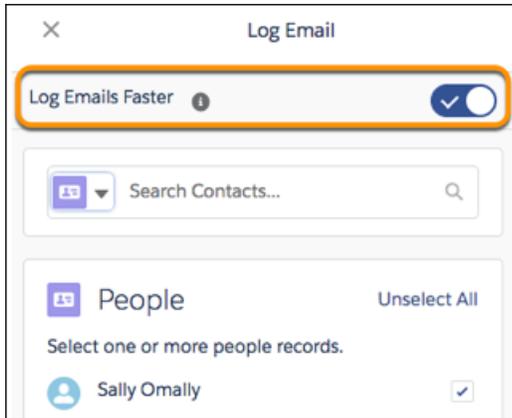
#### [Get Things Right with Right-to-Left Languages \(Beta\)](#)

## Log Emails from Outlook to Salesforce with Fewer Clicks

Sales reps work fast, and they need to log emails from Microsoft® Outlook® to Salesforce fast, too. Reps can now see email logging options as they move through their email, reducing the clicks required to log an email.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Reps turn on **Log Emails Faster** available in Read mode. Reps no longer have to open the email or event and click **Log Email** or **Edit Logged Email** to access the logging options.



SEE ALSO:

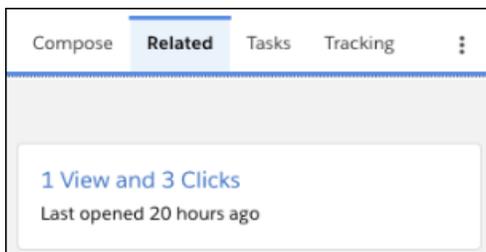
[Salesforce Help: Log Emails and Events from Outlook and Gmail to Salesforce \(can be outdated or unavailable during release preview\)](#)

## Access Tracking Details for an Individual Email in Outlook

Sales reps can now see how a prospect or customer engaged with a specific email without searching through all tracked emails. As a rep moves through sent email, each email shows a summary of the tracking information with a link to more details.

**Where:** This change applies to Salesforce Inbox on desktop, available for an extra cost in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** If you use the default email application pane, the new Email Tracking - Individual Receipt component is automatically added to the Related tab for users with an Inbox license.



If you've created custom email application panes, use Lightning App Builder to add the Email Tracking - Individual Receipt component to a tab with Read mode.

SEE ALSO:

[Salesforce Help: Considerations for Tracking Emails in the Outlook Integration \(can be outdated or unavailable during release preview\)](#)

## View Location in Email Tracking from Outlook

Know when and where your prospects are engaging with your email communications. Geolocation in email tracking is already in the Salesforce Inbox apps on iOS and Android devices and now you can use it with the desktop integration for Outlook.

**Where:** This change applies to Salesforce Inbox on desktop, available for an extra cost in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

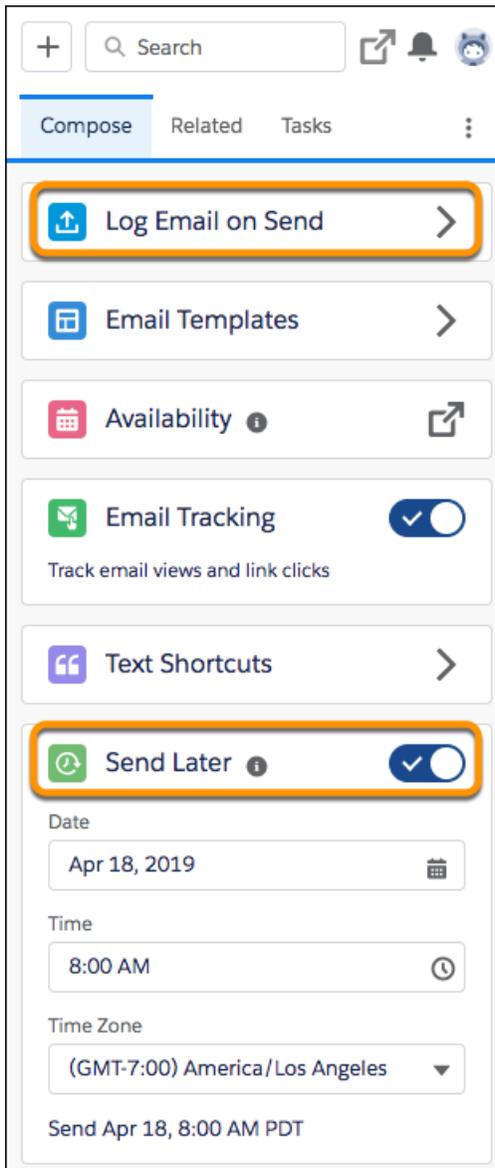
**Who:** Users with access to email tracking can see where the recipient opened the email.

## Schedule Emails to Send Later and Log to Salesforce When Sent

Don't let emails fall through the cracks! Set emails to log to Salesforce automatically when scheduled to be sent later. Reps can log necessary information without going back to the sent email and logging it manually.

**Where:** This change applies to Salesforce Inbox on desktop, available for an extra cost in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** On the email integration pane, users can select **Log Email on Send** and **Send Later**.



SEE ALSO:

[Salesforce Help: Email and Event Logging from Outlook and Gmail to Salesforce \(can be outdated or unavailable during release preview\)](#)

## Salesforce for Outlook: Latest Versions and Email Integration Alternatives

Salesforce for Outlook v3.4.7 fixes an issue that prevented reps from typing into the side panel search box. Salesforce for Outlook v3.4.6 avoided showing an error message during installation. Continue checking the Summer '19 release notes to learn about other potential fixes. To get the latest features and do away with upgrading, consider moving to our cloud-based product alternatives: the Outlook Integration, Lightning Sync, and Einstein Activity Capture.

### IN THIS SECTION:

#### [Get Salesforce for Outlook v3.4.7 Updates](#)

This latest version fixes compatibility issues that occurred after Microsoft released Windows 10 version 1903. After the Windows 10 update, users running earlier versions of Salesforce for Outlook couldn't type in the side panel search box. Users can alleviate this issue by upgrading to Salesforce for Outlook v3.4.7.

#### [Learn About Salesforce for Outlook v3.4.6](#)

Salesforce for Outlook v3.4.6 offers a small installation improvement. Some users installing earlier versions of Salesforce for Outlook saw a Microsoft® Windows® error about key access verification. With Salesforce for Outlook v3.4.6, users no longer see the error message. Check the release notes when Summer '19 gets underway to learn about other potential patches.

#### [Expand Your Horizons with Salesforce Cloud-Based Product Alternatives](#)

Get the latest product releases automatically when you move your sales reps to our cloud-based products: the Outlook Integration, Einstein Activity Capture, or Lightning Sync. Not only do you avoid installing upgrades, but reps also have access to the latest in email integration features.

## Get Salesforce for Outlook v3.4.7 Updates

This latest version fixes compatibility issues that occurred after Microsoft released Windows 10 version 1903. After the Windows 10 update, users running earlier versions of Salesforce for Outlook couldn't type in the side panel search box. Users can alleviate this issue by upgrading to Salesforce for Outlook v3.4.7.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Contact Manager, Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** Starting in Winter '19, if you never set up Salesforce for Outlook or your reps aren't regularly working with it, service is no longer available. But don't fret: Our next-generation products, Outlook integration, Lightning Sync, and Einstein Activity Capture are better than ever and ready to serve you. To see how the products differ, check out [Which Email Integration Product Is Right for My Company](#) in the Salesforce Help.

### SEE ALSO:

[Salesforce Trailblazer Community: Salesforce for Outlook Release Notes \(can be outdated or unavailable during release preview\)](#)

## Learn About Salesforce for Outlook v3.4.6

Salesforce for Outlook v3.4.6 offers a small installation improvement. Some users installing earlier versions of Salesforce for Outlook saw a Microsoft® Windows® error about key access verification. With Salesforce for Outlook v3.4.6, users no longer see the error message. Check the release notes when Summer '19 gets underway to learn about other potential patches.

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are better than ever and ready to serve you. To see how the products differ, check out [Which Email Integration Product Is Right for My Company](#) in the Salesforce Help.

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Get the latest product releases automatically when you move your sales reps to our cloud-based products: the Outlook Integration, Einstein Activity Capture, or Lightning Sync. Not only do you avoid installing upgrades, but reps also have access to the latest in email integration features.

**Where:** Availability for our cloud-based features differs by product and edition.

- Outlook integration is available for Lightning Experience and Salesforce Classic in Group, Professional, Enterprise, Performance, Unlimited, and Developer Editions with Sales Cloud, Service Cloud, and Lightning Platform.
- Einstein Activity Capture is available for Lightning Experience in Essentials, Professional, Enterprise, Performance, and Unlimited editions.
- Lightning Sync is available for Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Professional, Enterprise, Performance, Unlimited, and Developer Editions with Sales Cloud, Service Cloud, and Lightning Platform.

**Why:** Whether you're looking for a favorite feature, specific system support, or a simplified setup, see if our latest products meet your needs.

- Outlook Integration offers productivity features that aren't available on the Salesforce for Outlook side panel. If you're on Lightning Experience, you can build customized panels for different users, and your sales reps can log Microsoft emails to Salesforce as emails—no more logging emails as tasks! You can also upgrade reps to Salesforce Inbox for enhanced desktop and mobile features.
- Einstein Activity Capture syncs contacts and events between Microsoft applications and Salesforce. It offers more features than Lightning Sync, our other sync option, such as productivity-boosting email and event capture. Plus, only the admin and users manage setup; no technical input is needed from your Exchange administrator.
- Lightning Sync syncs contacts and events. You and your Exchange administrator can manage the rollout from end to end, so your users have minimal setup steps. Lightning Sync has no new features in Summer '19, but offers the same great experience that it always has.

**How:** To find out what's best for you based on the system requirements, [use our handy decision-making tool](#). To get a deeper understanding of the features offered, [review our email integration comparison table](#).

SEE ALSO:

[Salesforce Help: Outlook Integration \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Einstein Activity Capture \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Lightning Sync \(can be outdated or unavailable during release preview\)](#)

## Salesforce CPQ and Billing: Pricing Guidance, Improved Invoice Line Crediting, and Reliable Amendments and Renewals for Large Contracts

Drive your sales team to close deals by providing them with pricing guidance based on historical deals and product pricing trends. Amend and renew large contracts with lower risk of timeouts. Credit multiple invoice lines at once, and apply credit tax all in one convenient location.

## IN THIS SECTION:

[Salesforce CPQ: Pricing Guidance for Ideal Discounts, Reliable Amendments and Renewals for Large Contracts, and Improved Percent of Total Relationships on Order Products](#)

Drive your sales team to close deals by providing them with pricing guidance based on historical deals and product pricing trends. Amend and renew large contracts with lower risk of timeouts. View your covered assets from amendment quotes as order products on the Order detail page.

[Salesforce Billing: Bulk Invoice Line Crediting in the Credit Center and Sending CVs in the Payment Center](#)

Credit multiple invoice lines at once and apply credit tax all in one convenient location. Speed up the payment process for your end users by letting them send credit card CVs for any payment gateway in the Payment Center.

## SEE ALSO:

[Knowledge Article: New Objects and Fields for Salesforce CPQ and Billing Summer '19 \(can be outdated or unavailable during release preview\)](#)

## Salesforce CPQ: Pricing Guidance for Ideal Discounts, Reliable Amendments and Renewals for Large Contracts, and Improved Percent of Total Relationships on Order Products

Drive your sales team to close deals by providing them with pricing guidance based on historical deals and product pricing trends. Amend and renew large contracts with lower risk of timeouts. View your covered assets from amendment quotes as order products on the Order detail page.



**Note:** Salesforce CPQ is offered for an extra cost. For pricing, contact your Salesforce account executive.

## IN THIS SECTION:

[Suggest Ideal Prices with Pricing Guidance](#)

Help your sales team close deals by providing them with pricing guidance based on historical deals and product pricing trends. When sales reps add a product with pricing guidance to their quote, they can view suggested target, norm, and floor discount amounts. If the rep chooses the target price, Salesforce CPQ applies the appropriate discount to the quote line. You can customize guidance by filtering evaluated products and editing suggested discount values.

[Manage Larger Contracts with Large-Scale Amendment and Renewal Quoting](#)

Sales reps working with large contracts now have an easier time with amendments and renewals. The new Large-Scale Amendment and Renewal Quoting Service smoothly supports up to 2,000 related records without errors and timeouts.

[Maintain Percent of Total Relationships on Renewals When Contracting from Orders](#)

When a rep renews a contract made from an order, Percent of Total subscriptions now retain relationships with their covered assets on the renewal quote. Previously, Percent of Total subscriptions became Fixed Price subscriptions for the rest of their life cycle. Now, reps can continue updating their Percent of Total subscription with new covered products on renewal quotes for the subscription's entire life cycle. Also, orders now show zero-quantity order products for covered assets from renewal quotes, so reps no longer have to return to the initial quote.

[Renew and Co-Terminate Contracts from Opportunity and Account Pages with CPQ Lightning](#)

Salesforce CPQ customers can now renew and co-terminate multiple contracts from opportunities and accounts in Lightning Experience. Previously, this feature was available only in Salesforce Classic.

### [Logic Updated for Percent Fields in Price Action Formulas](#)

We've fixed an issue when Salesforce CPQ handles quote line percent fields in a price action's formula fields. Previously, when a price action formula evaluated a quote or quote line percentage field, it divided that field value by 100 within the formula logic. For example, a percent field value of 50% was evaluated as 0.005 rather than 0.5 within the formula. Fields that used the result of the price action formula had an incorrect value. Users could avoid this issue by multiplying quote or quote line percentage field values by 100 in their price action formulas. Now, price action formula fields don't divide quote or quote line percentage field values by 100. If you have price action formula fields where you multiplied percentage field values by 100 to avoid this error, you need to update them.

### [Hide and Lock Quote Fields with the Page Security Plugin](#)

Developers now have greater control over field visibility and editable status on CPQ quotes. We've added Javascript Page Security Plugin functions that support hiding quote fields and locking them from edits.

### [Retrieve Quote Terms with Quote Term Reader API](#)

Developers can now use the Quote Term Reader API to retrieve quote term information from a CPQ quote.

### [Other Changes in Salesforce CPQ](#)

Collapse and expand bundles in the large quote experience, and enable large configurations at the product level. Get new status messages during large bundle configuration, and validation rules are supported while the large quote threshold is active.

#### SEE ALSO:

[Knowledge Article: New Objects and Fields for Salesforce CPQ and Billing Summer '19 \(can be outdated or unavailable during release preview\)](#)

## Suggest Ideal Prices with Pricing Guidance

Help your sales team close deals by providing them with pricing guidance based on historical deals and product pricing trends. When sales reps add a product with pricing guidance to their quote, they can view suggested target, norm, and floor discount amounts. If the rep chooses the target price, Salesforce CPQ applies the appropriate discount to the quote line. You can customize guidance by filtering evaluated products and editing suggested discount values.

**Where:** This change applies to Salesforce Classic and Lightning Experience in all Salesforce CPQ editions.

**Who:** Pricing Guidance is available for Salesforce CPQ+ users. The Create Pricing Guidance page is available for Salesforce CPQ+ users with an EinsteinAnalyticsPlus license.

**Why:** When sales reps add a product with pricing guidance to their quote, they can click the quote line  icon to open the Pricing Guidance detail page. The detail page presents the target, norm, and floor discount value options. To apply a target discount, the rep clicks **Accept Recommendation**, and Salesforce CPQ adds the target discount percentage to the quote line's Additional Discount.

**How:** Users with EinsteinAnalyticsPlus can use the Create Pricing Guidance page to filter quote lines and generate discounts based on quote line pricing trends. After defining your filters **(1)**, Salesforce CPQ creates quantity bounds based on historical quote line quantity values. It then calculates the median discount for each quantity range based on the media Total Discount field value for all quote lines in that range. You can customize your suggested discounts as percentages relative to the median discount **(2)**. The Pricing Graph **(3)** shows your median discounts relative to your suggested discount.



You can also click **Guidance Tiers** to view the bounds and exact discounts for each tier.

Quantity Lower Bound	Quantity Upper Bound	Median Discount %	Target %	Norm %	Floor %
11	20	6.123	5.5107	6.123	7.04145
20	30	7.8255	7.04295	7.8255	8.999325
30	40	9.2865	8.35785	9.2865	10.679475
40	50	10.5465	9.49185	10.5465	12.128475
50	60	11.6715	10.50435	11.6715	13.422225
60	70	12.6975	11.42775	12.6975	14.602125

SEE ALSO:

[Salesforce Help: What Does Pricing Guidance Do? \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Things to Know About Pricing Guidance \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Set Up Pricing Guidance With Einstein Analytics \(can be outdated or unavailable during release preview\)](#)

## Manage Larger Contracts with Large-Scale Amendment and Renewal Quoting

Sales reps working with large contracts now have an easier time with amendments and renewals. The new Large-Scale Amendment and Renewal Quoting Service smoothly supports up to 2,000 related records without errors and timeouts.

**Where:** This change applies to Salesforce Classic and Lightning Experience in all Salesforce CPQ editions.

**When:** New customers default to the new service. If you're a current customer, you keep your current service, and you can choose to switch when it's available. We'll let you know when we're ready to move all customers to the new service.

**Why:** Previously, Salesforce CPQ encountered long loading times or errors when amending or renewing contracts with many subscriptions and assets. While the limit varied based on customer implementations, most users ran into timeout issues when they had approximately 100 related records.

**How:** If you're a new customer, you're all set.

If you've upgraded to Salesforce CPQ Summer '19 and want to switch to the new service, in Salesforce CPQ Subscriptions and Renewals package settings, deselect **Use Legacy Amend/Renew Service**.

SEE ALSO:

[Knowledge Article: Salesforce CPQ Large-Scale Amendment and Renewal Service \(can be outdated or unavailable during release preview\)](#)

## Maintain Percent of Total Relationships on Renewals When Contracting from Orders

When a rep renews a contract made from an order, Percent of Total subscriptions now retain relationships with their covered assets on the renewal quote. Previously, Percent of Total subscriptions became Fixed Price subscriptions for the rest of their life cycle. Now, reps can continue updating their Percent of Total subscription with new covered products on renewal quotes for the subscription's entire life cycle. Also, orders now show zero-quantity order products for covered assets from renewal quotes, so reps no longer have to return to the initial quote.

**Where:** This change applies to Salesforce Classic and Lightning Experience in all Salesforce CPQ editions.

**How:** In your Order Settings, select **Enable Zero Quantity Orders**.

In Salesforce CPQ Subscriptions and Renewals settings, select **PoT Renewals (Contracting from Orders)**. This feature is active by default for new Salesforce CPQ Summer '19 users.

SEE ALSO:

[Salesforce Help: Renewing Your Percent of Total Products \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Creating a Contract from an Order \(can be outdated or unavailable during release preview\)](#)

## Renew and Co-Terminate Contracts from Opportunity and Account Pages with CPQ Lightning

Salesforce CPQ customers can now renew and co-terminate multiple contracts from opportunities and accounts in Lightning Experience. Previously, this feature was available only in Salesforce Classic.

**Where:** This change applies to Lightning Experience in all Salesforce CPQ editions.

**How:** From the contracts related list on accounts and opportunities, select several contracts, and then click **Renew Contracts**.

SEE ALSO:

[Salesforce Help: Renew Contracts from an Account \(can be outdated or unavailable during release preview\)](#)

## Logic Updated for Percent Fields in Price Action Formulas

We've fixed an issue when Salesforce CPQ handles quote line percent fields in a price action's formula fields. Previously, when a price action formula evaluated a quote or quote line percentage field, it divided that field value by 100 within the formula logic. For example, a percent field value of 50% was evaluated as 0.005 rather than 0.5 within the formula. Fields that used the result of the price action formula had an incorrect value. Users could avoid this issue by multiplying quote or quote line percentage field values by 100 in their price action formulas. Now, price action formula fields don't divide quote or quote line percentage field values by 100. If you have price action formula fields where you multiplied percentage field values by 100 to avoid this error, you need to update them.

**Where:** This change applies to Salesforce Classic and Lightning Experience in all Salesforce CPQ editions.

SEE ALSO:

[Knowledge Article: Salesforce CPQ Summer '19 Price Action Formula Field Evaluation of Percent Fields \(can be outdated or unavailable during release preview\)](#)

## Hide and Lock Quote Fields with the Page Security Plugin

Developers now have greater control over field visibility and editable status on CPQ quotes. We've added Javascript Page Security Plugin functions that support hiding quote fields and locking them from edits.

**Where:** This change applies to Salesforce Classic and Lightning Experience in all Salesforce CPQ editions.

**Why:** Previously, the Javascript Page Security Plugin methods `isFieldVisible` and `isFieldEditable` could evaluate only quote line fields to hide a quote line field or lock it from edits. Now the `isFieldVisibleForObject` and `isFieldEditableForObject` functions can evaluate and change the consistency and editable status of both quote fields and quote line fields.

Salesforce CPQ Summer '19 still supports `isFieldVisible` and `isFieldEditable`. If your plugin uses pre-Summer '19 functions with `isFieldEditableForObject` and `isFieldVisibleForObject`, Salesforce CPQ ignores the new functions and uses the old functions instead.

SEE ALSO:

[CPQ Developer Guide: Javascript Page Security Plugin \(can be outdated or unavailable during release preview\)](#)

## Retrieve Quote Terms with Quote Term Reader API

Developers can now use the Quote Term Reader API to retrieve quote term information from a CPQ quote.

**Where:** This change applies to Salesforce Classic and Lightning Experience in all Salesforce CPQ editions.

SEE ALSO:

[CPQ Developer Guide: Quote Term Reader API \(can be outdated or unavailable during release preview\)](#)

## Other Changes in Salesforce CPQ

Collapse and expand bundles in the large quote experience, and enable large configurations at the product level. Get new status messages during large bundle configuration, and validation rules are supported while the large quote threshold is active.

IN THIS SECTION:

### [Expand and Collapse Bundles in Large Quote Experience](#)

Sales reps using Large Quote Experience no longer have to waste time scrolling through every child product in a bundle. We added package-level settings that let you control whether bundles are expandable and collapsible in the Large Quote Experience, and whether they appear expanded or collapsed by default.

### [New Message for Unsuccessful Search Results](#)

We made it easier for sales reps to know when their product searches don't return results. Asset Lookup, Subscription Lookup, Product Lookup, and Dynamic Filter Lookup pages now show a "No Search Results Found" message in response to unsuccessful searches.

### [Know When Large Bundle Processing Is Complete](#)

You can now monitor the configuration status of your bundles. Previously, Salesforce CPQ didn't indicate the status as it processed a bundle. If the bundle took a long time to configure, sales reps didn't know whether Salesforce CPQ was active or had stopped processing due to an error. Reps now see a processing message, and if the bundle fails, a new message indicates why.

### [Enable Large Configurations on Products](#)

You can now enable large configurations on product records for bundle parents that are likely to hit governor limits during configuration. Previously, you could enable large configurations only in Salesforce CPQ package settings, which applied the large configuration process during all your org's configuration processes. Small bundles would take longer to configure even if they weren't at risk of hitting Salesforce governor limits.

### [Large Quote Threshold Supports Validation Rules](#)

A new package setting lets Salesforce CPQ evaluate validation rules while the large quote threshold is active. Your sales reps now don't run the risk of performing actions in the quote line editor that a validation rule would otherwise prevent.

### [Behavior for List Prices of Renewed or Amended Subscriptions Has Changed](#)

We changed how Salesforce CPQ calculates list prices for amendments and for renewals where the account's renewal pricing method is Same or Uplift. Salesforce CPQ now uses the subscription's list price to calculate the renewal or amendment quote line's list price. Previously, Salesforce CPQ used the product's price book entry price unless the product had an active Price Editable field. If an admin changed the price book entry price before the sales rep renewed the subscription or after they contracted it, the subscription's amendment or renewal quote lines would be inaccurate.

## Expand and Collapse Bundles in Large Quote Experience

Sales reps using Large Quote Experience no longer have to waste time scrolling through every child product in a bundle. We added package-level settings that let you control whether bundles are expandable and collapsible in the Large Quote Experience, and whether they appear expanded or collapsed by default.

**Where:** This change applies to Salesforce Classic and Lightning Experience in all Salesforce CPQ editions.

**How:** Contact Salesforce CPQ support to enable this feature and Large Quote Experience. You can then use the new Salesforce CPQ Quote Line package setting Default Bundle Setting, which lets you control whether bundles appear expanded or collapsed when sales reps first add them to the quote line editor. This setting appears only when the Line Editor package settings Enable Large Quote Experience, Keep Bundles Together, and Visualize Hierarchy are selected.

SEE ALSO:

[Salesforce Help: Large Quote Experience \(can be outdated or unavailable during release preview\)](#)

## New Message for Unsuccessful Search Results

We made it easier for sales reps to know when their product searches don't return results. Asset Lookup, Subscription Lookup, Product Lookup, and Dynamic Filter Lookup pages now show a "No Search Results Found" message in response to unsuccessful searches.

**Where:** This change applies to Salesforce Classic and Lightning Experience in all Salesforce CPQ editions.

## Know When Large Bundle Processing Is Complete

You can now monitor the configuration status of your bundles. Previously, Salesforce CPQ didn't indicate the status as it processed a bundle. If the bundle took a long time to configure, sales reps didn't know whether Salesforce CPQ was active or had stopped processing due to an error. Reps now see a processing message, and if the bundle fails, a new message indicates why.

**Where:** This change applies to Salesforce Classic and Lightning Experience in all Salesforce CPQ editions.

**How:** Salesforce CPQ shows large bundle configuration status messages for bundles with an active Enable Large Configurations field. If the Enable Large Configurations package setting is active, users see large bundle configuration status messages for all bundles.

## Enable Large Configurations on Products

You can now enable large configurations on product records for bundle parents that are likely to hit governor limits during configuration. Previously, you could enable large configurations only in Salesforce CPQ package settings, which applied the large configuration process during all your org's configuration processes. Small bundles would take longer to configure even if they weren't at risk of hitting Salesforce governor limits.

**Where:** This change applies to Salesforce Classic and Lightning Experience in all Salesforce CPQ editions.

**How:** On the product record for your bundle parent, select **Enable Large Configurations**.

SEE ALSO:

[Salesforce Help: Enable Large Configurations \(can be outdated or unavailable during release preview\)](#)

## Large Quote Threshold Supports Validation Rules

A new package setting lets Salesforce CPQ evaluate validation rules while the large quote threshold is active. Your sales reps now don't run the risk of performing actions in the quote line editor that a validation rule would otherwise prevent.

**Where:** This change applies to Salesforce Classic and Lightning Experience in all Salesforce CPQ editions.

**How:** Select the Enable Large Quote Threshold Validations field in Salesforce CPQ package settings.

SEE ALSO:

[Salesforce Help: Large Quote Performance Settings \(can be outdated or unavailable during release preview\)](#)

## Behavior for List Prices of Renewed or Amended Subscriptions Has Changed

We changed how Salesforce CPQ calculates list prices for amendments and for renewals where the account's renewal pricing method is Same or Uplift. Salesforce CPQ now uses the subscription's list price to calculate the renewal or amendment quote line's list price. Previously, Salesforce CPQ used the product's price book entry price unless the product had an active Price Editable field. If an admin changed the price book entry price before the sales rep renewed the subscription or after they contracted it, the subscription's amendment or renewal quote lines would be inaccurate.

**Where:** This change applies to Salesforce Classic and Lightning Experience in all Salesforce CPQ editions.

## Salesforce Billing: Bulk Invoice Line Crediting in the Credit Center and Sending CVWs in the Payment Center

Credit multiple invoice lines at once and apply credit tax all in one convenient location. Speed up the payment process for your end users by letting them send credit card CVWs for any payment gateway in the Payment Center.

 **Note:** You need to have Salesforce CPQ to install Salesforce Billing. Some subscriptions offer this package for an extra cost. For pricing, contact your Salesforce account executive.

IN THIS SECTION:

[Salesforce Billing Summer '19 Pre-Installation Instructions](#)

Before you upgrade to Salesforce Billing Summer '19, make sure that your org follows key compatibility requirements.

[Manage Invoice Credits All in One Place](#)

We made it easier for your billing ops and customer service teams to credit several invoice lines at once. The Credit Center provides a one-stop shop for crediting an account's posted invoice lines, applying credit line tax, and reviewing updated balances before posting the credit note. Your billing ops and customer service teams can access the Credit Center from their accounts and view all their account's creditable invoices on one page.

[Enter the CW in the Payment Center](#)

We now allow customers to send the CW number when submitting a card payment to the Authorize.net, PayFlowPro, and Cybersource gateways. Previously, this field was only available when submitting a card payment to the Payeezy gateway.

## SEE ALSO:

[Knowledge Article: New Objects and Fields for Salesforce CPQ and Billing Summer '19 \(can be outdated or unavailable during release preview\)](#)

## Salesforce Billing Summer '19 Pre-Installation Instructions

Before you upgrade to Salesforce Billing Summer '19, make sure that your org follows key compatibility requirements.

**Where:** This change applies to Salesforce Classic and Lightning Experience in all Salesforce Billing editions.

**Who:** You need to have Salesforce CPQ to install Salesforce Billing. Some subscriptions offer this package for an extra cost. For pricing, contact your Salesforce account executive.

**How:** If you use Avalara for Salesforce Billing, upgrade it to version 3.0 after installing Salesforce Billing Summer '19.

If you use payment gateway packages for Cybersource, Payeezy, PayflowPro, or Authorize.net, upgrade them to version 4.0 after installing Salesforce Billing Summer '19.

## Manage Invoice Credits All in One Place

We made it easier for your billing ops and customer service teams to credit several invoice lines at once. The Credit Center provides a one-stop shop for crediting an account's posted invoice lines, applying credit line tax, and reviewing updated balances before posting the credit note. Your billing ops and customer service teams can access the Credit Center from their accounts and view all their account's creditable invoices on one page.

**Where:** This change applies to Salesforce Classic and Lightning Experience for users with a Salesforce CPQ & Billing Plus License.

**Who:** You need Salesforce CPQ to install Salesforce Billing. Some subscriptions offer this package for an extra cost. For pricing, contact your Salesforce account executive.

**Why:** Previously, billing ops users could credit specific invoice lines only by creating a credit note and assigning each credit note line to an invoice line. This process made it time-consuming to credit several invoice lines on an account. Users also had reference invoices and invoice line balances on a separate page. Now, when they open the Credit Center from their account, they can view all of their account's creditable invoices on one page. They can then choose an invoice and credit its invoice lines. Once they're done, they can return to their account or view the new credit note.

**Issue a Credit**

**Now choose how much to credit per invoice line.**

Search invoice lines

3 Items | Sorted by Product Name | Last updated a few seconds ago

<input checked="" type="checkbox"/>	PRODUCT NAME	BALANCE	CREDIT AMOUNT	CALCULATE TAX?	TAX AMOUNT	EFFECTIVE TAX DATE	TOTAL CREDIT
<input checked="" type="checkbox"/>	Keyboard	USD 80.00	USD 80.00	<input checked="" type="checkbox"/>	USD 0.00	Apr 5, 2019	USD 80.00
<input checked="" type="checkbox"/>	Laptop	USD 4,290.00	USD 2,000.00	<input type="checkbox"/>	USD 214.50	Apr 5, 2019	USD 2,214.50
<input type="checkbox"/>	Mouse	USD 321.75	USD 0.00	<input type="checkbox"/>	USD 0.00	Apr 5, 2019	USD 0.00

Cancel ◀ ▶ Back Next

**How:** After a billing ops user clicks **Credit Center** on their account, Salesforce Billing launches the Credit Center and shows all the posted invoices with outstanding balances on their account. When they select an invoice, the Credit Center lets them credit each of the invoice lines for that invoice. They can also calculate credit note line tax with the tax engine used for the invoice line, enter credit note line tax manually, or choose not to credit tax for a given line. When they're done, Salesforce Billing creates a posted credit note and associates its lines against the invoice lines that they credited.

SEE ALSO:

[Salesforce Help: Credit Center \(can be outdated or unavailable during release preview\)](#)

## Enter the CVV in the Payment Center

We now allow customers to send the CVV number when submitting a card payment to the Authorize.net, PayFlowPro, and Cybersource gateways. Previously, this field was only available when submitting a card payment to the Payeezy gateway.

**Where:** This change applies to Salesforce Classic and Lightning Experience in Salesforce Billing.

**Who:** You need Salesforce CPQ to install Salesforce Billing. Some subscriptions offer this package for an extra cost. For pricing, contact your Salesforce account executive.

**How:** To view the CVV field in the Payment Center for the Authorize.net, Payeezy, or PayflowPro gateways, install Version 4.0 or later of your chosen Salesforce Billing payment gateway package.

The CVV field also appears in the New Payment Method Credit Card page and the force.com payment page.

## Pardot: Data Visualization for Sales Users, New Einstein Insights, and More Goodies

Engagement History features now include dashboards for campaign records and prospect activity related lists for marketing asset records. Use Einstein Behavior Scoring values to tailor automated processes and find new campaign insights about marketing forms and landing pages. Plus, you can find Quick Filters and Full view options on some Pardot Lightning app objects.

### IN THIS SECTION:

#### [Monitor Prospect Engagement with Campaign Insights \(Generally Available\)](#)

Not only is Pardot Einstein Campaign Insights now generally available, we made it better. In addition to prospect details and list email engagement, find insights for other marketing assets. Get a bigger picture view with new explanations that feature activity around marketing forms and landing pages.

#### [Explore Marketing Report Data on Campaign Records](#)

Give the gift of data exploration to your sales and marketing users. The Engagement History Dashboard surfaces valuable data visualizations that show trends and patterns of marketing asset engagement. Share dashboards with users who don't need access to underlying datasets and configuration—they can filter and report on prospect engagement right from a campaign.

#### [Use Behavior Scoring with Workflows and Process Builder](#)

When a prospect shows all the right buying signals, you don't have time to waste with administrative tasks, like assigning leads and posting to Chatter. Use Einstein Behavior Scoring as part of your rule criteria in Process Builder and Workflows to automate the day-to-day. With these tools, you get the best leads to your sales team faster.

#### [View Engagement Activities in Related Lists](#)

You know that people have been interacting with your marketing assets, but where did all that data go? Oh, here it is, on the asset record in Salesforce! Find a related list of prospect activities on your asset records, and click through to learn more. Admins can also add engagement history related lists to account, lead, contact, and person account records.

#### [Use Quick Filters on Pardot Views](#)

Pardot is jumping on the Quick Filters train! Find the Quick Filter menu on Pardot's related lists throughout the Pardot Lightning app.

#### [Ease into Lightning Experience](#)

A new view that's similar to Salesforce Classic is available for some Pardot Lightning app pages. Try the new Full view for marketing form, marketing link, and landing page asset records.

#### [B2B Marketing Analytics Legacy App Is Retiring](#)

The legacy B2B Marketing Analytics app is retiring with the Spring '20 release (February 2020), and its dataflow and datasets will stop updating.

#### [Get All Your Pardot Release Notes in One Place](#)

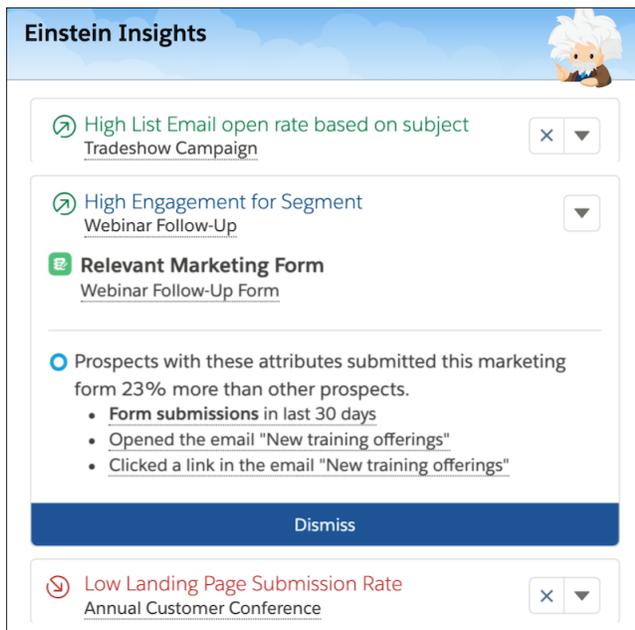
Pardot's release schedule has evolved into six releases a year—the three major Salesforce releases and three mid-releases. To keep you up-to-date, we've created a page for Pardot's release notes, which debuts with Pardot's April '19 release. Nothing is changing for the major releases, so you can still find the freshest release notes right here. Check out the new [Pardot Release Notes](#) page.

## Monitor Prospect Engagement with Campaign Insights (Generally Available)

Not only is Pardot Einstein Campaign Insights now generally available, we made it better. In addition to prospect details and list email engagement, find insights for other marketing assets. Get a bigger picture view with new explanations that feature activity around marketing forms and landing pages.

**Where:** This change applies to Lightning Experience in Pardot Advanced with Salesforce Enterprise and Unlimited editions.

**Why:** The first iteration of Campaign Insights focused on list email engagement. Although email marketing can be effective, it doesn't tell the whole story. We added new asset types to Campaign Insights to reveal a more complete view of the customer journey.



SEE ALSO:

[Salesforce Help: Einstein Campaign Insights \(can be outdated or unavailable during release preview\)](#)

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

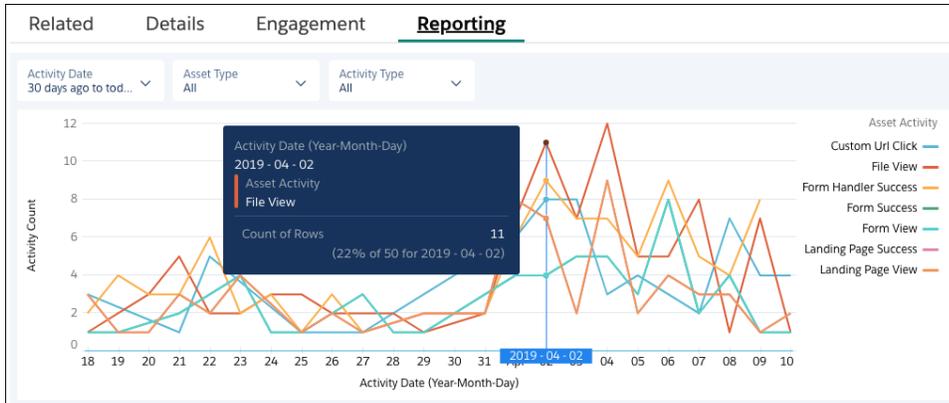
## Explore Marketing Report Data on Campaign Records

Give the gift of data exploration to your sales and marketing users. The Engagement History Dashboard surfaces valuable data visualizations that show trends and patterns of marketing asset engagement. Share dashboards with users who don't need access to underlying datasets and configuration—they can filter and report on prospect engagement right from a campaign.

**Where:** This change applies to Lightning Experience in all Pardot editions with Salesforce Professional, Enterprise, and Unlimited editions.

**Who:** To use Engagement History features, your Salesforce org needs a Pardot license. Your Pardot edition determines the number of user licenses you have: Growth: 5, Plus: 10, and Advanced: 20. You also need a verified Salesforce-Pardot connector, Connected Campaigns turned on, and some campaigns already connected.

**How:** A Salesforce admin turns on Engagement History Dashboards, which creates two users if they don't exist: Analytics Integration Cloud User and Analytics Cloud Security User. Then, the admin turns on Engagement History Dashboards and chooses the users who can view the dashboards. In the Lightning App Builder, drag the Engagement History Dashboard component to a tab on your campaign record.



SEE ALSO:

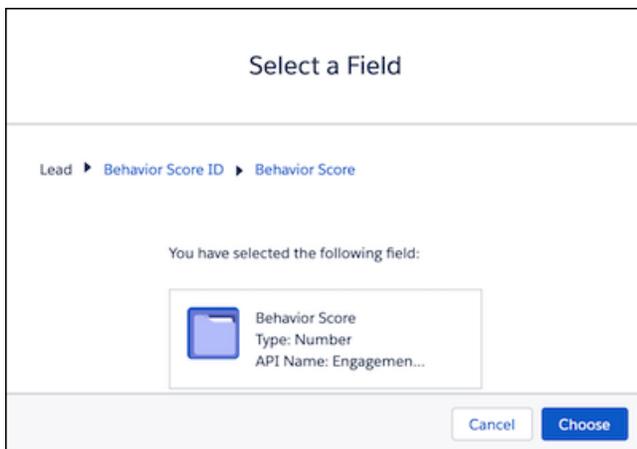
[Salesforce Help: Engagement History Dashboard \(can be outdated or unavailable during release preview\)](#)

## Use Behavior Scoring with Workflows and Process Builder

When a prospect shows all the right buying signals, you don't have time to waste with administrative tasks, like assigning leads and posting to Chatter. Use Einstein Behavior Scoring as part of your rule criteria in Process Builder and Workflows to automate the day-to-day. With these tools, you get the best leads to your sales team faster.

**Where:** This change applies to Lightning Experience in Salesforce Enterprise and Unlimited editions.

**How:** When you build a rule in Process Builder or Workflow Rules, add a lead or contact object, and select the **Behavior Score ID** > **Behavior Score** field. Enter the value to filter for, and save your work.



SEE ALSO:

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

## View Engagement Activities in Related Lists

You know that people have been interacting with your marketing assets, but where did all that data go? Oh, here it is, on the asset record in Salesforce! Find a related list of prospect activities on your asset records, and click through to learn more. Admins can also add engagement history related lists to account, lead, contact, and person account records.

**Where:** This change applies to Lightning Experience in all Pardot editions with Salesforce Professional, Enterprise, and Unlimited editions.

**How:** The engagement activities related list appears by default on marketing link, marketing form, and landing page records. Click the **Related** tab to view it.

PROSPECT	ACTIVITY TYPE	ACTIVITY DATE
<a href="#">Eugena Luce</a>	Click	4/9/2019 11:05 PM
<a href="#">Eugena Luce</a>	Success	4/9/2019 11:05 PM
<a href="#">Eugena Luce</a>	View	4/9/2019 11:05 PM
<a href="#">Phyllis Cotton</a>	View	4/9/2019 8:50 PM
<a href="#">Phyllis Cotton</a>	Click	4/9/2019 8:50 PM
<a href="#">Phyllis Cotton</a>	Success	4/9/2019 8:50 PM

[View All](#)

To show the related list on other objects, an admin must add them in the Object Manager.

## Use Quick Filters on Pardot Views

Pardot is jumping on the Quick Filters train! Find the Quick Filter menu on Pardot's related lists throughout the Pardot Lightning app.

**Where:** This change applies to Lightning Experience in all Pardot editions.

SEE ALSO:

[Zoom Through Related Lists with Quick Filters](#)

## Ease into Lightning Experience

A new view that's similar to Salesforce Classic is available for some Pardot Lightning app pages. Try the new Full view for marketing form, marketing link, and landing page asset records.

**Where:** This change applies to the Pardot Lightning app in all Pardot editions.

SEE ALSO:

[View Records Using Full View \(Beta\)](#)

## B2B Marketing Analytics Legacy App Is Retiring

The legacy B2B Marketing Analytics app is retiring with the Spring '20 release (February 2020), and its dataflow and datasets will stop updating.

**How:** To learn more about the new B2B Marketing Analytics app, see [B2B Marketing Analytics Implementation Guide \(PDF\)](#).

## Get All Your Pardot Release Notes in One Place

Pardot's release schedule has evolved into six releases a year—the three major Salesforce releases and three mid-releases. To keep you up-to-date, we've created a page for Pardot's release notes, which debuts with Pardot's April '19 release. Nothing is changing for the major releases, so you can still find the freshest release notes right here. Check out the new [Pardot Release Notes](#) page.

## Service: Smarter Bot Routing and Dialog Review, Improved Field Service Dispatching, and Easy Setup for Skills-Based Routing

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Review Einstein Bot dialogs with ease in a visual map, and use new smart routing features to escalate bot conversations to the right experts. Work faster in the Field Service Lightning dispatcher console with a pop-out map, long-term Gantt view, and new drag-and-drop scheduling options. Set up skills-based routing in a jiffy with a handsome setup screen. Finally, explore a smorgasbord of other productivity-boosting features for agents, including the ability to proactively reach out to customers with critical service updates, create more intelligent macros with conditional expressions, and merge duplicate cases.

### IN THIS SECTION:

#### [Einstein for Service: Faster Set Up, Bot Profiles, Conversation Maps, and Smarter Bot-to-Agent Transfers](#)

Einstein Bots support your agents and help your customers. Set up and test bots faster with fewer utterances and without intent models. Customize what your bots can do and access with custom profiles. Understand conversational design with visual representations on maps. Transfer bot conversations to the right agents by overriding default queues on chat buttons and channel IDs.

#### [Field Service: Deep Linking, Enhanced Optimization, Service Crew Wizard, and Time Sheet Templates](#)

Use deep linking to streamline navigation to Field Service Lightning mobile app screens. Take schedule optimization to the next level with Enhanced Optimization, which includes features that make it easier to address last-minute scheduling challenges and minimize surprises for your team. Create service crews in a jiffy with a new wizard. Enjoy improvements to the Gantt, including new views and scheduling options, a pop-out map, and a real-time progress indicator for optimization requests. And create templates to automatically generate time sheets.

#### [Channels: Name Changes for Snap-Ins, Live Agent and LiveMessage, and Facebook Recommendations](#)

To have more descriptive names of our products, we changed Snap-ins to Embedded Services, Live Agent to Chat, and LiveMessage to Messaging. Social Customer Service supports the new Facebook recommendations format.

#### [Knowledge: Inline Editing, Enhanced Reports, and More Reasons to Move to Lightning Experience](#)

Write even faster with inline editing enabled for Knowledge articles. Build better reports with enhanced object relationships. And we added Lightning Experience actions and enhancements so that you can do more and customize all you want.

#### [Routing: Attribute-Based Routing \(Beta\), Additional Skills, and Enhancements to Omni-Channel Supervisor](#)

We introduced an easier way to set up skills-based routing with attribute-based routing. We also refined skills-based routing to let you drop some skills after a specified timeout. We added buttons to Omni-Channel Supervisor to let you change agent queues and skills. We added the option to warn agents before opening a new browser page. And we made routing available through an invocable action in a flow.

#### [Case Management: Conditional Macros, Guided Action List Improvements, and Case Merging](#)

We're always looking for ways to help your agents be more efficient. Merge cases into one master record. Give agents the next steps to take, including Next Best Action recommendations, in the Actions & Recommendations component (previously known as the Guided Action List). And create powerful macros in Lightning Experience that include conditional expressions.

# Einstein for Service: Faster Set Up, Bot Profiles, Conversation Maps, and Smarter Bot-to-Agent Transfers

Einstein Bots support your agents and help your customers. Set up and test bots faster with fewer utterances and without intent models. Customize what your bots can do and access with custom profiles. Understand conversational design with visual representations on maps. Transfer bot conversations to the right agents by overriding default queues on chat buttons and channel IDs.

## IN THIS SECTION:

### [Intelligently Transfer Bot Sessions During Conversations](#)

Transfer each bot session to the right agent or queue by overriding the default queue on Chat buttons or the channel ID for Messaging. Create rule actions that route conversations to agents in specialized queues.

### [Understand Conversation Design with a Dialog Map](#)

Spot each conversation's turns, references, and rule conditions with an easy-to-use visual representation. Build and create dialogs in Dialog Details, then switch to Map to see the conversation's configuration and framework. Dialog Map is read-only, so you can't create or update dialogs from it.

### [Set Up Bots Faster and with Less Preparation](#)

Jumpstart bot implementations without adding 20 utterances or turning on Einstein to create an intent model for your bot. On dialog intents, you can choose to enter a few keywords that exactly match utterances used by customers. This "exact match" option helps you test and deploy simple bots faster. Exact match ignores capitalization but doesn't overlook spaces or punctuation.

### [Customize Bot Actions with Profiles](#)

Expand your bots' capabilities and give them access to features like Field Service Lightning by assigning them custom profiles. Each bot now has a Bot User, which specifies what a bot can do based on licenses, permissions, and objects. By default, each bot has a Basic Chatbot User profile, but we recommend that you create a custom profile to broaden your bot's behavior.

### [Give Agents the Right Steps and Top Results from Einstein Next Best Action](#)

Combine recommendations from Einstein Next Best Action with other guidance, and show it all in a single place: the Actions & Recommendations component. Create actions and offers as recommendations. Refine and personalize them with action strategies that use business rules, Einstein predictive models, and other data sources. Present the best options with other actions so that your workers can find the right steps fast.

### [Optimize Button in Einstein Case Classification Was Removed](#)

To simplify the Case Classification setup, we streamlined some options and removed the Optimize button.

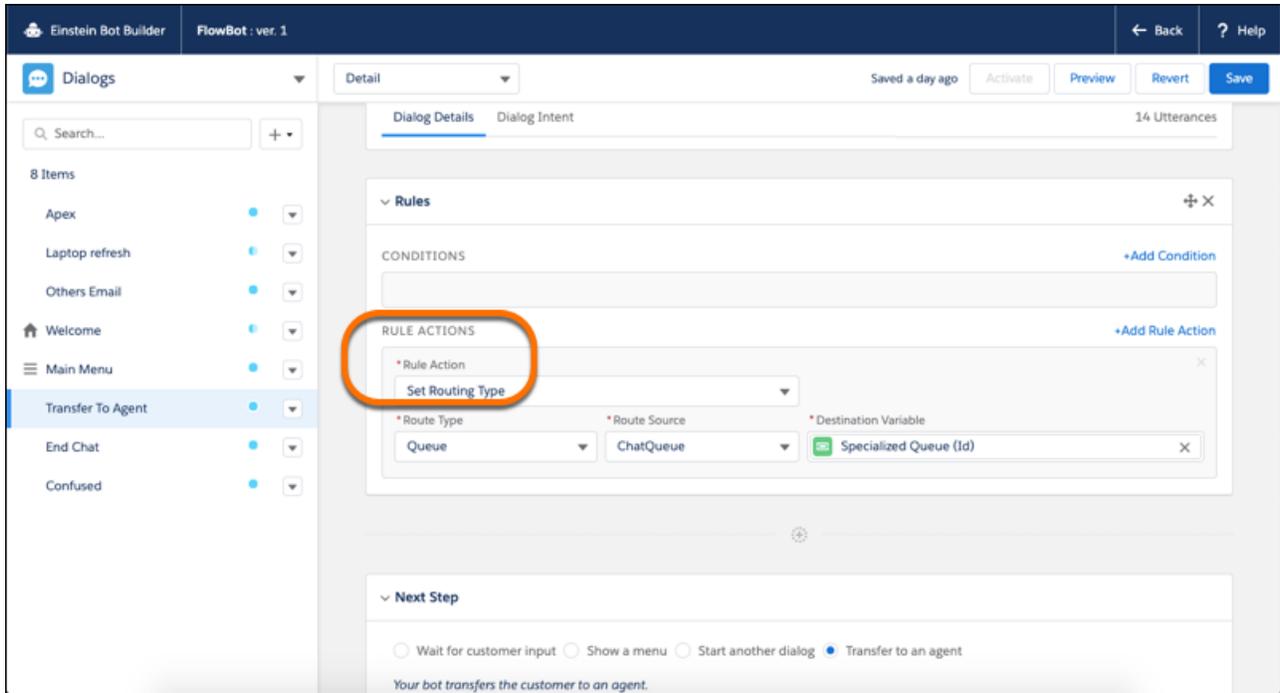
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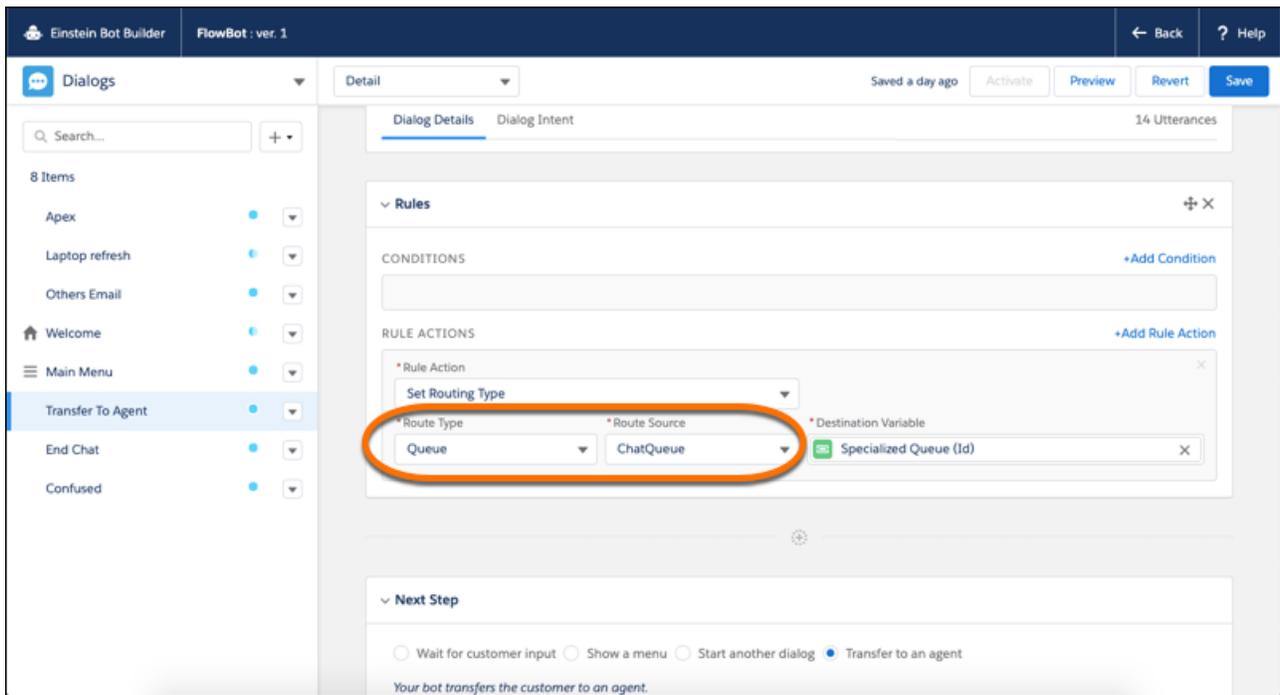
**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions. Setup for Einstein Bots is available only in Lightning Experience.

**Who:** Einstein Bots is available to orgs with both Service Cloud and Chat user licenses. Each org is provided with 25 Einstein Bots conversations per month for each Chat user with an active subscription. To make full use of the Einstein Bots Performance page, you also need Service Cloud Analytics.

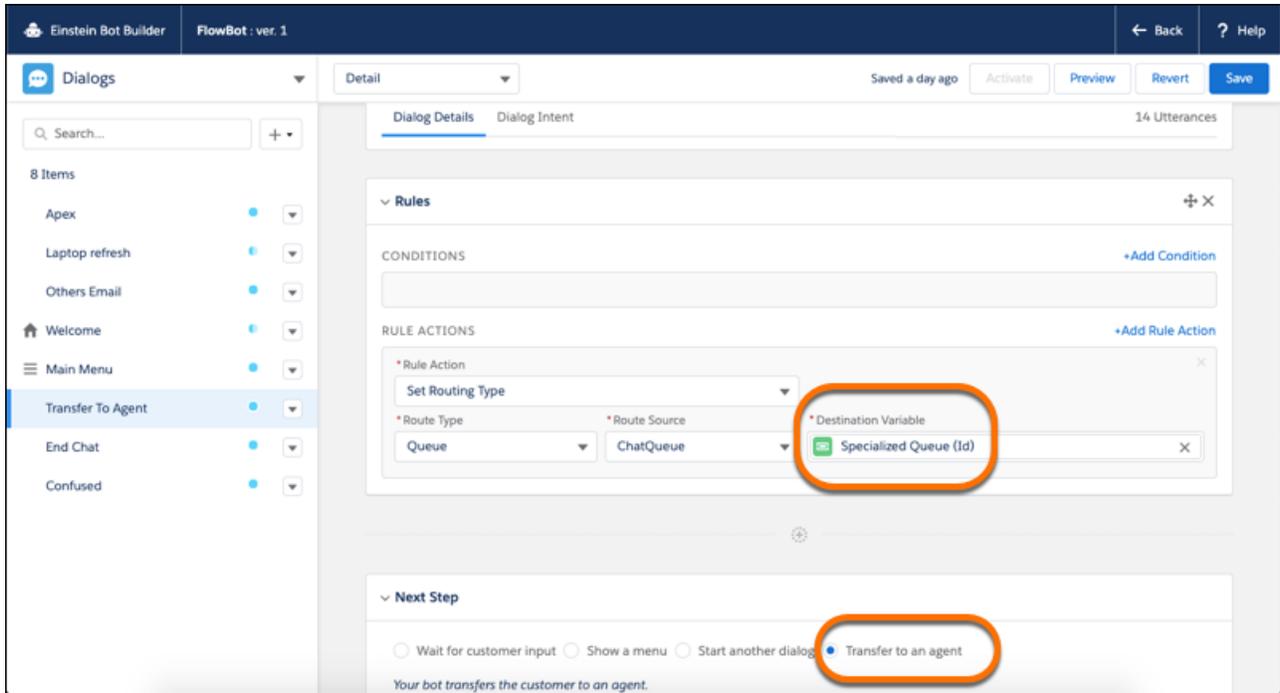
**How:** Create a rule on a dialog, and under Rule Action, select **Set Routing Type**.



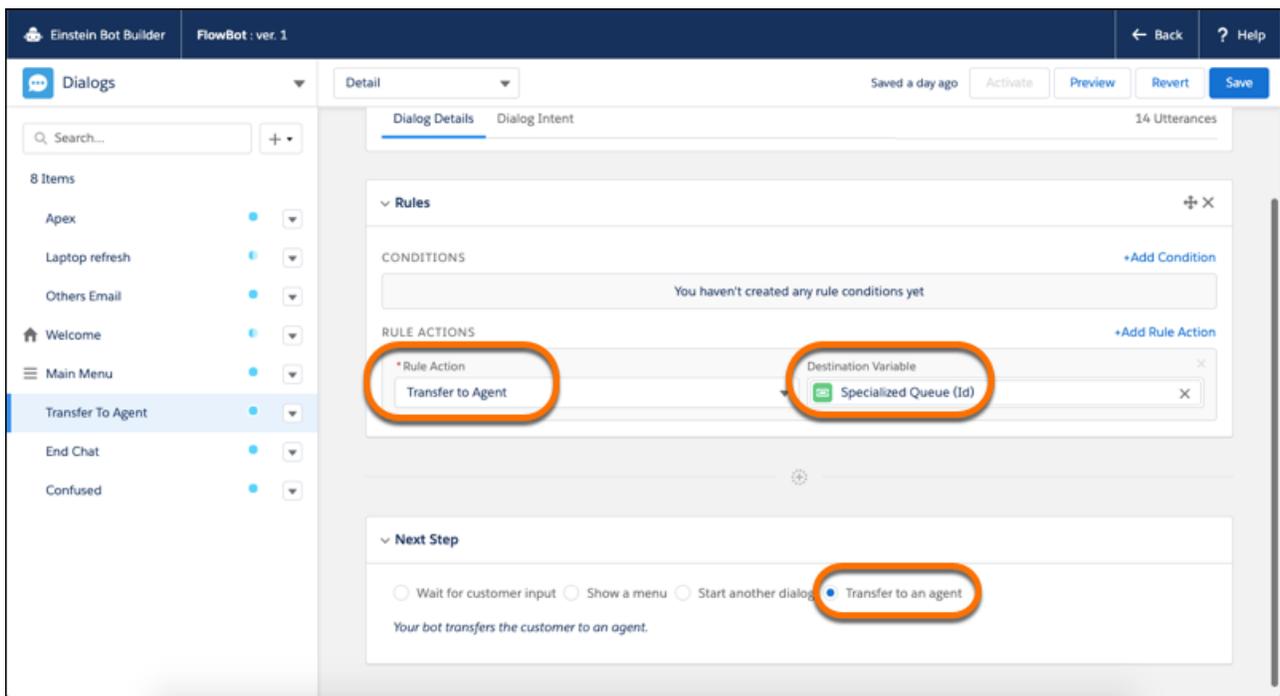
For Route Type, select a queue or bot. For Route Source, select the queue or bot whose default queue you want to override.



Choose a variable to store the queue that overrides the default one. (If this variable isn't created, you must create it). Set the next step to **Transfer to an agent**.



You can transfer sessions immediately by creating a rule with an action that transfers to an agent to the destination variable you already set.



SEE ALSO:

[Salesforce Help: Set Up a Dialog Rule Element](#) (can be outdated or unavailable during release preview)

[Salesforce Help: What's a Variable?](#) (can be outdated or unavailable during release preview)

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

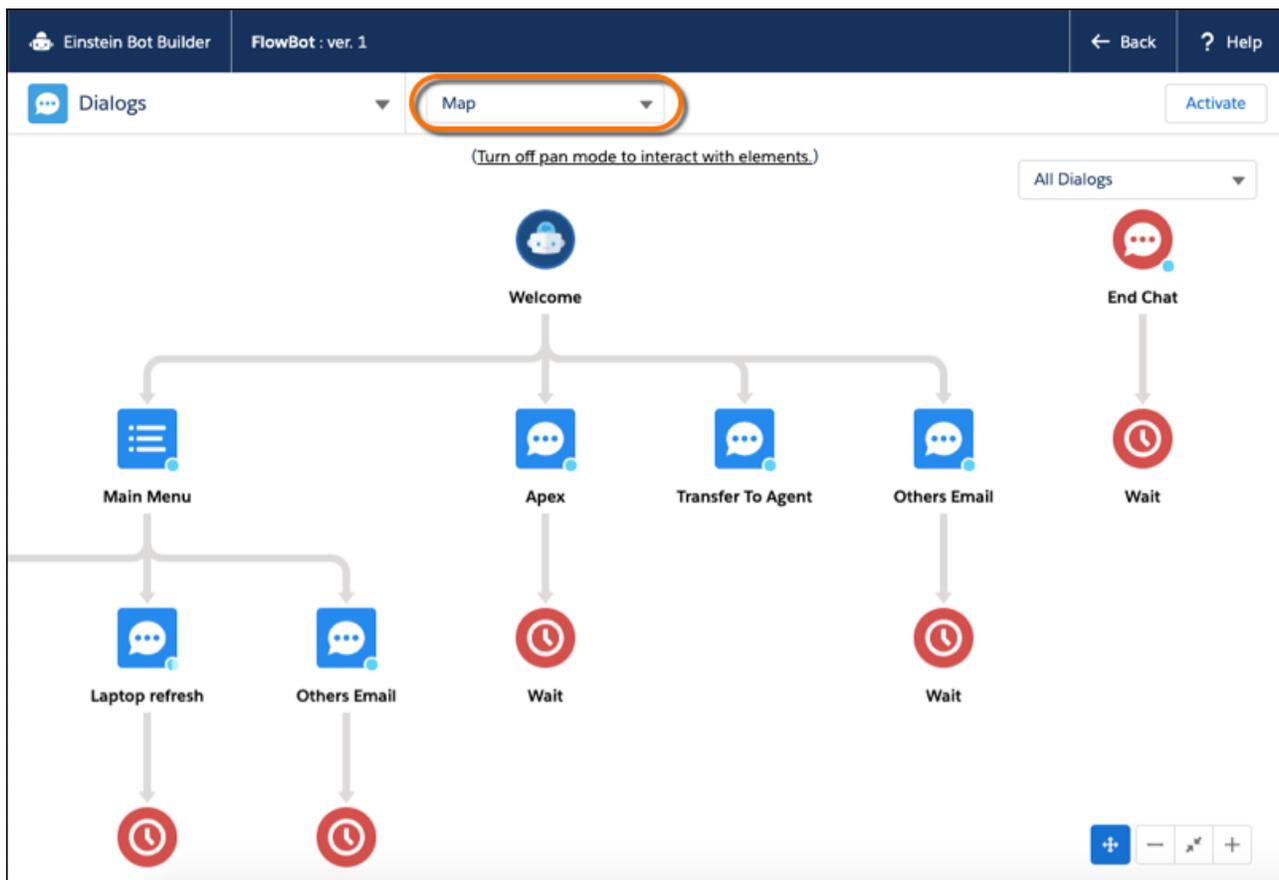
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Spot each conversation's turns, references, and rule conditions with an easy-to-use visual representation. Build and create dialogs in Dialog Details, then switch to Map to see the conversation's configuration and framework. Dialog Map is read-only, so you can't create or update dialogs from it.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions. Setup for Einstein Bots is available only in Lightning Experience.

**Who:** Einstein Bots is available to orgs with both Service Cloud and Chat user licenses. Each org is provided with 25 Einstein Bots conversations per month for each Chat user with an active subscription. To make full use of the Einstein Bots Performance page, you also need Service Cloud Analytics.

**Why:** Dialog Map shows you each conversation at a glance.



SEE ALSO:

[Salesforce Help: Understand Einstein Bot Dialogs \(can be outdated or unavailable during release preview\)](#)

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

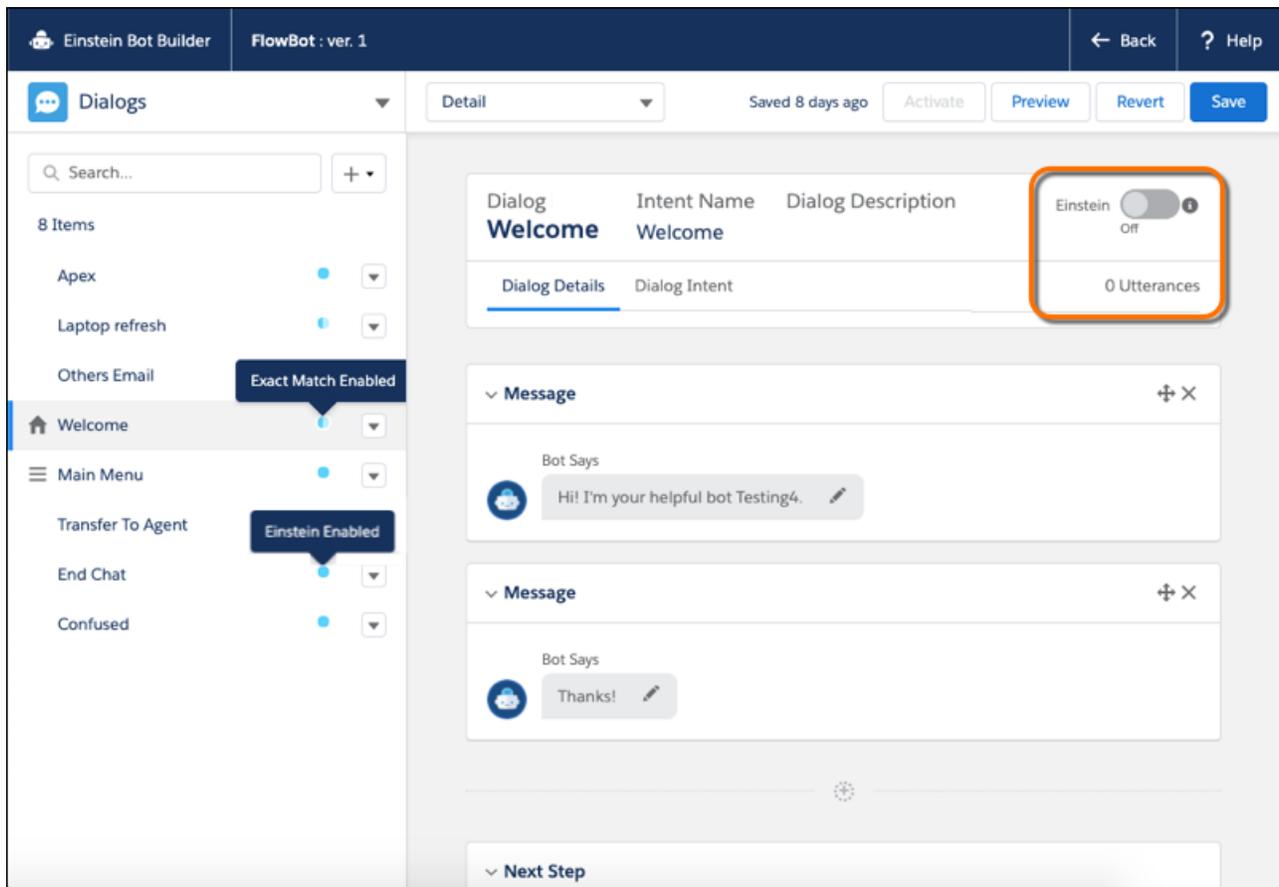
## Set Up Bots Faster and with Less Preparation

Jumpstart bot implementations without adding 20 utterances or turning on Einstein to create an intent model for your bot. On dialog intents, you can choose to enter a few keywords that exactly match utterances used by customers. This "exact match" option helps you test and deploy simple bots faster. Exact match ignores capitalization but doesn't overlook spaces or punctuation.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions. Setup for Einstein Bots is available only in Lightning Experience.

**Who:** Einstein Bots is available to orgs with both Service Cloud and Chat user licenses. Each org is provided with 25 Einstein Bots conversations per month for each Chat user with an active subscription. To make full use of the Einstein Bots Performance page, you also need Service Cloud Analytics.

**Why:** It might not be necessary for your business goals or timeframe to use Einstein to train your bot to understand your customers. You must first add at least 20 unique utterances to each dialog intent. After 150 utterances are added, you can turn on Einstein to use natural language processing. When Einstein is off, your bot exactly matches customer inputs with an utterance from a dialog intent.



SEE ALSO:

[Salesforce Help: Train Your Bot to Understand Your Customers \(Beta\) \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Understand Einstein Bot Dialogs \(can be outdated or unavailable during release preview\)](#)

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

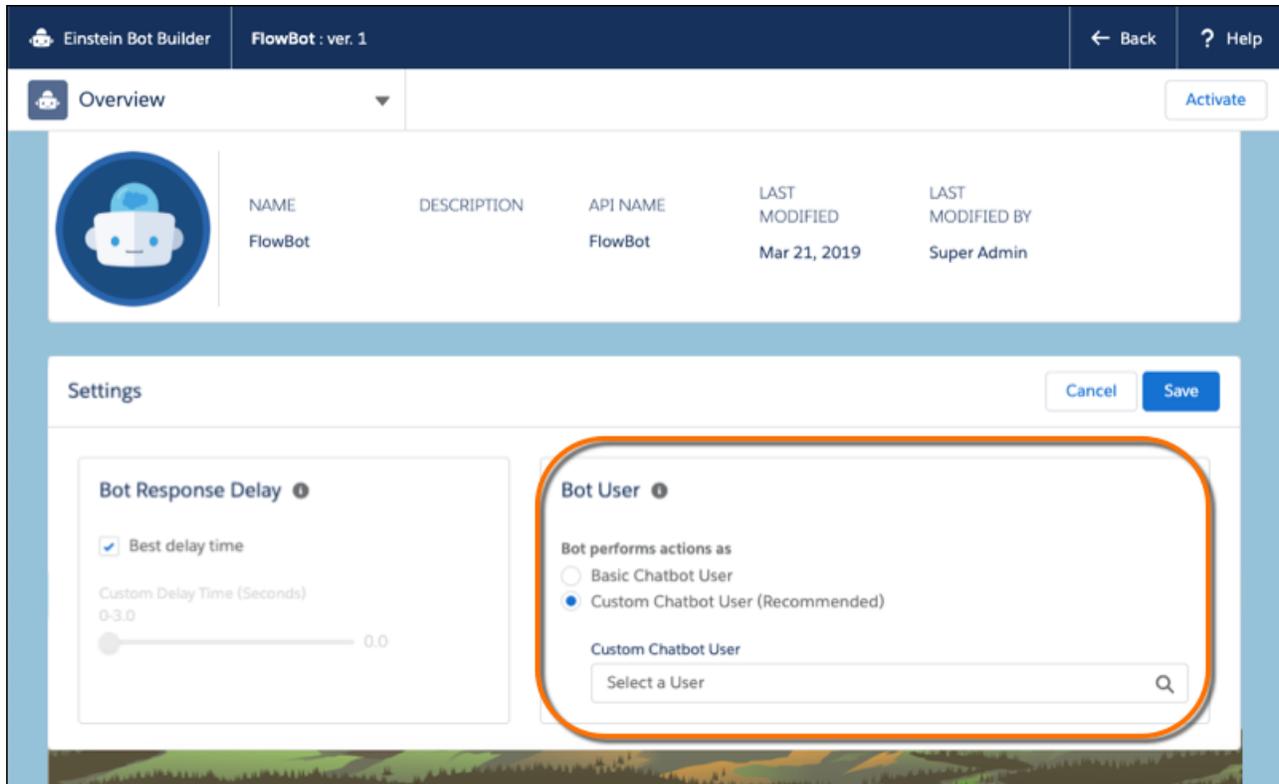
## Customize Bot Actions with Profiles

Expand your bots' capabilities and give them access to features like Field Service Lightning by assigning them custom profiles. Each bot now has a Bot User, which specifies what a bot can do based on licenses, permissions, and objects. By default, each bot has a Basic Chatbot User profile, but we recommend that you create a custom profile to broaden your bot's behavior.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions. Setup for Einstein Bots is available only in Lightning Experience.

**Who:** Einstein Bots is available to orgs with both Service Cloud and Chat user licenses. Each org is provided with 25 Einstein Bots conversations per month for each Chat user with an active subscription. To make full use of the Einstein Bots Performance page, you also need Service Cloud Analytics.

**How:** Assign a bot a profile.



SEE ALSO:

[Salesforce Help: Profiles \(can be outdated or unavailable during release preview\)](#)

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

## Give Agents the Right Steps and Top Results from Einstein Next Best Action

Combine recommendations from Einstein Next Best Action with other guidance, and show it all in a single place: the Actions & Recommendations component. Create actions and offers as recommendations. Refine and personalize them with action strategies that use business rules, Einstein predictive models, and other data sources. Present the best options with other actions so that your workers can find the right steps fast.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Lightning Flow for Service: All the Right Guidance, All in One Place](#)

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

## Optimize Button in Einstein Case Classification Was Removed

To simplify the Case Classification setup, we streamlined some options and removed the Optimize button.

**Where:** This change applies to Lightning Experience and Salesforce Classic. Einstein for Agents is available for an extra fee in Lightning Experience in Enterprise and Unlimited editions. Setup for Einstein Case Classification is available only in Lightning Experience.

 **Note:** Einstein Case Classification is not available in the Salesforce Government Cloud.

### SEE ALSO:

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

## Field Service: Deep Linking, Enhanced Optimization, Service Crew Wizard, and Time Sheet Templates

Use deep linking to streamline navigation to Field Service Lightning mobile app screens. Take schedule optimization to the next level with Enhanced Optimization, which includes features that make it easier to address last-minute scheduling challenges and minimize surprises for your team. Create service crews in a jiffy with a new wizard. Enjoy improvements to the Gantt, including new views and scheduling options, a pop-out map, and a real-time progress indicator for optimization requests. And create templates to automatically generate time sheets.

### IN THIS SECTION:

#### [Field Service Lightning Mobile App: Deep Linking, Appointment Notifications on Dispatch, and Enhancements to Image Upload](#)

Direct mobile users to a specific page or record in one tap with deep linking. Choose when your service resources are notified of new appointments. Upload and organize multiple images in the app. View images and other files from the Files related list on Android devices. Plus, unlock the app faster with Touch ID and Face ID.

#### [Schedule Smarter with Enhanced Optimization \(Beta\)](#)

We've cooked up a banquet of new optimization features to help you address last-minute scheduling challenges, make more informed scheduling decisions, and minimize surprises for your team.

#### [Create and Manage Service Crews with Crew Management \(Generally Available\)](#)

Quickly create and manage service crews using the crew management tool, which was previously in beta. Use the new service crew wizard to create a crew, and find the right crew members for the job with smarter search results. Search now considers resources' operating hours and availability in addition to their skills.

#### [See Further into the Future on the Gantt](#)

View up to six months of your team's schedule on the Gantt with the new long-term view. Choose how many months to display, highlight weekends to aid scanning, and apply a multiday appointment filter. Keep things tidy by showing only appointments and absences over a certain length. We're also introducing a two-week view for mid-range planning.

#### [Work Faster in the Dispatcher Console Map](#)

Make the most of your screen real estate by popping out the map and dragging it anywhere in the dispatcher console. Schedule a service appointment by dragging it from the map onto a service resource's schedule in the Gantt. View custom Gantt icons and color palettes on the map, and cluster map markers to make scanning easier.

#### [Set Scheduling Limits for Different Types of Work](#)

To control the amount of time that your team spends on different types of work, set scheduling capacity limits according to work type. For example, ensure that repair work occupies no more than half of your team's weekly scheduled hours. You can also specify a date range and service territory for each limit you create.

### [Monitor Optimization Requests from the Dispatcher Console](#)

Monitor open optimization requests in real time without leaving the dispatcher console. The optimization requests panel now shows a percentage-based progress bar for each request in addition to its status and includes an option to cancel the request. You can still view details about a request from the Optimization Requests custom object tab.

### [Select a Scheduling Policy When Booking Appointments](#)

Enjoy greater scheduling flexibility by choosing a scheduling policy directly from the Book Appointment and Candidates Chatter actions.

### [Automatically Create Time Sheets for your Service Resources \(Beta\)](#)

Automate the process of creating time sheets with templates. Set the frequency, start date, and time range covered. After you assign the template to a user profile, Salesforce automatically creates time sheets for those service resources. Users can view and edit their time sheets on the Salesforce app, on their desktop, or in a flow.

### [Sort Related Lists in Service Reports](#)

Order records in a service report's related lists by any number or date field. For example, order the records in the Work Order Line Items related list from earliest to latest completion date.

### [Get Started with Shifts](#)

For customers who prefer to manage their service resources using shifts, we laid the groundwork for shift management with the new Shift standard object.

### [Shower Productive Users with Confetti](#)

When a user reaches a designated Path stage on a work order, work order line item, or service appointment, celebrate their progress with a virtual confetti toss.

### [Give New Community Users Access to Field Service Lightning Objects](#)

We answered your request: community users no longer have default create, read, edit, or delete access for certain Field Service Lightning objects. Admins must manually provide access to these objects for new community users.

### [Ignore the Asset Resource Type When You Create a Service Resource](#)

When you create a service resource, Field Service Lightning users can see Asset as an option for the Resource Type field. However, you can save the record with a Resource Type of Asset only when your org has access to Lightning Scheduler.

## Field Service Lightning Mobile App: Deep Linking, Appointment Notifications on Dispatch, and Enhancements to Image Upload

Direct mobile users to a specific page or record in one tap with deep linking. Choose when your service resources are notified of new appointments. Upload and organize multiple images in the app. View images and other files from the Files related list on Android devices. Plus, unlock the app faster with Touch ID and Face ID.

### IN THIS SECTION:

#### [Streamline Mobile Navigation with Deep Linking](#)

Your mobile workers rely on their mobile devices to perform complex tasks, and some of those tasks require them to navigate between multiple apps. Use deep linking to take users to a specific screen in the app. Create a link to the screen or tab you want your users to view, and then add the link to an app, email, or website. When a user taps the link on a mobile device, it launches in the Field Service Lightning mobile app.

#### [Choose When to Send Service Appointment Notifications](#)

Your service resources might not need to know about a new appointment right away, especially if you're scheduling many appointments in advance. Instead, notify users when it's most helpful—when they're assigned a service appointment or when they're dispatched for the appointment.

### [Upload Multiple Images to Get the Full Picture](#)

Use your image upload flow to capture and select several images at once. Swipe to move between images, or see all of them together in the gallery view. In each image's detail view, you can add a description or delete the image.

### [View Files on Android](#)

The Files related list is now available on Android devices. Previously, if you added the Files related list to a page layout, it displayed only on iOS devices. To view images and other files that are attached to a record, navigate to the record, tap **Related**, and scroll to Files.

### [Other Changes in the Field Service Lightning Mobile App](#)

Look for these improvements to the app.

## Streamline Mobile Navigation with Deep Linking

Your mobile workers rely on their mobile devices to perform complex tasks, and some of those tasks require them to navigate between multiple apps. Use deep linking to take users to a specific screen in the app. Create a link to the screen or tab you want your users to view, and then add the link to an app, email, or website. When a user taps the link on a mobile device, it launches in the Field Service Lightning mobile app.

**Where:** This change applies to Field Service Lightning for Android and iOS in Enterprise, Performance, Unlimited, and Developer editions.

**Why:** For example, perhaps your mobile workers use a separate app for billing. Place a link at the end of the billing form that directs the worker back to the service closure flow in the Field Service app.

SEE ALSO:

[Field Service Lightning Developer Guide \(can be outdated or unavailable during release preview\)](#)

## Choose When to Send Service Appointment Notifications

Your service resources might not need to know about a new appointment right away, especially if you're scheduling many appointments in advance. Instead, notify users when it's most helpful—when they're assigned a service appointment or when they're dispatched for the appointment.

**Where:** This change applies to Field Service Lightning for Android and iOS in Enterprise, Performance, Unlimited, and Developer editions.

**How:** In Field Service Mobile Settings configuration, under Customization, select either **Send appointment notifications on assignment** or **Send appointment notifications on dispatch**.

SEE ALSO:

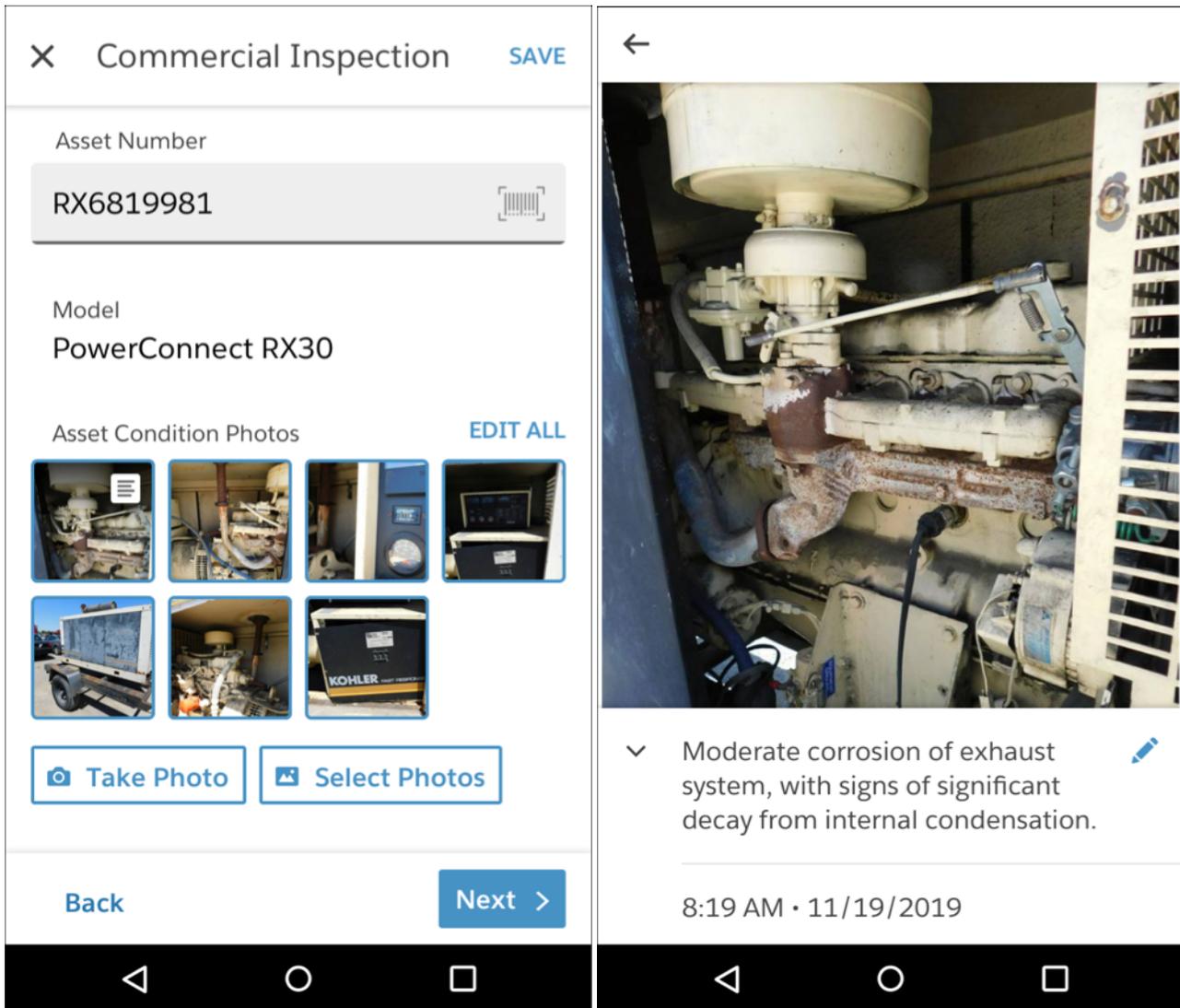
[Salesforce Help: Customize Push Notifications for the Field Service Lightning Mobile App \(can be outdated or unavailable during release preview\)](#)

## Upload Multiple Images to Get the Full Picture

Use your image upload flow to capture and select several images at once. Swipe to move between images, or see all of them together in the gallery view. In each image's detail view, you can add a description or delete the image.

**Where:** This change applies to Field Service Lightning for Android and iOS in Enterprise, Performance, Unlimited, and Developer editions.

**Why:** See the big picture in the gallery view, or drill down in the detail view.



## View Files on Android

The Files related list is now available on Android devices. Previously, if you added the Files related list to a page layout, it displayed only on iOS devices. To view images and other files that are attached to a record, navigate to the record, tap **Related**, and scroll to Files.

**Where:** This change applies to Field Service Lightning for Android in Enterprise, Performance, Unlimited, and Developer editions.

**How:** If you're already using the Files related list on iOS, you're all set. To add the Files related list to an object's layout, find the object in the Object Manager. Edit the object's page layout, and drag the Files related list to the Related Lists section of the layout.

## Other Changes in the Field Service Lightning Mobile App

Look for these improvements to the app.

**Where:** These changes apply to Field Service Lightning for Android and iOS in Enterprise, Performance, Unlimited, and Developer editions.

### Unlock the App with Touch ID or Face ID

With our update to the latest Mobile SDK, users can unlock the Field Service Lightning mobile app with Touch ID or Face ID.

### “Use Salesforce Mobile Actions” Setting Is Hidden from Setup

You don't need to use this setting, so we removed it from the Field Service Mobile Settings page.

SEE ALSO:

[Mobile SDK Development Guide \(can be outdated or unavailable during release preview\)](#)

## Schedule Smarter with Enhanced Optimization (Beta)

We've cooked up a banquet of new optimization features to help you address last-minute scheduling challenges, make more informed scheduling decisions, and minimize surprises for your team.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions with the Field Service Lightning managed package installed.

 **Note:** As a beta feature, Enhanced Optimization is a preview and isn't part of the “Services” under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only from generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for Enhanced Optimization in the [IdeaExchange](#) and through the [Trailblazer Community](#). For information about enabling this feature in your organization, contact Salesforce.

**Why:** Enhanced Optimization includes the following features.

- **Optimization recipes for common scheduling challenges:** Tackle common scheduling challenges with optimization “recipes” that address what happens to your schedule after appointment cancellations, time changes, and overlaps. Cover all scenarios by creating multiple recipes for each category. Check out the four sample recipes provided to get started.
- **Smarter travel time estimates:** Predictive travel builds on Field Service Lightning's street-level routing service by incorporating time-of-day route data into travel time estimates.
- **Rapid in-day optimization:** Last-minute appointment requests, employee illness, a flock of chickens blocking the road... Many factors can derail a field service team's schedule. Create scheduling policies that optimize a service resource's schedule on the day of service so that you can swiftly get your team back on track.

**How:** From the App Launcher, open the Field Service Admin app and click the **Field Service Settings** tab. To activate Enhanced Optimization, select **Optimization > Activation** and click the Enhanced Optimization toggle.

 **Note:** Because Enhanced Optimization is in beta, activating it removes your access to some existing scheduling features, like Resource Priority and Skill Level service objectives.

SEE ALSO:

[Salesforce Help: Activate Enhanced Optimization \(Beta\) \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Create Scheduling Recipes for Common Events \(Beta\) \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Set Up Travel Time Calculation \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Optimize Today's Schedule \(Beta\) \(can be outdated or unavailable during release preview\)](#)

## Create and Manage Service Crews with Crew Management (Generally Available)

Quickly create and manage service crews using the crew management tool, which was previously in beta. Use the new service crew wizard to create a crew, and find the right crew members for the job with smarter search results. Search now considers resources' operating hours and availability in addition to their skills.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions with the Field Service Lightning managed package installed.

**Who:** To access crew management, users need the FSL Admin Permissions or FSL Dispatcher Permissions permission set. They also need access to crew management Visualforce pages and Apex classes. For details, see [Set Up Crew Management](#) (can be outdated or unavailable during release preview).

**Why:** Previously, the crew management tool only let you manage the membership of existing active crews. Now, you can create, activate, and update your service crews in one place.

Click **Get candidates** on an appointment in the crew management tool to view qualifying service resources. The list of candidates shows available resources with skills that the crew needs and available resources without those skills (in case an extra pair of hands is needed).

**Crew Candidates for SA-15055** Close

**Minimum Size:** 3 (current assigned: 1)  
**Recommended Size:** Undefined  
**Required Skills:** Maintenance, Installation  
**Missing Skills:** Installation

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**Members**

Janice Gonzales  
 Skills: Break-Fix, Field Connect (level 9), Field Upgrade (level 7), Maintenance (level 4)

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**Candidates**

Alan Reed  
 Relevant Skills: Installation  
**Has Missing Skills: Installation**

Alexander Raneri  
 Relevant Skills: Installation  
**Has Missing Skills: Installation**

Jane Austin  
 Relevant Skills: Installation  
**Has Missing Skills: Installation**

Louise Martin  
 Relevant Skills: Installation  
**Has Missing Skills: Installation**

Ralph Clark  
 Relevant Skills: Installation  
**Has Missing Skills: Installation**

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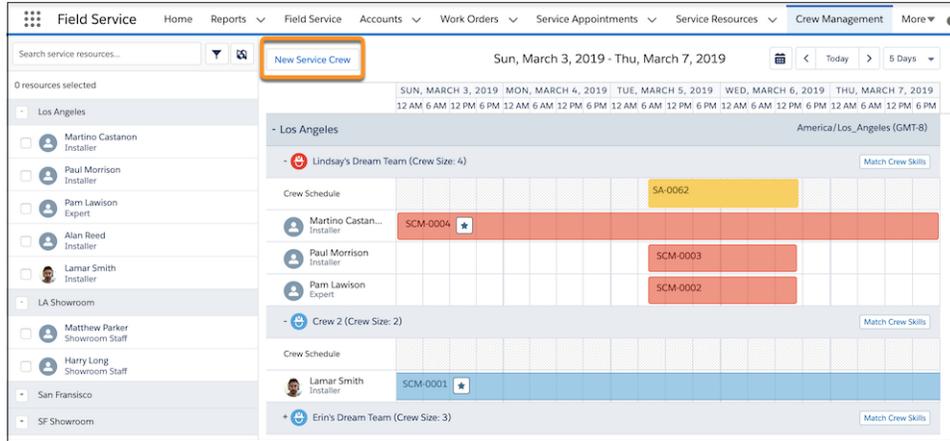
**Available Resources (no relevant skills)**

Gloria Barnes  
 Resource has no relevant skills

Harry Long  
 Resource has no relevant skills

Matthew Parker  
 Resource has no relevant skills

To let users access crew management, either embed the Crew Management custom Lightning component in a Lightning page or create a Crew Management Visualforce tab. Click **New Service Crew** in the top left of the crew management tool to quickly create a crew.



SEE ALSO:

[Salesforce Help: Manage Service Crew Membership](#) (can be outdated or unavailable during release preview)

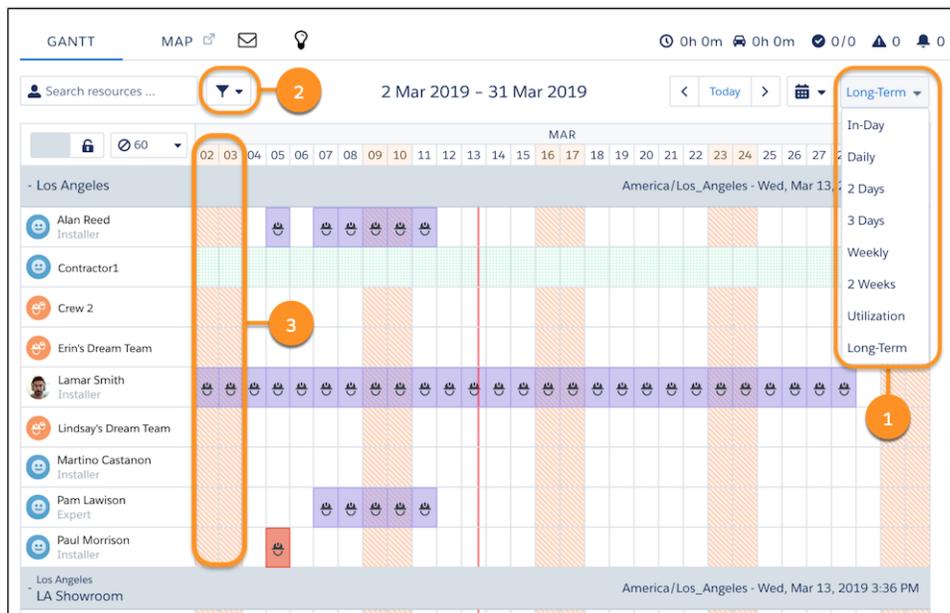
## See Further into the Future on the Gantt

View up to six months of your team’s schedule on the Gantt with the new long-term view. Choose how many months to display, highlight weekends to aid scanning, and apply a multiday appointment filter. Keep things tidy by showing only appointments and absences over a certain length. We’re also introducing a two-week view for mid-range planning.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions with the Field Service Lightning managed package installed.

**Who:** Users need the Longterm View custom permission to see the Long-Term option in the Gantt resolution menu. This view replaces the 5-week Multiday view, which had fewer customization options. No permission is needed to highlight weekends or see the 2 Weeks view.

**Why:** The long-term view gives you greater control over which appointments appear.



You can now choose **Long-Term** or **2 Weeks** in the Gantt resolution menu (1). Customize your long-term view from the Hours tab in the Gantt filter (2).

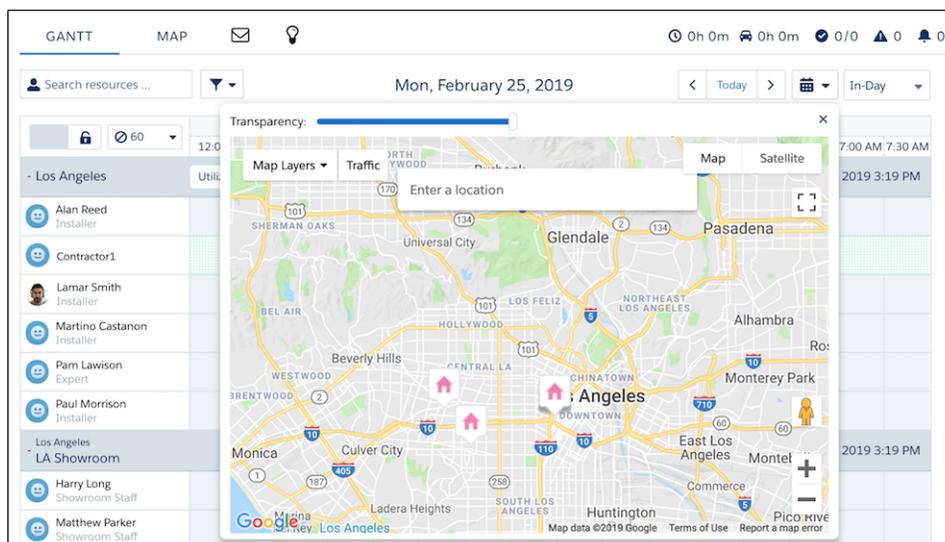
Highlight weekends in orange (3) regardless of the view by selecting **Highlight weekends** on the Hours tab. Make sure that **Show weekends** is also selected.

## Work Faster in the Dispatcher Console Map

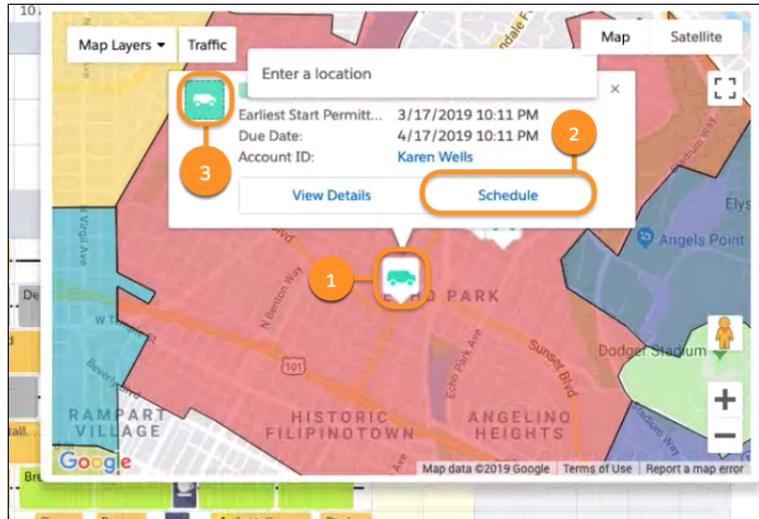
Make the most of your screen real estate by popping out the map and dragging it anywhere in the dispatcher console. Schedule a service appointment by dragging it from the map onto a service resource's schedule in the Gantt. View custom Gantt icons and color palettes on the map, and cluster map markers to make scanning easier.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions with the Field Service Lightning managed package installed.

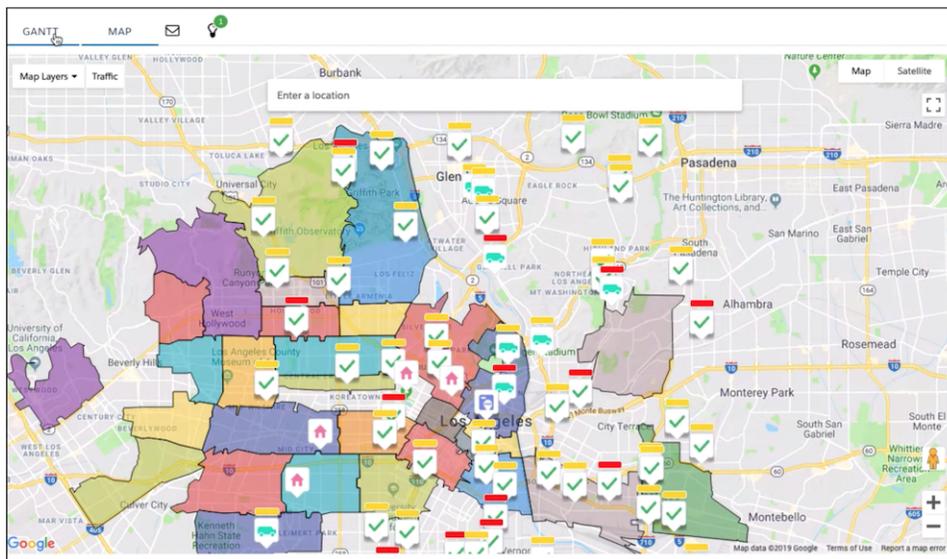
**How:** To pop out the map, hover over the Map tab in the dispatcher console and click [🗺](#). Move the map to your desired location, and adjust its transparency using the slider.



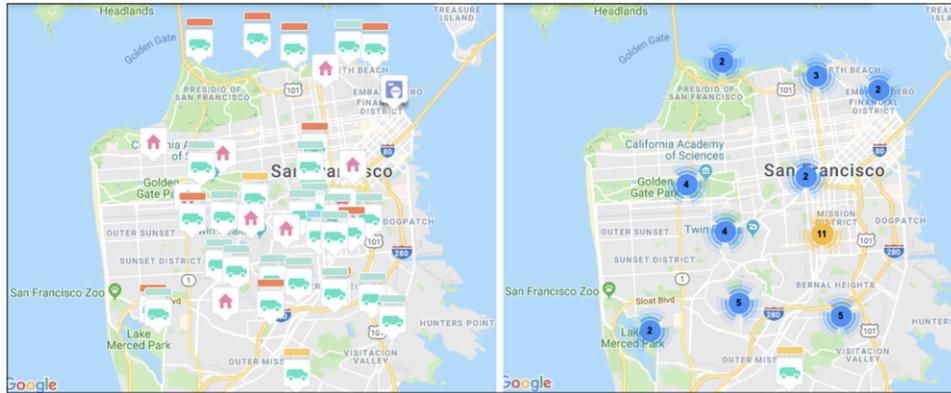
On the pop-out map, click an appointment icon (1). To schedule the appointment, click **Schedule** (2) or drag the shaded icon (3) from the details window onto the desired location in the Gantt. After an appointment is scheduled, you can also reschedule or cancel it from the map.



The Gantt palette selected in the Palettes tab of the Gantt filter now appears on the map in horizontal bars above each service appointment icon. If an appointment has a custom Gantt icon—added using the Gantt Icon field—the icon replaces the standard van icon.



To tidy up a crowded map and avoid overlooking any markers, click **Map Layers** and select **Cluster nearby markers**. Items on the map are organized into blue markers that indicate the number of items in each cluster. Here's what the map looks like before and after clustering. Click a numbered marker to zoom in.



SEE ALSO:

[Salesforce Help: Work in the Dispatcher Console Map](#) (can be outdated or unavailable during release preview)

## Set Scheduling Limits for Different Types of Work

To control the amount of time that your team spends on different types of work, set scheduling capacity limits according to work type. For example, ensure that repair work occupies no more than half of your team's weekly scheduled hours. You can also specify a date range and service territory for each limit you create.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**How:** Create a work type group from the Work Type Groups tab to represent the type of work that you want to limit, and add the related work types in the Work Type Group Members related list. Then, create a related work capacity limit that specifies how many hours per day, week, or month to allot to appointments with those work types. You can create multiple limits for a work type group to cover different service territories, date ranges, and scheduling preferences.

WORK TYPE GROUP MEMBER NAME	WORK TYPE
00000002	Vent Replacement
00000003	Skylight Repair

WORK CAPACITY LIM...	HOURS PER TIME PERIOD	TIME PERIOD	START DATE
WCL-0004	50.00	Month	3/1/2019

**Important:** For the Summer '19 release, *work capacity limits serve only as a suggestion, not a rule*. Dispatchers can refer to the limits for guidance on how to structure the schedule. However, Field Service Lightning's scheduling and optimization features don't enforce the limits you create. Work capacity usage records also don't update to reflect scheduled work, and you can't review the appointments that count against each limit.

SEE ALSO:

[Salesforce Help: Create Scheduling Limits for Work Types](#) (can be outdated or unavailable during release preview)

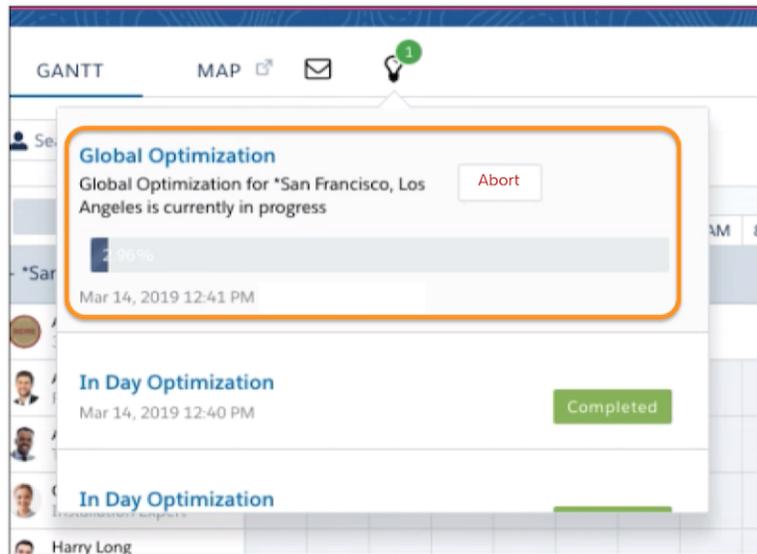
## Monitor Optimization Requests from the Dispatcher Console

Monitor open optimization requests in real time without leaving the dispatcher console. The optimization requests panel now shows a percentage-based progress bar for each request in addition to its status and includes an option to cancel the request. You can still view details about a request from the Optimization Requests custom object tab.

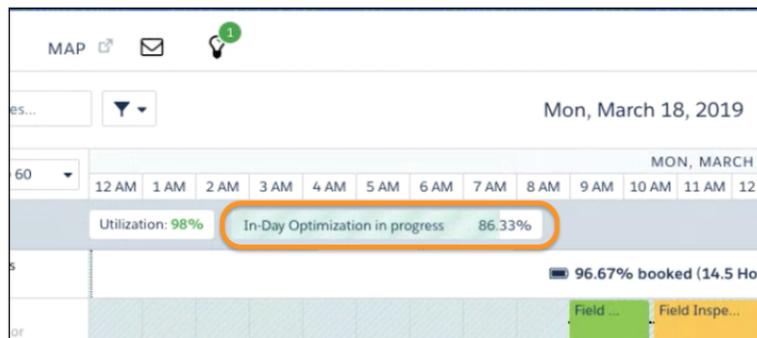
**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions with the Field Service Lightning managed package installed.

**When:** Users need the Abort Optimization Request custom permission to cancel optimization requests.

**Who:** To view the progress of global optimization requests, click the lightbulb icon at the top of the Gantt. The panel also shows the status of recent optimization requests. Click **Abort** to cancel a request.



In-day optimization progress appears below the Gantt's time axis.



A percentage-based progress bar isn't available for resource schedule optimization requests.

SEE ALSO:

[Salesforce Help: Monitor Optimization Requests \(can be outdated or unavailable during release preview\)](#)

## Select a Scheduling Policy When Booking Appointments

Enjoy greater scheduling flexibility by choosing a scheduling policy directly from the Book Appointment and Candidates Chatter actions.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions with the Field Service Lightning managed package installed.

**Who:** Users need these custom permissions to see the new Change Scheduling Policy field:

- Policy Picker In Appointment Booking
- Policy Picker In Get Candidates

**Why:** The Book Appointment and Candidates Chatter actions use the default scheduling policy defined in **Field Service Settings** > **Global Actions** > **Appointment Booking**. However, sometimes you may need to apply a less restrictive scheduling policy. In this case, use the new **Change Scheduling Policy** field to try a different policy. This field also makes it easy to test out new scheduling policies.

The screenshot shows a Salesforce interface for booking appointments. At the top, there is a 'Back' button and a record ID '00014074'. Below this is a 'Change Scheduling Policy' dropdown menu, which is currently set to 'Customer First (Default)'. Below the dropdown is a calendar view for 'Golden Slots'. The calendar shows two days: Wednesday, April 3rd 2019 and Tuesday, April 2nd 2019. For Wednesday, there are three time slots: 9:00AM - 11:00AM, 11:00AM - 1:00PM, and 1:00PM - 3:00PM. For Tuesday, there are two time slots: 1:00PM - 3:00PM and 3:00PM - 5:00PM. Each slot is marked as 'Recommended'.

**Note:** The Change Scheduling Policy field shows all scheduling policies that the user has access to. Scheduling policy access is based on sharing rules.

**How:** To choose a scheduling policy from the Book Appointment or Candidate Chatter action, click **Get Appointments** or **Get Candidates** on the action. After the results load, select a different policy in the Change Scheduling Policy field to rerun the search.

SEE ALSO:

[Salesforce Help: Schedule Appointments from the Record Feed \(can be outdated or unavailable during release preview\)](#)

## Automatically Create Time Sheets for your Service Resources (Beta)

Automate the process of creating time sheets with templates. Set the frequency, start date, and time range covered. After you assign the template to a user profile, Salesforce automatically creates time sheets for those service resources. Users can view and edit their time sheets on the Salesforce app, on their desktop, or in a flow.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Note:** As a beta feature, Time Sheet Templates are a preview and aren't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as

is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for Time Sheet Templates in the [Field Service Lightning group in the Trailblazer Community](#). For information on enabling this feature in your org, contact Salesforce.

**Who:** Time sheet templates are a beta feature. To get started with time sheet templates, contact Salesforce.

**How:** To create a time sheet template, navigate to Time Sheet Settings in Setup. Click **New** to define the template and make it active.

**New Time Sheet Template**

**Information**

\* Label: Mon-Fri Biweekly

\* Name: Mon\_Fri\_Biweekly

\* Start Date: 4/1/2019

\* Frequency: Every Two Weeks

\* Work Week Start Day: Monday

\* Work Week End Day: Friday

Description: Biweekly time sheet for service resources who work Monday through Friday.

\* Active:

Save

Assign the template to at least one user profile.

**Assign to Profiles**

Assign Time Sheet Setting to Profiles

Profiles Selected: "Chatter External User", "Service Cloud" +2 more

\* Time Sheet Setting: Mon-Fri Biweekly

Cancel Save

Change Assignments

PROFILES

- Chatter External User
- Chatter Free User
- Chatter Moderator
- Contract Manager
- Guest License User
- Marketing User
- Read Only
- Service Cloud
- Service Cloud User
- Solution Manager
- Standard User

After you assign the template to a user profile, the time sheets are automatically created for the user profiles you selected based on your chosen frequency.

SEE ALSO:

[Salesforce Help: Customize Time Sheet Settings \(can be outdated or unavailable during release preview\)](#)

## Sort Related Lists in Service Reports

Order records in a service report's related lists by any number or date field. For example, order the records in the Work Order Line Items related list from earliest to latest completion date.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**How:** Open a service report template and click the wrench icon on the related list you want to sort. On the Sorting tab, select a number or date field to sort by, and choose ascending or descending order.

## Get Started with Shifts

For customers who prefer to manage their service resources using shifts, we laid the groundwork for shift management with the new Shift standard object.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Salesforce Help: Shift Fields for Field Service \(can be outdated or unavailable during release preview\)](#)

## Show Productive Users with Confetti

When a user reaches a designated Path stage on a work order, work order line item, or service appointment, celebrate their progress with a virtual confetti toss.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Path: Celebrate Sales Milestones](#)

## Give New Community Users Access to Field Service Lightning Objects

We answered your request: community users no longer have default create, read, edit, or delete access for certain Field Service Lightning objects. Admins must manually provide access to these objects for new community users.

**Where:** These changes apply to Lightning communities, accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** These changes apply to communities created with licenses provisioned after Summer '19. Communities provisioned with licenses created before that are not affected.

**Why:** For enhanced security, admins must grant permissions for the following objects:

- Assets
- Entitlements
- Entity Milestones

- [Linked Articles](#)
- [Locations](#)
- [Maintenance Plans](#)
- [Operating Hours](#)
- [Product Items](#)
- [Product Requests](#)
- [Product Transfers](#)
- [Return Order](#)
- [Service Appointments](#)
- [Service Contract](#)
- [Service Crews](#)
- [Service Territories](#)
- [Shipments](#)
- [Work Capacity Limit](#)
- [Work Types](#)

SEE ALSO:

[Communities User Licenses](#)

## Ignore the Asset Resource Type When You Create a Service Resource

When you create a service resource, Field Service Lightning users can see Asset as an option for the Resource Type field. However, you can save the record with a Resource Type of Asset only when your org has access to Lightning Scheduler.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Manage Room and Equipment Booking with Asset Scheduling](#)

## Channels: Name Changes for Snap-Ins, Live Agent and LiveMessage, and Facebook Recommendations

To have more descriptive names of our products, we changed Snap-ins to Embedded Services, Live Agent to Chat, and LiveMessage to Messaging. Social Customer Service supports the new Facebook recommendations format.

IN THIS SECTION:

[Messaging: A New Name for LiveMessage, Outbound Messages, and Sensitive Data Screening](#)

For a better description of the product, LiveMessage is now called Messaging. Follow up with customers by sending outbound messages. Never expose your customer's sensitive data to your agents.

[Chat: A New Name for Live Agent, Improvements to Conversational Conferencing, Seconds in the Timestamp, and Alert Sounds](#)

For a better description of the product, Live Agent is now called Chat. Conversational Conferencing is easier to navigate. Seconds are now included in a chat timestamp and the alert sounds are more pleasant.

[Social Customer Service: Facebook Recommendation Format and Bulk Actions on Posts](#)

Social Customer Service supports the new Facebook recommendations format. Save time with bulk actions on Social Post list views.

[Phone: Dialer for Essentials and Voice Support Setup Flow Updates](#)

Consolidate your company's phone calls to one phone number and integrate your third-party phone with Salesforce.

[Embedded Service for Mobile Apps: Give Customers a Great Mobile Chat Experience](#)

We added support for Knowledge article previews in a chat, user experience enhancements, and bug fixes.

[Embedded Service for Web: A New Name for Snap-Ins, Appointment Management, and Customized Chat Experiences](#)

For a better description of the product, Snap-ins is now called Embedded Services. Allow your customers to make their own appointments and tailor your chat experiences to your company's needs.

## Messaging: A New Name for LiveMessage, Outbound Messages, and Sensitive Data Screening

For a better description of the product, LiveMessage is now called Messaging. Follow up with customers by sending outbound messages. Never expose your customer's sensitive data to your agents.

### IN THIS SECTION:

[Messaging is the New LiveMessage](#)

Our LiveMessaging product is a messaging product. We have changed its name to a more descriptive title. In the Setup interface, we left both names so searching Messaging or LiveMessage in the Quick Find box provides the correct results.

[Reach Out to Your Customers with Agent Initiated Conversations \(Open Beta\)](#)

When an issue requires more research, agents don't have to stay in a messaging conversation. They can end the conversation, find the solution, and return to restart the conversation.

[Connect to Your Customers with WeChat \(Pilot\)](#)

Let customers communicate with support agents using WeChat. Customers use WeChat to send messages, and agents reply from the Service Console.

[Protect Your Customers' Sensitive Data](#)

In support conversations, hide sensitive data strings, such as tax and credit card numbers, personal information, and even profanity.

[Messaging Transcript Improvements](#)

Navigating messaging transcripts just got easier. Agents are notified in the transcripts when they don't have access to records, when other participants have responded, and when previous messages are loading.

[Respond Lightning Fast with Quick Text](#)

Messaging agents can save loads of time with quick text, so we made it easier to use. A button for quick text displays in the message toolbar, so inserting predefined text is just a click away.

[Encrypt Conversations](#)

Customers talk with agents about all kinds of topics, even topics that include sensitive information. Now you can encrypt the transcribed conversations between agents and customers with Shield Platform Encryption.

[Messaging Invocable Action for Flows](#)

With Summer '19, invocable actions and quick actions available for building flows are now categorized to make them easier to find. For Messaging, invocable actions include: `InvocableLiveMessageNotification.java`.

[Read Languages in the Direction They Were Intended](#)

Right-to-left (RTL) languages, such as Hebrew and Arabic, are supported in Messaging.

### [Manage Messaging Agents' Permissions](#)

Agents can send and receive messages with the new Messaging Agent permission, without accessing Setup. Previously, agents needed the View Setup and Configuration permission.

## Messaging is the New LiveMessage

Our LiveMessaging product is a messaging product. We have changed its name to a more descriptive title. In the Setup interface, we left both names so searching Messaging or LiveMessage in the Quick Find box provides the correct results.

**Where:** This change applies to orgs with access to Messaging through a Digital Engagement add-on. Messaging in Lightning Experience is available in Enterprise, Performance, Unlimited, and Developer editions with the Service Cloud

## Reach Out to Your Customers with Agent Initiated Conversations (Open Beta)

When an issue requires more research, agents don't have to stay in a messaging conversation. They can end the conversation, find the solution, and return to restart the conversation.

**Where:** This change applies to orgs with access to Messaging through a Digital Engagement add-on. Messaging in Lightning Experience is available in Enterprise, Performance, Unlimited, and Developer editions with the Service Cloud.



**Note:** Any use of this beta feature is subject to the Beta Agreements terms at <https://www.salesforce.com/company/legal/agreements.jsp>

**How:** Once a possible issue solution is available, agents navigate to the customer's record home and click Start Conversation. A new tab opens with the most recent session and a message that a new session has started. Agents continue the conversation where they left off. They can send multiple messages.

If the customer isn't available to respond, agents can close the conversation tab and they are notified once the customer responds. An outbound message in a waiting state doesn't take up agent capacity.

If the original agent goes offline before the customer responds, the conversation is routed to a secondary agent and the original agent can't contribute to the conversation.



**Note:** For agent initiated messages, we use the most current customer opt out information at the time the message is sent. If end users change their opt out status after an initial outbound message is sent, agents can send additional messages until the official opt out status is updated.

## Connect to Your Customers with WeChat (Pilot)

Let customers communicate with support agents using WeChat. Customers use WeChat to send messages, and agents reply from the Service Console.

**Where:** This change applies to orgs with access to Messaging through a Digital Engagement add-on. Messaging in Lightning Experience is available in Enterprise, Performance, Unlimited, and Developer editions with the Service Cloud.



**Note:** We provide this feature to selected customers through a pilot program that requires agreement to specific terms and conditions. To be nominated to participate in the program, contact your Success Manager or log a case in <https://help.salesforce.com/home>. Because pilot programs are subject to change, we can't guarantee acceptance. This pilot feature isn't generally available, as referenced in this document or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only based on generally available features.

**How:** Use the guided setup flow to set up a WeChat channel. You need your WeChat account ID and information.

## Protect Your Customers' Sensitive Data

In support conversations, hide sensitive data strings, such as tax and credit card numbers, personal information, and even profanity.

**Where:** This change applies to orgs with access to Messaging through a Digital Engagement add-on. Messaging in Lightning Experience is available in Enterprise, Performance, Unlimited, and Developer editions with the Service Cloud.

**How:** Set up sensitive data rules for Messaging.

1. From Setup, enter *Sensitive Data Rules* in the Quick Find box and click **Sensitive Data Rules** under *Messaging* (formerly *LiveMessage*).

 **Note:** Sensitive Data Rules are shared between Chat and Messaging. You can edit rules in either Chat or Messaging but they are enforced in both.

2. Click **New** or **New Sensitive Data Rule**.
3. Under *Information*, enter your rule's name and description.
4. If you want to run the rule after it's saved, check **Active**.
5. In *Patterns*, enter a JavaScript regular expression (regex) for each pattern on a separate line.
6. Choose the action; remove the data or replace it.
7. Optionally, you can test your regular expression.
8. Choose which roles have the rule enforced.

 **Note:** Rules are enforced on the author. Therefore, if a "don't show phone number" rule is enforced on the visitor, when visitors enter their phone numbers, agents and supervisors can't see it.

9. Set a priority for the rule. Lower numbers are executed first.
10. Click **Save**.

## Messaging Transcript Improvements

Navigating messaging transcripts just got easier. Agents are notified in the transcripts when they don't have access to records, when other participants have responded, and when previous messages are loading.

**Where:** This change applies to orgs with access to Messaging through a Digital Engagement add-on. Messaging in Lightning Experience is available in Enterprise, Performance, Unlimited, and Developer editions with the Service Cloud

**How:** Agents have more information in their message transcripts.

- **Permissions:** When an agent doesn't have access to other conversations with the customer, the agent sees a warning message indicating that some conversations are not viewable due to permissions.
- **Jump to new messages:** If an agent scrolls up to read previous messages and another participant responds, a link identifying the number of new messages appears. Once the agent clicks the link, a line identifies where the new messages begin.
- **Loading previous chats:** When an agent joins a conference, older comments are loaded. Grey lines appear while they are loading.
- **Return to the selected conversation:** When a conference participant scrolls away from the selected conversation, they can return to their original place by clicking **Jump to Selected Conversation**.

## Respond Lightning Fast with Quick Text

Messaging agents can save loads of time with quick text, so we made it easier to use. A button for quick text displays in the message toolbar, so inserting predefined text is just a click away.

**Where:** This change applies to orgs with access to Messaging through a Digital Engagement add-on. Messaging in Lightning Experience is available in Enterprise, Performance, Unlimited, and Developer editions with the Service Cloud

**How:** Quick text in Lightning Experience is enabled by default in all orgs. If you enabled and created quick text in Salesforce Classic, your messages work in Lightning Experience.

When you create or edit quick text, set the Channel field to Messaging. Then look for the new quick text button when sending a message.

## Encrypt Conversations

Customers talk with agents about all kinds of topics, even topics that include sensitive information. Now you can encrypt the transcribed conversations between agents and customers with Shield Platform Encryption.

**Where:** This change applies to orgs with access to Messaging through a Digital Engagement add-on. Messaging in Lightning Experience is available in Enterprise, Performance, Unlimited, and Developer editions with the Service Cloud

**How:** To access Shield Platform Encryption for Chat transcripts, contact Salesforce Customer Support.

Once Shield Platform Encryption is enabled, select the fields on the Encryption Policy page.

Object	Fields
ConversationEntry	<ul style="list-style-type: none"> <li>Conversation Body</li> <li>Conversation Supervisor Transcript Body</li> <li>Message</li> <li>Actor Name</li> </ul>
MessagingEndUser	<ul style="list-style-type: none"> <li>Profile Picture URL</li> </ul>

SEE ALSO:

[Encrypt Your Chat Transcripts](#)

[Encrypt Your Chat Transcripts](#)

## Messaging Invocable Action for Flows

With Summer '19, invocable actions and quick actions available for building flows are now categorized to make them easier to find. For Messaging, invocable actions include: `InvocableLiveMessageNotification.java`.

**Where:** This change applies to orgs with access to Messaging through a Digital Engagement add-on. Messaging in Lightning Experience is available in Enterprise, Performance, Unlimited, and Developer editions with the Service Cloud.

**Who:** Invocable actions are available based on your org permissions.

**Why:** Invocable actions and quick actions are declarative building blocks for flows. And categories make finding available invocable actions and quick actions faster and easier.

**How:** When you're building your flow, drag the Action flow element onto the Flow Builder canvas. Under Filter By, select the category you want. Use search to find the invocable action or quick action you want to add to your flow, or view a list of all available for.

SEE ALSO:

[Standard Invocable Actions for Session-Based Permission Sets Are Categorized for Flows](#)

[Standard Invocable Actions \(can be outdated or unavailable during release preview\)](#)

## Read Languages in the Direction They Were Intended

Right-to-left (RTL) languages, such as Hebrew and Arabic, are supported in Messaging.

## Manage Messaging Agents' Permissions

Agents can send and receive messages with the new Messaging Agent permission, without accessing Setup. Previously, agents needed the View Setup and Configuration permission.

**Where:** This change applies to orgs with access to Messaging through a Digital Engagement add-on. Messaging in Lightning Experience is available in Enterprise, Performance, Unlimited, and Developer editions with the Service Cloud.

## Chat: A New Name for Live Agent, Improvements to Conversational Conferencing, Seconds in the Timestamp, and Alert Sounds

For a better description of the product, Live Agent is now called Chat. Conversational Conferencing is easier to navigate. Seconds are now included in a chat timestamp and the alert sounds are more pleasant.

### IN THIS SECTION:

#### [Chat is the New Live Agent](#)

Our Live Agent product is a chat product. We have changed its name to a more descriptive title. In the Setup interface, we left both names so searching Chat or Live Agent in the Quick Find box provides the correct results.

#### [Help Customers as a Team](#)

With chat conferencing, you can work with other agents to solve your customers' trickiest problems.

#### [Conversational Conferencing Improvements](#)

Chat conferencing just got easier. Chat conferencing is available with Omni-Channel in Beta for Salesforce Lightning. Agents are notified when they don't have access to records, when other participants have responded, and when previous chats are loading.

#### [Chat Enhancements](#)

The sounds for incoming chats, participants leaving chats, and other audio alerts are more pleasant. In Lightning, agents need the View Setup & Configuration permission for transferring chats to buttons. Seconds are now included in a Chat timestamp so you have accountability to the second.

## Chat is the New Live Agent

Our Live Agent product is a chat product. We have changed its name to a more descriptive title. In the Setup interface, we left both names so searching Chat or Live Agent in the Quick Find box provides the correct results.

## Help Customers as a Team

With chat conferencing, you can work with other agents to solve your customers' trickiest problems.

**Where:** This change applies to Lightning Experience and Salesforce Classic. Chat is available in Performance and Developer edition orgs that were created after June 14, 2012, and in Unlimited and Enterprise edition orgs with the Service Cloud.

**How:** To initiate a chat conference, agents click the double agent icon. Then, simply select the desired agent from the agent dropdown, optionally write a brief message, and click **Start Conference**.

## Conversational Conferencing Improvements

Chat conferencing just got easier. Chat conferencing is available with Omni-Channel in Beta for Salesforce Lightning. Agents are notified when they don't have access to records, when other participants have responded, and when previous chats are loading.

**Where:** This change applies to Lightning Experience. Chat is available in Performance and Developer edition orgs that were created after June 14, 2012, and in Unlimited and Enterprise edition orgs with the Service Cloud.

### How:

- **Omni\_Channel:** Chat conferencing is available with Omni-Channel in Beta for Salesforce Lightning.
- **Permissions:** When an agent doesn't have access to other conversations with the customer, the agent sees a warning message indicating that some conversations are not viewable due to permissions.
- **Jump to new messages:** If an agent scrolls up to read previous messages and another participant responds, a link identifying the number of new messages appears. Once the agent clicks the link, a line identifies where the new messages begin.
- **Loading previous chats:** When an agent joins a conference, older comments are loaded. Grey lines appear while they are loading.
- **Return to the selected conversation:** When a conference participant scrolls away from the selected conversation, they can return to their original place by clicking **Jump to Selected Conversation**.
- **Leaving conferences:** To leave a conference, agents click **Leave Conversation** in the conference footer. When there is only one agent in the conversation, button becomes **End Conversation**.

## Chat Enhancements

The sounds for incoming chats, participants leaving chats, and other audio alerts are more pleasant. In Lightning, agents need the View Setup & Configuration permission for transferring chats to buttons. Seconds are now included in a Chat timestamp so you have accountability to the second.

**Where:** This change applies to Lightning Experience and Salesforce Classic. Chat is available in Performance and Developer edition orgs that were created after June 14, 2012, and in Unlimited and Enterprise edition orgs with the Service Cloud.

## Social Customer Service: Facebook Recommendation Format and Bulk Actions on Posts

Social Customer Service supports the new Facebook recommendations format. Save time with bulk actions on Social Post list views.

### IN THIS SECTION:

#### [Display Facebook Reviews Using the Recommendation Format](#)

Facebook changed its review format to recommendations. Agents can see whether a Facebook user recommends or doesn't recommend in the Lightning Service Console. Make sure that your field-level security allows agents to view or edit ReviewScore and ReviewScale fields.

#### [Approve and Reject Social Feed Posts in Bulk](#)

Save time by approving and rejecting multiple posts at once in a Social Post list view.

#### [Move to an Instagram Business Account for the Latest API](#)

With an Instagram Business Account, you are on the latest version of Instagram's API and have access to the latest and greatest features for support on Instagram.

## Display Facebook Reviews Using the Recommendation Format

Facebook changed its review format to recommendations. Agents can see whether a Facebook user recommends or doesn't recommend in the Lightning Service Console. Make sure that your field-level security allows agents to view or edit ReviewScore and ReviewScale fields.

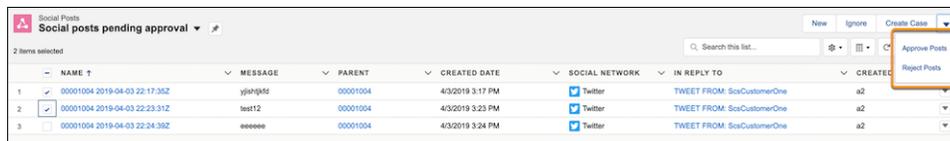
**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

## Approve and Reject Social Feed Posts in Bulk

Save time by approving and rejecting multiple posts at once in a Social Post list view.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Select as many posts as you want in the list, and then select an action.



[Chatter REST API](#) and [Chatter in Apex](#) support approving and rejecting social feed posts in bulk.

## Move to an Instagram Business Account for the Latest API

With an Instagram Business Account, you are on the latest version of Instagram's API and have access to the latest and greatest features for support on Instagram.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Convert your existing personal Instagram account or [create an Instagram business account](#) and then authorize within Social Customer Service or Social Studio.

## Phone: Dialer for Essentials and Voice Support Setup Flow Updates

Consolidate your company's phone calls to one phone number and integrate your third-party phone with Salesforce.

### IN THIS SECTION:

#### [Make and Receive Calls in Service Console with Dialer](#)

Consolidate your company's phone calls to one phone number with Lightning Dialer for Essentials so that incoming calls have a better chance of connecting to someone on your team.

#### [Create a Call Center with the Updated Voice Support Setup Flow](#)

We refreshed the voice support setup flow to give you a bit more context as you go through each step. The voice support setup flow lets you integrate your third-party phone with Salesforce so your team can take and make calls alongside their other work.

## Make and Receive Calls in Service Console with Dialer

Consolidate your company's phone calls to one phone number with Lightning Dialer for Essentials so that incoming calls have a better chance of connecting to someone on your team.

**Where:** This change applies to Lightning Experience in Essentials edition.

SEE ALSO:

[Unify Your Team's Phones with Dialer](#)

## Create a Call Center with the Updated Voice Support Setup Flow

We refreshed the voice support setup flow to give you a bit more context as you go through each step. The voice support setup flow lets you integrate your third-party phone with Salesforce so your team can take and make calls alongside their other work.

## Embedded Service for Mobile Apps: Give Customers a Great Mobile Chat Experience

We added support for Knowledge article previews in a chat, user experience enhancements, and bug fixes.

**Where:** This change applies to the Service SDK for Mobile Apps for iOS (version 218.0.1) and Android (version 218.0.0).

For details about new features, see the release notes for [iOS](#) and [Android](#). Visit the [Embedded Service SDK Developer Center](#) for other resources.

## Embedded Service for Web: A New Name for Snap-Ins, Appointment Management, and Customized Chat Experiences

For a better description of the product, Snap-ins is now called Embedded Services. Allow your customers to make their own appointments and tailor your chat experiences to your company's needs.

IN THIS SECTION:

[Embedded Services is the New Snap-Ins](#)

Our Snap-ins product is an embedded service. We have changed its name to a more descriptive title. In the Setup interface, we left both names so searching Embedded Services or Snap-Ins in the Quick Find box provides the correct results.

[Let Customers Manage Appointments](#)

Embedded Appointment Management gives your customers an easy way to schedule, modify, and cancel appointments. The experience is powered by Lightning Flow, which means you can craft the perfect interaction and decide when and how to create related records, like work orders.

[Allow Customers to Leave and Return to the Embedded Service Chat Dialog](#)

Before Summer '19, when your customer was in an embedded service chat (or Snap-ins chat), they couldn't leave the dialog to search for important information or files. Set your customers free by disabling focus trapping.

[Customize Your Chat Message with Lightning Web Components](#)

Lightning Web Components can help you tailor your chats to your company's needs. Lightning Web Components look no different than Aura Components to your customer.

[Support File Based Flows](#)

Modify records in file and database flows with the Tooling API.

### Embedded Service Flow Improvements

We've increased the default size of the flow windows and allow you to set the size to your needs. We've redesigned the footer menus to support easier navigation.

## Embedded Services is the New Snap-Ins

Our Snap-ins product is an embedded service. We have changed its name to a more descriptive title. In the Setup interface, we left both names so searching Embedded Services or Snap-Ins in the Quick Find box provides the correct results.

## Let Customers Manage Appointments

Embedded Appointment Management gives your customers an easy way to schedule, modify, and cancel appointments. The experience is powered by Lightning Flow, which means you can craft the perfect interaction and decide when and how to create related records, like work orders.

**Where:** This change applies to Salesforce Classic and Lightning Experience in Professional, Enterprise, Unlimited, and Developer editions that use the Embedded Services code snippet version 5.0 or later.

**How:** Organizations with Field Service Lightning and the Field Service Lightning Managed App can configure embedded flows for customer appointment management.

## Allow Customers to Leave and Return to the Embedded Service Chat Dialog

Before Summer '19, when your customer was in an embedded service chat (or Snap-ins chat), they couldn't leave the dialog to search for important information or files. Set your customers free by disabling focus trapping.

**Where:** This change applies to Salesforce Classic and Lightning Experience in Professional, Enterprise, Unlimited, and Developer editions that use the Embedded Services code snippet version 5.0 or later.

**How:** Admins and developers can disable focus trapping by setting `disableKeyTrapping` in their Embedded Services code snippet.

```
embedded_svc.settings.disableKeyTrapping = true;
```

Users can leave the chat with keystrokes, not the touch pad or mouse.

## Customize Your Chat Message with Lightning Web Components

Lightning Web Components can help you tailor your chats to your company's needs. Lightning Web Components look no different than Aura Components to your customer.

**Where:** This change applies to orgs with access to Messaging through a Digital Engagement add-on. Messaging in Lightning Experience is available in Enterprise, Performance, Unlimited, and Developer editions with the Service Cloud.

**How:** Customize your chat message experience with a Lightning Web Component.

## Support File Based Flows

Modify records in file and database flows with the Tooling API.

**Where:** This change applies to Salesforce Classic and Lightning Experience in Professional, Enterprise, Unlimited, and Developer editions that use the Embedded Services code snippet version 5.0 or later.

**How:** In the Tooling API object `EmbeddedServiceFlow`, change the `FOREIGNKEY` type field flow to `ENUMORID` type field.

## Embedded Service Flow Improvements

We've increased the default size of the flow windows and allow you to set the size to your needs. We've redesigned the footer menus to support easier navigation.

# Knowledge: Inline Editing, Enhanced Reports, and More Reasons to Move to Lightning Experience

Write even faster with inline editing enabled for Knowledge articles. Build better reports with enhanced object relationships. And we added Lightning Experience actions and enhancements so that you can do more and customize all you want.

### IN THIS SECTION:

#### [Improve Your Authoring Experience with Inline Editing](#)

Discover the convenience of inline editing for article drafts. Quickly make updates and see all your article fields while you write. You can even use inline editing when you edit translations side by side while you view the master-language version.

#### [Gain Insights with Enhanced Report Relationships](#)

We're falling in love with the new relationships between Knowledge objects in reports. Find all the fields in related cases by building a custom report type that uses the Case Article object. Add data categories to your Knowledge report types to see how your content is organized, find content gaps, and more.

#### [Search Knowledge Articles from Any Object](#)

Use and search Knowledge in more places. Add the Knowledge component to the Lightning page for any standard or custom object. You can use basic authoring actions in the action dropdowns, but suggested articles and some actions, such as Insert Article Contents into Email, are available only for cases.

#### [Use the Restore, Delete, and Submit for Translation Actions in Lightning Experience](#)

You can now easily restore or delete archived articles—and submit published or draft articles for translation—from list views. Use the **Restore** action in record pages to bring back a previous version of a published article, or the latest version of an archived article. The previous Delete action is now called Delete Draft. Use the new Delete Article action to remove archived articles and the associated versions and translations from your knowledge base. Previously, these actions were available only in Salesforce Classic. Find these actions in the Salesforce APIs and use them in flows.

#### [Paste Images into Article Rich Text Fields](#)

It's easier to add image content to Knowledge articles. Use copy and paste to insert images from the clipboard and most browsers. Authors and agents can take a screenshot and quickly add it to an article to highlight a feature or demonstrate an issue.

#### [Send Case Emails with Community and Site Article URLs in Lightning Experience](#)

Close cases in a jiff by inserting Knowledge article links from your communities and sites. In Lightning Experience, agents can use the Insert URL into Email action in the Knowledge component to post a link to the article. Previously, this feature was available only in Salesforce Classic.

#### [Manage Promoted Search Terms in Lightning Experience](#)

Promote articles in Knowledge searches by adding and modifying your search terms in Lightning Knowledge. Add the Promoted Search Terms related list to your Knowledge page layouts. Previously, you could view promoted search terms in Lightning Knowledge, but you could manage them only in Salesforce Classic.

#### [Manage Knowledge Workflow Actions in Lightning Experience](#)

Model and automate processes and employ Knowledge actions in the workflows that you create. Previously, you could manage Knowledge workflow actions only in Salesforce Classic.

[Engage Global Customers with Articles in Right-to-Left Languages](#)

Provide articles for customers across the globe with support for right-to-left text in Knowledge.

[Use the Upgraded Rich Text Editor](#)

Rich text fields in Knowledge now use CKEditor version 4.11.2.

[Create Knowledge Actions and Global Quick Actions](#)

You can create an article from just about anywhere. Choose Knowledge when you build global quick actions that create a record. And, new Knowledge-to-Knowledge lookup fields let you make actions in the Buttons, Links, and Actions screen in the Object Manager.

[More Lookup Features for Lightning Knowledge](#)

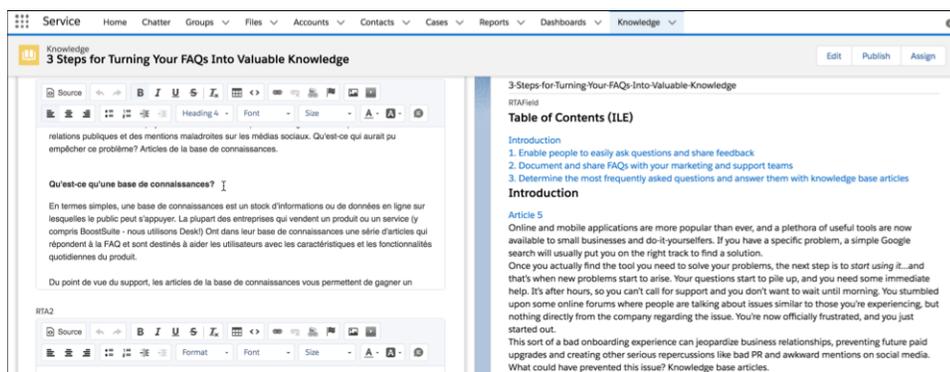
Use the lookup relationships that make sense, like master-detail relationships with Knowledge as the parent. Create an article from a lookup while creating other records. And, you can add article-to-article lookup fields so you can use a related list of articles and build more types of article actions.

## Improve Your Authoring Experience with Inline Editing

Discover the convenience of inline editing for article drafts. Quickly make updates and see all your article fields while you write. You can even use inline editing when you edit translations side by side while you view the master-language version.

**Where:** This change applies to Lightning Experience only. Salesforce Knowledge is available in Essentials, Developer, and Unlimited editions, and for an additional cost in Professional, Performance, and Enterprise editions.

**How:** Add the Publication Status field to the page layout. The edit action must also be in the page layout.



SEE ALSO:

[Salesforce Help: Page Layout Considerations for Lightning Knowledge \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Update Records \(can be outdated or unavailable during release preview\)](#)

## Gain Insights with Enhanced Report Relationships

We're falling in love with the new relationships between Knowledge objects in reports. Find all the fields in related cases by building a custom report type that uses the Case Article object. Add data categories to your Knowledge report types to see how your content is organized, find content gaps, and more.

**Where:** This change applies to Lightning Experience only. Salesforce Knowledge is available in Essentials, Developer, and Unlimited editions, and for an additional cost in Professional, Performance, and Enterprise editions.

**How:** You can build custom report types that use relationships between these objects.

- Knowledge object—Use Knowledge Versions as the secondary object to link to Data Categories.
- Knowledge Articles object—Connect to Knowledge Article Versions or Case Articles.
- Knowledge Article Versions object—Link to the Case Articles object.
- Case object—Link to Articles, then to the Knowledge Article Versions object.

SEE ALSO:

[Salesforce Help: Report on Salesforce Knowledge Articles \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Article Reports \(can be outdated or unavailable during release preview\)](#)

## Search Knowledge Articles from Any Object

Use and search Knowledge in more places. Add the Knowledge component to the Lightning page for any standard or custom object. You can use basic authoring actions in the action dropdowns, but suggested articles and some actions, such as Insert Article Contents into Email, are available only for cases.

**Where:** This change applies to Lightning Experience only. Salesforce Knowledge is available in Essentials, Developer, and Unlimited editions, and for an additional cost in Professional, Performance, and Enterprise editions.

SEE ALSO:

[Salesforce Help: Use the Knowledge Component in the Lightning Service Console \(can be outdated or unavailable during release preview\)](#)

## Use the Restore, Delete, and Submit for Translation Actions in Lightning Experience

You can now easily restore or delete archived articles—and submit published or draft articles for translation—from list views. Use the **Restore** action in record pages to bring back a previous version of a published article, or the latest version of an archived article. The previous Delete action is now called Delete Draft. Use the new Delete Article action to remove archived articles and the associated versions and translations from your knowledge base. Previously, these actions were available only in Salesforce Classic. Find these actions in the Salesforce APIs and use them in flows.

**Where:** This change applies to Lightning Experience only. Salesforce Knowledge is available in Essentials, Developer, and Unlimited editions, and for an additional cost in Professional, Performance, and Enterprise editions.

**Who:** Users with delete permission on Knowledge can delete drafts. To delete archived articles, users need the Manage Articles and Archive Articles user permissions, and Modify All on Knowledge.

**How:** Add actions to your page layouts. Bulk actions appear on list views for users with the appropriate permissions.

SEE ALSO:

[Salesforce Help: Lightning Knowledge User Access \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Authoring Actions in Lightning Knowledge \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: When Are Lightning Authoring Actions Available? \(can be outdated or unavailable during release preview\)](#)

## Paste Images into Article Rich Text Fields

It's easier to add image content to Knowledge articles. Use copy and paste to insert images from the clipboard and most browsers. Authors and agents can take a screenshot and quickly add it to an article to highlight a feature or demonstrate an issue.

**Where:** This change applies to Lightning Experience only. Salesforce Knowledge is available in Essentials, Developer, and Unlimited editions, and for an additional cost in Professional, Performance, and Enterprise editions.

SEE ALSO:

[Salesforce Help: Rich Text Editor \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Editing Rich Text Area Fields in Records \(can be outdated or unavailable during release preview\)](#)

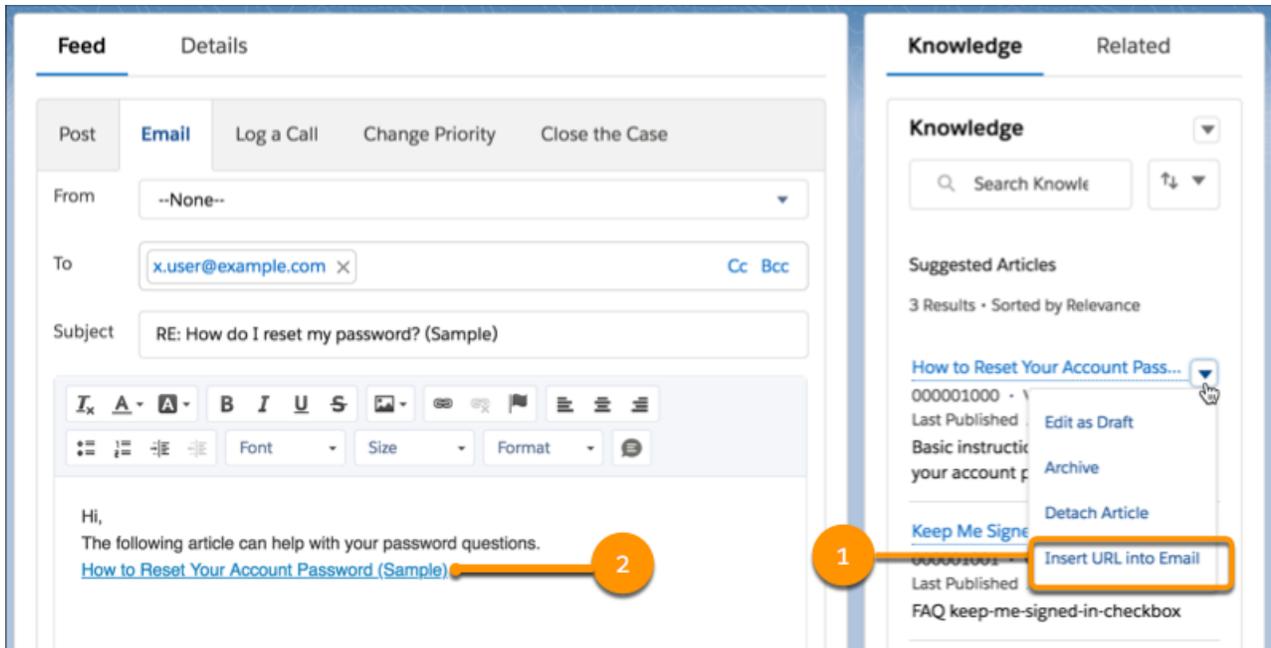
## Send Case Emails with Community and Site Article URLs in Lightning Experience

Close cases in a jiff by inserting Knowledge article links from your communities and sites. In Lightning Experience, agents can use the Insert URL into Email action in the Knowledge component to post a link to the article. Previously, this feature was available only in Salesforce Classic.

**Where:** This change applies to Lightning Experience in all editions with Knowledge, except Professional edition. Salesforce Knowledge is available in Essentials, Developer, and Unlimited editions, and for an additional cost in Professional, Performance, and Enterprise editions.

**Who:** Users need permission to read Knowledge articles and edit cases to use this action. They also need View Setup and Configuration permission.

**How:** In Knowledge Settings, select **Allow users to share articles via public URLs**. Then in a case, agents can use the action in the Knowledge component (1) to insert the link into the case feed email (2).



SEE ALSO:

[Salesforce Help: Post Site and Community Article URLs \(can be outdated or unavailable during release preview\)](#)

## Manage Promoted Search Terms in Lightning Experience

Promote articles in Knowledge searches by adding and modifying your search terms in Lightning Knowledge. Add the Promoted Search Terms related list to your Knowledge page layouts. Previously, you could view promoted search terms in Lightning Knowledge, but you could manage them only in Salesforce Classic.

**Where:** This change applies to Lightning Experience only. Salesforce Knowledge is available in Essentials, Developer, and Unlimited editions, and for an additional cost in Professional, Performance, and Enterprise editions.

SEE ALSO:

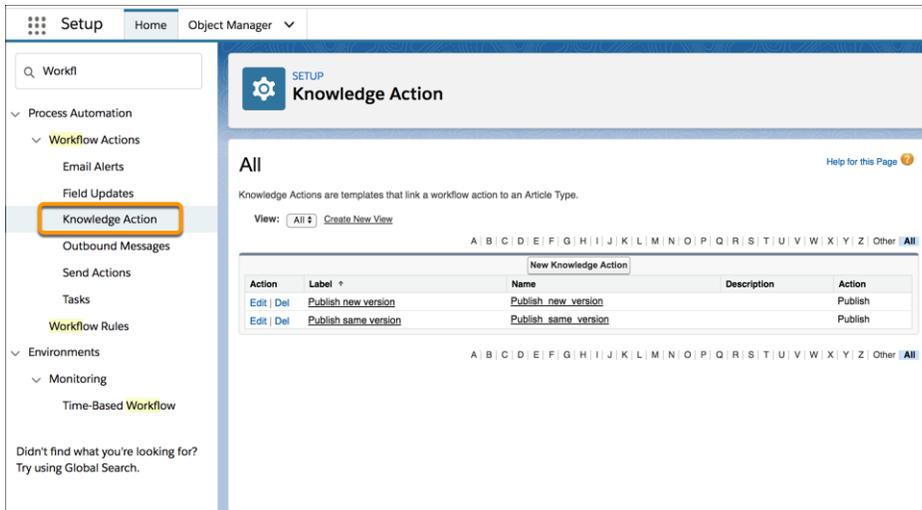
[Salesforce Help: Promote Articles in Search Results \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Manage Promoted Search Terms \(can be outdated or unavailable during release preview\)](#)

## Manage Knowledge Workflow Actions in Lightning Experience

Model and automate processes and employ Knowledge actions in the workflows that you create. Previously, you could manage Knowledge workflow actions only in Salesforce Classic.

**Where:** This change applies to Lightning Experience only. Workflow is available in Enterprise, Performance, Developer, and Unlimited editions. Salesforce Knowledge is available in Essentials, Developer, and Unlimited editions, and for an additional cost in Professional, Performance, and Enterprise editions.



SEE ALSO:

[Salesforce Help: Create Workflow Actions for Knowledge \(can be outdated or unavailable during release preview\)](#)

## Engage Global Customers with Articles in Right-to-Left Languages

Provide articles for customers across the globe with support for right-to-left text in Knowledge.

**Where:** This change applies to Lightning Experience only. Salesforce Knowledge is available in Essentials, Developer, and Unlimited editions, and for an additional cost in Professional, Performance, and Enterprise editions.

SEE ALSO:

[Salesforce Help: Supported Languages \(can be outdated or unavailable during release preview\)](#)

## Use the Upgraded Rich Text Editor

Rich text fields in Knowledge now use CKEditor version 4.11.2.

**Where:** This change applies to Lightning Experience and Salesforce Classic. Salesforce Knowledge is available in Essentials, Developer, and Unlimited editions, and for an additional cost in Professional, Performance, and Enterprise editions.

SEE ALSO:

[Rich Text Editors Get an Upgrade](#)

## Create Knowledge Actions and Global Quick Actions

You can create an article from just about anywhere. Choose Knowledge when you build global quick actions that create a record. And, new Knowledge-to-Knowledge lookup fields let you make actions in the Buttons, Links, and Actions screen in the Object Manager.

**Where:** This change applies to Lightning Experience only. Salesforce Knowledge is available in Essentials, Developer, and Unlimited editions, and for an additional cost in Professional, Performance, and Enterprise editions.

SEE ALSO:

[Salesforce Help: Global Quick Actions \(can be outdated or unavailable during release preview\)](#)

[More Lookup Features for Lightning Knowledge](#)

[Locate Invocable Actions Quickly by Category](#)

## More Lookup Features for Lightning Knowledge

Use the lookup relationships that make sense, like master-detail relationships with Knowledge as the parent. Create an article from a lookup while creating other records. And, you can add article-to-article lookup fields so you can use a related list of articles and build more types of article actions.

**Where:** This change applies to Lightning Experience only. Salesforce Knowledge is available in Essentials, Developer, and Unlimited editions, and for an additional cost in Professional, Performance, and Enterprise editions.

### Create Master-Detail Relationships

Use Knowledge as the parent in a master-detail lookup relationship. For example, you can create a master-detail relationship between articles and the records in an article review custom object. Then, you can create roll-up summaries from fields in the custom object.

### Use Cascade-Delete with Knowledge

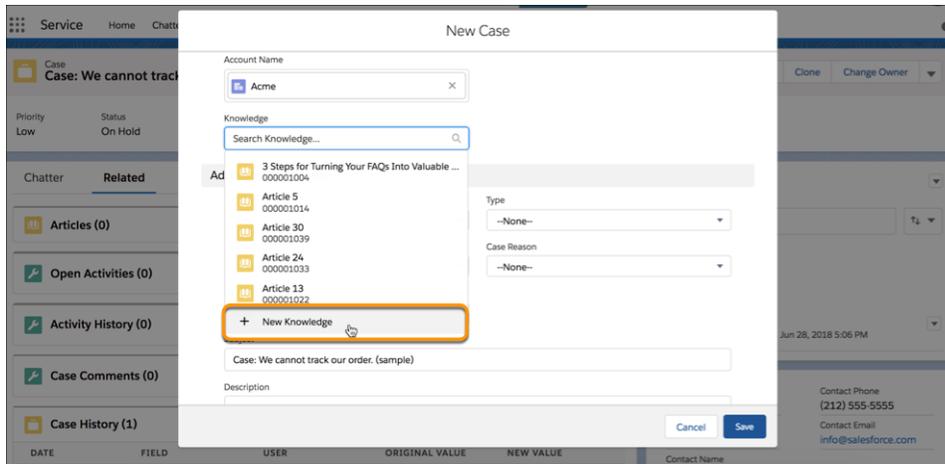
Cascade-delete removes related records in a lookup when articles are deleted. Use cascade-delete in lookups from custom objects to Knowledge. For example, you can delete records from an article review custom object when the article version is deleted. Keep in mind that lookups to Knowledge link to a specific article version. If you publish an article and don't use the option to **Publish as new version**, the previously published version is deleted. Child records in a master-detail relationship with cascade-delete enabled are therefore also deleted.

### Build Knowledge-to-Knowledge Lookups

Choose Knowledge as the target in a lookup field on the Knowledge object. Add the Knowledge related list to your page layouts. This change also lets you create new Knowledge record actions in the Buttons, Links, and Actions screen of the object manager, and create global quick actions with Knowledge.

### Create an article from the lookup while creating a related record

When you create a record with a lookup to Knowledge, you can now choose to create an article from the lookup dropdown. Once you save the article, it's linked to your new record.



## SEE ALSO:

[Salesforce Help: Object Relationships Overview \(can be outdated or unavailable during release preview\)](#)  
[Create Knowledge Actions and Global Quick Actions](#)

## Routing: Attribute-Based Routing (Beta), Additional Skills, and Enhancements to Omni-Channel Supervisor

We introduced an easier way to set up skills-based routing with attribute-based routing. We also refined skills-based routing to let you drop some skills after a specified timeout. We added buttons to Omni-Channel Supervisor to let you change agent queues and skills. We added the option to warn agents before opening a new browser page. And we made routing available through an invocable action in a flow.

## IN THIS SECTION:

### [Set Up Skills-Based Routing Without Code Using Attribute-Based Routing \(Beta\)](#)

Do you want to use skills-based routing but are daunted by the tricky setup? Attribute-based routing is an easier way to set up skills-based routing—you use clicks, not code. Skip APIs, and instead use a setup flow to associate an object's field values with the skills needed to route a work item to the right agent. It's not quite as flexible as using the API, but it's easy to set up...and very powerful.

### [Specify Which Routing Skills Are Additional](#)

Your customers expect great service and that means getting their case to the best agent as soon as possible. In skills-based routing, you can set some skills to additional. After a designated timeout period, a skill marked as additional is dropped from Omni-Channel routing. The case is then routed to the best-matched agent, even if the agent doesn't have all the skills.

### [Manage Queue and Skill Assignments for Your Agents in Omni-Channel Supervisor](#)

Respond to incoming support requests by changing queues as needed. Update agent skills to support your customers. Two buttons on the Agent tab let you manage queue assignments and skills quickly and easily.

### [Prompt Before Logging Out Agents of Other Browser Tabs](#)

To help agents avoid accidentally ending conversations in progress, you can display a prompt before logging in to Omni-Channel in the new tab or window. When an agent opens another Omni-Channel console in a different tab or window or refreshes the current tab, the agent is logged out of Omni-Channel on other consoles. Any ongoing conversations are ended. Adding a prompt can prevent these unintentional logouts.

### [Use a Flow to Route Work Items Based on Skills](#)

Do you find it cumbersome to use Apex to create PendingServiceRouting and related SkillRequirement records? Select the Routing category to add SkillsBasedRoutingInvocableAction to your flow instead of using code. This technique gives you access to the powerful skills-based routing feature within your flow. For example, build a flow that assigns work to an agent based on the agent's language and other skills that match the incoming work.

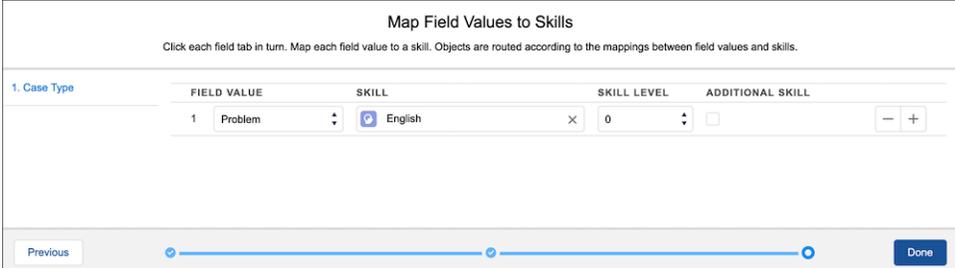
## Set Up Skills-Based Routing Without Code Using Attribute-Based Routing (Beta)

Do you want to use skills-based routing but are daunted by the tricky setup? Attribute-based routing is an easier way to set up skills-based routing—you use clicks, not code. Skip APIs, and instead use a setup flow to associate an object's field values with the skills needed to route a work item to the right agent. It's not quite as flexible as using the API, but it's easy to set up...and very powerful.

**Where:** This feature applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** As a beta feature, Attribute-Based Routing is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature.

**How:** To route work by skills, define the mappings between work-item field values and skills. Create one attribute mapping set for each object. For example, for the Case object, you could create a mapping set that includes the Case Reason, Case Type, and Escalated fields. Then map the field values to skills so that the work item is routed to the agent with the right skills to handle the case. You can also specify skill levels and whether a skill is additional and can be dropped if necessary to route the work item more quickly.



Map Field Values to Skills				
Click each field tab in turn. Map each field value to a skill. Objects are routed according to the mappings between field values and skills.				
1. Case Type	FIELD VALUE	SKILL	SKILL LEVEL	ADDITIONAL SKILL
	1 Problem	English	0	<input type="checkbox"/>

Previous Done

Routed work appears in both the Queues Backlog and the Skills Backlog in Omni-Channel Supervisor.

Attribute-based routing supports case, contact request, lead, order, social post, and custom objects. You can't use it with Chat and Messaging.

SEE ALSO:

[Specify Which Routing Skills Are Additional](#)

## Specify Which Routing Skills Are Additional

Your customers expect great service and that means getting their case to the best agent as soon as possible. In skills-based routing, you can set some skills to additional. After a designated timeout period, a skill marked as additional is dropped from Omni-Channel routing. The case is then routed to the best-matched agent, even if the agent doesn't have all the skills.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** If you set up a skill using the attribute-based routing setup flow, select **Additional Skill**. If you use the API to set up skills-based routing, use the `IsAdditional` field on the SkillRequirement object.

1. Account	FIELD VALUE	SKILL	SKILL LEVEL	ADDITIONAL SKILL
	1 GenePoint	Spanish	4	<input checked="" type="checkbox"/>

SEE ALSO:

[Set Up Skills-Based Routing Without Code Using Attribute-Based Routing \(Beta\)](#)

## Manage Queue and Skill Assignments for Your Agents in Omni-Channel Supervisor

Respond to incoming support requests by changing queues as needed. Update agent skills to support your customers. Two buttons on the Agent tab let you manage queue assignments and skills quickly and easily.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** To enable supervisors to change queue and skill assignments, select **Queues and skills** in Omni-Channel Supervisor Settings.

To adjust queue assignments, select one or more agents, and click **Change Queues**. However, you can't move agents that are assigned to queues through roles or public groups.

**Change queues**

Change assignments for 1 selected agent

1 queue is fully selected and 0 queue is partially selected

QUEUE NAME	AGENT NAME
<input type="checkbox"/> > Case queue	0 of 1 agents selected
<input type="checkbox"/> > Chat queue	0 of 1 agents selected
<input type="checkbox"/> > ABR Case queue	0 of 1 agents selected
<input checked="" type="checkbox"/> > CaseQ	1 of 1 agents selected

To adjust skill assignments, select one or more agents, and click **Change Skills**.

**Change skills**

Change assignments for 1 selected agent

0 skill is fully selected and 0 skill is partially selected

SKILL NAME	AGENT NAME	SKILL LEVEL
<input type="checkbox"/> > Spanish	0 of 1 agents selected	
<input type="checkbox"/> > French	0 of 1 agents selected	
<input type="checkbox"/> > English	0 of 1 agents selected	

To see changes to their queues and skills, agents must change to an offline status and then back to an online status.

SEE ALSO:

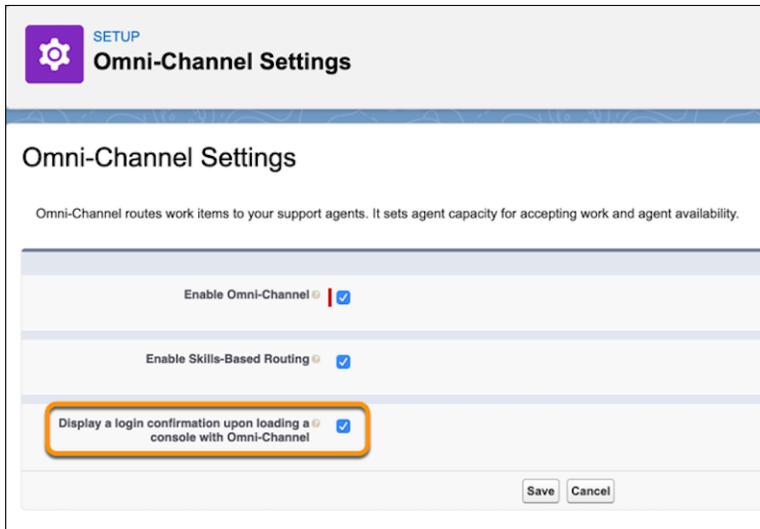
[Change Agent Queues and Skills in Omni-Channel Supervisor](#)

## Prompt Before Logging Out Agents of Other Browser Tabs

To help agents avoid accidentally ending conversations in progress, you can display a prompt before logging in to Omni-Channel in the new tab or window. When an agent opens another Omni-Channel console in a different tab or window or refreshes the current tab, the agent is logged out of Omni-Channel on other consoles. Any ongoing conversations are ended. Adding a prompt can prevent these unintentional logouts.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** In Setup, under Omni-Channel Settings, select **Display a login confirmation upon loading a console with Omni-Channel**.



## Use a Flow to Route Work Items Based on Skills

Do you find it cumbersome to use Apex to create PendingServiceRouting and related SkillRequirement records? Select the Routing category to add SkillsBasedRoutingInvocableAction to your flow instead of using code. This technique gives you access to the powerful skills-based routing feature within your flow. For example, build a flow that assigns work to an agent based on the agent's language and other skills that match the incoming work.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Locate Invocable Actions Quickly by Category](#)

## Case Management: Conditional Macros, Guided Action List Improvements, and Case Merging

We're always looking for ways to help your agents be more efficient. Merge cases into one master record. Give agents the next steps to take, including Next Best Action recommendations, in the Actions & Recommendations component (previously known as the Guided Action List). And create powerful macros in Lightning Experience that include conditional expressions.

IN THIS SECTION:

[Lightning Flow for Service: All the Right Guidance, All in One Place](#)

Show workers the logical next steps in one easy-to-find location: the Actions & Recommendations component. Previously known as the Guided Action List, we gave this component a new name to match its new capabilities. Your agents see a to-do list that includes screen flows, quick actions, and Next Best Action recommendations. And you can show the list on more Lightning pages, giving your users the guidance they need where they need it.

[Cases: Case Merging, Improvements to Files, Template Enhancement](#)

Merge up to three cases to manage duplicates. Find and use files more easily in the Files related list. Have more control over your template library.

### [Agent Productivity: Conditional Macros and Improved Quick Text Searching in Lightning Experience](#)

Help your agents work smarter, not harder. Add logic to macros so that instructions execute when certain conditions are met. And agents can find the quick text that they want fast, because searches look at message content and not just titles.

## Lightning Flow for Service: All the Right Guidance, All in One Place

Show workers the logical next steps in one easy-to-find location: the Actions & Recommendations component. Previously known as the Guided Action List, we gave this component a new name to match its new capabilities. Your agents see a to-do list that includes screen flows, quick actions, and Next Best Action recommendations. And you can show the list on more Lightning pages, giving your users the guidance they need where they need it.

### IN THIS SECTION:

#### [Put Einstein Next Best Action Recommendations at Your Agents' Fingertips](#)

Combine the top recommendations from your Einstein Next Best Action strategies with other next steps that your agents can take. When your strategies produce recommendations, they appear in a tab on the Actions & Recommendations component. You no longer need a separate Next Best Action component to show them to your agents.

#### [Stay on Track with Quick Actions in the Actions & Recommendations Component](#)

Let agents choose quick actions from the component so that they can close cases quickly without heading elsewhere. Agents can send emails, log calls, and perform other quick actions directly from the list of actions that you configure.

#### [Show More Guidance on More Pages](#)

Help users know what to do next on more types of pages. We expanded support for the Actions & Recommendations component in Lightning Experience to include products, orders, and even custom objects, just to name a few.

#### [Reorder the List to Your Liking](#)

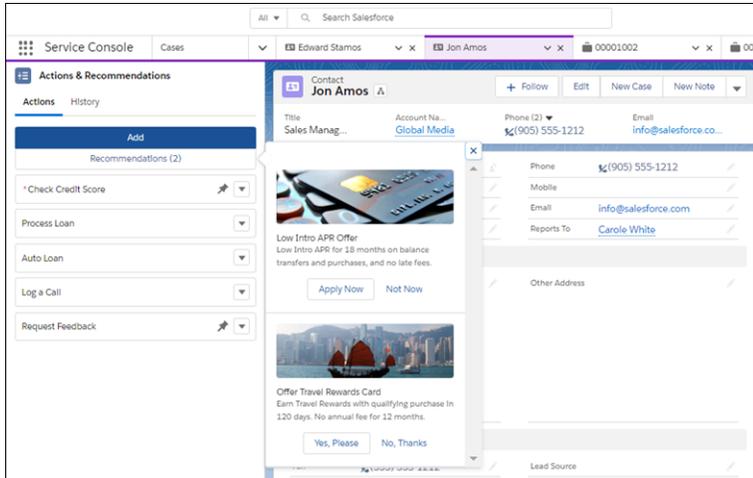
Shuffle steps in the Actions & Recommendations component into an order that aligns with your workflow. You can move items up or down within each pinned or unpinned region using a dropdown menu.

## Put Einstein Next Best Action Recommendations at Your Agents' Fingertips

Combine the top recommendations from your Einstein Next Best Action strategies with other next steps that your agents can take. When your strategies produce recommendations, they appear in a tab on the Actions & Recommendations component. You no longer need a separate Next Best Action component to show them to your agents.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Capture your business logic in Einstein Next Best Action strategies, and define recommendations that your strategies can refine into offers and actions. Create an Actions & Recommendations deployment, select strategies, and configure how recommendations appear. You can set up a deployment to show just recommendations or include quick actions, screen flows, and field service mobile flows, too. In Lightning App Builder, place the Actions & Recommendations component on a record page, and select your deployment.

**SEE ALSO:**

[Salesforce Help: Lightning Flow for Service & the Actions and Recommendations Component \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Einstein Next Best Action \(can be outdated or unavailable during release preview\)](#)

[Lightning Flow for Service Developer Guide \(English only\)](#)

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

**Stay on Track with Quick Actions in the Actions & Recommendations Component**

Let agents choose quick actions from the component so that they can close cases quickly without heading elsewhere. Agents can send emails, log calls, and perform other quick actions directly from the list of actions that you configure.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** To add quick actions to the list, create an Actions & Recommendations deployment or use Process Builder. In a deployment, select objects to provide context for object-specific quick actions. You can also include global quick actions as steps in the list. Drag the component to a record page using Lightning App Builder, and select the deployment in component properties.

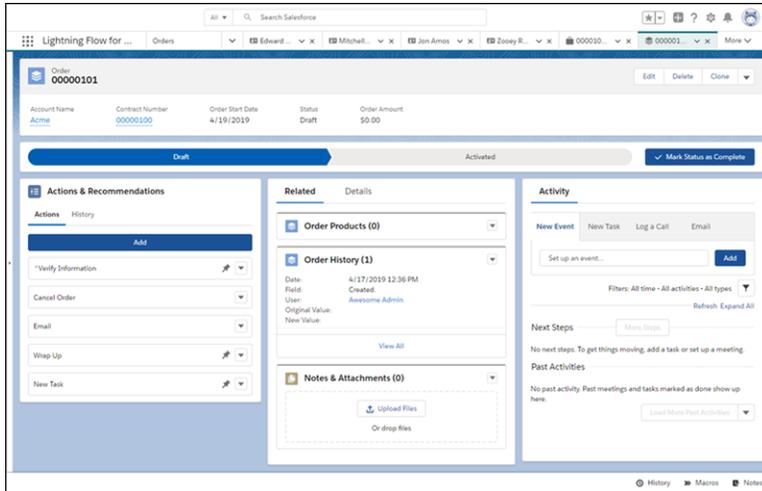
**SEE ALSO:**

[Lightning Flow for Service Developer Guide \(English only\)](#)

**Show More Guidance on More Pages**

Help users know what to do next on more types of pages. We expanded support for the Actions & Recommendations component in Lightning Experience to include products, orders, and even custom objects, just to name a few.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.



SEE ALSO:

[Lightning Flow for Service Developer Guide: Supported Apps, Channels, and Objects \(English only\)](#)

## Reorder the List to Your Liking

Shuffle steps in the Actions & Recommendations component into an order that aligns with your workflow. You can move items up or down within each pinned or unpinned region using a dropdown menu.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

## Cases: Case Merging, Improvements to Files, Template Enhancement

Merge up to three cases to manage duplicates. Find and use files more easily in the Files related list. Have more control over your template library.

IN THIS SECTION:

### [Merge Cases into a Single Record \(Beta\)](#)

If you have duplicate cases or cases that you want to merge into a single case, you can now merge two or three cases into one master record. When you merge cases, the master record is updated with your chosen field values. Most related lists, feed items, and child records are merged into the master record. The master record keeps the Chatter feeds, your values for read-only and hidden fields (except Created Date and Created By), related items, and security.

### [See Files Attached to Email Messages in the Case's Files Related List](#)

Agents can now see files that were attached to an email on any case page that includes the Files related list. Previously, files appeared in the Attachments related list along with other content, making it difficult to identify the files. Now you can get rid of your Attachments related list and use the cleaner Files related list to view the files associated with the case.

### [Easily Insert Files When Composing a Case-Related Email](#)

Agents can attach files to an email more easily. Files related to a case or attached to an email are collected under Related Files in the file selector. You can add multiple files at once. And the selector prevents you from adding duplicates.

### [Have More Control over Your Email Template Library](#)

You want every communication with your customers to be top-notch and aligned with your brand. So you created email templates for your agents to use when interacting with customers. However, managing those templates can be tricky when agents create their own. You lose track of the templates, and your agents don't know which templates are approved. We solved that problem: The Save as new template and Save template menu items are now unavailable to agents using the Email Quick Action when working on cases. Agents can still create and edit templates from the Email Templates home in Lightning Experience.

### [Quickly Create Cases Without Interrupting Your Workflow](#)

We added a Save & New button to the New Case and Edit Case windows so agents can quickly create another case without leaving the window.

### [View Case Milestones in Lightning Experience](#)

Ensure that you're meeting all your service-level agreements with the new Case Milestones related list. Track your cases' elapsed time, completion, and more—all from case layouts in Lightning Experience.

## Merge Cases into a Single Record (Beta)

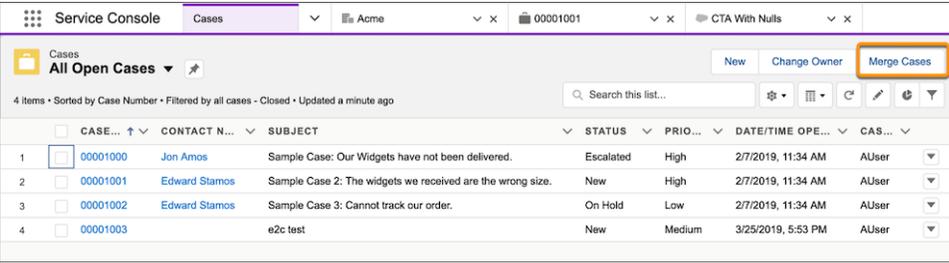
If you have duplicate cases or cases that you want to merge into a single case, you can now merge two or three cases into one master record. When you merge cases, the master record is updated with your chosen field values. Most related lists, feed items, and child records are merged into the master record. The master record keeps the Chatter feeds, your values for read-only and hidden fields (except Created Date and Created By), related items, and security.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** As a beta feature, Merge Cases is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature.

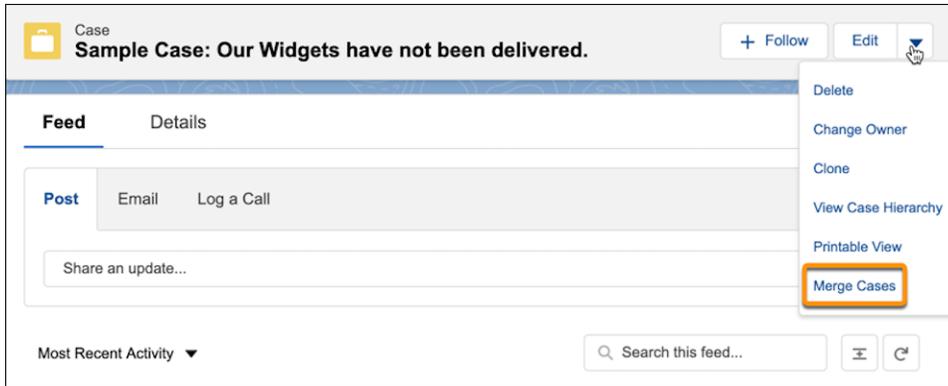
**How:** To turn on Merge Cases, from Setup, in the Quick Find box, enter *Support Settings*, and then select **Support Settings**. Select **Enable Case Merge (Beta)**.

In a Cases list view, select two or three cases, and click **Merge Cases**. You can merge cases from custom list views as well. You can't merge from the Recently Viewed list, but you can merge from the Recently Viewed Cases list.

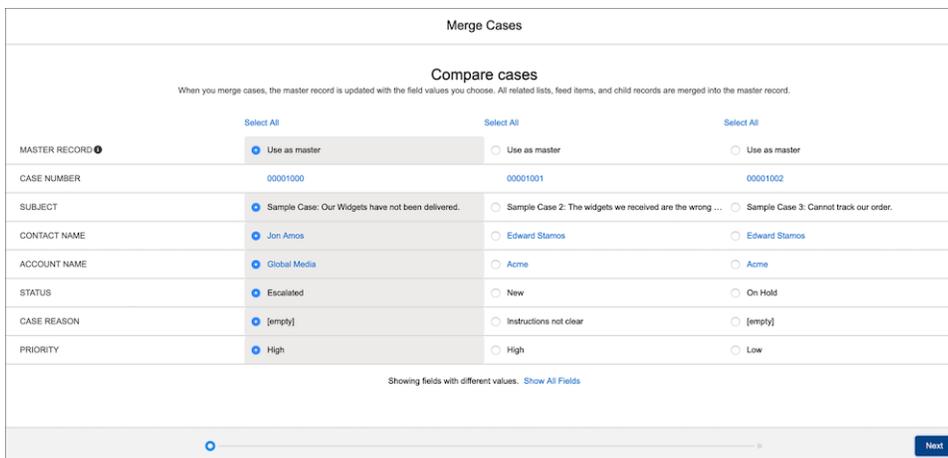


CASE...	CONTACT N...	SUBJECT	STATUS	PRIO...	DATE/TIME OPE...	CAS...
1	00001000 Jon Amos	Sample Case: Our Widgets have not been delivered.	Escalated	High	2/7/2019, 11:34 AM	AUser
2	00001001 Edward Stamos	Sample Case 2: The widgets we received are the wrong size.	New	High	2/7/2019, 11:34 AM	AUser
3	00001002 Edward Stamos	Sample Case 3: Cannot track our order.	On Hold	Low	2/7/2019, 11:34 AM	AUser
4	00001003	e2c test	New	Medium	3/25/2019, 5:53 PM	AUser

You can also start a merge from within a case and add the other cases to merge.



Select the field values to merge into the master.



SEE ALSO:

[IdeaExchange: Case Merge Button](#)

[Salesforce Help: Set Up Case Merge in Lightning Experience \(Beta\) \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Merge Duplicate Cases in Lightning Experience \(Beta\) \(can be outdated or unavailable during release preview\)](#)

## See Files Attached to Email Messages in the Case's Files Related List

Agents can now see files that were attached to an email on any case page that includes the Files related list. Previously, files appeared in the Attachments related list along with other content, making it difficult to identify the files. Now you can get rid of your Attachments related list and use the cleaner Files related list to view the files associated with the case.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Add the Files related list to the case page layout. The Source column indicates the source of the file. You could have the same file from several sources.

TITLE	OWNER	LAST MODIFIED	SIZE	SOURCE
appexchange	System	2/5/2019 1:52 PM	434KB	EmailToCase bad case
rest	Test User	12/13/2018 4:04 PM	581KB	RE: EmailToCase bad case [ ref_00DRM5vbl_500RM29H0v.ref]
rest	Test User	12/13/2018 4:04 PM	581KB	RE: EmailToCase bad case [ ref_00DRM5vbl_500RM29H0v.ref]
rest	Test User	12/13/2018 4:04 PM	581KB	00001023
Blank Diagram	Test User	12/13/2018 10:45 AM	25KB	RE: EmailToCase bad case [ ref_00DRM5vbl_500RM29H0v.ref]
Blank Diagram	Test User	12/13/2018 10:45 AM	25KB	00001023

SEE ALSO:

[Salesforce Help: Using Salesforce Files](#)

### Easily Insert Files When Composing a Case-Related Email

Agents can attach files to an email more easily. Files related to a case or attached to an email are collected under Related Files in the file selector. You can add multiple files at once. And the selector prevents you from adding duplicates.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Add the Files related list to your case page layout.

### Select Files

Owned by Me

Shared with Me

Recent

Following

Libraries

Related Files

- CTA With Nulls**  
Mar 22, 2019 • 66KB • png
- CTA Four Steps**  
Mar 22, 2019 • 84KB • png
- image (1)**  
Feb 22, 2019 • 45KB • png
- image (1)**  
Feb 22, 2019 • 45KB • png
- image (1)**  
Feb 22, 2019 • 45KB • png
- image (1)**  
Feb 22, 2019 • 45KB • png

0 of 10 files selected

## Have More Control over Your Email Template Library

You want every communication with your customers to be top-notch and aligned with your brand. So you created email templates for your agents to use when interacting with customers. However, managing those templates can be tricky when agents create their own. You lose track of the templates, and your agents don't know which templates are approved. We solved that problem: The Save as new template and Save template menu items are now unavailable to agents using the Email Quick Action when working on cases. Agents can still create and edit templates from the Email Templates home in Lightning Experience.

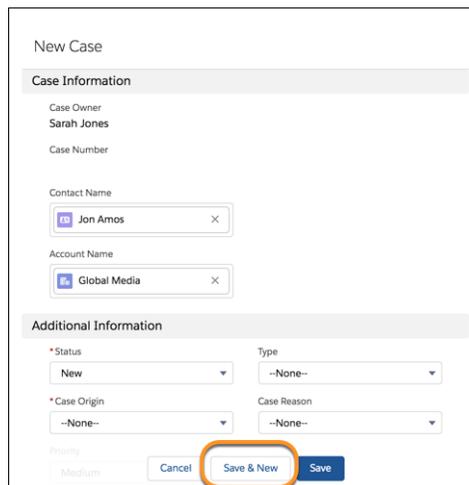
**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

## Quickly Create Cases Without Interrupting Your Workflow

We added a Save & New button to the New Case and Edit Case windows so agents can quickly create another case without leaving the window.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Developer, Performance, and Unlimited editions.

**How:** In the New Case window or in the Edit Case window, click **Save & New** to save the case and create another case.



## View Case Milestones in Lightning Experience

Ensure that you're meeting all your service-level agreements with the new Case Milestones related list. Track your cases' elapsed time, completion, and more—all from case layouts in Lightning Experience.

**Where:** This change applies to Lightning Experience in Enterprise, Performance, Unlimited, and Developer editions.

**How:** In the Object Manager, find the Case object. Edit the case layout, and drag the Case Milestones related list to the Related Lists section of the layout.

SEE ALSO:

[Salesforce Help: Using the Case Milestones Related List \(can be outdated or unavailable during release preview\)](#)

## Agent Productivity: Conditional Macros and Improved Quick Text Searching in Lightning Experience

Help your agents work smarter, not harder. Add logic to macros so that instructions execute when certain conditions are met. And agents can find the quick text that they want fast, because searches look at message content and not just titles.

### IN THIS SECTION:

#### [Power Up Your Macros with Conditional Instructions](#)

Help agents be more productive with smart macros in Lightning Experience that include conditional instructions. Add expressions that control which instructions execute.

#### [Find the Right Quick Text Fast](#)

Search the body of all quick texts in Lightning Experience and find the right one fast. Previously, a quick text search looked only at titles.

#### [Locate Invocable Actions Quickly by Category](#)

Invocable actions and quick actions are declarative building blocks for flows. To make them easier to find, we categorized them. For Service Cloud, invocable actions include `GenerateWorkOrderInvocableAction.java`, `InvocableArchiveKnowledgeArticles.java`, and `SkillsBasedRoutingInvocableAction`.

#### [Embed Live Quip Documents and Chat Rooms Directly in Service Cloud](#)

Resolve cases faster by centralizing your case data, escalations, and team communications in an integrated and collaborative experience in Service Cloud. Use Service Cloud–specific Quip document templates to get everyone on the same page and turn chaos into process so you can better support your customers.

## Power Up Your Macros with Conditional Instructions

Help agents be more productive with smart macros in Lightning Experience that include conditional instructions. Add expressions that control which instructions execute.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** In Macro Builder, build conditional logic using IF, ELSEIF, and ELSE expressions. Add instructions that execute when any or all of the conditions in an expression are met. To create more complex logic, you can group conditions and add multiple ELSEIF statements.

SEE ALSO:

[Salesforce Help: Add Logic to Macros in Lightning Experience \(can be outdated or unavailable during release preview\)](#)

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Search the body of all quick texts in Lightning Experience and find the right one fast. Previously, a quick text search looked only at titles.

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## Locate Invocable Actions Quickly by Category

Invocable actions and quick actions are declarative building blocks for flows. To make them easier to find, we categorized them. For Service Cloud, invocable actions include `GenerateWorkOrderInvocableAction.java`, `InvocableArchiveKnowledgeArticles.java`, and `SkillsBasedRoutingInvocableAction`.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** When you're building your flow, drag the Action flow element onto the Flow Builder canvas. Under Filter By, select the category you want. Use search to find the invocable action or quick action you want to add to your flow, or view a list of all available for.

SEE ALSO:

[Find Actions by Type or Category When Building Flows](#)

[Use a Flow to Route Work Items Based on Skills](#)

## Embed Live Quip Documents and Chat Rooms Directly in Service Cloud

Resolve cases faster by centralizing your case data, escalations, and team communications in an integrated and collaborative experience in Service Cloud. Use Service Cloud–specific Quip document templates to get everyone on the same page and turn chaos into process so you can better support your customers.

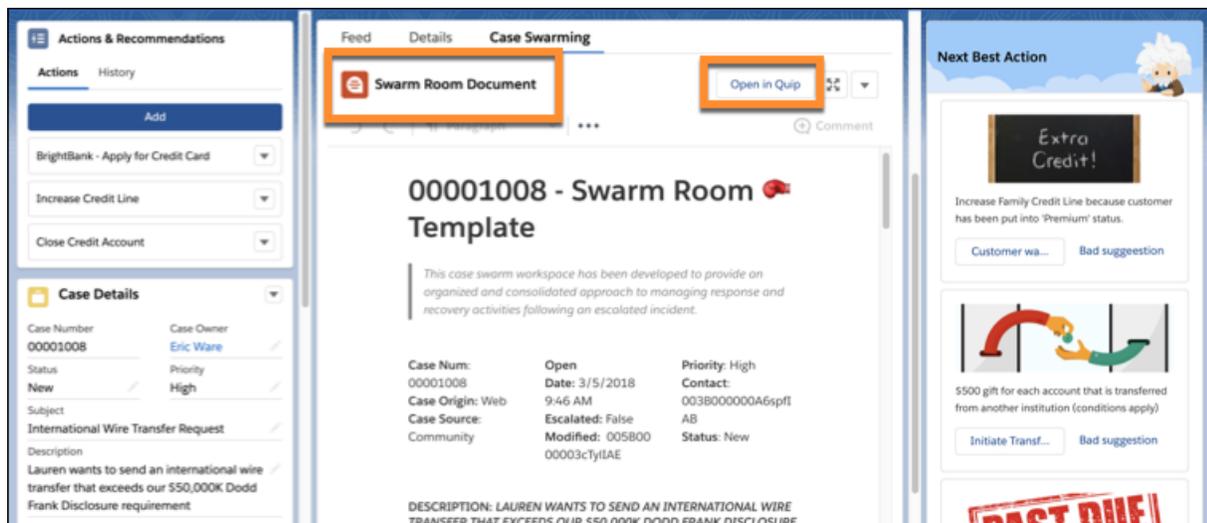
**Where:** This change applies to Lightning apps in Lightning Experience in Essentials, Professional, Performance, Unlimited, and Developer editions.

**Who:** This change is available with a Quip Enterprise plan or free trial.

**How:** If you haven't already done it, connect Salesforce to Quip. In Setup, enter *Quip* in the Quick Find box, and follow the steps. Then launch Lightning App Builder, and add the Quip Document component to the Service page that you want to update.

You have a few options for how the document component behaves. For example, you can have the same Quip document attached to each record. Or you can use mail-merge syntax to auto-fill new documents from a template. You can even use different templates for different records. You can also assign a custom label to the embedded Quip document.

Here's an example of a Quip document embedded in the Case Swarming tab of a service case. Its custom label is Swarm Room Document. You can edit the document directly in Salesforce or open it in Quip.



SEE ALSO:

[Quip Support: The Quip Document Component for Salesforce: A Guide for Users](#)

[Quip Support: The Quip Document Component for Salesforce: A Guide for Admins](#)

[Quip Templates](#)

[Quip for Service Webinars](#)

## Analytics: Row-Level Formulas (Beta), Report Notifications, Templates with Predictive Analytics, Einstein Predictions Service

Bring the power of row-level formulas to every record in a report. Set conditions in reports, and receive emails when the conditions are met. Add predictive analytics to your apps with templates. Embed Einstein Discovery predictions anywhere. And much more!

### IN THIS SECTION:

[Reports and Dashboards: Row-Level Formulas \(Beta\), Report Results Search, Subscription Conditions](#)

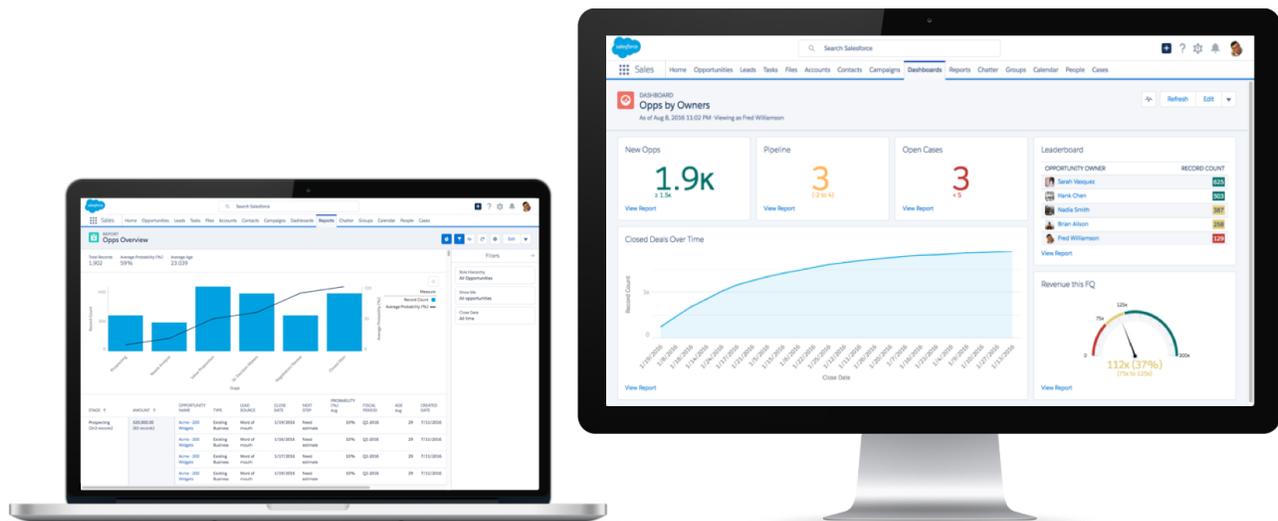
Experience new ways to analyze your data with reports and dashboards. Row-level formulas (beta) bring the evaluative power of formulas to every record in a report. Search for specific data in a report, and make it stand out with conditional formatting. Need to know when the sum of closed opportunities hits \$1,000,000 or the count of new cases exceeds 100? Subscribe to reports, set conditions, and receive emails when these conditions are met.

[Einstein Analytics: App Templates with Predictive Analytics, Einstein Predictions Service, Customizable Video Onboarding](#)

Increase your app's IQ with the Einstein Discovery predictive capability built into app templates. Embed Einstein Discovery predictions anywhere. Tailor users' onboarding journeys with your own in-dashboard videos.

## Reports and Dashboards: Row-Level Formulas (Beta), Report Results Search, Subscription Conditions

Experience new ways to analyze your data with reports and dashboards. Row-level formulas (beta) bring the evaluative power of formulas to every record in a report. Search for specific data in a report, and make it stand out with conditional formatting. Need to know when the sum of closed opportunities hits \$1,000,000 or the count of new cases exceeds 100? Subscribe to reports, set conditions, and receive emails when these conditions are met.



### IN THIS SECTION:

[Reports: Row-Level Formulas \(Beta\), Search, Lightning Historical Tracking](#)

Row-level formulas (beta) offer a powerful way to calculate new values for every record in reports. After running a report, it's easier to find specific data with report results search. Track changes to data over time by creating and editing historical tracking reports in Lightning Experience.

### [Dashboards: Sorting Overhauled, Table Subtotals, Table Column Resizing](#)

To improve presentation and consumption of dashboard data, we're introducing new organizational and summary tools. Two-level sorting expands sorting options for every dashboard component, enabling dashboard builders to better curate data. Subtotals on Lightning table components provide summaries of displayed data. And for those times when data in a Lightning table column looks a bit cramped, go ahead and open it up by resizing it.

### [Subscriptions: Better Charts on Dashboard Subscription Emails and Conditions for Report Notifications](#)

You can subscribe to a report and receive emails only when specified conditions are met. Plus, dashboard subscription emails look better than ever with more feature-rich charts.

## Reports: Row-Level Formulas (Beta), Search, Lightning Historical Tracking

Row-level formulas (beta) offer a powerful way to calculate new values for every record in reports. After running a report, it's easier to find specific data with report results search. Track changes to data over time by creating and editing historical tracking reports in Lightning Experience.

### IN THIS SECTION:

#### [Evaluate Each Record in Reports with Row-Level Formulas \(Beta\)](#)

Answering business questions sometimes means making a calculation on every row in a report. With row-level formulas, you don't need to export report data to a spreadsheet or ask an admin to create a one-off custom formula field. Instead, write a row-level formula directly in the Lightning report builder.

#### [Make Data Stand Out with Conditional Formatting \(Generally Available\)](#)

Keep your eyes on the opportunities and accounts that matter most. For insights in a flash, add conditional formatting to summary or matrix reports in Lightning Experience to highlight fields that match specific criteria. This feature, now generally available, adds support for conditional formatting on reports deployed or retrieved with managed packages.

#### [Find Records Faster with Search](#)

Wading through an entire report to find just the records you're interested in can be time-consuming. The report table search makes its entrance so that you spend less time looking for the information you need.

#### [Work with Formulas in the Fields Pane](#)

You can now create, edit, and delete summary formulas directly from the top of the fields pane. After removing a summary formula column, it's stored in the fields pane so you can quickly add it back later. While row-level formulas are in beta, you can only view them.

#### [Create Historical Tracking Reports In Lightning](#)

You no longer need to switch back to Salesforce Classic to create meaningful reports on how your business is changing. Create, edit, and view all your historical tracking reports in Lightning Experience. Historical tracking reports (also called historical trending reports) help you capture changes in key business metrics over time.

#### [Export Joined Reports with Formatting](#)

You can now export joined reports with formatting. Export formatted joined reports to preserve their easy-to-read layout in spreadsheet editing software. Joined reports always export as a Formatted Report in `.xlsx` format. Details Only, other file formats, and other encodings are not supported.

#### [View Content in Report Tables Better](#)

Do you find it difficult to view all of the content in some fields? Now, report rows are better sized to fit their content. Long-text area fields, such as notes, show line breaks correctly and images display fully.

### Say Goodbye to the Small Formula Editor

Join us in bidding a fond farewell to the small formula editor. When creating or editing report formulas, the larger, more-feature-rich editor is now the only editor. Although the small editor offered a quick way to add or edit a formula, many of the best formula writing features weren't available. With references for fields and functions, the large editor helps you write powerful formulas fast.

## Evaluate Each Record in Reports with Row-Level Formulas (Beta)

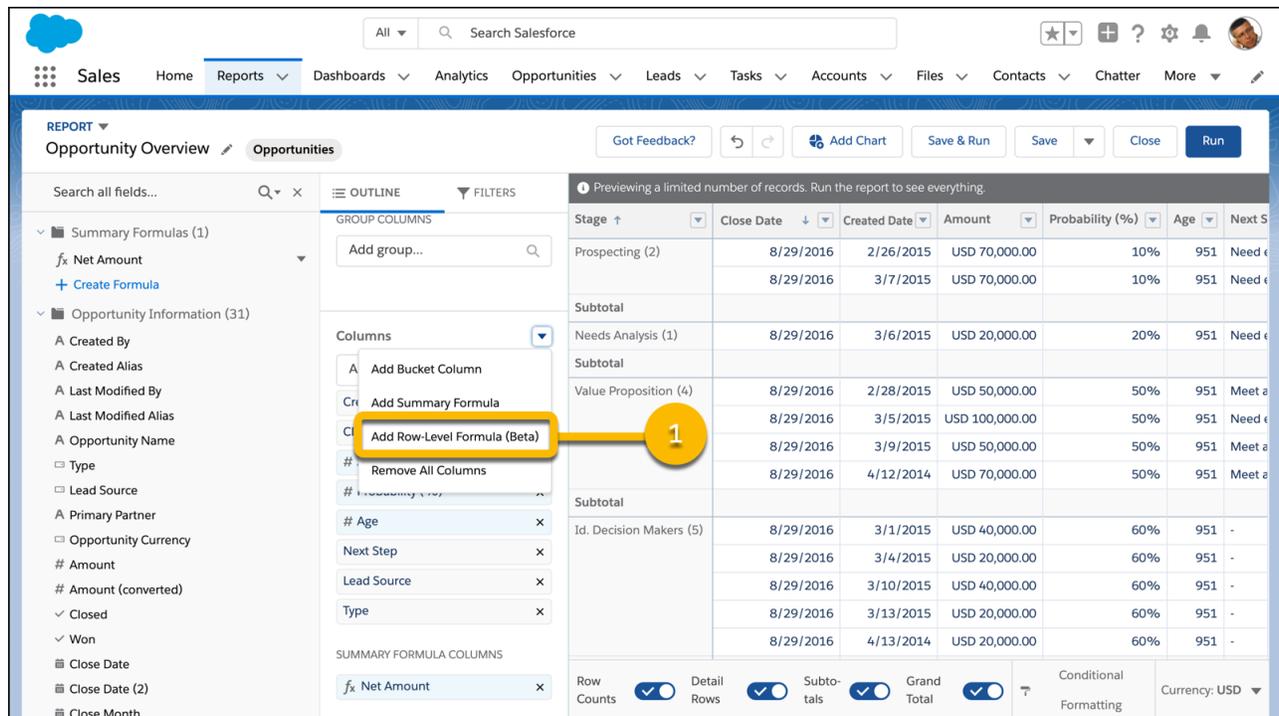
Answering business questions sometimes means making a calculation on every row in a report. With row-level formulas, you don't need to export report data to a spreadsheet or ask an admin to create a one-off custom formula field. Instead, write a row-level formula directly in the Lightning report builder.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** As a beta feature, row-level formulas is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or about it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for row-level formulas in Lightning Experience in the [Trailblazer Community](#).

**Why:** For example, write a row-level formula on an opportunity report to calculate the number of days between each opportunity's created date and close date. To do so, subtract the created date from the close date.

Add a row-level formula from the Columns section of the Overview pane by clicking  > **Add Row-Level Formula (Beta)** (1).



The screenshot displays the Salesforce Lightning Report Builder interface for an "Opportunity Overview" report. The "Columns" section is expanded, and the "Add Row-Level Formula (Beta)" option is highlighted with a yellow box and a circled "1". The report table shows columns for Stage, Close Date, Created Date, Amount, Probability (%), Age, and Next Step. The table contains data for various opportunity stages like "Prospecting", "Needs Analysis", "Value Proposition", and "Id. Decision Makers".

Stage	Close Date	Created Date	Amount	Probability (%)	Age	Next S
Prospecting (2)	8/29/2016	2/26/2015	USD 70,000.00	10%	951	Need e
	8/29/2016	3/7/2015	USD 70,000.00	10%	951	Need e
Subtotal						
Needs Analysis (1)	8/29/2016	3/6/2015	USD 20,000.00	20%	951	Need e
Subtotal						
Value Proposition (4)	8/29/2016	2/28/2015	USD 50,000.00	50%	951	Meet a
	8/29/2016	3/5/2015	USD 100,000.00	50%	951	Need e
	8/29/2016	3/9/2015	USD 50,000.00	50%	951	Meet a
	8/29/2016	4/12/2014	USD 70,000.00	50%	951	Meet a
Subtotal						
Id. Decision Makers (5)	8/29/2016	3/1/2015	USD 40,000.00	60%	951	-
	8/29/2016	3/4/2015	USD 20,000.00	60%	951	-
	8/29/2016	3/10/2015	USD 40,000.00	60%	951	-
	8/29/2016	3/13/2015	USD 20,000.00	60%	951	-
	8/29/2016	4/13/2014	USD 20,000.00	60%	951	-

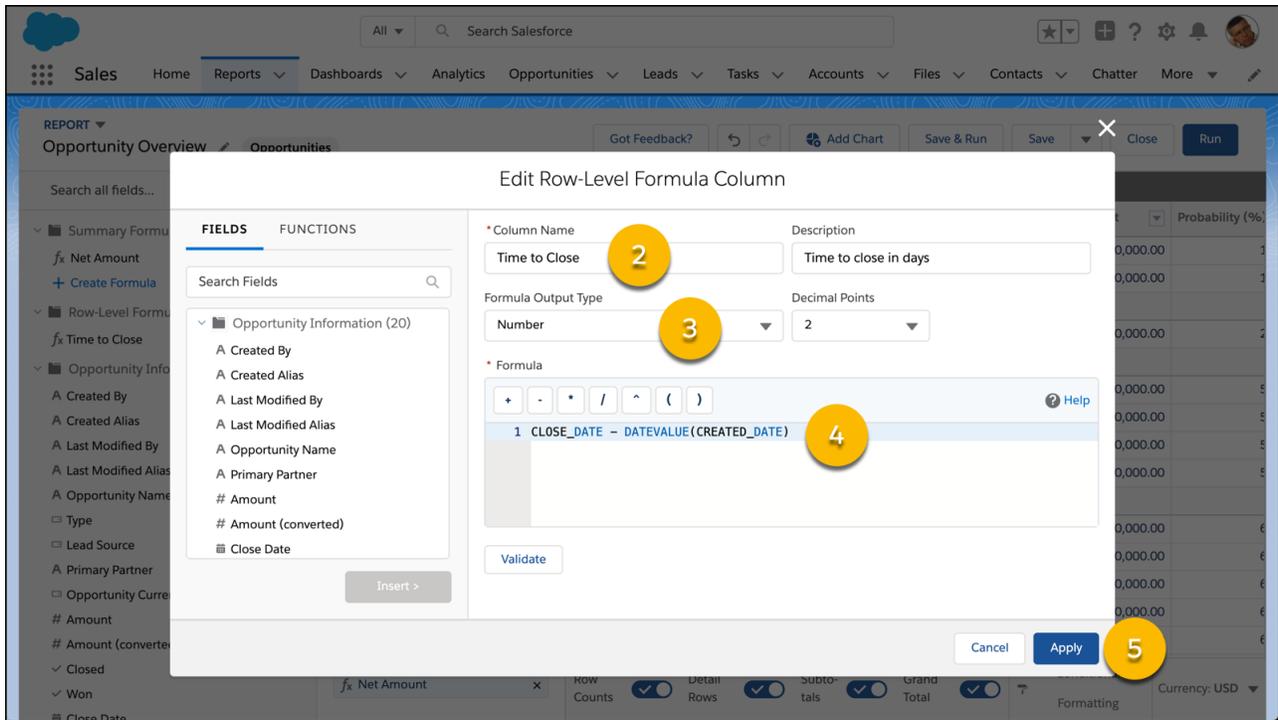
Name the row-level formula column *Time to Close* (2). Choose **Number** as the Formula Output Type (3). Then write the formula (4):

```
CLOSE_DATE - DATEVALUE(CREATED_DATE)
```

 **Note:**

- `CLOSE_DATE` and `CREATED_DATE` are the API names of the Close Date and Created Date fields. Formulas work with the API names of fields, not the display names. The easiest way to enter the API name of a field is to search for it from the fields menu, select it, and click **Insert >**.
- The two fields' values must have a matching data type so that we can subtract one from the other. Because `CLOSE_DATE`'s data type is `date` and `CREATED_DATE`'s data type is `datetime`, we use the `DATEVALUE()` function to convert `CREATED_DATE` to a `date`.

Click **Apply** (5).



The screenshot shows the 'Edit Row-Level Formula Column' dialog box in Salesforce. The dialog is titled 'Edit Row-Level Formula Column' and is overlaid on a report titled 'Opportunity Overview'. The dialog has a 'FIELDS' tab selected, showing a list of fields under 'Opportunity Information (20)'. The 'Formula' field contains the text '1 CLOSE\_DATE - DATEVALUE(CREATED\_DATE)'. The 'Column Name' field is 'Time to Close', the 'Description' is 'Time to close in days', the 'Formula Output Type' is 'Number', and the 'Decimal Points' is '2'. The 'Apply' button is highlighted with a yellow circle containing the number 5.

The row-level formula appears as a column on the report (6).

The screenshot shows a Salesforce report interface. On the left, the 'Columns' pane lists various fields, with 'fx Time to Close' selected and highlighted by a yellow box. A yellow circle with the number '6' is positioned next to it, with a line pointing to the 'fx Time to Close' column header in the report table. The report table displays columns for Stage, Close Date, Created Date, fx Time to Close, Amount, and Probability (%). The data is grouped by Stage, with subtotals for each group. The 'fx Time to Close' column is highlighted with a yellow box in the table as well.

Stage	Close Date	Created Date	fx Time to Close	Amount	Probability (%)
Prospecting (2)	8/29/2016	2/26/2015	550.00	USD 70,000.00	3
	8/29/2016	3/7/2015	541.00	USD 70,000.00	3
Subtotal					
Needs Analysis (1)	8/29/2016	3/6/2015	542.00	USD 20,000.00	2
Subtotal					
Value Proposition (4)	8/29/2016	2/28/2015	548.00	USD 50,000.00	5
	8/29/2016	3/5/2015	543.00	USD 100,000.00	5
Id. Decision Makers (5)	8/29/2016	3/9/2015	539.00	USD 50,000.00	5
	8/29/2016	4/12/2014	870.00	USD 70,000.00	5
Subtotal					
Id. Decision Makers (5)	8/29/2016	3/1/2015	547.00	USD 40,000.00	6
	8/29/2016	3/4/2015	544.00	USD 20,000.00	6
	8/29/2016	3/10/2015	538.00	USD 40,000.00	6
	8/29/2016	3/13/2015	535.00	USD 20,000.00	6
	8/29/2016	4/13/2014	869.00	USD 20,000.00	6

**How:** Enable the row-level formulas beta feature from Setup. Enter *Reports* in the Quick Find box, then click **Reports and Dashboards Settings**. Select **Enable Row-Level Formulas (Lightning Experience Only)** and click **Save**.

SEE ALSO:

[IdeaExchange: Custom calculations on reports - at the row level \(not summary\)](#)

## Make Data Stand Out with Conditional Formatting (Generally Available)

Keep your eyes on the opportunities and accounts that matter most. For insights in a flash, add conditional formatting to summary or matrix reports in Lightning Experience to highlight fields that match specific criteria. This feature, now generally available, adds support for conditional formatting on reports deployed or retrieved with managed packages.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** Want to know at a glance which accounts have opportunities valued between \$100,000 and \$500,000? Or, keep a close watch on the total number of open cases per support agent? In Lightning Experience, you can now apply up to five formatting rules to a report. And, you can define up to three bins for each rule you apply. You can use the standard palette or custom colors for each bin.

**How:** Open a summary or matrix report with at least one measure or summary in edit mode. Click **Conditional Formatting**. In Add Conditional Formatting Rule, select a summary or custom summary formula field that serves as a KPI for your business. You can also apply conditional formatting to grand totals in a matrix report. Set the breakpoint values and the range colors for each bin. When you're ready to apply the conditional formatting rule, click **Done**.

The screenshot shows a Salesforce report interface. On the left, a dialog box titled "Add Conditional Formatting Rule" is open, showing a table for defining rules based on the "Sum of Amount" field. The table has columns for "RANGE" and "BACKGROUND COLOR".

RANGE	BACKGROUND COLOR
<= 140000	Red
> 140,000 to 500000	Orange
> 500,000	Green

On the right, a report table is displayed with columns: Account Name, Opportunity Name, Opportunity Owner, Created Date, and Amount. The table includes subtotals and is filtered by "Global Retail (3)", "Global Media (7)", and "Acme (5)". The "Amount" column is highlighted in yellow for several rows, indicating search results. The "Grand Total" row is highlighted in green.

Account Name	Opportunity Name	Opportunity Owner	Created Date	Amount
Acme	Acme - 200 Widgets	Brian Alison	8/29/2016	USD 20,000.00
Subtotal				USD 400,000.00
Global Retail (3)	salesforce.com - 1,000 Widgets	Brian Alison	8/29/2016	USD 100,000.00
	salesforce.com - 500 Widgets	Sarah Vasquez	8/29/2016	USD 50,000.00
	salesforce.com - 2,000 Widgets	Brian Alison	8/29/2016	USD 20,000.00
Subtotal				USD 170,000.00
Global Media (7)	salesforce.com - 5000 Widgets	Hank Chen	8/29/2016	USD 500,000.00
	salesforce.com - 1,000 Widgets	Hank Chen	8/29/2016	USD 100,000.00
	Fred	Hank Chen	8/29/2016	USD 70,000.00
	Fred	Fred Williamson	8/29/2016	USD 70,000.00
	salesforce.com - 2,000 Widgets	Sarah Vasquez	8/29/2016	USD 20,000.00
	Acme - 200 Widgets	Hank Chen	8/29/2016	USD 20,000.00
	salesforce.com - 2,000 Widgets	Hank Chen	8/29/2016	USD 20,000.00
Subtotal				USD 800,000.00
Acme (5)	salesforce.com - 5000 Widgets	Sarah Vasquez	8/29/2016	USD 500,000.00
	Acme - 1,200 Widgets	Nadia Smith	8/29/2016	USD 140,000.00
	salesforce.com - 500 Widgets	Hank Chen	8/29/2016	USD 50,000.00

At the bottom of the report, there are toggle switches for "Row Counts", "Detail Rows", "Subtotals", and "Grand Total", all of which are currently turned on.

### Find Records Faster with Search

Wading through an entire report to find just the records you're interested in can be time-consuming. The report table search makes its entrance so that you spend less time looking for the information you need.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** In a tabular, summary, or matrix report, click the search icon in the report's run page. Enter the search string in the search field. The search string can contain alphanumeric and special characters. For ease of viewing, report headers and fields containing the search string are highlighted in yellow. The search field also gives you a count of the number of search results. Use the **Previous** and **Next** buttons to navigate through the results.

REPORT: OPPORTUNITIES  
**Opportunities**

Trend Add Chart

Global 1/876

Opportunity Owner	Account Name	Amount	Close Date	Created Date	fx Time
Hank Chen	Global Media	USD 70,000.00	2/26/2015	8/29/2016	
Nadia Smith	Acme	USD 500,000.00	2/27/2015	8/29/2016	
Nadia Smith	Acme	USD 50,000.00	2/28/2015	8/29/2016	
Brian Alison	Acme	USD 40,000.00	3/1/2015	8/29/2016	
Brian Alison	salesforce.com	USD 140,000.00	3/2/2015	8/29/2016	
Brian Alison	salesforce.com	USD 70,000.00	3/3/2015	8/29/2016	
Fred Williamson	Global Media	USD 20,000.00	3/4/2015	8/29/2016	
Sarah Vasquez	Global Media	USD 100,000.00	3/5/2015	8/29/2016	
Sarah Vasquez	Global Media	USD 20,000.00	3/6/2015	8/29/2016	
Sarah Vasquez	Acme	USD 70,000.00	3/7/2015	8/29/2016	
Sarah Vasquez	Acme	USD 500,000.00	3/8/2015	8/29/2016	
Sarah Vasquez	Global Retail	USD 50,000.00	3/9/2015	8/29/2016	
Hank Chen	Global Retail	USD 40,000.00	3/10/2015	8/29/2016	
Hank Chen	salesforce.com	USD 140,000.00	3/11/2015	8/29/2016	

 Note:

- The report table search returns results only on the records that are rendered, which is a maximum of 2,000 records and 100 columns.
- For matrix reports, you can use report table search for the summary table but not the detail rows.

## Work with Formulas in the Fields Pane

You can now create, edit, and delete summary formulas directly from the top of the fields pane. After removing a summary formula column, it's stored in the fields pane so you can quickly add it back later. While row-level formulas are in beta, you can only view them.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** At the top of the fields pane, there are now two formula folders, Summary Formulas and Row-Level Formulas (Beta), each contain their namesake formulas. If the report has no row-level formulas, then the Row-Level Formulas (Beta) folder does not appear.

From the Summary Formulas folder, create (+ **Create Formula**, edit (▼) > **Edit**), delete (▼) > **Delete**), and add (▼) > **Add** summary formulas.

All formulas - summary and row-level alike - are searchable from **Search all fields...**

## Create Historical Tracking Reports In Lightning

You no longer need to switch back to Salesforce Classic to create meaningful reports on how your business is changing. Create, edit, and view all your historical tracking reports in Lightning Experience. Historical tracking reports (also called historical trending reports) help you capture changes in key business metrics over time.

**Where:** This change applies to Lightning Experience in Enterprise, Performance, Unlimited, and Developer editions.

## Export Joined Reports with Formatting

You can now export joined reports with formatting. Export formatted joined reports to preserve their easy-to-read layout in spreadsheet editing software. Joined reports always export as a Formatted Report in .xlsx format. Details Only, other file formats, and other encodings are not supported.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** While reading a joined report, or directly from the Reports tab, click (▼) > **Export** > **Export** to begin downloading the report.

## View Content in Report Tables Better

Do you find it difficult to view all of the content in some fields? Now, report rows are better sized to fit their content. Long-text area fields, such as notes, show line breaks correctly and images display fully.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

## Say Goodbye to the Small Formula Editor

Join us in bidding a fond farewell to the small formula editor. When creating or editing report formulas, the larger, more-feature-rich editor is now the only editor. Although the small editor offered a quick way to add or edit a formula, many of the best formula writing features weren't available. With references for fields and functions, the large editor helps you write powerful formulas fast.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

## Dashboards: Sorting Overhauled, Table Subtotals, Table Column Resizing

To improve presentation and consumption of dashboard data, we're introducing new organizational and summary tools. Two-level sorting expands sorting options for every dashboard component, enabling dashboard builders to better curate data. Subtotals on Lightning table components provide summaries of displayed data. And for those times when data in a Lightning table column looks a bit cramped, go ahead and open it up by resizing it.

### IN THIS SECTION:

#### [Sort Dashboard Components by Groups and Measures](#)

We overhauled sorting in dashboard components and improved how components sort data. Instead of choosing to sort by label or value, you can sort by a named group or measure. Plus, dashboard components now support two-level sorting. So you can sort a component by stage and then by sum of amount, or by average age and then record count.

#### [Show Subtotals on First-Level Groups in Lightning Tables](#)

Two-level grouping in Lightning tables is a powerful way to summarize data on a dashboard. For example, see sum of amount for opportunities grouped by type and then stage. Previously, after adding a second group, you could see the sum of amount for opportunities by the second group (stage), but not by the first group (type). Now, you can see sum of amount for both! Show subtotals to summarize data from the first-level group.

#### [Resize Columns in Lightning Tables](#)

For those times when a Lightning table column feels a bit cramped, go ahead and open it up by resizing it. You can resize columns but not rows. Resizing lasts only for the current session. So the next time you open the dashboard, the columns use their default widths.

## Sort Dashboard Components by Groups and Measures

We overhauled sorting in dashboard components and improved how components sort data. Instead of choosing to sort by label or value, you can sort by a named group or measure. Plus, dashboard components now support two-level sorting. So you can sort a component by stage and then by sum of amount, or by average age and then record count.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** To sort data in a dashboard component, edit the dashboard component.

**Edit Component**

Record Count

# Annual Revenue

Sort By

Type

Then Sort By

Sum of Annual Revenue

Industry

Record Count

Sum of Annual Revenue

Show Subtotals

Add Conditional Highlighting

**Preview**

**Accounts by Type and Industry**

Type ↑	Industry ↓	Record Count	Sum of Annual Rev.
Customer	Retail	7	GBP 107,877,000.
	Technology	10	GBP 85,816,500.0
	Biotechnology	8	GBP 55,401,500.0
	Entertainment	4	GBP 31,531,500.0
	Media	2	GBP 17,671,500.0
	Manufacturing	2	GBP 13,821,500.0
Hospitality	2	GBP 13,475,000.0	

[View Report \(Accounts by Industry\)](#)

To set the first-level sorting behavior, choose an eligible group or measure from the Sort By dropdown (1). Don't see the group or measure that you want to sort by? Make sure it's in the component. Click the arrow icon to change the sort direction between ascending () and descending () (2). To set second-level sorting behavior, choose an eligible group or measure from the Then Sort By dropdown.

**Note:**

**A Word about Sorting Behavior Past and Present**

For dashboard components created before the Summer '19 release, there is an extra sort option: **Report Grouping**. The primary purpose of the **Report Grouping** option is to provide forwards compatibility for existing dashboards without disrupting how each component is sorted. Choosing to sort by **Report Grouping** ascending () means "match the sort order of the source report". Choosing to sort by **Report Grouping** descending () means "invert the sort order of the source report".

**Report Grouping** isn't available for dashboard components created in Summer '19 and later. If you change the sort order from **Report Grouping** to a named group or measure and save the dashboard, then the **Report Grouping** sort option disappears. If a source report has a row limit filter (only available in Salesforce Classic), then the **Report Grouping** option is always available.

## Show Subtotals on First-Level Groups in Lightning Tables

Two-level grouping in Lightning tables is a powerful way to summarize data on a dashboard. For example, see sum of amount for opportunities grouped by type and then stage. Previously, after adding a second group, you could see the sum of amount for opportunities by the second group (stage), but not by the first group (type). Now, you can see sum of amount for both! Show subtotals to summarize data from the first-level group.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** To show subtotals on a Lightning table, edit the component.

Edit Component

Add measure column... 🔍

Record Count 👁️

# Amount ✕

Sort By

Type ▼ ↑

Then Sort By

Stage ▼ ↑

Display Units

Full Number ▼

Show Chatter Photos

Show Total

Show Subtotals 1

Add Conditional Highlighting

Preview

**Opportunities Grouped by Accounts**

Type ↑	Stage ↑	Sum of Amount
New Business	Needs Analysis	USD 31,143,630.00
	Value Proposition	USD 4,621,000.00
	Id. Decision Makers	USD 6,417,500.00
	Proposal/Price Quote	USD 1,686,750.00
	Closed Won	USD 5,087,500.00
	Closed Lost	USD 4,422,900.00
<b>Subtotal</b>		<b>USD 53,379,280.00</b>

2 Subtotal USD 53,379,280.00

[View Report \(Opportunities Grouped by Accounts\)](#)

Cancel Update

If necessary, group data and add measure columns. Select **Show Subtotals** (1), and click **Update**.

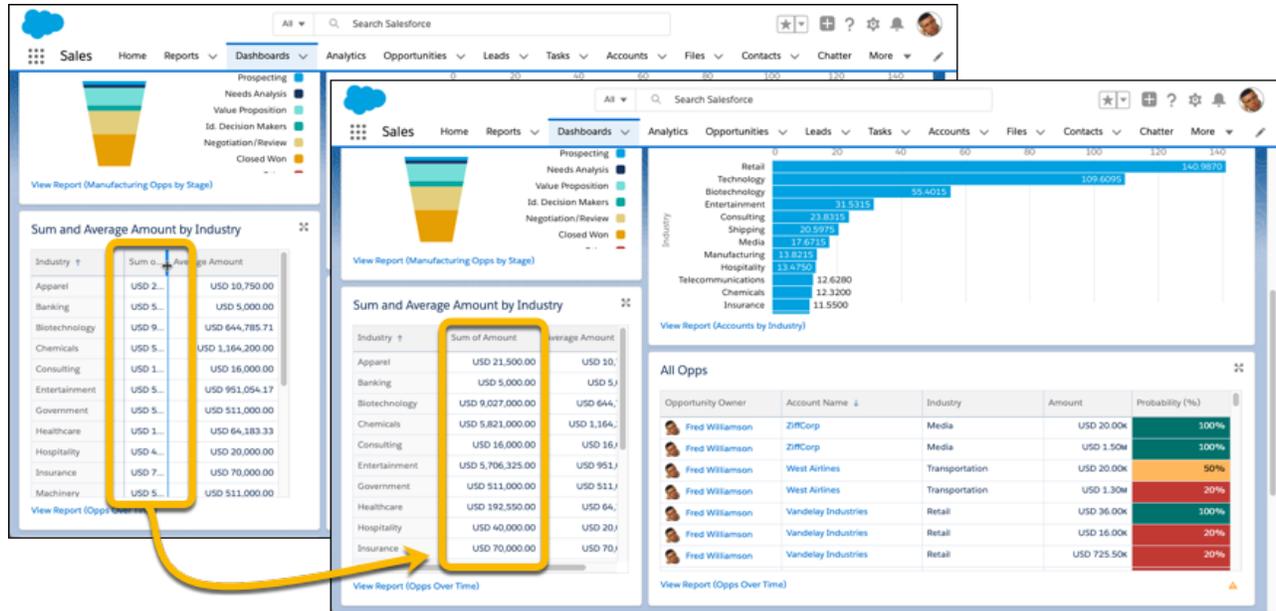
Subtotals always match the summary type of their associated metric column. If the metric column is sum of amount, the subtotal is a sum (2). For example, if the metric column is average age, the subtotal is an average.

## Resize Columns in Lightning Tables

For those times when a Lightning table column feels a bit cramped, go ahead and open it up by resizing it. You can resize columns but not rows. Resizing lasts only for the current session. So the next time you open the dashboard, the columns use their default widths.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Resize a Lightning table column from the Edit Component preview or while reading a dashboard. Click-and-drag the edge of the column you want to resize.



## Subscriptions: Better Charts on Dashboard Subscription Emails and Conditions for Report Notifications

You can subscribe to a report and receive emails only when specified conditions are met. Plus, dashboard subscription emails look better than ever with more feature-rich charts.

### IN THIS SECTION:

#### [Get Notified When Reports Conditions Are Met](#)

Don't wait to find out when an important aggregate in your Salesforce report reaches a meaningful threshold. You can now notify report subscribers about the change as soon as the report runs. For instance, you can set conditions to send email when average case age is greater than one day, or opportunity count rises above 100. Each time your report runs, the report conditions are checked. If the threshold is reached, email is sent to the specified recipients with a summary of the conditions that were met. If you select **Summary + Report**, a copy of the full report is sent along with a summary of the conditions that were met.

#### [Get Better Dashboard Charts and Tables in Subscription Emails](#)

To improve the accuracy and meaning of the information in subscription emails, we've added improved charts and tables. For instance, line charts now show values, display units, and decimal places, so you don't have to guess anymore about the numbers behind the visualizations.

## Get Notified When Reports Conditions Are Met

Don't wait to find out when an important aggregate in your Salesforce report reaches a meaningful threshold. You can now notify report subscribers about the change as soon as the report runs. For instance, you can set conditions to send email when average case age is greater than one day, or opportunity count rises above 100. Each time your report runs, the report conditions are checked. If the threshold is reached, email is sent to the specified recipients with a summary of the conditions that were met. If you select **Summary + Report**, a copy of the full report is sent along with a summary of the conditions that were met.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Add conditions to your report subscriptions, and subscribers receive an email if the selected aggregates meet the specified thresholds.

**Conditions**

In addition to subscribing, you can set up conditions on this report. You will be notified when conditions are met. This is optional.

Add conditions to this report

You will get notified when all of the conditions are met **(AND)**

* Aggregate	* Operator	* Value
Record Count ▼	Equals ▼	

[+ Add Condition](#)

**Email options**

Summary + report

Summary only

## Get Better Dashboard Charts and Tables in Subscription Emails

To improve the accuracy and meaning of the information in subscription emails, we've added improved charts and tables. For instance, line charts now show values, display units, and decimal places, so you don't have to guess anymore about the numbers behind the visualizations.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**What:** These settings are now reflected in the dashboard charts and tables in subscription emails.

Dashboard charts

- Display Units
- Decimal Places
- Show Values on Line Charts
- Combine Small Groups into "Others"
- Palettes
- Themes

Dashboard tables

- Groupings (previously indicated No Data when groupings were present)
- Themes

## Einstein Analytics: App Templates with Predictive Analytics, Einstein Predictions Service, Customizable Video Onboarding

Increase your app's IQ with the Einstein Discovery predictive capability built into app templates. Embed Einstein Discovery predictions anywhere. Tailor users' onboarding journeys with your own in-dashboard videos.

## IN THIS SECTION:

[Analytics Setup and Data Integration: More Data Sources, More Syncing, Fewer Sync Conflicts](#)

Connect to new data sources: Netsuite and Oracle Eloqua. Sync more Redshift data. Allow Analytics to clean up incremental sync conflicts.

[Analytics Prebuilt Apps: New Templates, Filter Template Picker by Tag, Predictive Analytics](#)

Create apps from new templates for managing environmental sustainability, fund-raising effectiveness, and service delivery in the public sector. Find templates more easily by selecting tags in the template picker Filter field. And increase your analytics IQ with built-in Einstein Discovery predictive capability.

[Analytics App Building: Improved Filters, Asset Sharing, Global Filter Enhancements](#)

Use filter logic in the explorer. Save time by building assets once and sharing them across apps. Enjoy more customizable global dashboard filters.

[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

Create AI models with confidence that they provide ethical and accountable predictions. Add Einstein Discovery predictions as a standard Lightning component in any record detail page.

[Extending Analytics: Einstein Prediction Service, Embedded Dashboard Filter Builder](#)

Embed Einstein Discovery predictions into any application or web page. Along with its new name, the Einstein Analytics Dashboard component has an easy way to specify dynamic, contextual filters on dashboards embedded in record pages.

[Analytics for End Users: Learn Tab, In-Dashboard Customized Onboarding, Mobile Apps](#)

Start fresh or continue your Analytics journey with Learn tab resources and adventures. Tailor users' onboarding journeys with the widget-specific Learn option. Look for new versions of Analytics for iOS and Android to coincide with the Summer '19 release.

## Analytics Setup and Data Integration: More Data Sources, More Syncing, Fewer Sync Conflicts

Connect to new data sources: Netsuite and Oracle Eloqua. Sync more Redshift data. Allow Analytics to clean up incremental sync conflicts.

## IN THIS SECTION:

[Connect to Your Data in Oracle Eloqua and NetSuite \(Generally Available\)](#)

Connect to even more enterprise application data with the Oracle Eloqua and NetSuite connectors. These features are now generally available.

[Sync More Data Through Amazon Redshift Connections](#)

For each Amazon Redshift object, you can now load up to 100 million rows or 50 GB, depending on which limit is reached first. We increased the limit from 20 million rows or 10 GB per object.

[Increase Performance When Extracting Large Volumes of Google BigQuery Data](#)

To increase performance when extracting large volumes of data, like 10 million records, use the Staging extract mode. When you extract data using this mode, the connector first stages the data in the specified Google Cloud storage path and then extracts the data from the storage path.

[Set Connection Mode for Connected Salesforce Objects in One Place](#)

To eliminate potential conflicts, you now specify the connection mode for each connected Salesforce object in one place. This feature applies only to objects that use the Salesforce Local Connector. Previously, conflicts could arise because you could set this property for the same object in multiple places. You could set the "incremental" property in the sfdcDigest node of one or more dataflows. You could also set the connection mode in the Connect page. We also added Full Sync as a connection mode option.

### [Combine Related Data in New Ways with Joins](#)

You can now use a join to combine two sets of data, including datasets and connected objects. Unlike the existing lookup feature that only returns one matching record when there are multiple matches between the sets of data, a join returns all matching records.

### [Summarize Your Data in a New Dataset with Groups and Aggregates](#)

Large datasets can be hard to digest due to the amount of information and low-grain details. You can now roll up a dataset to a higher granularity and store the results in a new dataset. For example, group daily call logs by month and add an aggregate that calculates the average call duration for each month. Store these results in a new dataset that you can join with other datasets with the same monthly grain.

### [Complete Your Data by Replacing Nulls](#)

Sometimes your data has unintentional missing values--typically these are null values. To clean up your data, you can quickly replace nulls with another value, like a default one.

### [Manipulate Strings with New Recipe Functions](#)

Use string functions to create new values in a formula field based on dimension columns and text strings. For example, you can change the casing of text strings, concatenate values from multiple columns, and replace values.

### [Capture Newly Added Fields in Recipes](#)

When you edit a recipe, you no longer miss fields that are added to the data sync after the recipe is created. New fields appear on the Columns tab, allowing you to include them in recipes. Previously, the fields didn't show up.

### [Delete Private Datasets of Other Users](#)

You can now delete datasets from another user's My Private App. To keep your org clean and avoid reaching your org's dataset row limit, delete unused datasets from inactive users.

### [Identify Nulls and Empty Strings in the Recipe Preview](#)

Sometimes your data has both null values and empty strings. Generally, an empty string is intentional and implies that a value doesn't exist. A null value can be more ambiguous, where data might have never been collected or the value doesn't actually exist. To help you distinguish nulls from empty strings, the recipe preview displays them differently.

### [Take Note of the Consistent Labels for Google Analytics and BigQuery Connections](#)

We updated the connection property labels for the Google Analytics and BigQuery connectors to match the Google Spanner connection labels. These labels also match what you see in Google.

### [Check Out the Simplified Monitor](#)

To help you quickly distinguish job types, the monitor now includes the Type column. For recipes, the monitor keeps it simple, showing you the number of operations that ran and, if applicable, errors. The progress bar in the Duration column helps you identify how much data is already processed. Dataflow and recipe names are now hyperlinks that you can click to edit their definitions.

### [Launch the Recipe Field Preview Faster](#)

To speed up the preview when you create a recipe, multi-value fields are no longer included, by default. The recipe editor hides the fields because they can cause recipes to yield unexpected results. For example, a recipe with multi-value fields could encounter query timeouts or fail to load or run.

### [Speed Up Data Loads with Concurrent Dataflow Runs](#)

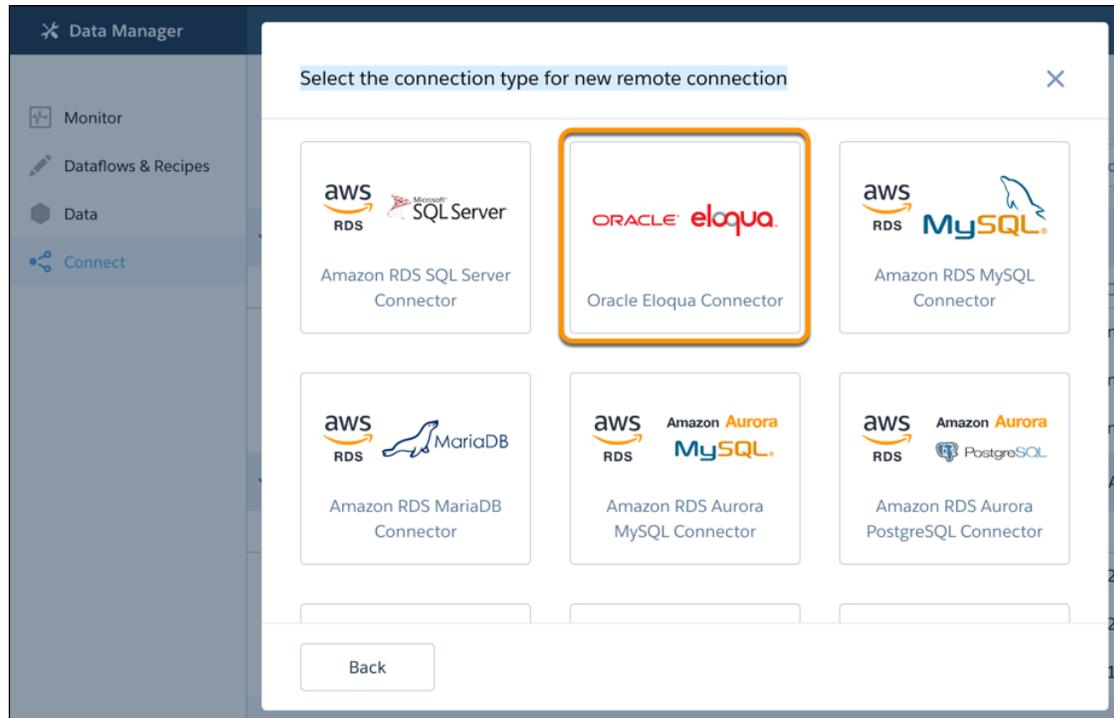
For a production org with the Einstein Analytics Plus platform license, Analytics runs up to two dataflows concurrently when multiple dataflow jobs overlap. If more than two jobs overlap, Analytics puts the remaining jobs in queue. Previously, only one dataflow job ran at a time.

## **Connect to Your Data in Oracle Eloqua and NetSuite (Generally Available)**

Connect to even more enterprise application data with the Oracle Eloqua and NetSuite connectors. These features are now generally available.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** Create connections with the Oracle Eloqua and NetSuite connectors on the Connect tab of the data manager.



## Sync More Data Through Amazon Redshift Connections

For each Amazon Redshift object, you can now load up to 100 million rows or 50 GB, depending on which limit is reached first. We increased the limit from 20 million rows or 10 GB per object.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

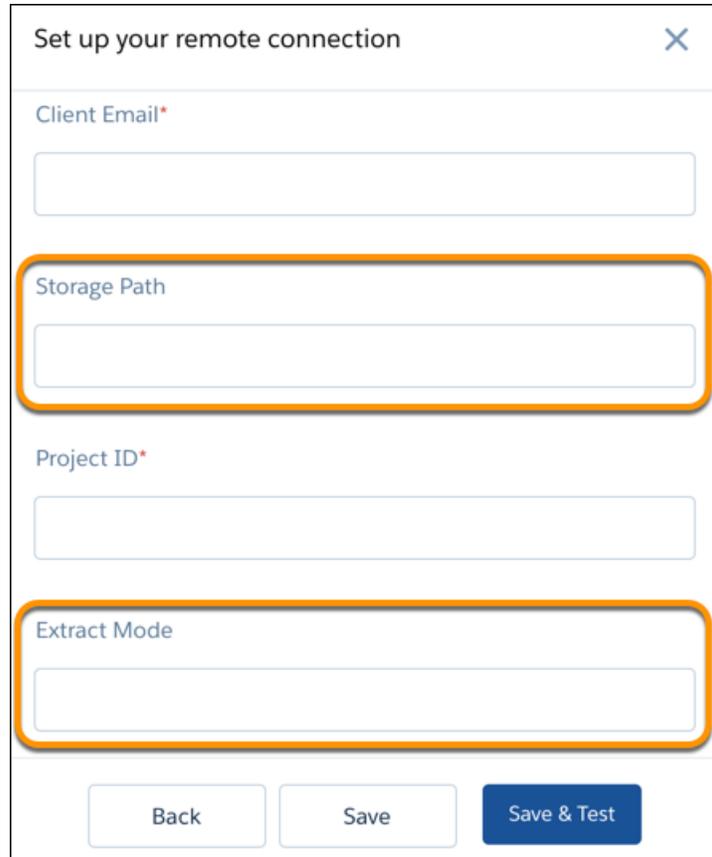
## Increase Performance When Extracting Large Volumes of Google BigQuery Data

To increase performance when extracting large volumes of data, like 10 million records, use the Staging extract mode. When you extract data using this mode, the connector first stages the data in the specified Google Cloud storage path and then extracts the data from the storage path.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** To use the staging mode, enter **Staging** in the Extract Mode connection property. Also enter the bucket name or the bucket name and folder name in the Storage Path property, like `<bucket_name>` or `<bucket_name>/<folder_name>`.

**Note:** To write files to this staging area, the user specified in Client Email must have the list, read, and write permissions on the bucket.



Set up your remote connection

Client Email\*

Storage Path

Project ID\*

Extract Mode

Back Save Save & Test

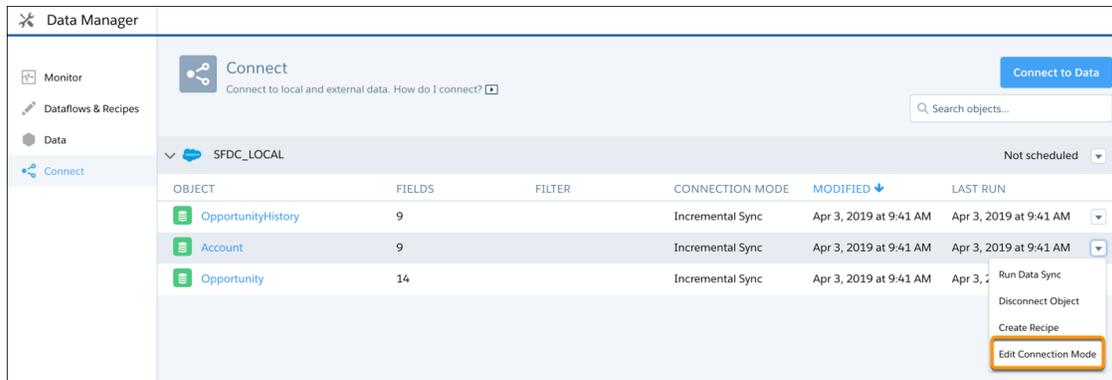
To use the original mode, leave the Extract Mode property blank or enter **Direct**.

## Set Connection Mode for Connected Salesforce Objects in One Place

To eliminate potential conflicts, you now specify the connection mode for each connected Salesforce object in one place. This feature applies only to objects that use the Salesforce Local Connector. Previously, conflicts could arise because you could set this property for the same object in multiple places. You could set the “incremental” property in the `sfdcDigest` node of one or more dataflows. You could also set the connection mode in the Connect page. We also added Full Sync as a connection mode option.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** To set the connection mode on the Connect tab of the data manager, select **Edit Connection Mode** from the dropdown for the connected object. This option doesn't appear for objects that support full sync only.



Next choose the connection mode. Notice the new Full Sync option.

### Edit connection mode

Select how Analytics syncs with the source Salesforce object when sync runs

- Incremental Sync**  
Update records to match changes in the Salesforce object since the previous sync. Because only changes are included, the sync runs faster.
- Periodic Full Sync**  
Sync records incrementally and periodically overwrite all records with records in the Salesforce object. Use this mode to prevent the data drift that can occur over time with incremental sync.
- Full Sync**  
Overwrite all records with records in the Salesforce object. Because all data is included, the sync can take longer. Use this mode with Salesforce objects that perform hard deletes on records or that contain formula fields.

Cancel Save

When you change the incremental setting for a connected object or save changes to an sfdcDigest transformation, Analytics cleans up connection mode conflicts. To eliminate conflicts, Analytics maintains a single setting for each connected object and removes the incremental settings from the dataflow JSON. If you change the incremental setting in the dataflow JSON and upload the JSON, Analytics updates the connection mode and then removes the setting from the JSON.

## Combine Related Data in New Ways with Joins

You can now use a join to combine two sets of data, including datasets and connected objects. Unlike the existing lookup feature that only returns one matching record when there are multiple matches between the sets of data, a join returns all matching records.

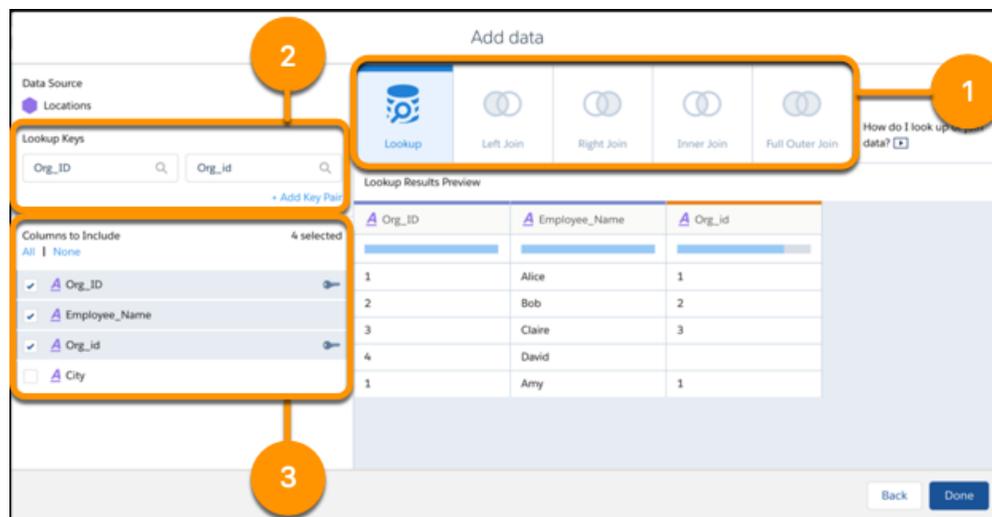
**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**When:** This feature is being added on a rolling basis during the Summer '19 release.

**Why:** Analytics offers different join types that allow you to control which records are returned.

Join Type	Description
Left join	Like a lookup, a left join includes all rows from the left and only matching rows from the right. Unlike a lookup, a join includes all matched rows in the target when multiple rows match.
Right join	A right join includes all rows from the right and only matching rows from the left. The join includes all matched rows in the target when multiple rows match.
Inner join	An inner join includes only matching rows from the left and right. The join includes all matched rows in the target when multiple rows match.
Full outer join	A full outer join includes all rows from the left and right, regardless of whether they have matches. The join includes all matched rows in the target when multiple rows match.

**How:** In a recipe, click the Add Data button (  ) and select a dataset or connected object from which you want to get more data. Then select the join type (1), specify the keys (2), and select the columns that you want to add to the recipe (3).



If the keys have duplicate values, the target dataset can become significantly larger than the input data streams. For instance, if 10,000 records on the left and 5,000 on the right share the same key value, the join creates 50 million (10,000\*5,000) records in the target dataset. To return one record for each matched key value, use a lookup instead of a join. If you must use a join, add more key fields to ensure more unique key values.

## Summarize Your Data in a New Dataset with Groups and Aggregates

Large datasets can be hard to digest due to the amount of information and low-grain details. You can now roll up a dataset to a higher granularity and store the results in a new dataset. For example, group daily call logs by month and add an aggregate that calculates the average call duration for each month. Store these results in a new dataset that you can join with other datasets with the same monthly grain.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**When:** This feature is being added on a rolling basis during the Summer '19 release.

**How:** In a recipe, click the Aggregation button (  ). To change the granularity of the data, add groups. To calculate aggregated metrics for each grouping, use the following aggregate functions on measure columns: sum, unique, avg, count, max, and min.

For example, to analyze key metrics for your accounts, group opportunities by account name, and then calculate the key metrics for each account: average age for opportunities to close, total amounts, average amounts, and total number of deals.

Aggregate data into a new table

Groups		Table Preview				Sample: 632 rows (77940 total)
AccountName__c		AccountName__c	AVG Age__c	SUM Amount	AVG Amount	Rows
	+	ixfoodservice	73	815031	135838.5	
		Resourcesoft	147.42857142857142	1871093	267299	
		Cipient Networks Inc	74.75	375656	93914	
		International Telecharge, ...	116.33333333333333	1186366	98863.83333333333	
		Alvion Technologies	112	1562215	223173.57142857142	
		MMG Technology Corpor...	154	1120519	280129.75	
		Lone Star Circuits	160.875	1791104	223888	
		Northern Data Systems	172.5	711181	118530.16666666667	
		JB Cubed	60	15501	15501	
		Sound Concepts	123.83333333333333	873568	145594.66666666666	

When you run the recipe, Analytics creates a new dataset that contains the aggregates that you specified and a grain determined by the groups. Check out the aggregates for each account.

AccountName__c	AVG Amount	Rows	AVG Age__c	SUM Amount
Tower Life Insurance Company	54,565	6	95	327,390
NetMercury	60,179	7	64	421,253
Graduate School	103,840	15	123	1,557,608
ArcelorMittal USA	15,586	4	85	62,344
Frisch's Restaurants	87,356	10	119	873,562
Yellow Transportation	151,908	10	77	1,519,089
Easylite Lit	130,287	7	102	912,015
Quark	75,000	12	81	900,010
infosnap	14,294	5	84	71,472
Candescent Technologies Corporation	107,000	5	67	535,000

## Complete Your Data by Replacing Nulls

Sometimes your data has unintentional missing values--typically these are null values. To clean up your data, you can quickly replace nulls with another value, like a default one.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**When:** This feature is being added on a rolling basis during the Summer '19 release.

**Why:** Generally, empty strings are intentional and imply that a value doesn't exist. Null values can be more ambiguous, where data might have never been collected or the value doesn't actually exist. To clarify, you can replace null values with an actual value. For example, your dashboard provides a list of sales transactions and allows users to group by product. But your underlying Sales dataset has nulls in the Product field for some transactions. To allow users to group transactions that don't have a product, you replace all nulls in the Product field with "N/A."

**How:** To replace the null values in a column, apply the Replace function on the column in a recipe, select **Search for null**, provide a replacement value, and click **Add**.

Opportunity ID	Next Step	AccountId, Annual...	Amount	Probability (%)
0060t00000DXTwFAAH	Closed!	null	500000	100
0060t00000DXTwGAAH	Closed!	null	50000	100
0060t00000DXTwHAAH	null	null	40000	60
0060t00000DXTwIAAH	Need estimate	100000000	140000	50
0060t00000DXTwJAAH	Need estimate	100000000	70000	20
0060t00000DXTwKAAH	Need estimate	100000000	20000	10
0060t00000DXTwLAAH	Close the deal!	null	100000	90
0060t00000DXTwMAAH	Meet at Widget Conferen...	null	20000	50

## Manipulate Strings with New Recipe Functions

Use string functions to create new values in a formula field based on dimension columns and text strings. For example, you can change the casing of text strings, concatenate values from multiple columns, and replace values.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**When:** This feature is being added on a rolling basis during the Summer '19 release.

**Why:** Unlike a dataflow transformation, a formula can perform multiple string manipulations at the same time. For instance, you can nest string functions to combine the sales territory and country into a single field, and then apply title casing to the values.

```
title(concat([Sales_Territory], " ", [Country]))
```

**How:** Add the string function with its input arguments in the formula. Text strings must be enclosed in double straight quotes ("This is a string. "). Column names must be enclosed in square brackets ([Opportunity\_Name]). The following example uses the `concat` function to concatenate the first and last names with a space between them.

The screenshot shows the 'Edit Transformation' dialog in Salesforce Einstein Analytics. The 'Formula' field contains the following code:

```
concat([OwnerId.FirstName], " ", [OwnerId.LastName])
```

The preview table above shows the result of this formula for three rows of data:

OwnerId.LastName	OwnerId.FirstName	formula
		Admin User
		Admin User
		Admin User

Analytics provides the following new functions.

Function	Description	Example
concat	Returns a string by concatenating the values of the specified columns and input strings. For example, to display the close date as MM-DD-YYYY, concatenate the Close_Date_Month column, Close_Date_Day column, and Close_Date_Year column, and add a dash between each of them.	<code>concat ([OwnerId.FirstName], " ", [OwnerId.LastName])</code>
lower	Returns a string with all characters from the input string in lowercase. If the input string is null, then the result is null.	<code>lower ([AccountId.Industry])</code>
ltrim	Removes the specified substring from the beginning of a string. To remove leading spaces, do not specify a substring.	<code>ltrim (" Spaces Before")</code>
replace	Replaces a substring with the specified characters. If any of the arguments are null, then the function returns null. If searchString is an empty string, the function returns null. This function is case-sensitive.	<code>replace ([Account_Name], "SFDC", "Salesforce")</code>
rtrim	Removes the specified substring from the end of a string. To remove trailing spaces, do not specify a substring.	<code>rtrim ("Spaces After ")</code>
substr	Returns characters from the string, starting at the specified position and of the specified length.	<code>substr ([Account_Id], 13, 3)</code>
title	Returns the string with the initial character of every word in uppercase and the remaining characters in	<code>title ([Opportunity_Name])</code>

Function	Description	Example
	lowercase. For example, "united states" becomes "United States."	
trim	Removes the specified substring from the beginning and end of a string. To remove leading and trailing spaces, do not specify a substring.	trim(" Spaces Before and After ")
upper	Returns the string with all characters in uppercase. If string is null, then the result is null.	upper([Owner_First_Name])

## Capture Newly Added Fields in Recipes

When you edit a recipe, you no longer miss fields that are added to the data sync after the recipe is created. New fields appear on the Columns tab, allowing you to include them in recipes. Previously, the fields didn't show up.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

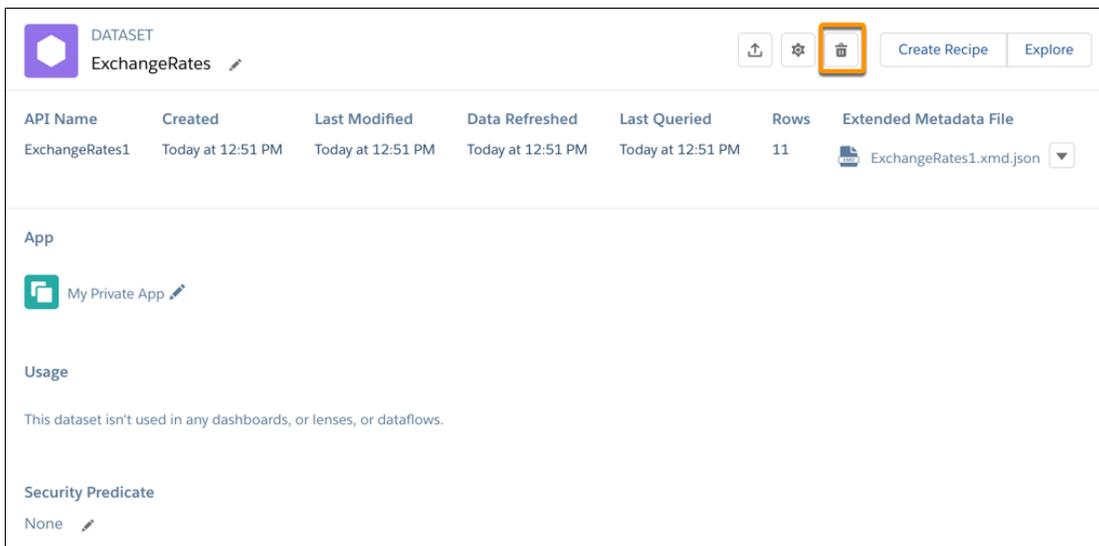
## Delete Private Datasets of Other Users

You can now delete datasets from another user's My Private App. To keep your org clean and avoid reaching your org's dataset row limit, delete unused datasets from inactive users.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Who:** Deleting private datasets is available to users with the Manage All Private Einstein Analytics user permission. By default, no users are assigned this user permission.

**How:** Before you can delete the dataset, remove references to it in dashboards and delete associated lenses. To delete the dataset, click the Delete Dataset button (  ) on the dataset edit page.



**DATASET**  
ExchangeRates

API Name: ExchangeRates1  
Created: Today at 12:51 PM  
Last Modified: Today at 12:51 PM  
Data Refreshed: Today at 12:51 PM  
Last Queried: Today at 12:51 PM  
Rows: 11  
Extended Metadata File: ExchangeRates1.xmd.json

**App**  
My Private App

**Usage**  
This dataset isn't used in any dashboards, or lenses, or dataflows.

**Security Predicate**  
None

Then click **Delete Permanently**.

## Identify Nulls and Empty Strings in the Recipe Preview

Sometimes your data has both null values and empty strings. Generally, an empty string is intentional and implies that a value doesn't exist. A null value can be more ambiguous, where data might have never been collected or the value doesn't actually exist. To help you distinguish nulls from empty strings, the recipe preview displays them differently.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** When you open a recipe, the preview now shows null values as "null" in gray italics and empty strings as blank values. Previously, nulls and empty strings appeared as blank values in the recipe preview.

The screenshot shows the 'DATASET RECIPE' interface for 'caseHistory'. A 'REPLACE' step is active, with a 'Find & Replace in 'Created Date'' action. The 'Preview' table shows columns: ID, Old Value, Created Date, Created Date searchReplace, Case ID, and New Value. The 'Old Value' column contains several 'null' entries, which are displayed in gray italics. The 'Created Date' column shows timestamps like '2019-02-12T23:22:52.0...'. The right sidebar shows a 'PROFILE' for 'Created Date searchReplace' with a bar chart indicating 5000 values (100%) and 0 missing values (0%).

## Take Note of the Consistent Labels for Google Analytics and BigQuery Connections

We updated the connection property labels for the Google Analytics and BigQuery connectors to match the Google Spanner connection labels. These labels also match what you see in Google.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** You see the new labels when you create or edit a Google Analytics or BigQuery connection.

Old Label	New Label
Service Account Key	Private Key
Service Account ID	Client Email

Set up your remote connection

Schema\*

Private Key\*

Client Email\*

Storage Path

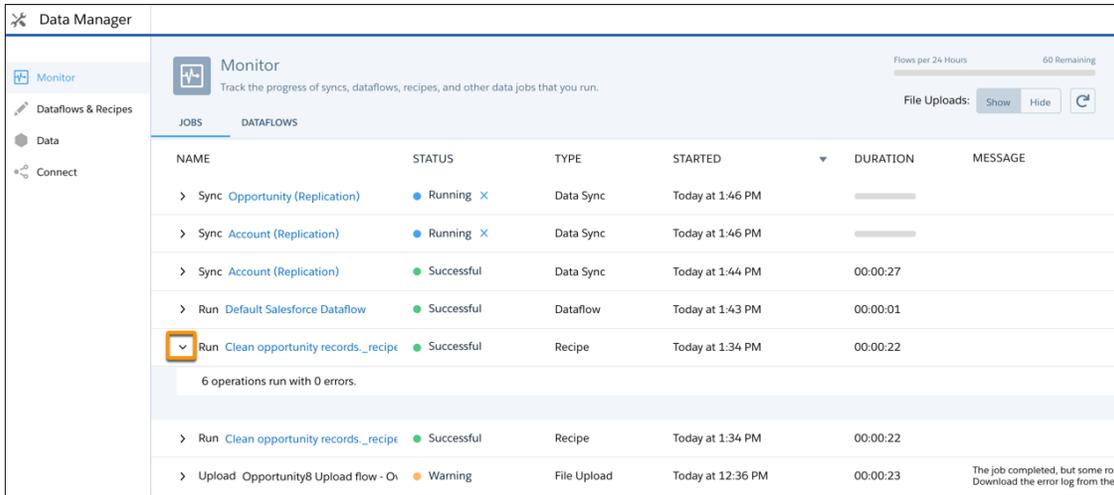
Back Save Save & Test

## Check Out the Simplified Monitor

To help you quickly distinguish job types, the monitor now includes the Type column. For recipes, the monitor keeps it simple, showing you the number of operations that ran and, if applicable, errors. The progress bar in the Duration column helps you identify how much data is already processed. Dataflow and recipe names are now hyperlinks that you can click to edit their definitions.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** Open the monitor to view the statuses of dataflow, CSV upload, recipe, and data sync jobs. Click the arrow next to a job to view the job details.

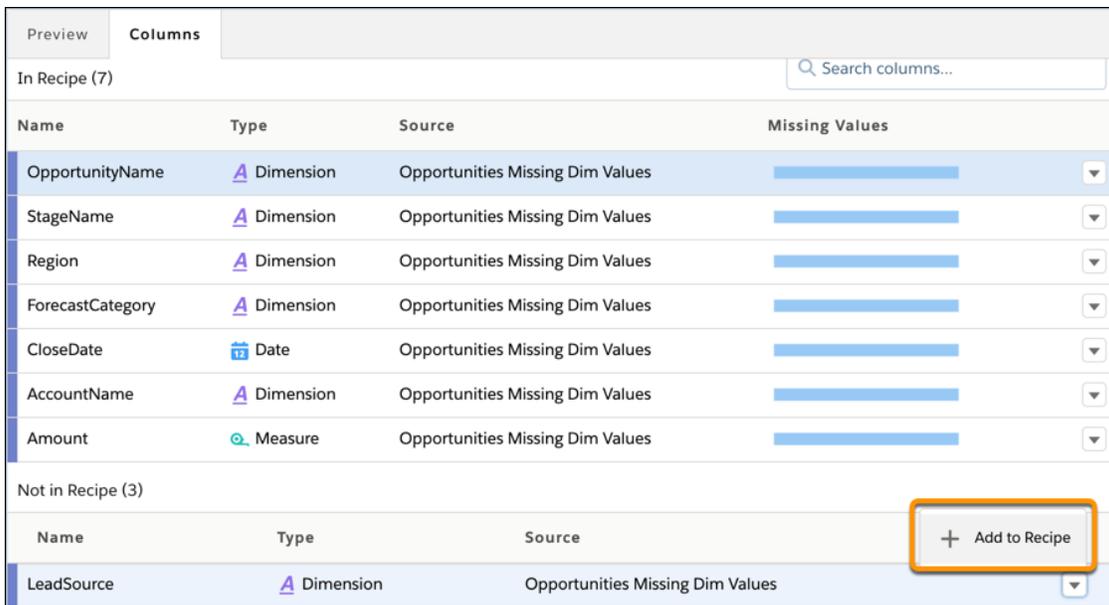


### Launch the Recipe Field Preview Faster

To speed up the preview when you create a recipe, multi-value fields are no longer included, by default. The recipe editor hides the fields because they can cause recipes to yield unexpected results. For example, a recipe with multi-value fields could encounter query timeouts or fail to load or run.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** If needed, you can manually add these fields to a recipe from the Columns tab in the recipe editor.



### Speed Up Data Loads with Concurrent Dataflow Runs

For a production org with the Einstein Analytics Plus platform license, Analytics runs up to two dataflows concurrently when multiple dataflow jobs overlap. If more than two jobs overlap, Analytics puts the remaining jobs in queue. Previously, only one dataflow job ran at a time.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Who:** Concurrent dataflow jobs is available to users with Einstein Analytics Plus platform license. For production orgs with the Einstein Analytics Growth license or sandbox orgs, Analytics still runs one job at a time.

## Analytics Prebuilt Apps: New Templates, Filter Template Picker by Tag, Predictive Analytics

Create apps from new templates for managing environmental sustainability, fund-raising effectiveness, and service delivery in the public sector. Find templates more easily by selecting tags in the template picker Filter field. And increase your analytics IQ with built-in Einstein Discovery predictive capability.

### IN THIS SECTION:

#### [Fortify Your Sales Data with Einstein Discovery for Sales Analytics](#)

Apply the power of predictive analytics to your Sales Cloud data. Use the Einstein Discovery for Sales template to create an app that surfaces your most promising opportunities to help you boost sales.

#### [Assign Einstein Analytics Platform or Plus Permission Sets to Use Sales and Service Analytics Apps](#)

Permission sets for the Sales Analytics and Service Analytics apps have been removed from Salesforce setup for Einstein Analytics Growth and Einstein Analytics Plus customers. If admins and users in your org need access to the apps, assign them Einstein Analytics Platform or Plus permission sets.

#### [Get Actionable Insights About Your Environmental Data with Analytics for Sustainability](#)

Bring your environmental accounting in line with your financial accounting with key performance indicators about your organization's energy use. Dashboard visualizations use data from the Salesforce Sustainability managed package, which streamlines the process of environmental data capture, impact assessment, and audit for any organization.

#### [Maximize Fundraising with New Analytics App](#)

The Fundraising Performance app gives you actionable insights into annual donor retention and attrition, donor gains and losses, and donation amount gains and losses.

#### [Measure and Improve Public Sector Service Delivery with Public Sector Case Analytics](#)

The Public Sector Case Analytics app gives you instant insight into the status of your cases, surfacing the ones that need immediate action. Use dashboard visualizations to quickly surface case-related activities that are near or past due to help you improve delivery of client services.

#### [Financial Services Analytics Templates Have New Names and Licensing](#)

We renamed the Financial Advisor Analytics template to Wealth Starter Analytics, and Retail Banking Analytics is now called Consumer Banking Starter Analytics. Use the templates to get started building an Einstein Analytics solution based on your Financial Services Cloud data.

#### [Filter the Template Picker by Tag to Find the Analytics App You Want to Create Fast](#)

Instead of scrolling through the ever-expanding set of apps, filter the template picker by tag or industry to get right to the one you want. We added a filter field alongside the template picker Search field.

#### [Other Enhancements: Predictive Analytics in Templates, Easy Dashboard Embedding](#)

Templates are getting more intelligent all the time with built-in Einstein Discovery capabilities and automated filter building when you embed dashboards.

### SEE ALSO:

[Boost Predictive Power for Retail Bankers with Einstein Analytics for Financial Services Enhancements](#)

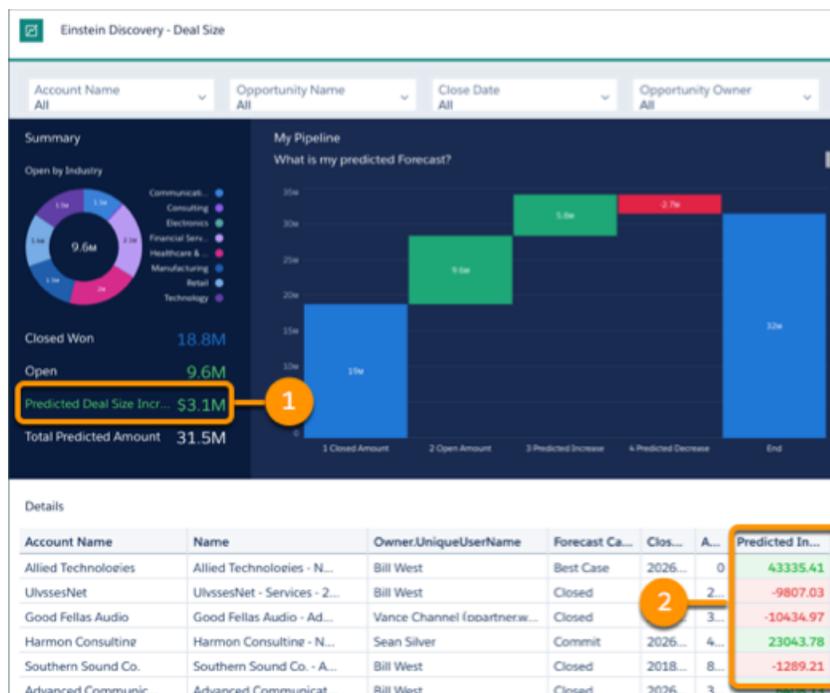
## Fortify Your Sales Data with Einstein Discovery for Sales Analytics

Apply the power of predictive analytics to your Sales Cloud data. Use the Einstein Discovery for Sales template to create an app that surfaces your most promising opportunities to help you boost sales.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Who:** To create an app from the Einstein Discovery for Sales Analytics Template, you must have an Einstein Analytics Plus license and have created the Sales Analytics app.

**Why:** The app's Einstein Discovery stories and dashboards identify your potentially most valuable deals or the ones that have the greatest chance of closing quickly. For example, the Deal Size dashboard predicts how much total revenue from opportunities (1) could increase over the amount set by your reps. The table (2) shows the possible revenue increase for each opportunity. Use the predictions to focus your team's activities on the opportunities with the greatest potential revenue increase.



**How:** In Analytics Studio, click **Create**, select **App**, and click **Start from Template**. Select the Einstein Discovery for Sales Analytics template. The wizard guides you the rest of the way.

## Assign Einstein Analytics Platform or Plus Permission Sets to Use Sales and Service Analytics Apps

Permission sets for the Sales Analytics and Service Analytics apps have been removed from Salesforce setup for Einstein Analytics Growth and Einstein Analytics Plus customers. If admins and users in your org need access to the apps, assign them Einstein Analytics Platform or Plus permission sets.

**Where:** This change applies to Einstein Analytics Growth and Plus customers in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Who:** Customers with either Einstein Analytics Growth and Einstein Analytics Plus licenses no longer need separate Sales Analytics App and Service Analytics App licenses to access the apps.

**How:** In Salesforce Setup, assign users one or more of the following permission sets:

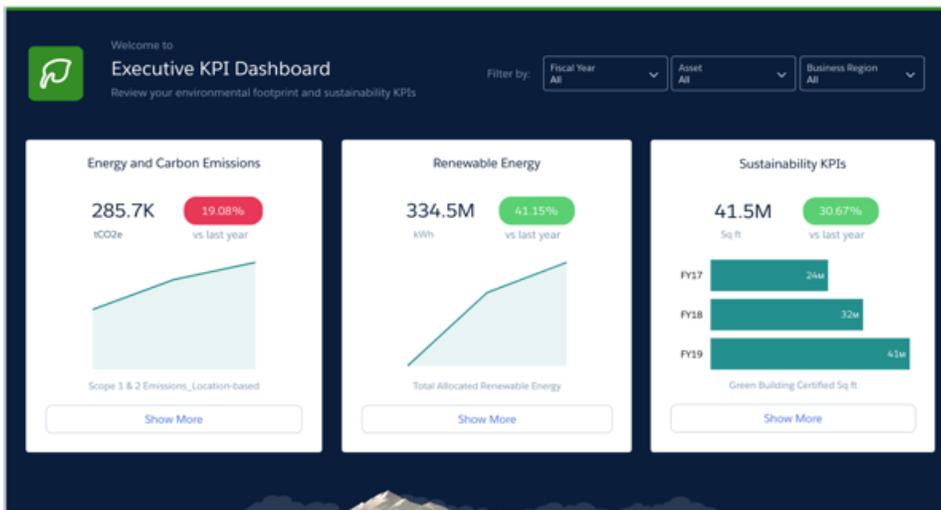
- Einstein Analytics Platform User. Includes the user permission to view Sales and Service Analytics.
- Einstein Analytics Platform Admin. Includes the user permission to create and manage Sales and Service Analytics.
- Einstein Analytics Plus User. Includes the user permission to view Sales and Service Analytics.
- Einstein Analytics Plus Admin. Includes the user permission to create and manage Sales and Service Analytics.

## Get Actionable Insights About Your Environmental Data with Analytics for Sustainability

Bring your environmental accounting in line with your financial accounting with key performance indicators about your organization's energy use. Dashboard visualizations use data from the Salesforce Sustainability managed package, which streamlines the process of environmental data capture, impact assessment, and audit for any organization.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Why:** Analytics Sustainability, which is part of the Salesforce Sustainability managed package, makes it easier to manage your environmental footprint. Use the app's dashboards to measure, report on, and disclose investor-grade environmental impact data, including energy consumption and carbon emissions metrics.



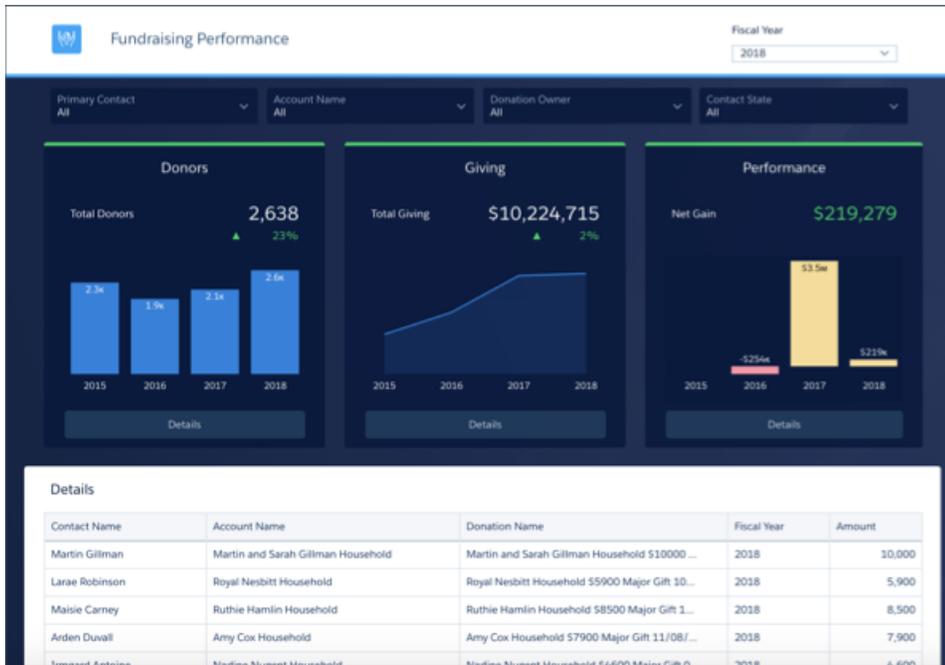
**How:** In Analytics Studio, click **Create**, and select **App**. Then click **Start from Template**. Scroll through the template picker, or use Search, and select **Analytics for Sustainability**. The configuration wizard guides you through the rest of the process.

## Maximize Fundraising with New Analytics App

The Fundraising Performance app gives you actionable insights into annual donor retention and attrition, donor gains and losses, and donation amount gains and losses.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Why:** Create an app from the Fundraising Performance template to get a concise, uniform picture of your fundraising so you can make improvements for future drives.



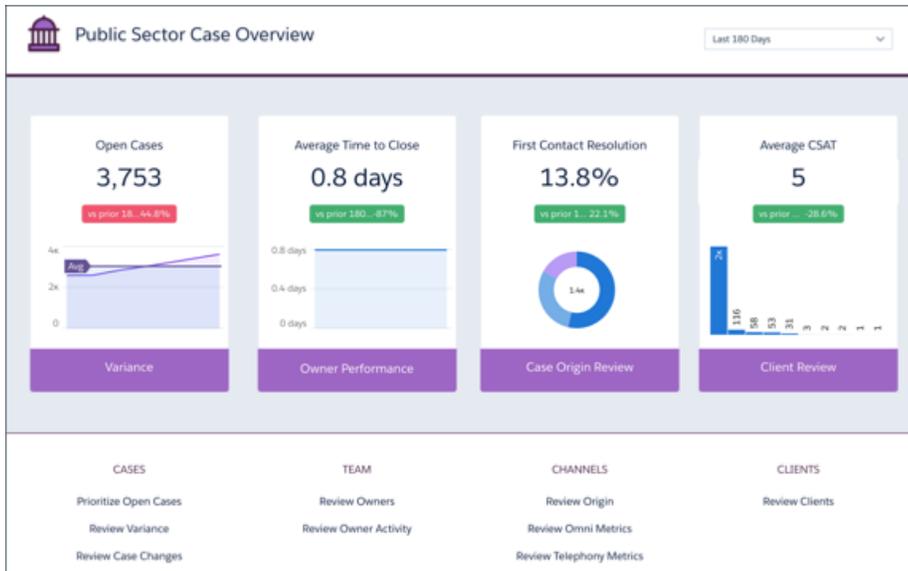
**How:** In Analytics Studio, click **Create**, and select **App**. Then click **Start from Template**. Scroll through the template picker, or use Search, and select the **Fundraising Performance** template. Analytics guides you through the rest of the process.

## Measure and Improve Public Sector Service Delivery with Public Sector Case Analytics

The Public Sector Case Analytics app gives you instant insight into the status of your cases, surfacing the ones that need immediate action. Use dashboard visualizations to quickly surface case-related activities that are near or past due to help you improve delivery of client services.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Why:** Create an app from the Public Sector Case Analytics template to unlock the full power of data about your team's case management. Its visualizations let public sector organizations measure their effectiveness and help them improve delivery of services. View bottlenecks in the process so you can assure effective case management and resolution with the right actions. And see if you and your team are compliant with service level agreements.



**How:** In Analytics Studio, click **Create**, and select **App**. Then click **Start from Template**. Scroll through the template picker, or use the Search field, and select **Public Sector Case Analytics**. The configuration wizard takes you through the rest of the process.

## Financial Services Analytics Templates Have New Names and Licensing

We renamed the Financial Advisor Analytics template to Wealth Starter Analytics, and Retail Banking Analytics is now called Consumer Banking Starter Analytics. Use the templates to get started building an Einstein Analytics solution based on your Financial Services Cloud data.

**Where:** This change applies to Lightning Experience in **Enterprise** and **Unlimited** editions that have Financial Services Cloud enabled.

**Who:** To create apps from the Wealth Starter Analytics and Consumer Banking Starter Analytics templates, you must have an FSCAnalyticsPlus (Einstein Analytics for Financial Services) license.

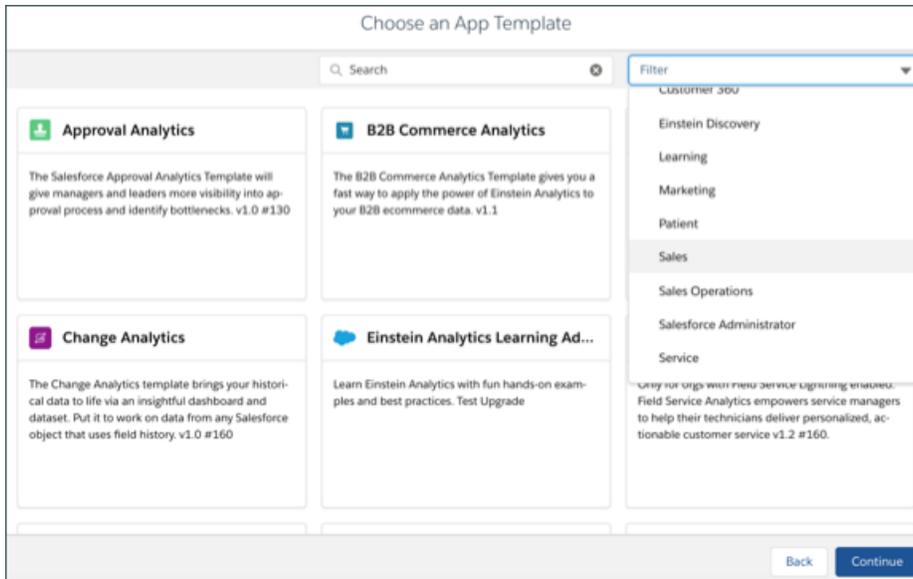
**Why:** Wealth Starter Analytics helps advisors grow their business by deepening client relationships and increasing assets under management (AUM). Its visualizations use data about your book of business to provide insights into all your clients so you can align your actions with current client goals.

Consumer Banking Starter Analytics helps personal bankers deepen customer relationships and attract new clients. Visualizations include client AUM, held away, and market share. You also get insight into referrals and opportunities to help start new relationships. Use the dashboards to help grow AUM and cross-sell products.

## Filter the Template Picker by Tag to Find the Analytics App You Want to Create Fast

Instead of scrolling through the ever-expanding set of apps, filter the template picker by tag or industry to get right to the one you want. We added a filter field alongside the template picker Search field.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.



**How:** In Analytics Studio, click **Create**, and select **App**. Click **Start from Template**. Select a tag from the **Filter** field.

## Other Enhancements: Predictive Analytics in Templates, Easy Dashboard Embedding

Templates are getting more intelligent all the time with built-in Einstein Discovery capabilities and automated filter building when you embed dashboards.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**When:** These features are being added to Analytics templates on a rolling basis during the Summer '19 release.

**Why:** Use the enhanced Sales Analytics wizard to create an Einstein Discovery story that identifies promising opportunities and helps you speed time-to-close. Already part of Pricing Analytics, predictive analytics is also being added to Einstein Analytics for Veeva and other templates.

We're also rolling out a Lightning component that automatically creates the filter for records related to the Lightning Experience page layout where you embed a dashboard. No more learning filter syntax and building the filter manually—Analytics does it for you.

**How:** To add Einstein Discovery capabilities to Analytics templates, follow the instructions in the configuration wizard. Embed dashboards in Lightning Experience pages with Lightning App Builder.

## Analytics App Building: Improved Filters, Asset Sharing, Global Filter Enhancements

Use filter logic in the explorer. Save time by building assets once and sharing them across apps. Enjoy more customizable global dashboard filters.

### IN THIS SECTION:

#### [Work with Filter Logic in the Explorer](#)

Sometimes data explorations require paring down the data with advanced filtering. You can now apply filter logic to a lens or step in a dashboard without writing SAQL statements.

### [Add Custom Formulas to Columns Faster](#)

Custom formulas come in handy when you want to do calculations on existing data. But adding a custom formula previously involved cloning a column, and then adding the formula. Now, you can launch the column editor from the Data tab and add formulas with fewer clicks.

### [Sort on Dimensions Easily](#)

Sort dimension values in ascending or descending order with just a few clicks. Previously, you could sort dimension values only by using SAQL.

### [Use Dot Series in Combo and Time Combo Charts](#)

Combo and time combo charts now include the option of dots, in addition to the previously available bars and lines to represent series in the chart. Dots make creating bullet charts in combo and time combo charts easy. Use a bullet chart as a visual way to compare pipeline health between different regions and within a region in one graph for sales users.

### [Style Dashboard Controls with Enhancements to Global Filters and List, Date, and Range Widgets](#)

We redesigned global filters to be more customizable and intuitive and unified the pick initial values behavior for all widgets. List, range, and date widgets now share design style options with global filters so that all filter styles can match when placed on the same dashboard. Global filters are a highly recommended best practice as they best support high-performing dashboards.

### [Debug Steps with the Dashboard Inspector](#)

New functionality in the Dashboard Inspector makes debugging queries easier. Previously, query level information was only available if the query ran successfully. Determining issues with binding syntax or SAQL syntax are now easier to find and fix.

### [Plan for Einstein Analytics Classic Designer's Retirement](#)

Classic designer is scheduled for retirement in all Salesforce orgs in November 2019. Starting with Winter '19, you can't create dashboards in Classic designer, but you can edit them. We encourage you to start converting Classic designer dashboards to the newer dashboard designer now. For more information, see [Convert Your Classic Designer Dashboard to Dashboard Designer](#).

### [Predict Seasonal Data with New SAQL Timeseries Options](#)

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### [Get the Power of Aggregateflex Steps in Values Tables](#)

To extend support for interactive and dynamic dashboards, we are replacing `grain` steps with `aggregateflex` steps in values tables. With this change, you can create dynamic filters on dashboard widgets. You can also create dynamic values table with Bindings 2.0 syntax.

### [Revert to Previously Saved Versions of Dashboards, Lenses, and Dataflows Using Asset History \(Pilot\)](#)

Until now, if you edited dashboards, dataflows, and lenses, you had to save a copy of each version if you wanted to revert to that version. With Asset History, every time you save a new version of an asset, Analytics automatically stores a snapshot of it. You can tag assets with descriptions for easy reference later when you or someone on your team wants to restore a particular version. View and revert to previously saved versions using Workbench API calls.

### [Share Assets Between Apps with New Analytics Templates Framework Capability](#)

Use the Template Dependencies feature to reuse Analytics dashboards, datasets, and lenses across apps. You create a dependency in a templated app under development on an app created from another template in the same org. The template you're developing references dashboards, lenses, or datasets that exist in the supporting app. Then, the new template incorporates those assets, and they appear in the app customers create from it.

### [Other Enhancements in App Building](#)

Review these small but significant changes in the explorer.

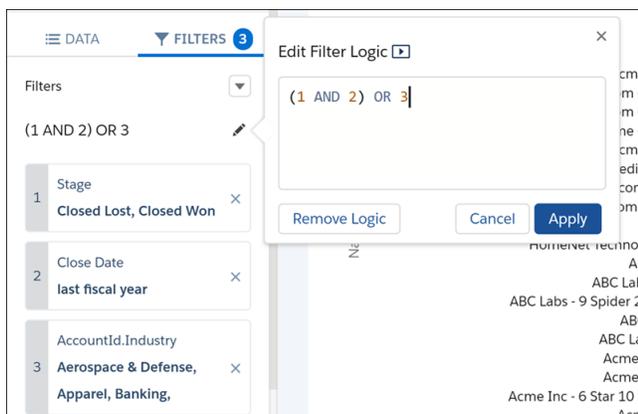
## Work with Filter Logic in the Explorer

Sometimes data explorations require paring down the data with advanced filtering. You can now apply filter logic to a lens or step in a dashboard without writing SAQL statements.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Why:** With filter logic, it's possible to add multiple filters to the same field. You can also exclude data that doesn't contain the value you enter. Simply apply the CONTAIN filter at the field level with the NOT operator in the filter logic. Defining or editing filter logic in the Add Filter dialog box means that you get to view the results instantly—without switching back from SAQL mode. Our easy-to-use-interface also ensures fewer errors as you add filter logic.

**How:** After adding filters to a lens, click the  in the Filters tab. Select **Add Filter Logic**. In Edit Filter Logic, build filter logic using AND, OR, and NOT operators along with the filter numbers. Click **Apply** when done.



SEE ALSO:

[IdeaExchange: Wave Analytics - Report Filter Logic \(using And and OR\)](#)

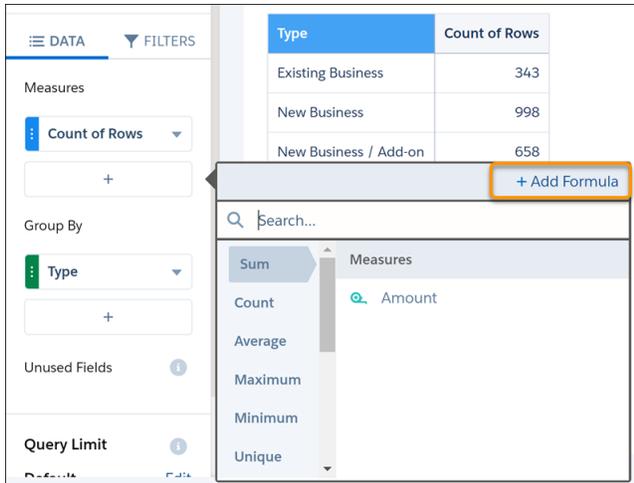
[IdeaExchange: Wave Lens Filter for "Does Not Contain" on Text Fields](#)

## Add Custom Formulas to Columns Faster

Custom formulas come in handy when you want to do calculations on existing data. But adding a custom formula previously involved cloning a column, and then adding the formula. Now, you can launch the column editor from the Data tab and add formulas with fewer clicks.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** To define custom formulas for compare tables or charts, click **+** under Measures, and click **Add Formula**. In the column editor, give the column a name and enter the custom formula. When done, click **Apply**.

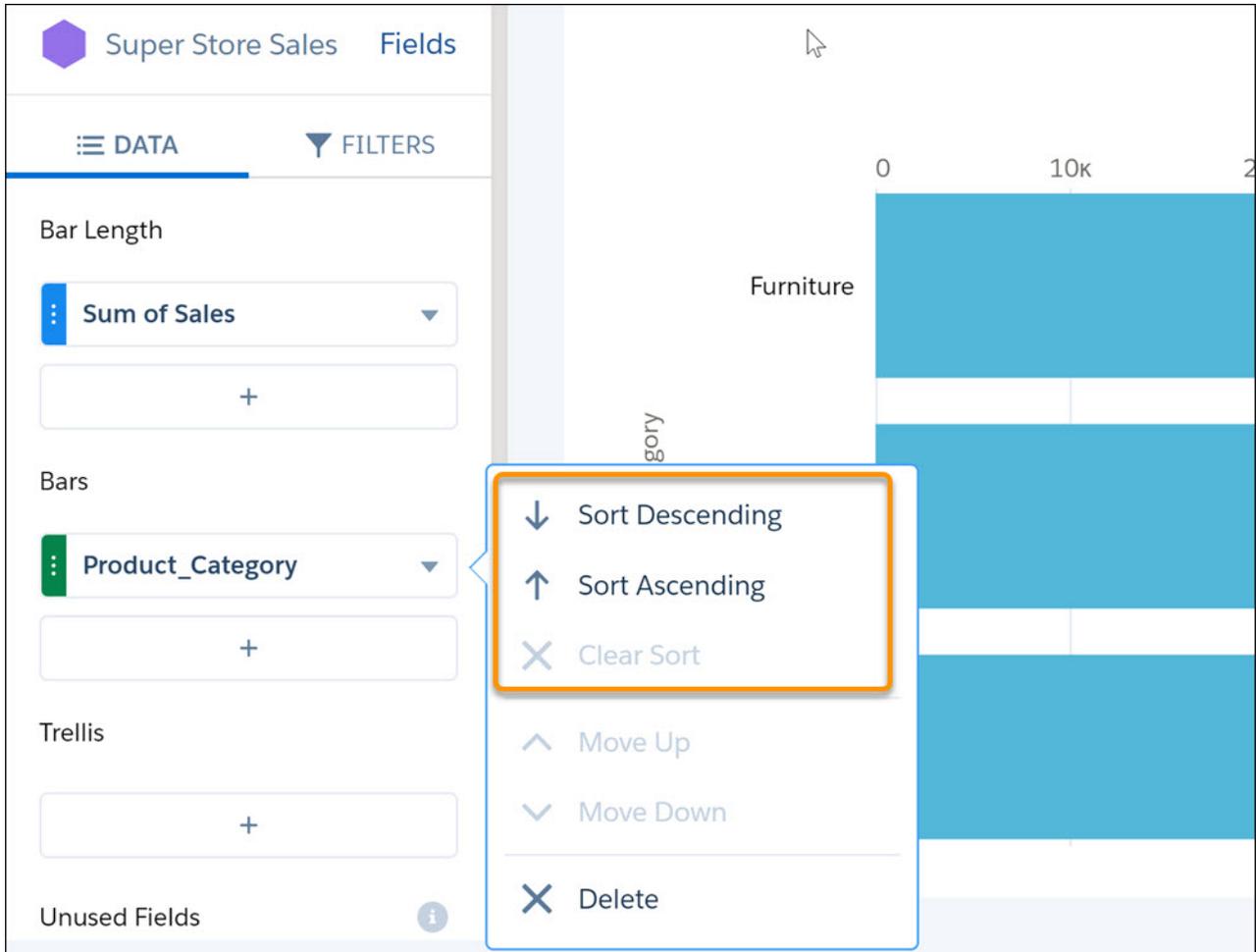


## Sort on Dimensions Easily

Sort dimension values in ascending or descending order with just a few clicks. Previously, you could sort dimension values only by using SAQL.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** Open a lens in chart, compare table, or pivot table mode. On the Data tab, click the actions menu for the dimension that you want to sort. Select **Sort Ascending** or **Sort Descending**. To unsort the dimension, click **Clear Sort**.

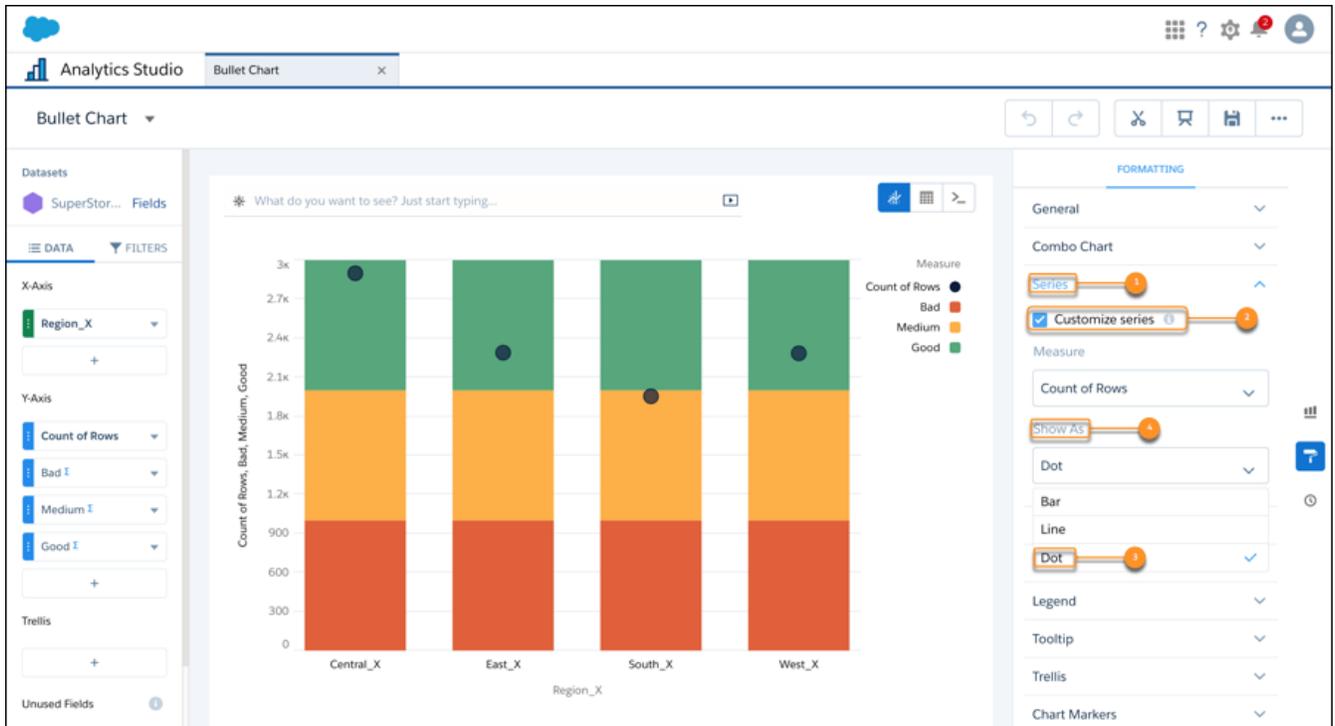


## Use Dot Series in Combo and Time Combo Charts

Combo and time combo charts now include the option of dots, in addition to the previously available bars and lines to represent series in the chart. Dots make creating bullet charts in combo and time combo charts easy. Use a bullet chart as a visual way to compare pipeline health between different regions and within a region in one graph for sales users.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** In the **Series** (1) section of the combo chart formatting panel, select **Customize Series** (2), then choose *Dot* (3) from the **Show As** (4) options.



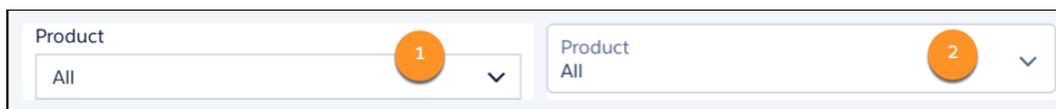
 **Note:** Dots are a fixed size and can't be changed. Unlike lines and bars, there is no **Show Value** option for dots.

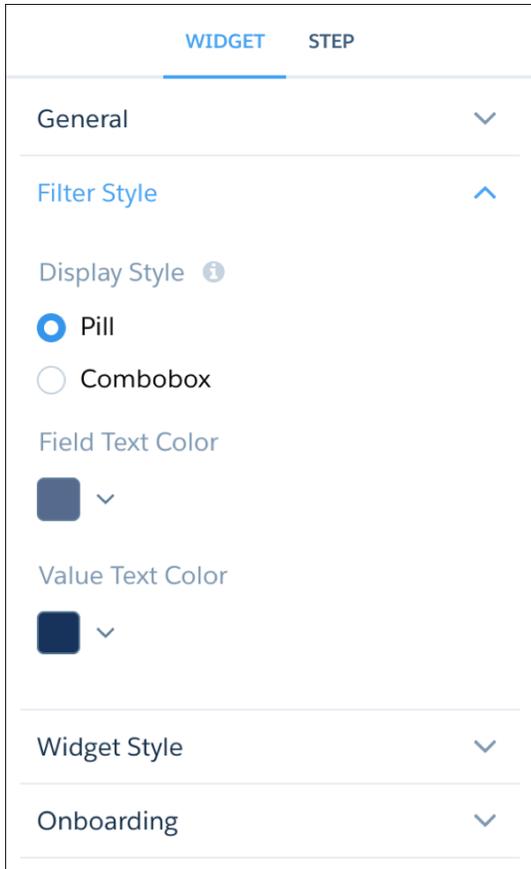
## Style Dashboard Controls with Enhancements to Global Filters and List, Date, and Range Widgets

We redesigned global filters to be more customizable and intuitive and unified the pick initial values behavior for all widgets. List, range, and date widgets now share design style options with global filters so that all filter styles can match when placed on the same dashboard. Global filters are a highly recommended best practice as they best support high-performing dashboards.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

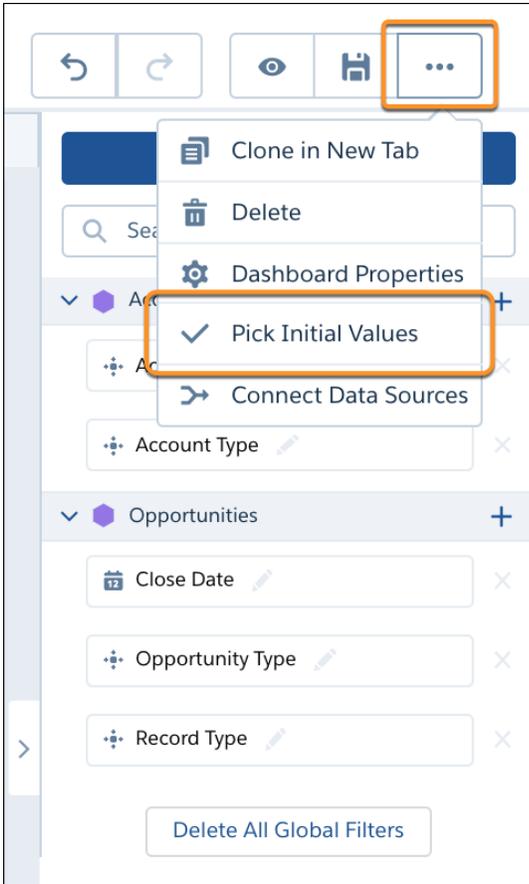
**Why:** Previously list, range, and date widgets used combobox styling (1), and global filter widgets used pill styling (2), and each filter used its own filter panel. Now list, date, and range widgets have the option of pill styling or combobox styling. Dashboard designers can use pill styling on list, date, and range widgets to match global filter styling and control all widgets on the same dashboard.



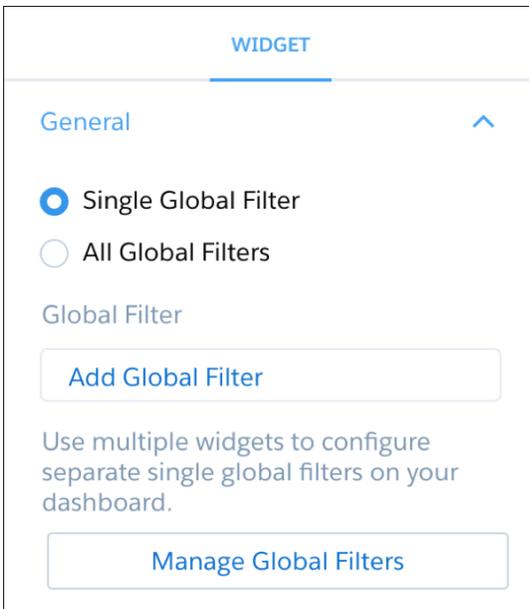


 **Note:** New list, date, and range widgets added in Summer '19 or later default to pill styling.

**Pick Initial Values** are selected in the same way for both global filters and list, date, and range widgets. Previously, global filters values were chosen in the filter panel, but we've updated that behavior for a consistent experience across all widgets.



**How:** After dragging on a global filter widget to the dashboard, choose **Single Global Filter** or **All Global Filters**, depending on your dashboard needs. When you select **All Global Filters** for a filter widget, resize the filter on the dashboard to see all the filters.



**Note:** Dashboards created in Spring '19 or earlier are set to **All Global Filters** in Summer '19 to preserve existing dashboard behavior. Filters added in Summer '19 or later default to **Single Global Filter** mode and can be updated in the widget panel.

Use the new global filters button (1) to manage all global filters on the dashboard. From this global filters menu (2), you can create or delete filters, and set filter properties. Using the panel is another way to add filters to your dashboard without displaying them in a widget.

The screenshot displays the 'Accounts' dashboard in the Analytics Studio Dashboard Designer. The dashboard includes several key metrics and charts:

- Summary Metrics:**
  - Avg Cycle: 123 days
  - Avg Age: 114 days
  - Avg Close Rate: 74%
  - Days Since Last Activity: -36
  - Created Cases: 1,625
- Top Accounts By:** A horizontal bar chart showing the top accounts by 'Closed Won' amount. The top account is Butler152 Inc. with \$7.8M.
- Donations by Stage:** A vertical bar chart showing the sum of amounts for various stages. The 'Closed Won' stage has the highest amount at \$435M.
- Open Pipeline:** A total value of \$245.0M.

The right-hand panel, titled 'Add Global Filter', allows users to search for and add filters for 'Accounts' and 'Opportunities'. It includes fields for 'Account Name', 'Account Type', 'Opportunity Type', and 'Record Type'. A 'Delete All Global Filters' button is also present.

## Debug Steps with the Dashboard Inspector

New functionality in the Dashboard Inspector makes debugging queries easier. Previously, query level information was only available if the query ran successfully. Determining issues with binding syntax or SAQL syntax are now easier to find and fix.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** When a step has errors and fails to execute, open the Dashboard Inspector (1) and select the step with errors (2). Use the View More Details button (3) for more information about bindings syntax errors, query level errors, and the query that was run.

STEP	# RUNS		
Referral_1	1	224	224
DynamicGrou...	1	3	3
DynamicGroupi...			
RowCountBy...	0	-	-
RowCountByPro...			

**Referral\_1**

An error occurred, [click here for more details.](#)

Last Run Metrics (ms)

Metadata: 1ms  
Waiting: 0ms  
Query: 224ms

## Plan for Einstein Analytics Classic Designer's Retirement

Classic designer is scheduled for retirement in all Salesforce orgs in November 2019. Starting with Winter '19, you can't create dashboards in Classic designer, but you can edit them. We encourage you to start converting Classic designer dashboards to the newer dashboard designer now. For more information, see [Convert Your Classic Designer Dashboard to Dashboard Designer](#).

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

## Predict Seasonal Data with New SAQL Timeseries Options

SAQL `timeseries` makes the most accurate predictions possible based on your existing data. It selects the best algorithm for the data you have, even if your data has seasonal variation. `timeseries` now supports daily and weekly seasonality as well as monthly, quarterly, and yearly seasonality. Does your case load have a weekly variation with call volume peaking near the end of the week? No problem - use `timeseries` to predict call volumes so you can plan.

**Where:** This feature is available in Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Who:** To use SAQL, you must have an Analytics Platform license.

**Why:** You can now specify any seasonality period between 2 and 24. Do your manufacturing sales have a 10-month seasonality? Or do your opportunities for certain products peak every three years? Use `timeseries` to accurately predict the value of future data, no matter what the seasonal pattern.

**How:** To use `timeseries`, open up your SAQL editor in the dashboard. Use `foreach` to project the data you want to look at, then use `timeseries` to make the prediction for your chosen measure.

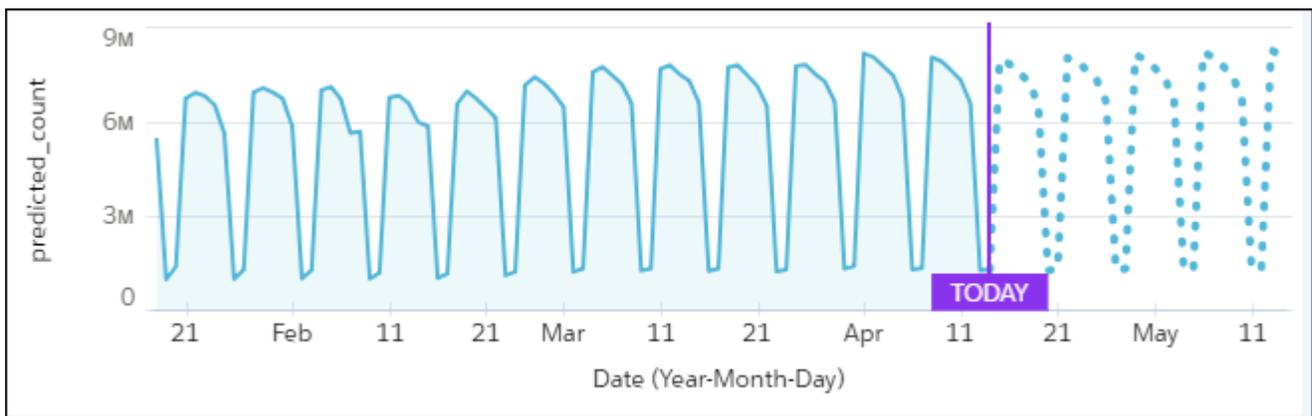
For example, you want to predict the number of calls your support team will get in the next 30 days. You know that call volume has a weekly seasonality, so you set `dateCols=('time_Year','time_Month','time_Day','Y-M-D')`. Set `length=30`, because we want the prediction for 30 days. Set `ignoreLast=true`, because we are only halfway through the current week (ignoring partial time periods improves the prediction's accuracy).

```
q = load "CaseData";
-- get the data from the past 90 days
q = filter q by date('time_Year', 'time_Month', 'time_Day') in ["90 days ago".."current day"];
q = group q by ('time_Year', 'time_Month', 'time_Day');
q = foreach q generate 'time_Year', 'time_Month', 'time_Day', count() as 'count';

-- use fill to fill any missing days.
q = fill q by (dateCols=('time_Year','time_Month','time_Day','Y-M-D'));

-- predict the number of calls for the next 30 days
q = timeseries q generate 'count' as 'predicted_count' with
(dateCols=('time_Year','time_Month','time_Day','Y-M-D'), length=30, ignoreLast=true);
q = foreach q generate 'time_Year' + "~~~" + 'time_Month' + "~~~" + 'time_Day' as
'time_Year~~~time_Month~~~time_Day', 'predicted_count';
q = order q by 'time_Year~~~time_Month~~~time_Day' asc;
q = limit q 1000;
```

The predicted call volume for the next 30 days has weekly variability:



## Get the Power of Aggregateflex Steps in Values Tables

To extend support for interactive and dynamic dashboards, we are replacing `grain` steps with `aggregateflex` steps in values tables. With this change, you can create dynamic filters on dashboard widgets. You can also create dynamic values table with Bindings 2.0 syntax.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Who:** To use SAQL, you must have an Analytics Platform license.

**How:** We automatically replace `grain` step types with `aggregateflex` steps in an existing values table when:

- You open the lens.
- You edit or clone the values table in a dashboard.

 **Note:** Although you can still add `grain` steps using JSON, we highly recommend that you use `aggregateflex` steps that support new features.

SEE ALSO:

[Salesforce Help: Bindings in Dashboard Designer Dashboards](#)

## Revert to Previously Saved Versions of Dashboards, Lenses, and Dataflows Using Asset History (Pilot)

Until now, if you edited dashboards, dataflows, and lenses, you had to save a copy of each version if you wanted to revert to that version. With Asset History, every time you save a new version of an asset, Analytics automatically stores a snapshot of it. You can tag assets with descriptions for easy reference later when you or someone on your team wants to restore a particular version. View and revert to previously saved versions using Workbench API calls.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

 **Note:** We provide Asset History to selected customers through a pilot program that requires agreement to specific terms and conditions. To be nominated to participate in the program, contact Salesforce. Pilot programs are subject to change, and we can't guarantee acceptance. The feature isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

**Who:** To take advantage of the Asset History API, you must have an Analytics Platform license with the Einstein Analytics Asset Version user permission enabled.

**How:** To use Asset History, contact your Salesforce representative to ask for the Einstein Analytics Asset Version permission to be enabled in your org. The permission is automatically enabled in SFDX scratch orgs.

To tag dashboards and lenses, add a description to the Version History box that Analytics displays when you save them. The first time you create a dashboard, lens, or dataflow, Analytics tags the asset for you. Analytics also tags assets when you create an app from a template or upgrade an app to a new version. By default, Analytics saves up to 10 versions of tagged and 10 versions of untagged assets.

To preview previous versions, use Workbench GET API calls to see the JSON for older versions, including the tags. Use PUT API calls to restore to previous versions.

 **Note:** As of this release, dataflows don't include the UI tagging feature. Instead, you can add a tag programmatically using REST API.

## Share Assets Between Apps with New Analytics Templates Framework Capability

Use the Template Dependencies feature to reuse Analytics dashboards, datasets, and lenses across apps. You create a dependency in a templated app under development on an app created from another template in the same org. The template you're developing references dashboards, lenses, or datasets that exist in the supporting app. Then, the new template incorporates those assets, and they appear in the app customers create from it.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** To create the dependency on the app, add a line to the `template-info.json` file for your template. The line identifies templates to include in the dependency.

```
{
  "name" : "SupportingDashboard",
  "namespace" : "namespacedone",
  "templateVersion" : "1.0",
  "condition" : "${Variables.dependOnAnotherTemplate}",
}
```

The dependent template references assets from other JSON files in your template with the following:

```
${Apps.<templatename>.<Dashboards|Lenses|Datasets>.<assetSourceName>.<Name|Label|Alias|Id>}:
```

Here are some examples:

```
"${Apps.namespacedone__SupportingDashboard.Dashboards.Comparision_tp.Name}"
"${Apps.namespacedone__SupportingDashboard.Datasets.MyDataset.Alias}"
```

## Other Enhancements in App Building

Review these small but significant changes in the explorer.

**Where:** These changes apply to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition for an extra cost in Enterprise, Performance, and Unlimited editions.

**Why:** These enhancements make it easier to build Analytics apps.

**Fields panel visible in SAQL mode.** Not a fan of having to memorize API names of dataset fields? You can view the fields panel when you write SAQL queries. Even better, copy the API name using the field's action menu, and paste it into the SAQL editor to avoid errors in your queries.

The screenshot shows the Einstein Analytics interface. On the left, the 'Learn to use the dataset fields panel' is open, showing a search bar and checkboxes for 'Show Hidden Fields (0)' and 'Show Field API Names'. Below this is a list of dimensions: Account.Name, LeadSource, Name, Owner.Name, StageName, and Type. There is also a section for 'Derived Dimensions' with an 'Add Derived Dimension' button. On the right, the 'Learn how to write and edit SAQL queries' panel is open, showing a query editor with the following code:

```
1 q = load "Opportunities1";
2 q = group q by ('Name', 'Type');
3 q = foreach q generate 'Name' as 'Name', 'Type'
4 q = order q by ('Name' asc, 'Type' asc);
5 q = limit q 2000;
```

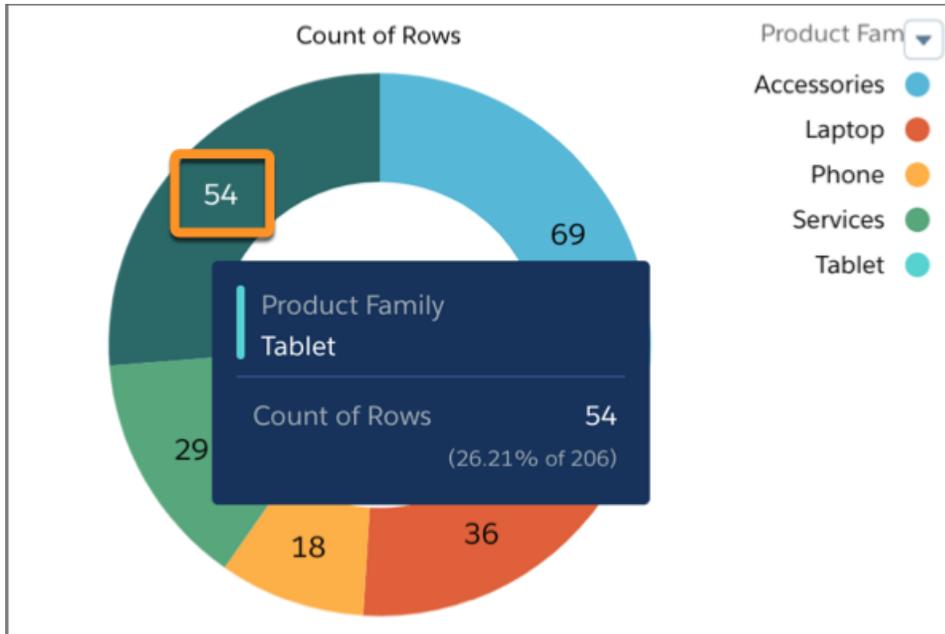
Below the query editor is a table with columns 'Rename', 'Type', and 'Count of'. The table contains the following data:

Rename	Type	Count of
bott1184	Existing Business	
bott124	Existing Business	
bott1444	New Business	
Opportunity for Abbott414	New Business	

A context menu is open over the table, with the 'Copy API Name' option highlighted. The 'Save' button is visible at the bottom of the interface.

**Improved SAQL error messages.** To help you troubleshoot error messages in the SAQL editor, the error message includes the line and column numbers the errors occurred at.

**Hover text is white for darker sections of pie charts.** When hovering over dark-colored sections in pie charts, text now automatically turns white and is easier to read. Previously, text remained black when hovering and was difficult to read.



## Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component

Create AI models with confidence that they provide ethical and accountable predictions. Add Einstein Discovery predictions as a standard Lightning component in any record detail page.

### IN THIS SECTION:

#### [Build Ethical and Accountable Models with Protected Fields](#)

Create accountable AI models that detect and flag potentially biased variables. With protected fields, you can declare protected values to exclude from your models and receive notice of problematic correlations.

#### [Gain Deeper Insight into Your Model with Enhanced Model Metrics](#)

Use the new Overview and Prediction Examination tabs to get more feedback about your model so that you can refine it to get better predictions.

#### [Experiment with Your Data Using Sandboxes](#)

Einstein Discovery stories are now included in full copy sandboxes. Copy a story and the data to a sandbox to test it. No need to recreate the story from scratch.

#### [Refine Your Stories Using Field-Level Correlations and Improvements](#)

Get help to optimize data analysis in your story with the Story Setup wizard. It shows you how each field correlates to the story outcome, identifies redundant or outlier data that you can exclude, and suggests bucketing improvements.

#### [Deploy Predictions on Salesforce Records Without Writing Code \(Pilot\)](#)

You can now write scores automatically to selected Salesforce fields. Easily integrate predictions without involving Process Builder or a managed package with a trigger.

#### [Display Einstein Discovery Predictions in Lightning Experience Record Pages](#)

Add Einstein Discovery predictions as a standard Lightning component in any record detail page. In the Lightning App Builder, drag the new Einstein Predictions component onto your record page. Then simply choose a prediction definition, set prediction units, and select display settings. On the record page, predictions are updated in real time, and no writeback to Salesforce is necessary.

### [Get Better Insights with Smart Bucketing](#)

Better bucketing improves your story insights. Einstein Discovery uses an unsupervised learning algorithm that analyzes numeric columns in your story. It suggests better buckets to use, such as different ranges for age or postal code data.

### [Predict Quantities Using Whole Numbers](#)

Calculations often result in fractions. But certain predictions make sense only when expressed as whole numbers, say the number of orders per month or the number of customers entering a store. Display them as whole numbers using automatic rounding.

### [Monitor the Accuracy of Deployed Models in Real Time \(Pilot\)](#)

Determine the accuracy of your model by comparing predicted outcomes with actual ones. Then use this feedback to fine-tune your model and get better predictions.

### [Generate Predictions Natively in Analytics Dataflows](#)

For Einstein Analytics dataflows, to score a dataset, add the new prediction transformation in the dataflow editor. Specify the name of the prediction definition to use and the name and label of the new dataset column to contain the score.

### [Improve Story Accuracy With Optimized Feature Selection](#)

Einstein Discovery now generates stories with numeric outcomes faster by selecting just the features and variables required to build the model. The story creation process is streamlined and quicker. Optimized feature selection applies to regression stories but is not for classification.

### [Gain Insights from Smaller Einstein Analytics Datasets](#)

Don't have a lot of data? No problem. Descriptive insights require only a minimum of 50 rows of data. Predictive insights require a minimum of 400 rows of data. Select the dataset during story setup. If it contains fewer than 400 rows, Einstein Discovery generates insights for descriptive insights but doesn't generate a model for predictions and improvements.

### [Retiring Einstein Discovery Classic](#)

We plan to retire Einstein Discovery Classic in Spring '20. Current Einstein Discovery Classic users need the Einstein Analytics Plus license (required for Einstein Discovery in Analytics) to recreate datasets and stories in Analytics Studio. Einstein Discovery Classic will be replaced with the new experience in all Developer Orgs with the Summer '19 release.

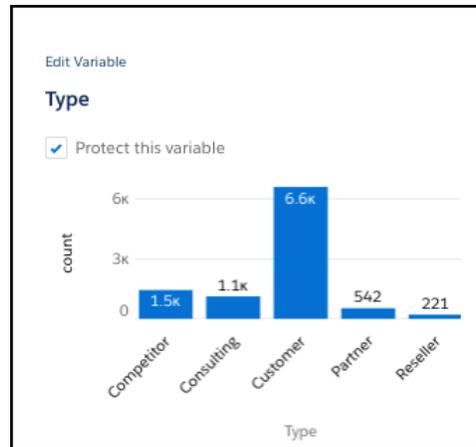
## Build Ethical and Accountable Models with Protected Fields

Create accountable AI models that detect and flag potentially biased variables. With protected fields, you can declare protected values to exclude from your models and receive notice of problematic correlations.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Who:** To use protected fields, you need the Create and Update Einstein Discovery Stories permission.

**How:** Edit a story. In the Story Setup, select a field and click **Protect this variable** in the right pane. Create the story to see your changes.



A protected field is excluded from the model. If a protected field shows a 50% or higher correlation to the story outcome variable, however, Einstein Discovery notifies you in the improvements section. For example, ZIP code and household income are often correlated. If your story contains both fields, exclude one of them to better focus the analysis on the other. Einstein Discovery can still calculate correlation for the excluded field if you decide to include it again.

For instructions, see [Edit a Story](#).

SEE ALSO:

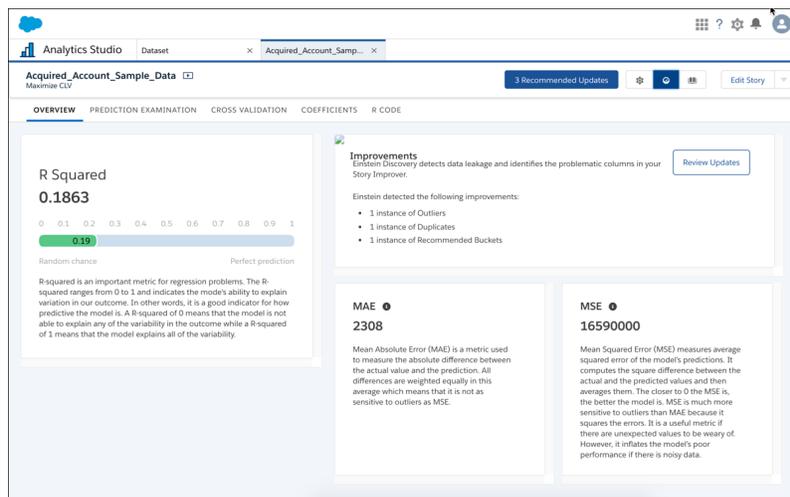
[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

## Gain Deeper Insight into Your Model with Enhanced Model Metrics

Use the new Overview and Prediction Examination tabs to get more feedback about your model so that you can refine it to get better predictions.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Why:** Get an at-a-glance summary of your model's metrics key indicators and performance on the Overview tab.



On the Prediction Examination tab, interact with the model metrics and see how they stack up against actual outcomes.

The screenshot displays the 'Prediction Examination' tab in Einstein Analytics. The main area is divided into two sections:

- Examination of the training dataset:** A table showing the first 100 rows of data. The columns include ACCOUNT ID, CLV, STARTDATE, CLOSEDATE, INDUSTRY, TYPE, OWNERSHIP, RATING, DIVISION, and ACCOUNTSCORE.
- Einstein Prediction:** A summary panel showing the Predicted Outcome (18953.6421) and Actual Outcome (19200.0000). It also lists top factors contributing to the prediction, such as Account Id, Close Date, and Rating.

ACCOUNT ID	CLV	STARTDATE	CLOSEDATE	INDUSTRY	TYPE	OWNERSHIP	RATING	DIVISION	ACCOUNTSCORE
15865	19200	2014-07-04	2014-09-01	Biotechnology	Reseller	Private	Warm	Ground Vehicle	C
9591	19200	2014-03-11	2014-05-15	Retail	Customer	Private	Cold	Ground Vehicle	C
1209	19640	2015-05-18	2015-07-10	Shipping	Customer	Public	Hot	Compliance	H
10171	19680	2015-01-31	2015-03-31	Hospitality	Customer	Private	Hot	Ground Vehicle	G
43322	19160	2015-08-29	2015-09-28	Hospitality	Reseller	Public	Cold	Standard Mater	A
42913	19640	2015-04-03	2015-05-13	Apparel	Competitor	Public	Hot	Standard Mater	C
3031	20640	2015-12-18	2016-02-20	Hospitality	Consulting	Public	Warm	Compliance	C
19160	17890	2014-08-17	2014-10-04	Consulting	Competitor	Public	Hot	Miniaturized Pa	C
43711	19160	2015-09-21	2015-10-24	Apparel	Customer	Public	Cold	Standard Mater	J
21722	20640	2015-05-28	2015-06-26	Consulting	Partner	Public	Cold	Engine Parts	A
11699	19200	2015-05-12	2015-07-24	Retail	Customer	Private	Cold	Ground Vehicle	B
3363	18640	2015-08-15	2015-10-20	Technology	Competitor	Private	Hot	Compliance	B
19336	17890	2015-11-26	2016-02-12	Technology	Competitor	Private	Hot	Miniaturized Pa	F

- The right side shows the predicted and actual outcome and the top factors that contributed to that outcome.
- The left side shows the first 100 rows of data in the story.

For more information, see [View Model Metrics](#).

SEE ALSO:

[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

## Experiment with Your Data Using Sandboxes

Einstein Discovery stories are now included in full copy sandboxes. Copy a story and the data to a sandbox to test it. No need to recreate the story from scratch.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** Any stories that exist in Production also exist in the full copy sandbox.

SEE ALSO:

[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

## Refine Your Stories Using Field-Level Correlations and Improvements

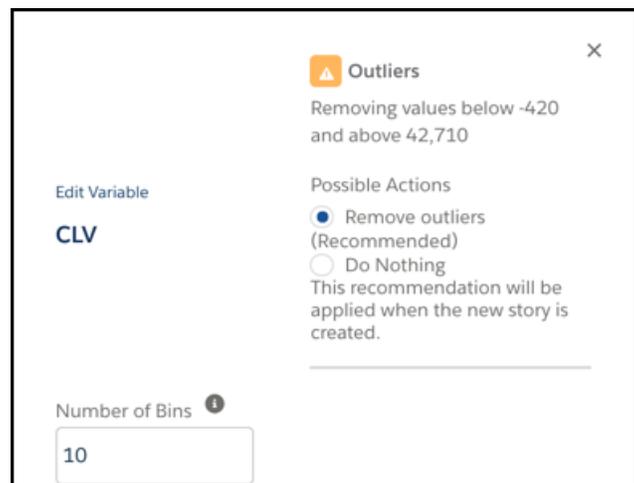
Get help to optimize data analysis in your story with the Story Setup wizard. It shows you how each field correlates to the story outcome, identifies redundant or outlier data that you can exclude, and suggests bucketing improvements.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** Run the Story Setup wizard after you create a story. The Correlation column shows how much each field contributed to the outcome in descending order of impact. If a field has no correlation to the outcome, remove it from the story to improve the model. The Data Alert column identifies fields that you improve, such as those with outliers or duplicates, to get better insights for your data.

FIELD NAME	TYPE	CORRELATION ↓	DATA ALERT
CLV MAXIMIZE	Number	N/A	Outliers
Division	Text	14.2%	Duplicate
Account Id	Number	9.2%	Duplicate
Type	Text	3.2%	
Rating	Text	2.1%	
Industry	Text	1.6%	
AccountScore	Text	0.7%	
BillingState	Text	0.1%	
StartDate	Date	0.1%	Duplicate
Ownership	Text		
CloseDate	Date		Duplicate

Click a field to see details and fine tune the story.



For more information, see [Edit a Story](#).

SEE ALSO:

[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

## Deploy Predictions on Salesforce Records Without Writing Code (Pilot)

You can now write scores automatically to selected Salesforce fields. Easily integrate predictions without involving Process Builder or a managed package with a trigger.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

 **Note:** We provide Code-free Predictions to selected customers through a pilot program that requires agreement to specific terms and conditions. To be nominated to participate in the program, contact Salesforce. Pilot programs are subject to change, and we

can't guarantee acceptance. Code-free Predictions are not generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only based on generally available products and features. You can provide feedback and suggestions for Code-free Predictions in the applicable IdeaExchange group in the Trailblazer Community.

**Who:** To view model accuracy, you must be enrolled in the pilot program and have the Connect Einstein Discovery Model permission.

**How:** Deploy a model for which you can map all model fields back to Salesforce fields. You can use an existing AI Prediction field or create one. After you deploy the model, add the AI Prediction field to the page layout.

### Deploy Model to Salesforce

#### Name the custom field that stores your results

We create a custom field for you that stores your prediction results. You get to name it whatever you like. Prediction results are stored in this field on each entity record

No AI Prediction field (automatic writeback will not be enabled)  
 Create a new AI Prediction field from label  
 Use an existing AI Prediction field

Enter a label for the new AI Prediction field

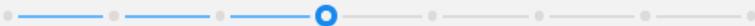
#### Einstein is here to help



##### Assign a custom field for writeback

To enable automatic writeback you'll either have to create a new AI Prediction field (providing a field label) or use an existing AI Prediction field. Note: this feature is disabled until all fields are mapped in the previous step.

Back



Add Filters

SEE ALSO:

[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

## Display Einstein Discovery Predictions in Lightning Experience Record Pages

Add Einstein Discovery predictions as a standard Lightning component in any record detail page. In the Lightning App Builder, drag the new Einstein Predictions component onto your record page. Then simply choose a prediction definition, set prediction units, and select display settings. On the record page, predictions are updated in real time, and no writeback to Salesforce is necessary.

**Where:** These changes apply to Einstein Analytics in Lightning Experience. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Who:** To add the component to a page, you must have the Customize Application system permission. To view the predictions, you must have the View Einstein Discovery Recommendations permission.

**How:** Drag the Einstein Predictions Standard Lightning Component to the page layout. Choose the prediction to show and, optionally, configure the settings. For instructions, see [Add Einstein Predictions to a Lightning Page](#).

SEE ALSO:

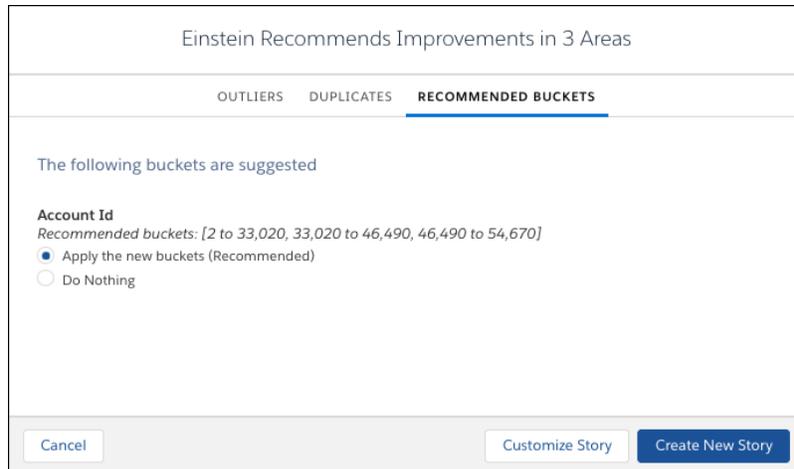
[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

## Get Better Insights with Smart Bucketing

Better bucketing improves your story insights. Einstein Discovery uses an unsupervised learning algorithm that analyzes numeric columns in your story. It suggests better buckets to use, such as different ranges for age or postal code data.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** On the Story toolbar, click **Recommended Updates**. On the Recommended Buckets tab, select **Apply the new buckets (Recommended)**. Create the story to see the new buckets.



For instructions, see [Improve a Story](#).

SEE ALSO:

[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

## Predict Quantities Using Whole Numbers

Calculations often result in fractions. But certain predictions make sense only when expressed as whole numbers, say the number of orders per month or the number of customers entering a store. Display them as whole numbers using automatic rounding.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** Create a story. In the Story Setup wizard, when you select a goal, select **Are you expecting a whole number greater than or equal to 0?**

For more information, see [Create a Story](#).

SEE ALSO:

[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

## Monitor the Accuracy of Deployed Models in Real Time (Pilot)

Determine the accuracy of your model by comparing predicted outcomes with actual ones. Then use this feedback to fine-tune your model and get better predictions.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Note:** We provide the Model Accuracy feature to selected customers through a pilot program that requires agreement to specific terms and conditions. To be nominated to participate in the program, contact Salesforce. Pilot programs are subject to change, and we can't guarantee acceptance. Model Accuracy isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only based on generally available products and features. You can provide feedback and suggestions for Model Accuracy in the applicable IdeaExchange group in the Trailblazer Community.

**Who:** To view model accuracy, you must be enrolled in the pilot program and have the Connect Einstein Discovery Model permission.

**How:** Open the Model Manager, click the model, and look at the Model Accuracy column. The value represents an aggregate of all predictions versus actual outcomes.

SEE ALSO:

[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

## Generate Predictions Natively in Analytics Dataflows

For Einstein Analytics dataflows, to score a dataset, add the new prediction transformation in the dataflow editor. Specify the name of the prediction definition to use and the name and label of the new dataset column to contain the score.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Who:** To embed Einstein Discovery predictions in dataflows, you need the Edit Analytics Dataflows and View Einstein Discovery Recommendations permissions. To see predictions, you need the View Einstein Discovery Recommendations permission.

**How:** For more information, see [prediction Transformation](#) in Salesforce help.

SEE ALSO:

[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

## Improve Story Accuracy With Optimized Feature Selection

Einstein Discovery now generates stories with numeric outcomes faster by selecting just the features and variables required to build the model. The story creation process is streamlined and quicker. Optimized feature selection applies to regression stories but is not for classification.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

SEE ALSO:

[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

## Gain Insights from Smaller Einstein Analytics Datasets

Don't have a lot of data? No problem. Descriptive insights require only a minimum of 50 rows of data. Predictive insights require a minimum of 400 rows of data. Select the dataset during story setup. If it contains fewer than 400 rows, Einstein Discovery generates insights for descriptive insights but doesn't generate a model for predictions and improvements.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

For more information, see [Einstein Discovery Limits](#).

SEE ALSO:

[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

## Retiring Einstein Discovery Classic

We plan to retire Einstein Discovery Classic in Spring '20. Current Einstein Discovery Classic users need the Einstein Analytics Plus license (required for Einstein Discovery in Analytics) to recreate datasets and stories in Analytics Studio. Einstein Discovery Classic will be replaced with the new experience in all Developer Orgs with the Summer '19 release.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** If you currently use Einstein Discovery Classic and already have the Einstein Analytics Plus license, log a case with Salesforce Support to be switched over to the new experience. If you have EA Growth or the Discovery Analysts license, contact your Account Executive to swap your license to Einstein Analytics Plus. Free Developer orgs have all the correct licenses and we will automatically switch them to the new experience.

If you want to keep data from your Einstein Discovery datasets, use the “Export to Einstein Analytics” feature *before* switching over. Once Einstein Discovery in Analytic is enabled in your org, use Analytics Studio to build your Einstein Analytics datasets and manually create your stories.

## Extending Analytics: Einstein Prediction Service, Embedded Dashboard Filter Builder

Embed Einstein Discovery predictions into any application or web page. Along with its new name, the Einstein Analytics Dashboard component has an easy way to specify dynamic, contextual filters on dashboards embedded in record pages.

### IN THIS SECTION:

#### [Embed Your Einstein Discovery Predictions Anywhere](#)

After deploying models with Einstein Discovery, use the Einstein Predictions Service Scoring API to embed your predictions into any website or application. Use the Scoring API REST endpoint to access the deployed Einstein Discovery predictive modes. Send model input variables, and get back predictions, reasons for the predictions, and recommendations on how to improve the predictions. Via embedding, you can score records located inside or outside of Salesforce.

#### [Quickly Build Contextual Filters for Dashboards Embedded in Record Pages](#)

In the Lightning App Builder and Community Builder, the Wave Dashboard component has a new name—“Einstein Analytics Dashboard”—and a new Filter Builder option for record pages. With the Filter Builder, you can point and click to configure dynamic filters for your embedded dashboards. Now it’s easy to set up a dashboard to show the relevant data for the record that it appears on.

## Embed Your Einstein Discovery Predictions Anywhere

After deploying models with Einstein Discovery, use the Einstein Predictions Service Scoring API to embed your predictions into any website or application. Use the Scoring API REST endpoint to access the deployed Einstein Discovery predictive modes. Send model input variables, and get back predictions, reasons for the predictions, and recommendations on how to improve the predictions. Via embedding, you can score records located inside or outside of Salesforce.

**Where:** This change applies to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**When:** This feature is being added on a rolling basis during the Summer '19 release.

**Who:** To access and run the API, you need the View Einstein Discovery Recommendations permission.

**How:** For instructions, see [Run Predictions With the Einstein Prediction Service](#).

### SEE ALSO:

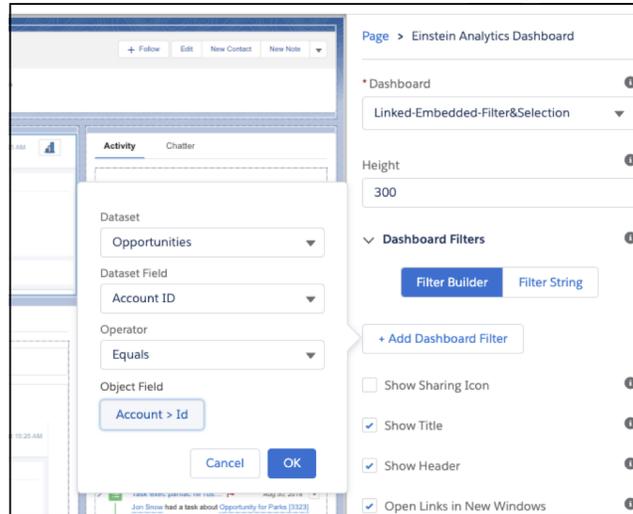
[Einstein Discovery: Bias Protection, Einstein Predictions Lightning Component](#)

## Quickly Build Contextual Filters for Dashboards Embedded in Record Pages

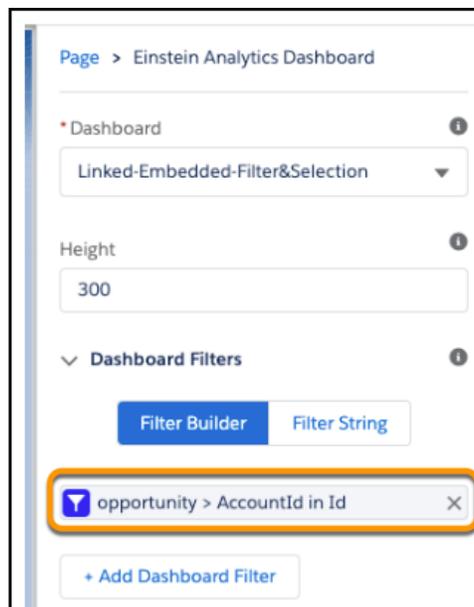
In the Lightning App Builder and Community Builder, the Wave Dashboard component has a new name—“Einstein Analytics Dashboard”—and a new Filter Builder option for record pages. With the Filter Builder, you can point and click to configure dynamic filters for your embedded dashboards. Now it’s easy to set up a dashboard to show the relevant data for the record that it appears on.

**Where:** These changes apply to Einstein Analytics in Lightning Experience. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Why:** Select fields from lists and add filters in seconds, all with clicks not code, reducing common errors.

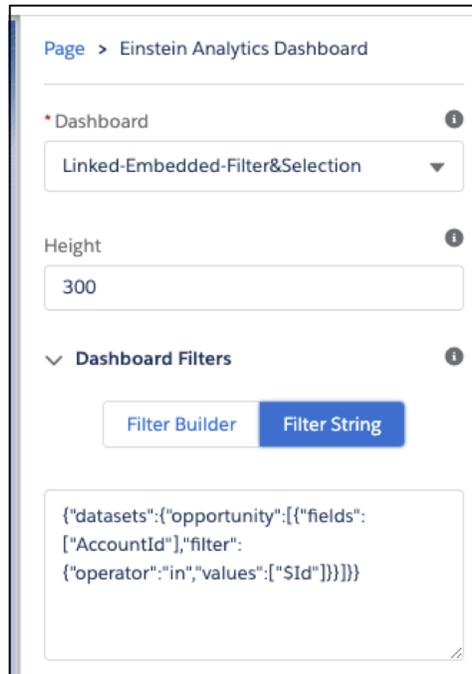


**How:** In the Einstein Analytics Dashboard component's configuration panel, click **Filter Builder** and **+ Add Dashboard Filter**. Select an available Analytics dataset and dataset field, and associate it with a field in an sObject or custom object. When you click **OK**, the filter appears in the configuration panel.



Click an existing filter to edit it in the Filter Builder, or click **X** to remove it.

To view or edit the filter JSON, click **Filter String**.



Be aware of the following considerations.

- The Filter Builder is available only when adding the Einstein Analytics Dashboard component in a record page layout. If you're adding the component in an app or home page layout, you can still create filters by entering JSON strings in the text box.
- The Filter Builder supports filters that associate Analytics dataset fields with Salesforce record object fields or custom object fields. The dataset fields must be dimensions (not dates or measures), and the object field values must be tokenizable (not static values). Use the Filter String text box to specify filters or dashboard selections not supported by the Filter Builder.
- A filter can't be viewed or edited in the Filter Builder if it was created or edited in the Filter String text box.

SEE ALSO:

[Salesforce Help: Embed Analytics Dashboards in Lightning Pages](#)

[Salesforce Help: Use Community Builder to Embed Analytics Dashboards in Communities](#)

## Analytics for End Users: Learn Tab, In-Dashboard Customized Onboarding, Mobile Apps

Start fresh or continue your Analytics journey with Learn tab resources and adventures. Tailor users' onboarding journeys with the widget-specific Learn option. Look for new versions of Analytics for iOS and Android to coincide with the Summer '19 release.

IN THIS SECTION:

[Get Started, Educate Yourself, and Stay Informed with the Learn Tab](#)

Starting in Summer '19, when you first open the Analytics Studio after a new release, the Learn tab presents the top new features. It also offers continuing educational content for you and getting started experiences for your users. That's right, no more blank slate for first-time users! Instead, the Learn tab is the in-product home of assistance resources for all users, regardless of where they are in their Analytics journey.

[Drive Adoption and Engagement with In-Dashboard Video Onboarding](#)

Help users get the most out of your Analytics assets by empowering them with educational videos right where they work. With the widget-specific Learn option, you can provide customized, right-on-time instruction for each dashboard and its charts.

[Additional Enhancements Across Analytics](#)

Experience Lightning style headers and even more helpful Help Menus in Analytics Studio and Data Manager.

[Analytics Mobile Apps: Upgrade to the Summer '19 Versions of Einstein Analytics for iOS and Android](#)

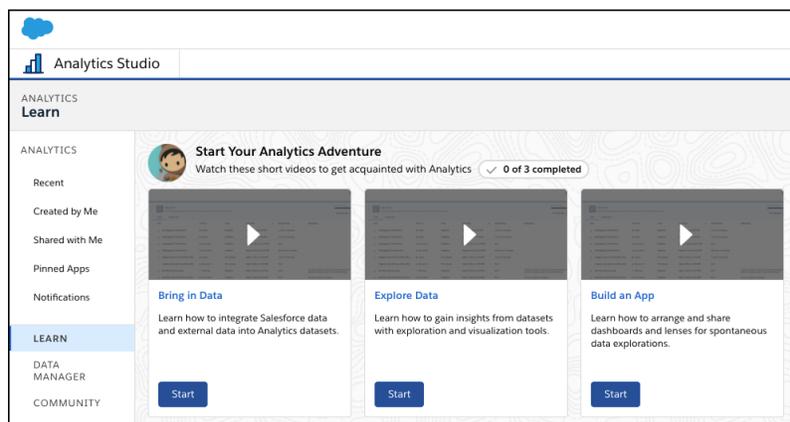
Einstein Analytics version 7.0 is generally available starting the week of June 17, 2019.

## Get Started, Educate Yourself, and Stay Informed with the Learn Tab

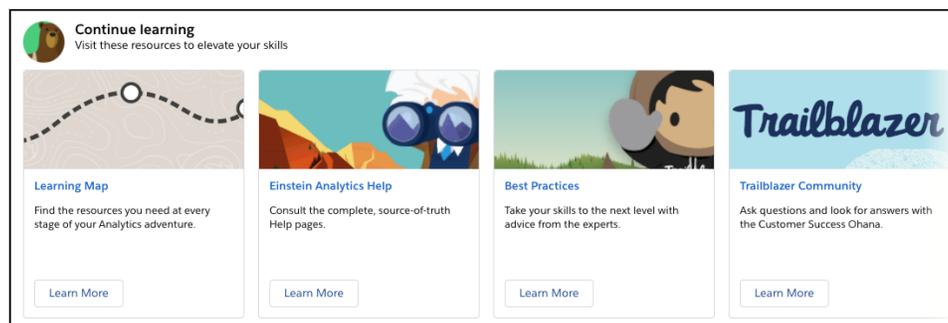
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**Where:** These changes apply to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

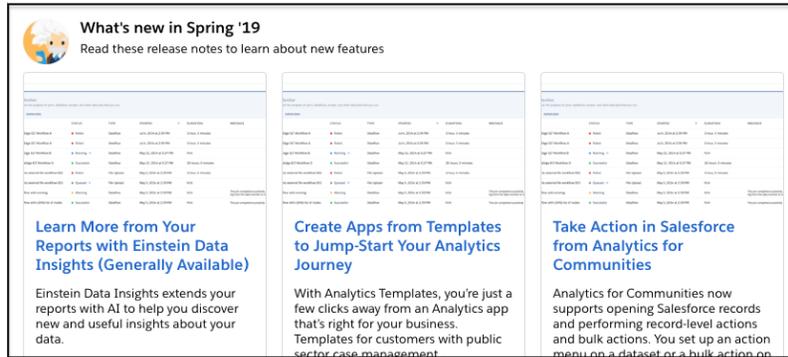
**How:** For a guided, first-time experience of Analytics Studio, direct your users to Start Your Analytics Adventure. Each tile in this section of the Learn tab initiates a key product action and triggers an in-app video. The video walks users through the process for completing the action, and learning progress is tracked. The available actions depend on the user's permissions.



Get the most out of Analytics Studio at any part of your Analytics journey. Refer to the Continue Learning section for links to the top user assistance resources, such as the Learning Map. This section includes new Trailmixes for different areas of Analytics.



Learn about top features and general updates each release in the What's New section.

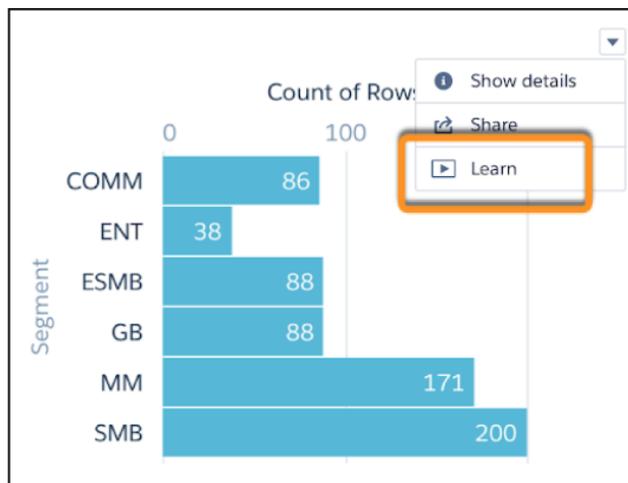


## Drive Adoption and Engagement with In-Dashboard Video Onboarding

Help users get the most out of your Analytics assets by empowering them with educational videos right where they work. With the widget-specific Learn option, you can provide customized, right-on-time instruction for each dashboard and its charts.

**Where:** This feature is available in Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Why:** Videos can help users to understand and interpret the data, make informed decisions, and take actions based on the latest information. Provide your own YouTube videos, which users can easily access in the widget action menus.



Selecting **Learn** opens our in-app, resizable, draggable video player, loaded with the video you specified.

**How:** In the dashboard designer's widget properties panel, open the Onboarding section. Enter a title and the embed URL for your video.

Onboarding ^

How do I link to an onboarding resource? ▶

Video Title

Video Embed URL ⓘ

Get the embed URL in YouTube by clicking **Share** and then **Embed**. The URL must have this format:  
<https://www.youtube.com/embed/xxxxxxxxxx>.

## Additional Enhancements Across Analytics

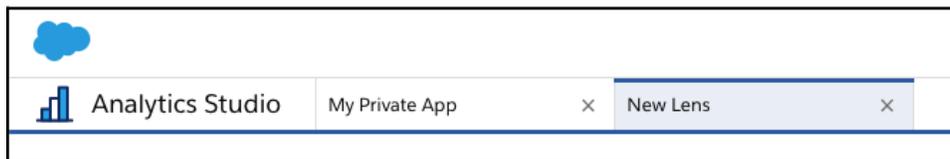
Experience Lightning style headers and even more helpful Help Menus in Analytics Studio and Data Manager.

**Where:** These changes apply to Einstein Analytics in Lightning Experience and Salesforce Classic. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

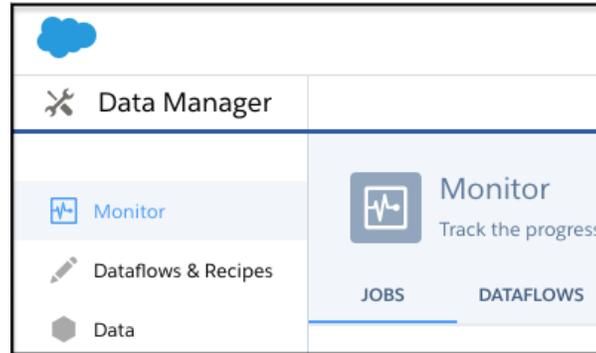
**Why:** These enhancements make Analytics easier to use.

- **Experience Lightning style headers in Analytics Studio and Data Manager.** Say goodbye to that old teal line and hello to Lightning-style tabs. We've given Analytics Studio and Data Manager a streamlined new look, without changing any functionality. Customers on Salesforce Classic also get the new style. Because there's no conversion to Lightning Experience, features such as Lightning Themes aren't carried into the new header of Analytics Studio and Data Manager.

With the lighter header in Analytics Studio, your own Analytics assets can capture more attention. The simplified look also sports our new Einstein Analytics logo.



The new style in the Data Manager provides visual consistency across Einstein Analytics.



- **Find more Analytics resources in the new Help Menu.** The same Help Menu that you know and love in Lightning Experience is now in Analytics Studio and Data Manager. The Help Menu's expandable sections, **Getting Started** and **Help for This Page**, contain more Analytics-specific resources for both new and experienced users.

## Analytics Mobile Apps: Upgrade to the Summer '19 Versions of Einstein Analytics for iOS and Android

Einstein Analytics version 7.0 is generally available starting the week of June 17, 2019.

### IN THIS SECTION:

#### [More Enhancements in Einstein Analytics for iOS](#)

Einstein Analytics for iOS now supports additional Summer '19 features.

#### [More Enhancements in Einstein Analytics for Android](#)

Einstein Analytics for Android includes performance improvements and support for additional Summer '19 features.

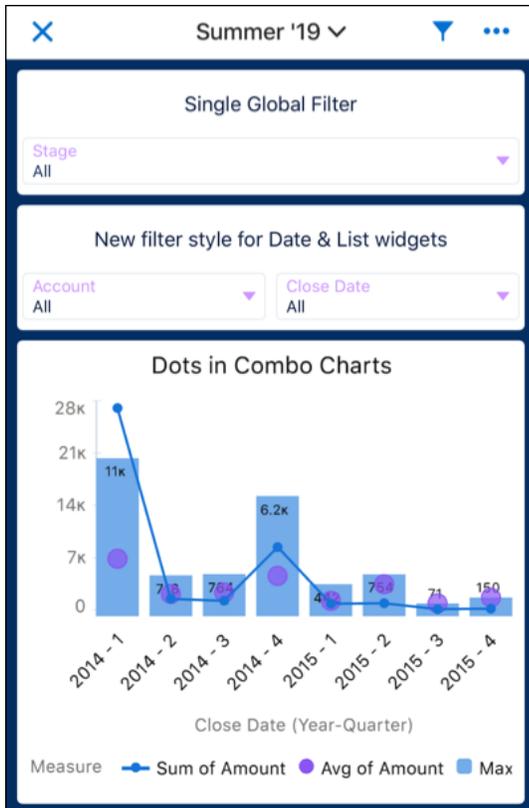
### More Enhancements in Einstein Analytics for iOS

Einstein Analytics for iOS now supports additional Summer '19 features.

**Where:** These changes apply to Einstein Analytics for iOS. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**Why:** Enhancements in the latest release include support for the following Summer '19 features.

- Single global filters.
- Filter styling options for list and date widgets.
- Dots in combo and time combo charts.
- Bug fixes.



**How:** Analytics is available for devices running iOS 10 and later. For the latest enhancements, download Einstein Analytics version 7.0 from the App Store.

### More Enhancements in Einstein Analytics for Android

Einstein Analytics for Android includes performance improvements and support for additional Summer '19 features.

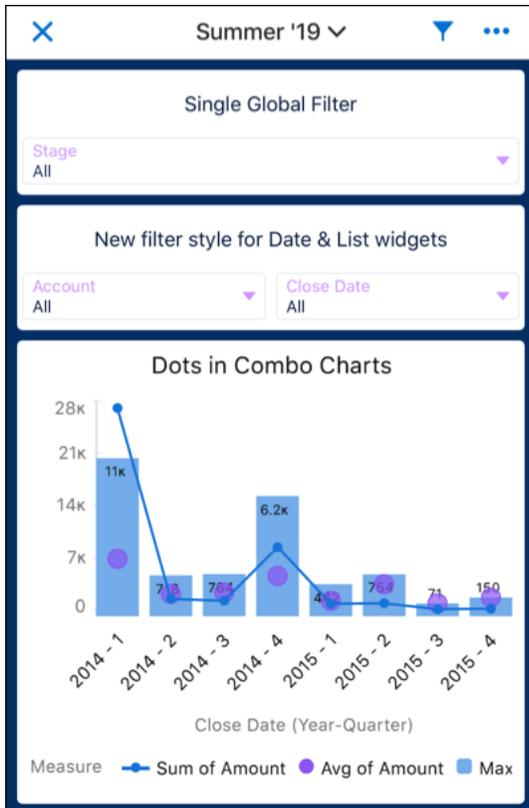
**Where:** These changes apply to Einstein Analytics for Android. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited Editions.

**Why:** Enhancements in the latest releases include the following performance improvements.

- Smoother dashboard scrolling optimized for mobile devices.
- Tap charts for more intuitive chart interactions in dashboards.
- Bug fixes and usability enhancements.

Enhancements in the latest release include support for the following Summer '19 features.

- Single global filters.
- Filter styling options for list and date widgets.
- Dots in combo and time combo charts.
- Bug fixes.



**How:** Analytics is available for devices running Android 5 or later. For the latest enhancements, download Einstein Analytics version 7.0 from Google Play.

## Communities: Increased Developer Productivity, Mobile Publisher Enhancements, and Record List Improvements

Summer '19 is a boon for developers, who can now work more efficiently on communities using a host of new API enhancements. Our mobile team has been hard at work improving the Salesforce Mobile Publisher for Community Cloud. Community users can also take advantage of new list view improvements, such as pinned list views, custom mass actions, and custom list views on tasks.

**Tip:** There's lots of Lightning striking Salesforce these days—Lightning Experience, Lightning Bolts, Lightning components—and it can be tricky to know how it all applies to Communities. Here's the rundown.

Lightning communities use the same underlying technology as Lightning Experience—namely, the Lightning Platform and Lightning components—but you aren't required to enable Lightning Experience to use them.

### IN THIS SECTION:

[Mobile Communities: Lightning Communities Through API and Optimized Images](#)

Developers can use the UI API or SOAP API to display Lightning Communities in the Salesforce mobile app. Asset file images are now optimized for mobile.

[Lightning Communities: Streamlined User Creation, Updated Flow Page URLs, and More](#)

Delegated admins have a more streamlined experience when creating users, doing so right from the user detail page rather than Salesforce Setup. We also updated the format of the Flow page URL.

[Lightning Components in Community Builder: Mass Actions in Communities, Customizable User Settings, and Contextual Einstein Analytics Dashboards](#)

Community users can now use mass actions in communities, saving them time and decreasing the number of headaches associated with opening records one by one. You now have the option of customizing community user settings with the new Customizable User Settings component. And users can now filter contextual Einstein Analytics Dashboards on record pages.

[Developer Productivity: Do More, More Easily](#)

Develop communities more efficiently with several API enhancements.

[Partner Central: Enhancements to Account Relationships and Channel Programs, Emails from Cases, Path on Market Development Funds, and Tailored Product Schedules](#)

Partners are getting more with account relationship and channel programs. More objects to share in account relationships, more ways to track how well they are working, and more flexibility over making updates. More members to add to channel programs and more ways to track member activity. Also, partners can now send emails from cases and configure their product schedules to better meet the needs of their sales teams.

[Sharing and Security: New Defaults for External Profiles, Increased Password Security, and Sharing Sets for Leads](#)

Community user profiles now have tighter object permissions out of the box, although you can always set permissions for your business needs. You can also tighten security by requiring community users to set more complex passwords. And now you can use sharing sets with leads.

[Critical Updates: External Org-Wide Defaults, TLS 1.2, and More](#)

We're enforcing and announcing a few critical updates this release. The External Sharing Model is enabled for all orgs starting in Summer '19, and TLS 1.2 is enforced.

[Other Changes in Communities](#)

Learn about smaller changes that improve your experience with communities.

## Mobile Communities: Lightning Communities Through API and Optimized Images

Developers can use the UI API or SOAP API to display Lightning Communities in the Salesforce mobile app. Asset file images are now optimized for mobile.

### IN THIS SECTION:

[Build Mobile Apps that Display a User's Lightning Communities](#)

Previously, the `formFactor` query parameter returned communities only if it was set to `Medium` for tablet apps, or `Large` for desktop apps. Now it also returns communities when it's set to `Small`.

[Display Optimized Images on Mobile Devices](#)

See logos and product images faster on mobile devices. Asset file images have been optimized for mobile display. In Spring '19, this preference was enabled for new communities, and it's now enabled by default for all communities.

## Build Mobile Apps that Display a User's Lightning Communities

Previously, the `formFactor` query parameter returned communities only if it was set to `Medium` for tablet apps, or `Large` for desktop apps. Now it also returns communities when it's set to `Small`.

SEE ALSO:

[User Interface API](#)

[New and Changed Objects](#)

## Display Optimized Images on Mobile Devices

See logos and product images faster on mobile devices. Asset file images have been optimized for mobile display. In Spring '19, this preference was enabled for new communities, and it's now enabled by default for all communities.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Essentials, Performance, Unlimited, and Developer editions.

**When:** Available within 24 hours after the release.

**How:** If you want to disable this preference, deselect **Optimize images for mobile** in Community Workspaces under **Administration | Preferences**.

 **Note:** A known issue affects the display of transparent images on mobile devices when this preference is enabled. Asset file images with a transparent background or layer lose transparency on mobile devices. To fix this issue, deselect the **Optimize images for mobile** preference in Community Workspaces under **Administration | Preferences**.

SEE ALSO:

[Spring '19 Release Note: Get a Better Image Experience on Mobile](#)

## Lightning Communities: Streamlined User Creation, Updated Flow Page URLs, and More

Delegated admins have a more streamlined experience when creating users, doing so right from the user detail page rather than Salesforce Setup. We also updated the format of the Flow page URL.

IN THIS SECTION:

[Do More with the New Salesforce CMS \(Beta\)](#)

CMS for Community Cloud has evolved into something bigger and better: Salesforce CMS. A host of features that improves usability and flexibility. Share content across communities more easily, and collaborate with local and regional teams on projects. Create content outside of your communities in CMS workspaces. And take advantage of role-based access to control content authoring and settings access in Salesforce CMS. Salesforce CMS is available automatically to all Communities Cloud customers. Check out the Salesforce CMS in the App Launcher.

[CMS for Community Cloud Users Are Migrating to Salesforce CMS \(Beta\)](#)

CMS for Community Cloud has had more than a name change—it has evolved into Salesforce CMS with many enhancements and some changes in how you work. If you've been using CMS for Community Cloud, we're moving your content to Salesforce CMS and setting up your new environment. This migration affects only communities that enabled CMS for Community Cloud. Let's walk you through the changes.

### [Control Who Does What in Salesforce CMS \(Beta\)](#)

Role-based access in Salesforce CMS makes it easy to control exactly who does what in each content workspace. Add contributors to individual CMS workspaces by assigning access roles according to the level of access they need.

### [Streamline User Creation and Management of External Users](#)

Now delegated admins can create, disable, and view external users without going to Salesforce Setup. They can select the action they want to take directly from the contact detail page.

### [Get More Control with Community Flow Page URLs](#)

The Flow page URL now includes flow arguments in the query string. When you navigate to the Flow page in Community Builder, you can set variable inputs for your flows from the URL. The updated format gives you more control over your variable inputs while you're on the Flow page. This change doesn't affect flows that aren't located on the out-of-the-box community Flow page.

### [Currency Field Is Available in Account and Opportunity Layouts](#)

You can now include the Account Currency field in account and opportunity layouts. Previously, the currency field was visible to users only while a record was being edited.

### [Community Builder No Longer Supported in Microsoft Internet Explorer 11](#)

For performance and security concerns, support for working in Community Builder from Microsoft Internet Explorer version 11 (IE11) ends in Summer '19. Switch to a more-secure supported browser to continue to build your community. You can still view Lightning communities with IE11.

### [Create a Report from Your Community \(Beta\)](#)

With the new Report Builder page, external users can create and delete reports directly from their community.

## Do More with the New Salesforce CMS (Beta)

CMS for Community Cloud has evolved into something bigger and better: Salesforce CMS. A host of features that improves usability and flexibility. Share content across communities more easily, and collaborate with local and regional teams on projects. Create content outside of your communities in CMS workspaces. And take advantage of role-based access to control content authoring and settings access in Salesforce CMS. Salesforce CMS is available automatically to all Communities Cloud customers. Check out the Salesforce CMS in the App Launcher.

**Where:** Salesforce CMS is available in Lightning Experience for Lightning communities in Enterprise, Essentials, Performance, Unlimited, and Developer editions.

 **Note:** Salesforce CMS is a beta feature. Salesforce admins, content managers, and content admins can access this beta feature in the Salesforce App Launcher and Communities administrators can do so in the Content Management workspace of any community. You can provide feedback and suggestions for Salesforce CMS in the [Community Cloud group](#) in the Trailblazer Community.

**Who:** To access Salesforce CMS and create content, you must be a Salesforce admin or have a contributor role, such as content manager or content admin, in specific CMS workspaces. To curate and display content to outside users, you must have admin privileges in Communities.

**Why:** With Salesforce CMS, authoring can be done outside communities, which has some nice perks.

- Assign content access with new contributor roles that don't require administrative access to your communities.
- Create one or more CMS workspaces to organize your content and share it across multiple communities at once.
- Create a Full sandbox to play around in safely before making Salesforce CMS part of your daily community life.

Within your individual communities, customize the experience for your users.

- Reuse content published from one or more CMS workspaces.
- Curate content into collections that automatically refresh as content changes.

- Reuse your existing CRM data, such as inventory, to help users find what they need.
- Connect to an external CMS to reuse content you already host elsewhere with CMS Connect.

**How:** To see Salesforce CMS in the App Launcher, Communities must be enabled in your org and users must have **Salesforce CMS** enabled in the Custom App Settings of their profile in Setup.

SEE ALSO:

[CMS for Community Cloud Users Are Migrating to Salesforce CMS \(Beta\)](#)

[Control Who Does What in Salesforce CMS \(Beta\)](#)

[Salesforce Help: Salesforce CMS](#)

[Salesforce Help: Create a Sandbox](#)

## CMS for Community Cloud Users Are Migrating to Salesforce CMS (Beta)

CMS for Community Cloud has had more than a name change—it has evolved into Salesforce CMS with many enhancements and some changes in how you work. If you've been using CMS for Community Cloud, we're moving your content to Salesforce CMS and setting up your new environment. This migration affects only communities that enabled CMS for Community Cloud. Let's walk you through the changes.

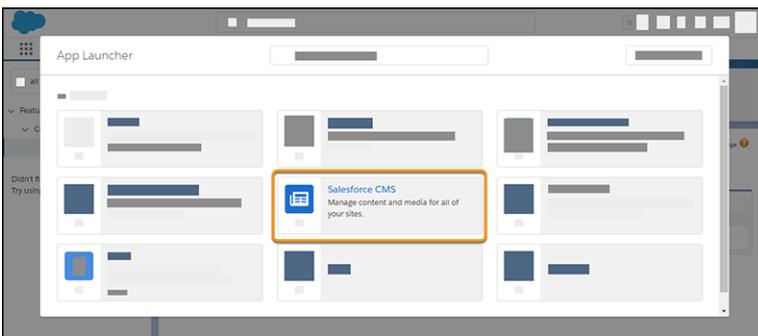
**Where:** Salesforce CMS is available in Lightning Experience for Lightning communities in Enterprise, Essentials, Performance, Unlimited, and Developer editions.

- 📌 **Note:** Salesforce CMS is a beta feature. Salesforce admins, content managers, and content admins can access this beta feature in the Salesforce App Launcher and Communities administrators can do so in the Content Management workspace of any community. You can provide feedback and suggestions for Salesforce CMS in the [Community Cloud group](#) in the Trailblazer Community.

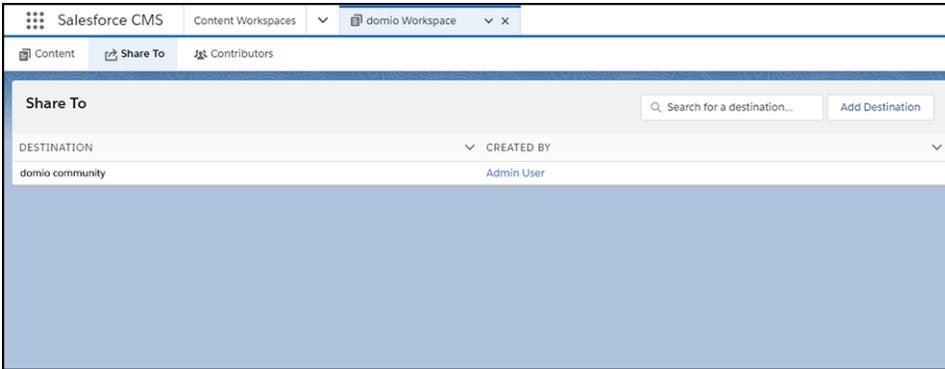
**When:** Although migration is automatic, it takes time for all workspaces and content to be created and assigned correctly. Trying to publish new content from a CMS workspace may encounter errors until the process is complete. No information will be lost during the transition, but you will need to try to publish the new content at a later time.

**How:** How and where you create and access your content is changing.

- Your content is migrated to the Salesforce CMS app, which you can access from the App Launcher.



- 📌 **Note:** If you don't see the CMS app, enable **Salesforce CMS** in the Custom App Settings of your profile in Salesforce Setup.
- Each community that had CMS for Community Cloud enabled now also has a separate CMS workspace with the same name as the community. The new CMS workspace is available in the Salesforce CMS app.



- All previously published content is republished along with its assigned topics.
-  **Note:** Migrated content gets new IDs. Update bookmarks or direct links to detail pages if you saved or created them manually.
- All draft and archived content is added to Salesforce CMS. After the content is published, reapply previously assigned topics in the Content Management workspace in the associated community.
- All collections that you previously created continue to be available in the Content Management workspace of each community.
- Anyone who had access to CMS for Community Cloud in the previous release is automatically granted a content admin contributor role. Content admins have full access to the newly created corresponding CMS workspace in the Salesforce CMS app. However, you can remove or change the contributor roles in the CMS app after migration.
-  **Note:** For large communities that have more than 200 community admins, only admins who have previously created content are assigned the new role.

## SEE ALSO:

[Do More with the New Salesforce CMS \(Beta\)](#)

[Control Who Does What in Salesforce CMS \(Beta\)](#)

[Salesforce Help: Salesforce CMS](#)

## Control Who Does What in Salesforce CMS (Beta)

Role-based access in Salesforce CMS makes it easy to control exactly who does what in each content workspace. Add contributors to individual CMS workspaces by assigning access roles according to the level of access they need.

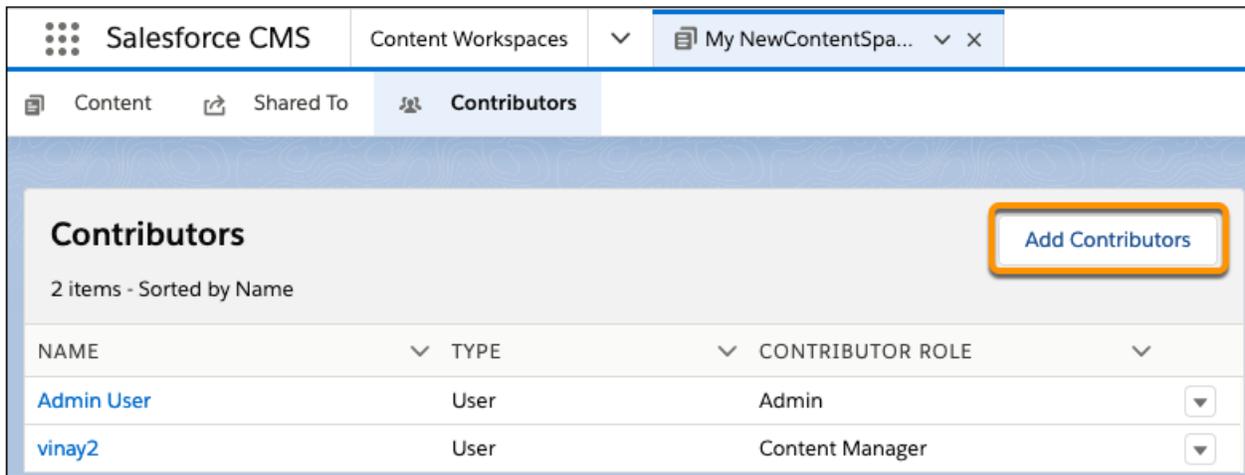
**Where:** Salesforce CMS is available in Lightning Experience for Lightning communities in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

-  **Note:** Salesforce CMS is a beta feature. Salesforce admins, content managers, and content admins can access this beta feature in the Salesforce App Launcher and Communities administrators can do so in the Content Management workspace of any community. You can provide feedback and suggestions for Salesforce CMS in the [Community Cloud group](#) in the Trailblazer Community.

**Why:** Previously, it was difficult to manage content in Salesforce CMS (formerly CMS for Community Cloud) because users had complete access to all functionality and content. Now you can add users or public groups as contributors to a specific CMS workspace and assign them one of the following roles:

- Content admin — These contributors have access to all content in the CMS workspace and can manage contributors and sharing.
- Content manager — These contributors have full access to all content in the CMS workspace.

**How:** To add contributors to a CMS workspace, you must be a Salesforce admin or a content admin in that workspace. In the Salesforce CMS app, go to CMS Workspaces and select a workspace to open it. Then select **Contributors** | **Add Contributor**, and assign roles as required.



**Note:** If you previously used CMS for Community Cloud, as part of the [migration to Salesforce CMS](#), we automatically assign the content admin role to existing users.

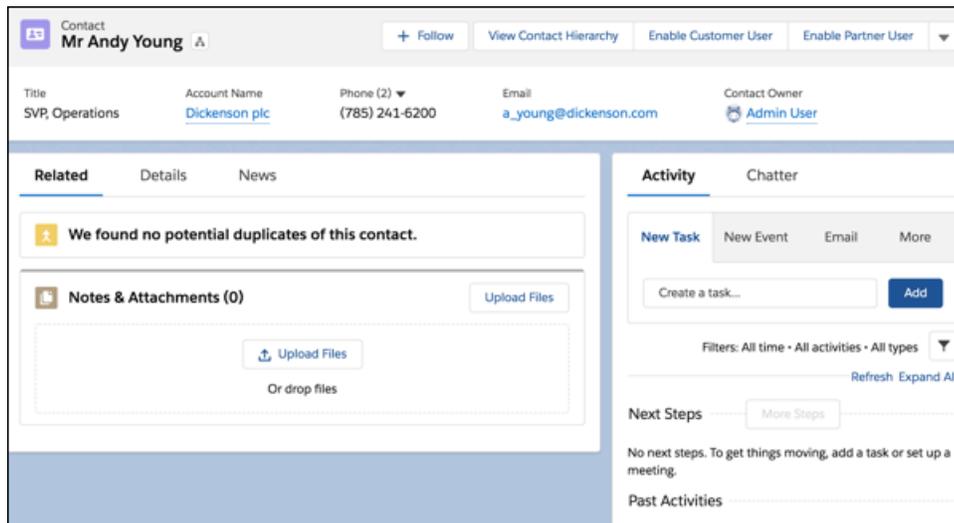
## Streamline User Creation and Management of External Users

Now delegated admins can create, disable, and view external users without going to Salesforce Setup. They can select the action they want to take directly from the contact detail page.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Users with partner licenses, the Manage External Users or Manage Customer Users preference, and the delegated admin permission can create external users.

**Why:** Delegated admins can enable a partner user directly from the Contact page.



## Get More Control with Community Flow Page URLs

The Flow page URL now includes flow arguments in the query string. When you navigate to the Flow page in Community Builder, you can set variable inputs for your flows from the URL. The updated format gives you more control over your variable inputs while you're on the Flow page. This change doesn't affect flows that aren't located on the out-of-the-box community Flow page.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Essentials, Performance, Unlimited, and Developer editions.

**Why:** Here's an example of the updated URL format.

```
/s/flow/flowName?flowArguments=[{"label":"variable1Name","dataType":"String","value":"value1"}, {"label":"variable2Name","dataType":"String","value":"value2"}]
```



**Note:** Make sure to use straight quotes in the URL query string. Smart (curly) quotes cause errors.

## Currency Field Is Available in Account and Opportunity Layouts

You can now include the Account Currency field in account and opportunity layouts. Previously, the currency field was visible to users only while a record was being edited.

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

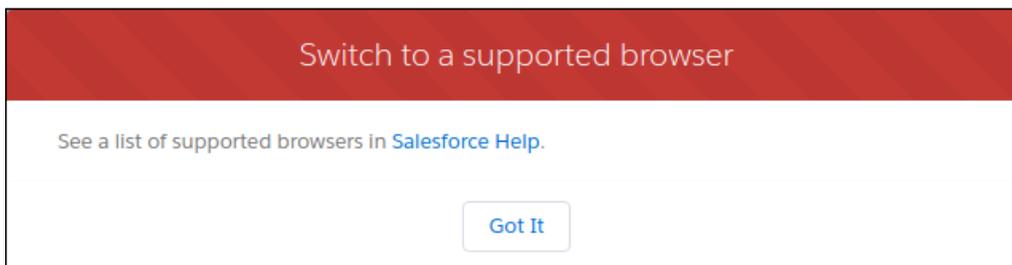
[Currency Field Is Available in Account and Opportunity Layouts](#)

## Community Builder No Longer Supported in Microsoft Internet Explorer 11

For performance and security concerns, support for working in Community Builder from Microsoft Internet Explorer version 11 (IE11) ends in Summer '19. Switch to a more-secure supported browser to continue to build your community. You can still view Lightning communities with IE11.

**Where:** This change applies to Community Builder in Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Essentials, Performance, Unlimited, and Developer editions.

**How:** The next time you access Community Builder with IE11, a message provides you a link to the browsers that Salesforce supports.



SEE ALSO:

[Browser Support for Communities](#)

## Create a Report from Your Community (Beta)

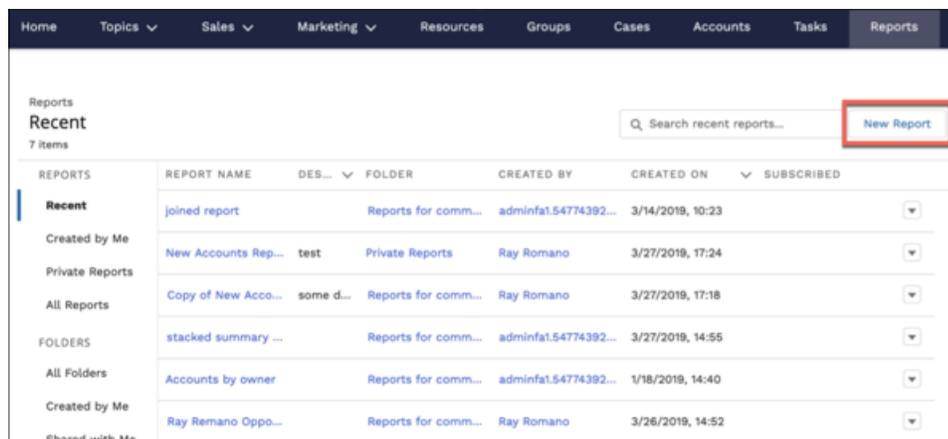
With the new Report Builder page, external users can create and delete reports directly from their community.

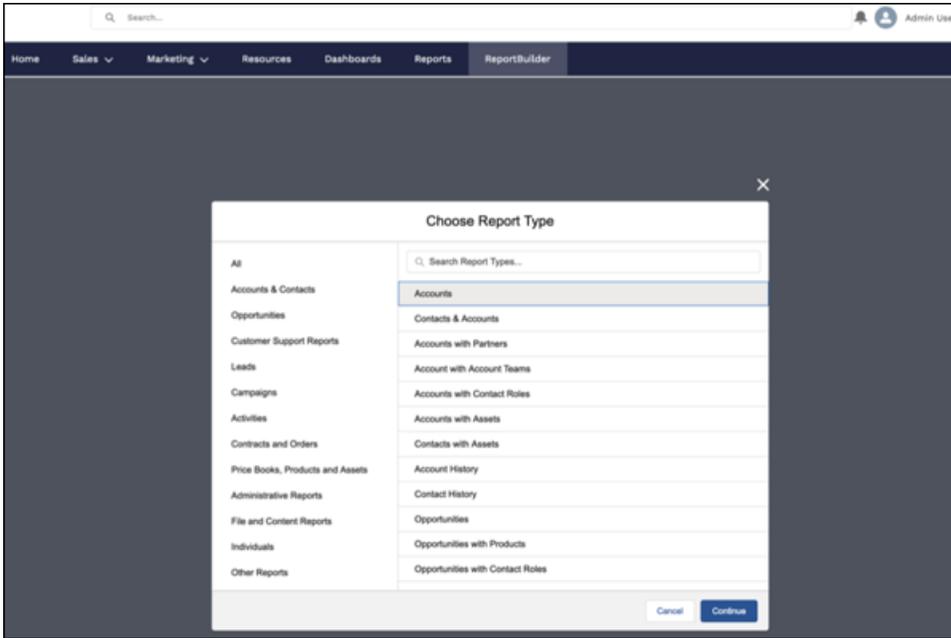
**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Note:** As a closed beta feature, the Report Builder page in communities is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for the Report Builder page, in the [Community Templates](#) group in the Trailblazer Community. For information on enabling this feature in your org, contact Salesforce Customer Support.

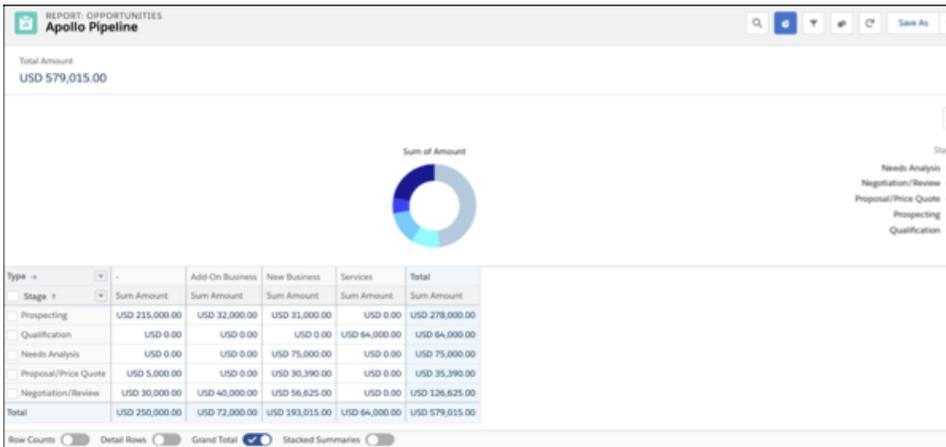
**Who:** The Report Builder page is available in the following community templates: Customer Account Portal, Partner Central, Customer Service, and Build Your Own templates for communities with Partner or Customer Community Plus licenses. Users need the Create and Customize Reports and Report Builder or Report Builder (Lightning Experience).

**Why:** External users can create and delete reports from the Report Builder page in their community.





Enhanced Reports are also available with this beta feature.



**Note:** Existing reports can't be updated using this feature. In order to change a report after it's created, you must delete the report and create it again.

**How:** Contact Salesforce Customer Support to enable.

**Warning:** The community admin must republish the community for the report builder page to appear. Until the community is republished, users will see an error message when clicking on the **New Report** button.

# Lightning Components in Community Builder: Mass Actions in Communities, Customizable User Settings, and Contextual Einstein Analytics Dashboards

Community users can now use mass actions in communities, saving them time and decreasing the number of headaches associated with opening records one by one. You now have the option of customizing community user settings with the new Customizable User Settings component. And users can now filter contextual Einstein Analytics Dashboards on record pages.

## IN THIS SECTION:

### [Set Up Quick Actions in Case Views](#)

Quick actions that you configure in Lightning Experience to help improve your users efficiency now also appear for use in Case components in communities. Quick actions that you previously created for Cases now also show up in your communities without any additional work.

### [Set Up Mass Quick Actions in Communities](#)

Mass quick actions are now available in Lightning communities the same as they are in Lightning Experience. Your customers can select up to 100 records in a list view and perform mass updates rather than updating records one at a time.

### [Set Up Global Quick Actions in Communities](#)

Actions, such as Polls, Posts, and Questions, now support the same global quick actions as in Lightning Experience. Your users can take advantage of the same time-saving shortcuts everywhere. This primarily affects Cases in communities.

### [Use Custom Task List Views in Record List Components](#)

Task lists in the Record List component in Lightning communities now work as they do elsewhere in Lightning Experience, supporting custom lists in all standard views on desktop and mobile devices.

### [Customize Your User Settings](#)

The new Customizable User Settings component offers the same great features as the User Settings component, but you can change the labels.

### [Quickly Build Contextual Filters for Einstein Analytics Dashboards](#)

The Wave Dashboard component is now called "Einstein Analytics Dashboard". And you get a new Filter Builder option for record pages. With the Filter Builder, you can point and click to configure dynamic filters for your embedded dashboards. This makes it easier to set up a dashboard to show the relevant data for each record page in which it appears.

### [Take Control of the Hover State in the Tile Menu \(Beta\)](#)

We've restored the hover icon in the Tile Menu component with a new display setting. You can show or hide the standard Salesforce hover icon for a menu item.

### [Streamline Customer Appointment Scheduling with Lightning Scheduler](#)

Help your community users schedule appointments quickly with a self-service interface in Lightning Scheduler. Out-of-the-box flows make it simple to search and select the right person, topic, location, and date and time.

### [Give Your Users More Display Options in Record Lists](#)

We expanded the control that you have for Record List components by giving you new display settings. Now you can let users pin their favorite record list views or restrict them from switching display layouts.

### [Customize the Submit Button on Your Community Contact Support Forms](#)

Add some pizzazz to your Contact Support forms by customizing your Submit button. Choose from customization options for text color, background color, button width, alignment, and more. Find all the new options under the style tab of the Contact Support Form component.

[Enhance Your Custom Lightning Community by Using Pages from Other Templates](#)

Your custom Lightning community is now even more customizable! You can now access any page from any Lightning community template, regardless of which template you chose as your starting point. Tailor your template-based community by installing any out-of-the-box page from the standard page options in Community Builder.

[Add Deflection Tracking to More Communities](#)

The Deflection Tracking component in Community Builder is now available in more Lightning community templates, including Customer Account Portal, Partner Central, and Help Center. Deflection tracking uses customized prompts to gather data from visitors to your community. Use the data to build insightful reports to help deflect new cases.

[Add a Button to Let Community Members Request a Call from Support](#)

Add the Contact Request Button & Flow component to your community, portal, or Help Center to let members request that customer support call them back. When a user clicks the Request Help button, a popup displays for the user to enter their issue and contact details.

## Set Up Quick Actions in Case Views

Quick actions that you configure in Lightning Experience to help improve your users efficiency now also appear for use in Case components in communities. Quick actions that you previously created for Cases now also show up in your communities without any additional work.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Essentials, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Salesforce Help: Add Quick Actions to the Case Page Layout for Lightning Experience](#)

## Set Up Mass Quick Actions in Communities

Mass quick actions are now available in Lightning communities the same as they are in Lightning Experience. Your customers can select up to 100 records in a list view and perform mass updates rather than updating records one at a time.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Essentials, Performance, Unlimited, and Developer editions.

**How:** Users can perform actions on a specific record (1) or an entire list of records (2).

	ACCOUNT NAME	ACCOU...	BILLING STA...	PHONE	TYPE	ACCOUN...
1	Blues Entertainment Corp.			(833) 452-1299		TUser
2	Burlington Group of America		NC	(336) 222-7000	Customer - Direct	TUser
3	Dickenson plc		KS	(785) 241-6200	Customer - Channel	TUser
4	Express Logistics and Transport		OR	(503) 421-7800	Customer - Channel	TUser
5	Farmers Coop. of Florida		FL	(850) 644-4200		TUser
6	GenePoint		CA	(650) 867-3450	Customer - Channel	TUser
7	Grand Hotels & Resorts Ltd		IL	(312) 596-1000	Customer - Direct	TUser
8	Pyramid Construction Inc.			(014) 427-4427	Customer - Channel	TUser

SEE ALSO:

[Salesforce Help: Set Up a Mass Quick Action](#)

## Set Up Global Quick Actions in Communities

Actions, such as Polls, Posts, and Questions, now support the same global quick actions as in Lightning Experience. Your users can take advantage of the same time-saving shortcuts everywhere. This primarily affects Cases in communities.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Essentials, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Salesforce Help: Global Quick Actions \(can be outdated or unavailable during release preview\)](#)

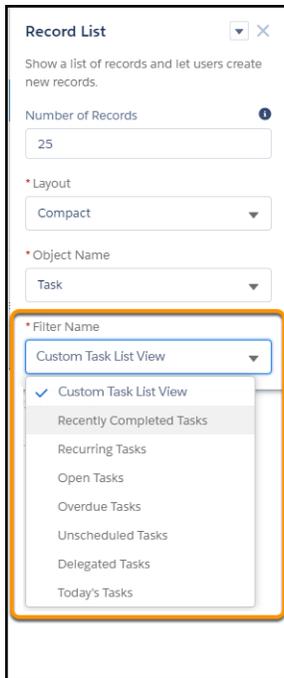
## Use Custom Task List Views in Record List Components

Task lists in the Record List component in Lightning communities now work as they do elsewhere in Lightning Experience, supporting custom lists in all standard views on desktop and mobile devices.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Essentials, Performance, Unlimited, and Developer editions.

**How:** The previous list views map to the following new list views, so you don't miss a beat.

Old Task List Views	New Task List Views
Delegated	Delegated Tasks
My Tasks	Open Tasks
All Overdue	Overdue Tasks
Completed Within Last 7 Days	Recently Completed Tasks
Today	Today's Tasks
	Recurring Tasks (new)
	Unscheduled Tasks (new)



**Note:** The new task list views aren't supported on mobile and tablet devices when the Record List component uses the Full layout. In this case, Recurring Tasks, Unscheduled Tasks, and custom list views default to My Tasks.

#### SEE ALSO:

[Salesforce Help: Record List](#)(can be outdated or unavailable during release preview)

[Salesforce Help: Record List](#)(can be outdated or unavailable during release preview)

## Customize Your User Settings

The new Customizable User Settings component offers the same great features as the User Settings component, but you can change the labels.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

## Quickly Build Contextual Filters for Einstein Analytics Dashboards

The Wave Dashboard component is now called "Einstein Analytics Dashboard". And you get a new Filter Builder option for record pages. With the Filter Builder, you can point and click to configure dynamic filters for your embedded dashboards. This makes it easier to set up a dashboard to show the relevant data for each record page in which it appears.

**Where:** These changes apply to Lightning communities accessed through Lightning Experience and Salesforce Classic. Communities are available in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Users with a Customer Community Plus, Partner Community, or Lightning External Apps Plus license can use Einstein Analytics in communities.

SEE ALSO:

[Quickly Build Contextual Filters for Dashboards Embedded in Record Pages](#)

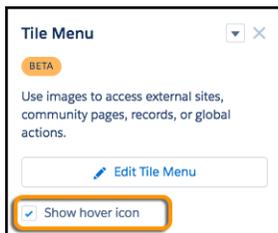
## Take Control of the Hover State in the Tile Menu (Beta)

We've restored the hover icon in the Tile Menu component with a new display setting. You can show or hide the standard Salesforce hover icon for a menu item.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Essentials, Performance, Unlimited, and Developer editions.

 **Note:** This release contains a beta version of the tile menu that is production quality but has known limitations. To provide feedback and suggestions, go to [IdeaExchange](#).

**How:** The hover icon option is on by default for all communities.



 **Note:** This option isn't available for mobile or tablet.

## Streamline Customer Appointment Scheduling with Lightning Scheduler

Help your community users schedule appointments quickly with a self-service interface in Lightning Scheduler. Out-of-the-box flows make it simple to search and select the right person, topic, location, and date and time.

**Where:** This change applies to Lightning communities accessed through Lightning Experience in Enterprise, Performance, and Unlimited editions.

SEE ALSO:

[Salesforce Help: Manage Appointments with Lightning Scheduler \(can be outdated or unavailable during release preview\)](#)

[Lightning Scheduler: Inbound Appointment Scheduling, Event Management, Action Plans, and More](#)

## Give Your Users More Display Options in Record Lists

We expanded the control that you have for Record List components by giving you new display settings. Now you can let users pin their favorite record list views or restrict them from switching display layouts.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Essentials, Performance, Unlimited, and Developer editions.

**How:** Select which display options you want to include for your users.

**Note:** These options aren't available for mobile or tablet.

With all properties enabled, community members can:

- Change the list view and pin it (1).
- Use search (2) to find items in long lists.
- Use list actions to accomplish list-related tasks, such as creating a new record (3).
- Access list view controls, change how the list is displayed, view related charts, and filter the list view (4). For shared views, users still need appropriate permissions to see the data.
- Edit fields inline (5).

	ACCOUNT NAME	ACCOU...	BILLING STA...	PHONE	TYPE	ACCOU...
1	Blues Entertainment Corp.			(033) 452-1299		TUser
2	Burlington Textiles Corp of America		NC	(336) 222-7000	Customer - Direct	TUser
3	Dickenson plc		KS	(785) 241-6200	Customer - Channel	TUser
4	Express Logistics and Transport		OR	(503) 421-7800	Customer - Channel	TUser
5	Farmers Coop. of Florida		FL	(850) 644-4200		TUser
6	GenePoint		CA	(650) 867-3450	Customer - Channel	TUser
7	Grand Hotels & Resorts Ltd		IL	(312) 596-1000	Customer - Direct	TUser
8	Pyramid Construction Inc.			(014) 427-4427	Customer - Channel	TUser

SEE ALSO:

[Salesforce Help: Record List](#) (can be outdated or unavailable during release preview)

## Customize the Submit Button on Your Community Contact Support Forms

Add some pizzazz to your Contact Support forms by customizing your Submit button. Choose from customization options for text color, background color, button width, alignment, and more. Find all the new options under the style tab of the Contact Support Form component.

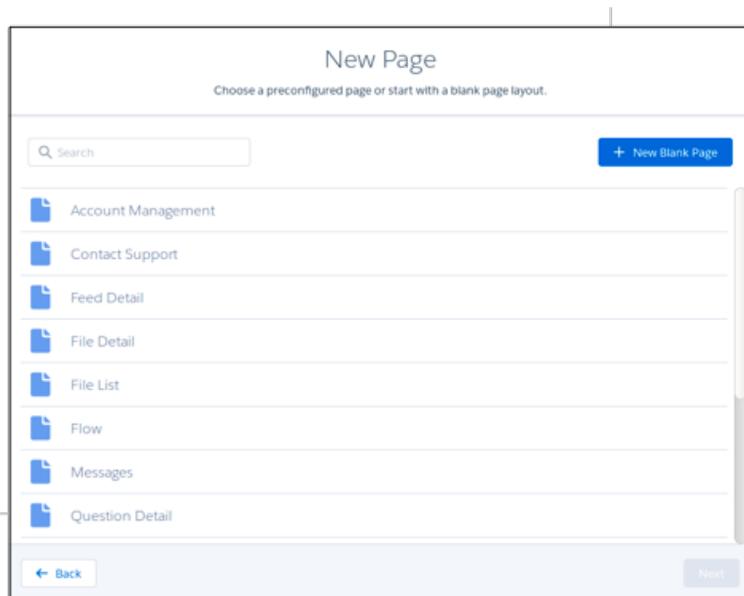
**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Essentials, Performance, Unlimited, and Developer editions.

## Enhance Your Custom Lightning Community by Using Pages from Other Templates

Your custom Lightning community is now even more customizable! You can now access any page from any Lightning community template, regardless of which template you chose as your starting point. Tailor your template-based community by installing any out-of-the-box page from the standard page options in Community Builder.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**How:** In Community Builder, on the Pages menu, select **New Page**. Then select **Standard Page**. Choose a preconfigured page from the list.



## Add Deflection Tracking to More Communities

The Deflection Tracking component in Community Builder is now available in more Lightning community templates, including Customer Account Portal, Partner Central, and Help Center. Deflection tracking uses customized prompts to gather data from visitors to your community. Use the data to build insightful reports to help deflect new cases.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Deflection Tracking](#)

## Add a Button to Let Community Members Request a Call from Support

Add the Contact Request Button & Flow component to your community, portal, or Help Center to let members request that customer support call them back. When a user clicks the Request Help button, a popup displays for the user to enter their issue and contact details.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Boost Your Help Center with Chat and Contact Requests](#)

## Developer Productivity: Do More, More Easily

Develop communities more efficiently with several API enhancements.

IN THIS SECTION:

[Update and Deploy Lightning Communities with ExperienceBundle \(Developer Preview\)](#)

The ExperienceBundle metadata type provides human-readable, text-based representations of the different Community Builder settings and site components, such as pages, branding sets, and themes. Whether it's for your own org or you're a consulting partner or ISV, quickly update and deploy Lightning communities using your preferred development tools, including Salesforce Extensions for VS Code, Salesforce CLI, Workbench, or your favorite IDE or text editor.

[Create and Publish Communities with Chatter REST API](#)

Speed up the process of creating and publishing communities using several new resources in Chatter Rest API. Programmatically retrieve a list of available templates and create Lightning or Salesforce Tabs + Visualforce communities. And for Lightning communities, you can also publish them programmatically.

[Experience More Consistent Navigation in Lightning Communities](#)

Communities now works the same as Lightning Experience when using `navigateToURL` and a URL fragment is passed as an argument.

[Future-Proof Your Linking with Navigation API Calls](#)

New enhancements in `lightning/navigation` for Lightning Communities in the Lightning Web Component API makes it more robust. The `lightning/navigation` Lightning web component now supports more foolproof navigation using `pageReferences` rather than URLs, avoiding broken navigation if you change URLs in the future. We also added support for `state` attributes as query parameters for your URLs. And `currentPageReference` provides the page reference that a customer is currently on as an element for your programming.

## Update and Deploy Lightning Communities with ExperienceBundle (Developer Preview)

The ExperienceBundle metadata type provides human-readable, text-based representations of the different Community Builder settings and site components, such as pages, branding sets, and themes. Whether it's for your own org or you're a consulting partner or ISV, quickly update and deploy Lightning communities using your preferred development tools, including Salesforce Extensions for VS Code, Salesforce CLI, Workbench, or your favorite IDE or text editor.

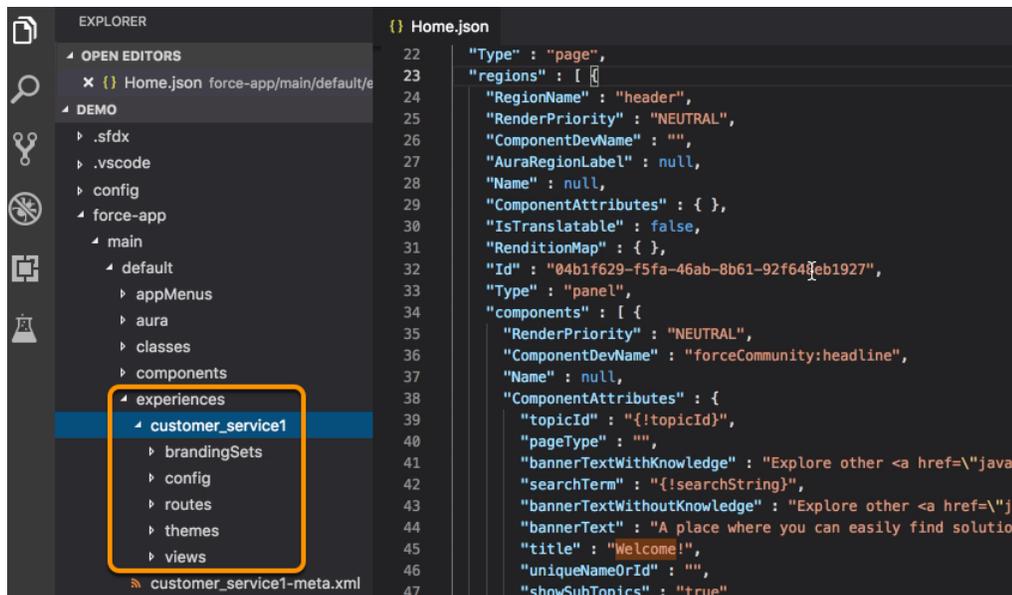
**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Developer editions. This feature is available only in Developer orgs and can't be used to deploy Lightning communities to a production org.

 **Note:** The ExperienceBundle type is available as a developer preview. The ExperienceBundle type isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. All commands, parameters, and other features are subject to change or deprecation at any time, with or without notice. Don't implement

functionality developed with these commands or tools. You can provide feedback and suggestions on using the ExperienceBundle type in the [Community Cloud group in the Trailblazer Community](#).

**Why:** Previously, the Network, CustomSite, and SiteDotCom metadata types combined to define a community. However, retrieving the SiteDotCom type produces a binary `.site` file, which isn't human readable. By retrieving the ExperienceBundle type instead of SiteDotCom, you can extract granular community metadata in a human-readable format, contained in a three-level folder structure.

The `experiences` folder contains all the Lightning communities in your org. Each community folder contains subfolders that represent the different components that you access in Community Builder. Edit the `.json` files on your local machine or scratch org, and then quickly deploy your changes.



**How:** To use the ExperienceBundle metadata type, from Setup, enter *Communities Settings* in the Quick Find box, and then select **Communities Settings**. Select **Enable ExperienceBundle Metadata API**, and save your changes.

## Create and Publish Communities with Chatter REST API

Speed up the process of creating and publishing communities using several new resources in Chatter Rest API. Programmatically retrieve a list of available templates and create Lightning or Salesforce Tabs + Visualforce communities. And for Lightning communities, you can also publish them programmatically.

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[New and Changed Chatter REST API Resources](#)

## Experience More Consistent Navigation in Lightning Communities

Communities now works the same as Lightning Experience when using `navigateToURL` and a URL fragment is passed as an argument.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Essentials, Performance, Unlimited, and Developer editions.

**Why:** Previous implementations of `navigateToURL`, such as this code example, worked inconsistently between Lightning Experience and Lightning communities.

```
$A.get("e.force:navigateToURL").setParams({ url: "#123" }).fire();
```

Now this code opens in the same tab in both Lightning Experience and Lightning communities.

## Future-Proof Your Linking with Navigation API Calls

New enhancements in `lightning/navigation` for Lightning Communities in the Lightning Web Component API makes it more robust. The `lightning/navigation` Lightning web component now supports more foolproof navigation using `pageReferences` rather than URLs, avoiding broken navigation if you change URLs in the future. We also added support for `state` attributes as query parameters for your URLs. And `currentPageReference` provides the page reference that a customer is currently on as an element for your programming.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** As part of these updates, `standard__namedPage` is being deprecated in Communities. Instead, use `comm__namedPage`.

SEE ALSO:

[New and Changed Modules for Lightning Web Components](#)

[Lightning Components Developer Guide: Navigate to Pages, Records, and Lists \(can be outdated or unavailable during release preview\)](#)

[Lightning Web Components Developer Guide: PageReference Types \(can be outdated or unavailable during release preview\)](#)

## Partner Central: Enhancements to Account Relationships and Channel Programs, Emails from Cases, Path on Market Development Funds, and Tailored Product Schedules

Partners are getting more with account relationship and channel programs. More objects to share in account relationships, more ways to track how well they are working, and more flexibility over making updates. More members to add to channel programs and more ways to track member activity. Also, partners can now send emails from cases and configure their product schedules to better meet the needs of their sales teams.

IN THIS SECTION:

[Share Market Development Fund Objects with Account Relationships](#)

Have you ever wished that you could share funds for marketing campaigns with other accounts? Now that the org-wide default sharing settings are editable for marketing budgets, fund allocations, fund requests, and fund claims, you can!

[Run Reports on Account Relationships](#)

Track your account relationships with reports. Add the account relationship object when creating a report and get a better sense of how those relationships are working out for you.

[Update Account Relationship Data Sharing Rules](#)

Don't create a whole new account relationship data sharing rule just because it needs an update. Now you can edit and save it.

#### [Easily Track Your Channel Program Members' History](#)

History tracking via the feed is now enabled for channel program members. No need to navigate to the audit trail to catch up on member activity. Look at the feed and find all your updates in one place.

#### [Add More Channel Program Members with Increased Limits](#)

Sometimes 5,000 channel members just aren't enough. Now you can add as many as 50,000 members to your channel programs. If you need even more members, reach out to your account executive and let them know.

#### [Track Stages of Market Development Funds Using Path](#)

Quickly view which stage your marketing development funds are at using Path. You can now track partner marketing budgets, partner fund allocations, partner fund requests, and partner fund claims in your community using the path component.

#### [Create Lookups to Market Development Fund Objects](#)

Use Lookup Relationship fields on standard and custom objects to track market development funds. Now Lookup Relationship fields can look up to partner fund claims, partner fund allocations, and partner fund requests.

#### [Enable Partners to Send Emails from Cases](#)

Now partners can send emails to customers from the cases that they are working on.

#### [Tailor Product Schedules to Your Business Processes](#)

Spare your sales team the grunt work of managing complex payment and delivery cycles. Enable customizable product schedules to optimize schedule layout and buttons and to use custom fields, validation rules, and Apex triggers.

## Share Market Development Fund Objects with Account Relationships

Have you ever wished that you could share funds for marketing campaigns with other accounts? Now that the org-wide default sharing settings are editable for marketing budgets, fund allocations, fund requests, and fund claims, you can!

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Market Development Fund objects are available to users with Partner Community and Customer Community Plus licenses.

## Run Reports on Account Relationships

Track your account relationships with reports. Add the account relationship object when creating a report and get a better sense of how those relationships are working out for you.

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Account Relationships are available to users with Partner Community and Customer Community Plus licenses.

**Why:** Create a custom report type using Account Relationships as the primary object.

The screenshot shows the 'Report Types' configuration page in Salesforce Setup. The left sidebar contains a navigation menu with 'Report Types' selected. The main content area is titled 'Report Types' and 'Account Relationships'. It includes sections for 'Define the Custom Report Type', 'Report Type Focus', 'Identification', and 'Deployment'. The 'Identification' section contains fields for 'Report Type Label', 'Report Type Name', 'Description', and 'Report Type Category'. The 'Deployment' section has radio buttons for 'In Development' and 'Deployed'.

Q report

Feature Settings

Analytics

Reports & Dashboards

Access Policies

Historical Trending

Report Types

Reporting Snapshots

Reports and Dashboards Settings

Didn't find what you're looking for? Try using Global Search.

SETUP Report Types

Edit Custom Report Type

Account Relationships

Define the Custom Report Type Save Cancel

Report Type Focus

Primary Object Account Relationships

Identification

Report Type Label Account Relationships

Report Type Name Account\_Relationships

Note: Description will be visible to users who create reports.

Description Reports based on account relationships

Report Type Category Other Reports

Deployment

A report type with deployed status is available for use in the report wizard. While in development, report types are visible only

Deployment Status  In Development  Deployed

Save Cancel

## Update Account Relationship Data Sharing Rules

Don't create a whole new account relationship data sharing rule just because it needs an update. Now you can edit and save it.

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Account Relationship Data Sharing Rules are available to users with Partner Community and Customer Community Plus licenses.

**Why:** Select an account relationship data sharing rule and click edit to make updates.

**How:** In Setup, enter *Account Relationship* in the Quick Find box. Select **Account Relationship Data Sharing Rule** and click **Edit**.

SEE ALSO:

[Configure Account Relationship Data Sharing Rules](#)

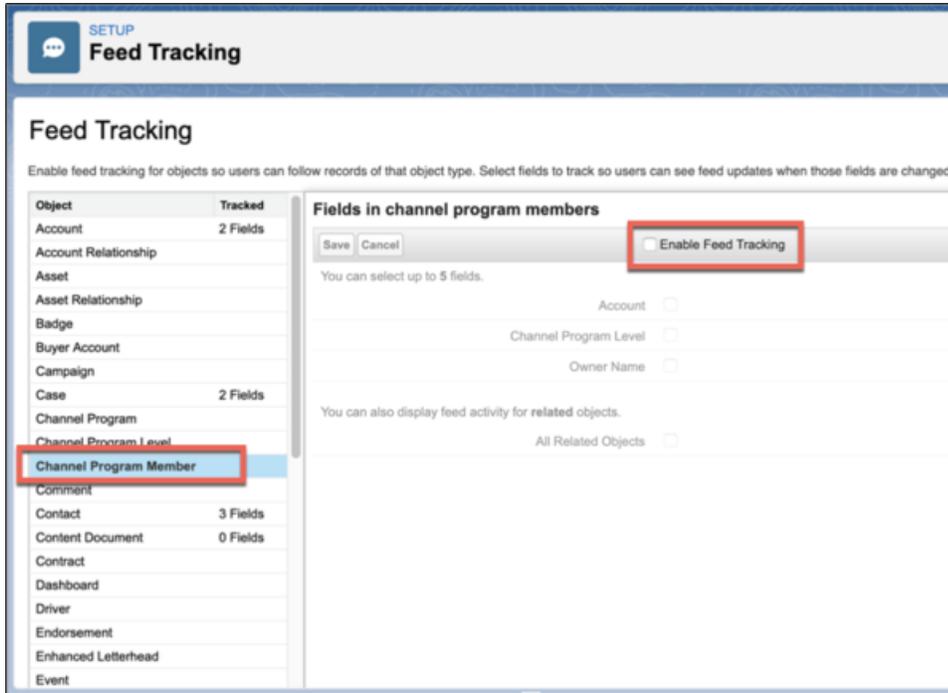
## Easily Track Your Channel Program Members' History

History tracking via the feed is now enabled for channel program members. No need to navigate to the audit trail to catch up on member activity. Look at the feed and find all your updates in one place.

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Channel programs are available to users with partner licenses.

**Why:** Enable feed tracking for Channel Program Member.



**How:** In Setup, enter *Feed Tracking* in the Quick Find box. Select **Feed Tracking** > **Channel Program Member**. Select **Enable Feed Tracking**.

**Tip:** Add a Name column to the Channel Program Member related list to easily drill down into the member's feed.

## Add More Channel Program Members with Increased Limits

Sometimes 5,000 channel members just aren't enough. Now you can add as many as 50,000 members to your channel programs. If you need even more members, reach out to your account executive and let them know.

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Channel programs are available to users with partner licenses.

## Track Stages of Market Development Funds Using Path

Quickly view which stage your marketing development funds are at using Path. You can now track partner marketing budgets, partner fund allocations, partner fund requests, and partner fund claims in your community using the path component.

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Market development funds are available to users with Partner Community and Customer Community Plus licenses.

**How:** In Setup, and enter *Path* in the Quick Find box. Select **Path Settings**. Click **Enable** and then click **New Path** to create a path.

SEE ALSO:

[Salesforce Help: Path \(can be outdated or unavailable during release preview\)](#)

## Create Lookups to Market Development Fund Objects

Use Lookup Relationship fields on standard and custom objects to track market development funds. Now Lookup Relationship fields can look up to partner fund claims, partner fund allocations, and partner fund requests.

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Lookups to market development fund objects are available to users with Bronze Partner, Silver Partner, Gold Partner, Partner, Partner Community, and Partner Community Login licenses

## Enable Partners to Send Emails from Cases

Now partners can send emails to customers from the cases that they are working on.

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Why:** Partners can respond to cases via email.

The screenshot displays the 'Email' tab in a Salesforce case record. At the top, there are three tabs: 'Post', 'Log A Call', and 'Email'. The 'Email' tab is active. Below the tabs, there are input fields for 'From', 'To', 'Bcc', and 'Subject'. The 'From' field is set to 'James Preston <manuel.verdin@example.com>'. The 'To' field contains 'Edward Stamos' with a close button. The 'Bcc' field contains 'manuel.verdin@example.com' with a close button. The 'Subject' field contains 'Sample Case 2: The widgets we received are the wrong size.' Below the fields is a rich text editor with a toolbar containing icons for bold, italic, underline, strikethrough, text color, background color, link, unlink, list, and indent. The text area contains the following message:

Dear Edward,

I have taken the ownership of the case. Before I begin further investigation, I would love to get few more details on this case.

- When did you receive this package?
- Which shipping service delivered this package at your office?
- Do you recollect if the package seemed broken or tempered?

Very happy to jump on a call to discuss and assist further.

Thanks|

At the bottom right of the email editor, there is a 'Send' button and a 'Saved' status indicator.

**How:** In Setup, and enter *Email-to-Case* in the Quick Find box. Select **Enable Email-to-Case** and configure your settings. Enable **Send Email** for your Partner Community or Customer Community Plus profiles, directly on the profile.

## Tailor Product Schedules to Your Business Processes

Spare your sales team the grunt work of managing complex payment and delivery cycles. Enable customizable product schedules to optimize schedule layout and buttons and to use custom fields, validation rules, and Apex triggers.

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Products: Tailor Product Schedules to Your Business Processes](#)

## Sharing and Security: New Defaults for External Profiles, Increased Password Security, and Sharing Sets for Leads

Community user profiles now have tighter object permissions out of the box, although you can always set permissions for your business needs. You can also tighten security by requiring community users to set more complex passwords. And now you can use sharing sets with leads.

IN THIS SECTION:

[Start with More Restrictive Profiles for Standard External Community Profiles](#)

Communities created with newly provisioned licenses can start with a blank slate when assigning object permissions to external users. Standard External profiles now have only minimal object permissions, which restricts certain profile permissions to be used by only the profiles who need them. It also makes the profiles easier to customize to fit your specific needs. Communities created with licenses provisioned before Spring '19 stay the same.

[Use Sharing Sets with Leads](#)

You can now grant portal or community users access to leads using sharing sets.

[Communities Support Right-to-Left Languages for Password Resets \(Beta\)](#)

You can now use right-to-left (RTL) languages, such as Arabic, Hebrew, and Urdu, to reset your password.

[Increase Password Complexity Requirements for Communities](#)

We now offer a password complexity option that requires internal and external users to include at least three of the following in their passwords: one number, one uppercase letter, one lowercase letter, and one special character (! " # \$ % & ' ( ) \* + , - . / : ; < = > ? @ [ \ ] ^ \_ ` { | } ~).

[Customize Passwordless Login and Verify Pages](#)

When users log in to your community with an email address or phone number (passwordless login), Salesforce sends them a verification code. At the same time, Salesforce generates the Verify page where users enter the verification code to confirm their identity. You've been able to brand the Verify page with your logo, colors, and background, but the form comes from Salesforce. Now you can replace the default Verify page with your own. Customize your Verify page's layout and text with Visualforce and a couple of Apex methods.

[View the Number of Failed Community Login Attempts](#)

You can now monitor the number of times a failed login attempt has been made on an external user's account. When the maximum number of failed login attempts is reached, the account is locked. You can unlock the user's account from User Details.

[Customer Community Plus and Customer Community Plus Login Licenses Are No Longer API Enabled by Default](#)

Starting Summer '19, new Customer Community Plus and Customer Community Plus Login licenses don't have the API enabled user permission on by default. Add the permission by cloning the standard profile and saving a community-specific custom profile. Licenses purchased and used before Summer '19 still have the API enabled user permission on.

### [Set External Access Levels for More Objects](#)

You can now set external access levels for many more standard objects. The external access level for User and newly created custom objects now defaults to Private.

### [Verify Standard Page Access for Authenticated Users](#)

If you've restricted authenticated users' access to standard Salesforce pages, we've added more standard pages to the list, such as the Chatter, Global Search, and User Profile pages. The **Allow Access to Standard Salesforce Pages** setting is enabled by default. If you disabled this setting, verify that pages necessary to your site's functionality aren't blocked.

### [\\$Site.AdminEmailAddress Is Deprecated](#)

For added security for your sites, we deprecated the \$Site.AdminEmailAddress merge field. This field now returns an empty string instead of the `site__Contact` value for the current site. You can still access the admin's email address using SOQL queries.

## Start with More Restrictive Profiles for Standard External Community Profiles

Communities created with newly provisioned licenses can start with a blank slate when assigning object permissions to external users. Standard External profiles now have only minimal object permissions, which restricts certain profile permissions to be used by only the profiles who need them. It also makes the profiles easier to customize to fit your specific needs. Communities created with licenses provisioned before Spring '19 stay the same.

**Where:** This change applies to Lightning communities, accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** This change applies to communities created with licenses provisioned after Summer '19. Communities created with licenses provisioned before that are not affected.

 **Note:** Starting in Winter '20, Salesforce will introduce a preference that restricts the use of standard external profiles for self-registration, login, and assignment to users. Review the critical update for more information about this coming change.

## Use Sharing Sets with Leads

You can now grant portal or community users access to leads using sharing sets.

**Where:** This change applies to all communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**How:** To enable sharing sets for leads in your org, contact Salesforce Customer Support.

SEE ALSO:

[Salesforce Help: Set Up Sharing Sets \(can be outdated or unavailable during release preview\)](#)

## Communities Support Right-to-Left Languages for Password Resets (Beta)

You can now use right-to-left (RTL) languages, such as Arabic, Hebrew, and Urdu, to reset your password.

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** As a beta feature, RTL language support is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce

reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature.

SEE ALSO:

[Reset Passwords with Right-to-Left Languages \(Beta\)](#)

## Increase Password Complexity Requirements for Communities

We now offer a password complexity option that requires internal and external users to include at least three of the following in their passwords: one number, one uppercase letter, one lowercase letter, and one special character (! " # \$ % & ' ( ) \* + , - . / : ; < = > ? @ [ \ ] ^ \_ ` { | } ~).

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Enhance Security with Increased Password Complexity](#)

## Customize Passwordless Login and Verify Pages

When users log in to your community with an email address or phone number (passwordless login), Salesforce sends them a verification code. At the same time, Salesforce generates the Verify page where users enter the verification code to confirm their identity. You've been able to brand the Verify page with your logo, colors, and background, but the form comes from Salesforce. Now you can replace the default Verify page with your own. Customize your Verify page's layout and text with Visualforce and a couple of Apex methods.

**Where:** This change is available in all communities accessed through Lightning Experience and Salesforce Classic, and is available in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Create Your Own Verify Page for Community Passwordless Logins](#)

## View the Number of Failed Community Login Attempts

You can now monitor the number of times a failed login attempt has been made on an external user's account. When the maximum number of failed login attempts is reached, the account is locked. You can unlock the user's account from User Details.

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[See the Number of Failed Login Attempts on a User Account](#)

## Customer Community Plus and Customer Community Plus Login Licenses Are No Longer API Enabled by Default

Starting Summer '19, new Customer Community Plus and Customer Community Plus Login licenses don't have the API enabled user permission on by default. Add the permission by cloning the standard profile and saving a community-specific custom profile. Licenses purchased and used before Summer '19 still have the API enabled user permission on.

**Where:** This change applies to all communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

## Set External Access Levels for More Objects

You can now set external access levels for many more standard objects. The external access level for User and newly created custom objects now defaults to Private.

**Where:** This change applies to communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Safeguard Your Data by Setting External Access Levels for More Standard Objects \(Beta\)](#)

[User and Custom Object Access Settings Default to Private](#)

[Salesforce Help: External Organization-Wide Defaults Overview \(can be outdated or unavailable during release preview\)](#)

## Verify Standard Page Access for Authenticated Users

If you've restricted authenticated users' access to standard Salesforce pages, we've added more standard pages to the list, such as the Chatter, Global Search, and User Profile pages. The **Allow Access to Standard Salesforce Pages** setting is enabled by default. If you disabled this setting, verify that pages necessary to your site's functionality aren't blocked.

**Where:** This change applies to communities and sites accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

**How:** We recommend that you test this update in a sandbox org before the changes are live in your production org.

To enable or disable this setting in Salesforce Sites, from Setup, enter `Sites` in the Quick Find Box, and then select **Sites**. Click the name of the site you want to edit, and select **Login Settings**. Click **Edit**, and select or deselect **Allow Access to Standard Salesforce Pages**.

In communities, set the `allowStandardPortalPages` field on the CustomSite Metadata type to `true` or `false` in the communities that you want to edit.

SEE ALSO:

[Salesforce Help: Managing Salesforce Sites Login and Registration Settings \(can be outdated or unavailable during release preview\)](#)

## \$\$Site.AdminEmailAddress Is Deprecated

For added security for your sites, we deprecated the \$\$Site.AdminEmailAddress merge field. This field now returns an empty string instead of the `Site Contact` value for the current site. You can still access the admin's email address using SOQL queries.

**Where:** This change applies to sites accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**How:** To access the admin's email address, you can use these SOQL queries within an Apex controller.

```
SELECT Admin.Email
FROM Site
WHERE Id=\'\' + Site.getSiteId() + \'\'
```

```
SELECT Email
FROM User
WHERE Id=\'\' + Site.getAdminId() + \'\'
```

## Critical Updates: External Org-Wide Defaults, TLS 1.2, and More

We're enforcing and announcing a few critical updates this release. The External Sharing Model is enabled for all orgs starting in Summer '19, and TLS 1.2 is enforced.

### IN THIS SECTION:

#### [Enable External Org-Wide Defaults in Orgs with Communities or Portals \(Critical Update, Enforced\)](#)

Enabling external org-wide defaults in orgs with communities or portals was a critical update in Spring '19 and is enforced for the Summer '19 release. This update enables the External Sharing Model and helps you secure your data. You can set more restrictive levels of access for external users instead of giving internal and external users the same default access.

#### [Require TLS 1.2 for HTTPS Connections in Communities and Sites \(Critical Update\)](#)

To maintain the highest security standards and promote the safety of your data, Salesforce is disabling the older Transport Layer Security (TLS) 1.1 encryption protocol. Starting in October 2019, all inbound connections to or outbound connections from your Salesforce communities, sites, and portals must use TLS 1.2. Verify that your browser access, API integrations, and other Salesforce features are compliant with TLS 1.2.

#### [Disable the API Enabled User Permission Defaults for External Profiles \(Critical Update\)](#)

Salesforce is disabling the API enabled permission on all standard and cloned external profiles. The API enabled permission allows external applications or connectors, such as Workbench, Dataloader.io, Jitterbit, Excel Connector, Salesforce Mobile App, Mobile SDK Apps, Salesforce IoT, or Connected Apps to use the API to authenticate or access Salesforce data.

#### [Restrict the Use of Standard External Profiles for Self-Registration, Login, and Assignment to Users \(Critical Update\)](#)

This update restricts the use of standard external profiles for self-registration, login, and assignment to users.

#### [Block Certain Fields in the User Record for Orgs with Communities and Portals \(Critical Update\)](#)

Salesforce is giving customers the option to enable a user setting that allows the hiding of certain personal information fields on the user records in orgs with communities or portals. The fields are hidden from view when external users are accessing user records. External users can still see their own user records.

## Enable External Org-Wide Defaults in Orgs with Communities or Portals (Critical Update, Enforced)

Enabling external org-wide defaults in orgs with communities or portals was a critical update in Spring '19 and is enforced for the Summer '19 release. This update enables the External Sharing Model and helps you secure your data. You can set more restrictive levels of access for external users instead of giving internal and external users the same default access.

**Where:** This change applies to communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

**When:** This critical update is enforced for the Summer '19 release. Orgs that turn on communities after the Summer '19 release is live have these defaults enabled.

**How:** When external org-wide defaults are first enabled, the external access levels are set to match the internal access levels. To set stricter access levels for external users, from Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**. Under Organization-Wide Defaults, edit the default external access.

SEE ALSO:

[Salesforce Help: External Organization-Wide Defaults Overview \(can be outdated or unavailable during release preview\)](#)

## Require TLS 1.2 for HTTPS Connections in Communities and Sites (Critical Update)

To maintain the highest security standards and promote the safety of your data, Salesforce is disabling the older Transport Layer Security (TLS) 1.1 encryption protocol. Starting in October 2019, all inbound connections to or outbound connections from your Salesforce communities, sites, and portals must use TLS 1.2. Verify that your browser access, API integrations, and other Salesforce features are compliant with TLS 1.2.

**Where:** This change applies to communities and sites accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

**When:** This critical update is enforced on October 25, 2019. Communities enabled after this date require TLS 1.2 by default.

**How:** We recommend that you test this update in a sandbox or Developer Edition org to verify end-to-end compatibility before enabling it in your production org. We also recommend that you inform your community users about this upcoming change and encourage them to upgrade to browsers that support TLS 1.2.

To activate this critical update before October 25, 2019, from Setup, enter *Critical Updates* in the Quick Find box, then select **Critical Updates**. For Require TLS 1.2 for HTTPS Connections for Communities and Sites, click **Activate**.

SEE ALSO:

[Knowledge Article: Salesforce Disabling TLS 1.1](#)

[Require TLS 1.2 for HTTPS Connections \(Critical Update\)](#)

## Disable the API Enabled User Permission Defaults for External Profiles (Critical Update)

Salesforce is disabling the API enabled permission on all standard and cloned external profiles. The API enabled permission allows external applications or connectors, such as Workbench, Dataloader.io, Jitterbit, Excel Connector, Salesforce Mobile App, Mobile SDK Apps, Salesforce IoT, or Connected Apps to use the API to authenticate or access Salesforce data.

**Where:** This change applies to all orgs using standard and cloned external profiles assigned to the following licenses:

- Authenticated Website
- Bronze Partner
- CSP Lite Portal
- Customer Community
- Customer Community Login
- Customer Community Plus
- Customer Community Plus Login
- Customer Portal Manager
- Customer Portal Manager Custom
- Customer Portal Manager Standard
- Customer Portal User

- External Apps Login
- External Apps Member
- External Apps Plus Login
- External Apps Plus Member
- External Identity Login
- Gold Partner
- High Volume Customer Portal
- High Volume Portal
- Ideas Only Portal
- Internal Portal User
- Limited Customer Portal Manager Custom
- Limited Customer Portal Manager Standard
- Overage Authenticated Website
- Overage Customer Portal Manager Custom
- Overage Customer Portal Manager Standard
- Overage High Volume Customer Portal
- Partner
- Partner Community
- Partner Community Login
- Platform Portal
- Silver Partner

**How:** Review the external profiles in your org to determine which ones require the API enabled permission for their use cases.

If you'd like your users to retain the permission, clone the standard profile, and select the API enabled permission. Reassign your users to the new cloned profile, and add the profile to the correct community memberships.

Alternatively, create a permission set with the API enabled permission selected, and assign it to the users who need the permission.

For cloned profiles, simply re-enable the permission for user cases where it is needed.

## Restrict the Use of Standard External Profiles for Self-Registration, Login, and Assignment to Users (Critical Update)

This update restricts the use of standard external profiles for self-registration, login, and assignment to users.

**Where:** This change applies to Lightning and Salesforce Tabs + Visualforce communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

**When:** Starting in Winter '20, Salesforce will restrict the use of standard external profiles.

**Who:** This change applies to all orgs using standard external profiles:

- BronzePartner ExternalAppsPlusLogin
- CSPLitePortal
- CustomerCommunity
- CustomerCommunityLogin
- CustomerCommunityPlus

- CustomerCommunityPlusLogin
- CustomerPortalManager
- CustomerPortalManagerCustom
- CustomerPortalManagerStandard
- ExternalAppsLogin
- ExternalAppsMember
- ExternalAppsPlusMember GoldPartner
- HighVolumeCustomerPortal
- HighVolumePortal
- IdeasOnlyPortal
- LimitedCustomerPortalMgrCustom
- LimitedCustomerPortalMgrStandard
- OverageAuthenticatedWebsite
- OverageCustomerPortalMgrCustom
- OverageCustomerPortalMgrStandard
- OverageHighVolumeCustomerPortal
- Partner
- PartnerCommunity
- PartnerCommunityLogin
- PlatformPortal
- SilverPartner AuthenticatedWebsite

**Why:** In Winter '20, the **Allow standard external profiles, such as community and portal profiles, for self-registration, login, and assignment to users** preference will take effect. This preference allows users to self-register and log in using standard external profiles. It also allows admins to assign standard external profiles when creating or updating user profiles. This preference is disabled by default. Have your Salesforce admin review the CRUD and FLS settings for all standard external profiles before turning on this preference.

**How:** From Setup, enter *Critical Updates* in the Quick Find box, then select **Critical Updates**. For **Prevents using the standard external profile for self-registration, login, and assignment to users**, click **Activate**.

Go back to Setup and enter *Communities Settings* in the Quick Find box. Select **Communities Settings**. To allow self-registration, login, and assignment to users using standard external profiles, select **Allow standard external profiles, such as community and portal profiles, for self-registration, login, and assignment to users**. Contact Salesforce customer support if you need further assistance.

## Block Certain Fields in the User Record for Orgs with Communities and Portals (Critical Update)

Salesforce is giving customers the option to enable a user setting that allows the hiding of certain personal information fields on the user records in orgs with communities or portals. The fields are hidden from view when external users are accessing user records. External users can still see their own user records.

**Where:** This change applies to all orgs with communities or portals.

**How:** Salesforce is introducing an org setting that allows for the hiding of other users' personal information in pages showing the user record to external user profiles, and in SOSL and SOQL queries that run as external users.

The affected fields are

- Alias
- EmployeeNumber
- FederationIdentifier
- SenderEmail
- Signature
- Username
- Division
- Title
- Department
- Extension

Admins can enable the setting **Hide personal information** for the org under User Management Settings. After enabling the setting, searches on user records don't show the affected fields of other users to external users. Test any changes in a sandbox environment before introducing it in production.

## Other Changes in Communities

Learn about smaller changes that improve your experience with communities.

### IN THIS SECTION:

#### [Improve Your Sales Process by Using Path with Leads in the Salesforce App](#)

Now you can use Path to guide mobile device users who work leads. Previously, Path supported only opportunities in the Salesforce app.

#### [Link Takes Users Directly to Their Profile Page](#)

Sending someone directly to their user profile page wasn't always easy and required custom components, a redirect link, or both. That didn't seem ideal, so we fixed it. Adding `/s/profile/home` to the end of the URL takes the logged in user directly to their user profile page. You can also use the modified URL as a link.

#### [Receive \(or Not to Receive\) Email Notifications for Best Answers](#)

Finding out that the answer you posted to a question was picked as the best can be pretty cool. Aside from checking the post, email notifications are a quick way to get that feedback. However, not everyone wants to get more email. We added an option to let members choose if they want to receive these email notifications.

#### [Use Any Google Analytics Custom Dimension](#)

It used to be that you could use only the first two Google Analytics custom dimensions to capture your community's data. This restriction was a problem if you were already using those dimensions in another capacity. So we fixed it. Now you can use any custom dimension you want, within Google's 1–20 range, of course.

#### [Add Static Resources to CORS Whitelist](#)

You can now add static resources to the CORS whitelist. For example, say that you use Lightning Out to display Lightning components on an external site, like SAP. If your components rely on static resources stored in Salesforce, save SAP to the CORS whitelist in Setup. If a domain isn't in the CORS whitelist, browsers don't load fonts or JavaScript file referenced from static resources.

#### [Create More Roles and Add More Person Account Users with Increased Limits](#)

We increased the number of roles that you can have in communities and portals from 5,000 to 50,000. This number includes all roles associated with customer portals, partner portals, and communities. We also increased the number of person account portal users that a Salesforce user can own from 10,000 to 50,000.

## Improve Your Sales Process by Using Path with Leads in the Salesforce App

Now you can use Path to guide mobile device users who work leads. Previously, Path supported only opportunities in the Salesforce app.

**Where:** This change applies to communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

## Link Takes Users Directly to Their Profile Page

Sending someone directly to their user profile page wasn't always easy and required custom components, a redirect link, or both. That didn't seem ideal, so we fixed it. Adding `/s/profile/home` to the end of the URL takes the logged in user directly to their user profile page. You can also use the modified URL as a link.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

## Receive (or Not to Receive) Email Notifications for Best Answers

Finding out that the answer you posted to a question was picked as the best can be pretty cool. Aside from checking the post, email notifications are a quick way to get that feedback. However, not everyone wants to get more email. We added an option to let members choose if they want to receive these email notifications.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

## Use Any Google Analytics Custom Dimension

It used to be that you could use only the first two Google Analytics custom dimensions to capture your community's data. This restriction was a problem if you were already using those dimensions in another capacity. So we fixed it. Now you can use any custom dimension you want, within Google's 1–20 range, of course.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

## Add Static Resources to CORS Whitelist

You can now add static resources to the CORS whitelist. For example, say that you use Lightning Out to display Lightning components on an external site, like SAP. If your components rely on static resources stored in Salesforce, save SAP to the CORS whitelist in Setup. If a domain isn't in the CORS whitelist, browsers don't load fonts or JavaScript file referenced from static resources.

**Where:** This change applies to Aura components and Lightning web components in Lightning Experience and Salesforce Classic and all communities.

SEE ALSO:

[Salesforce Help: Use CORS to Access Salesforce Resources from Web Browsers](#)

## Create More Roles and Add More Person Account Users with Increased Limits

We increased the number of roles that you can have in communities and portals from 5,000 to 50,000. This number includes all roles associated with customer portals, partner portals, and communities. We also increased the number of person account portal users that a Salesforce user can own from 10,000 to 50,000.

**Where:** This change applies to communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Salesforce Help: System Overview: Portal Roles \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Person Account Communities User Limitations \(can be outdated or unavailable during release preview\)](#)

## Files: Asset Files Updates and More File Sharing

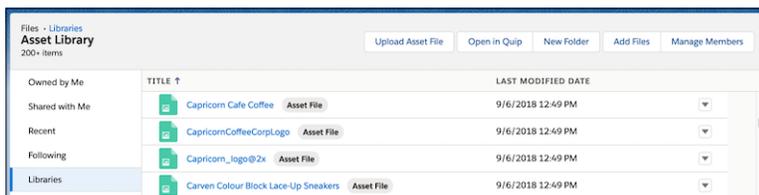
Finding and making asset files is getting smoother and faster. Identify asset files in an instant with the new UI indicator. Make a new asset file right from the Asset Library with the click of a button. We've increased file sharing limits.

### Create Asset Files Right from Your Asset Library

Create an asset file with the click of a button, right from the Asset Library in Files home. While you're there, identify your asset files at a glance with the new Asset File label. Previously, you could create asset files only from Community Builder, Data Loader, or the API.

**Where:** This change applies to Lightning Experience in Professional, Enterprise, Essentials, Performance, Unlimited, and Developer editions.

**How:** Click Upload Asset File, and the file selector pops up to let you upload a new file or select an existing file to make into an asset.



After you click **Save**, the file is saved to the Asset Library.

### File Sharing Limits Increased

Previously, files could be shared a maximum of 100 times, which includes shares with records, people, and groups. The file sharing limit has increased to 2000, so share your files with abandon!

**Where:** This change applies to Lightning Experience and Salesforce Classic [and all versions of the mobile app] in Professional, Enterprise, Essentials, Performance, Unlimited, and Developer editions.

## Mobile: Do More on the Go

Salesforce mobile apps help your users stay productive throughout their busy days, no matter where they are. So we've been hard at work adding new ways to help your users outside of the office.

IN THIS SECTION:

[Salesforce App: Improved Mobile Notifications and Sales Features](#)

The latest version of the Salesforce app includes a new process for setting up custom notifications on records that matter the most to your users. We also improved assigning territories to accounts and added enhancements to help keep your users notified and productive no matter where their busy days take them.

[Mobile Publisher: Privacy Policy, Sandbox Community, Unlock with Biometric ID](#)

Brighten up your Communities with significant changes, amazing features, and improvements. You can add a privacy policy to your Mobile Publisher project to your Salesforce Lightning Communities app for iOS and Android. In addition to the community in production, community members now have a sandbox org in the sandbox community to beta test in. Plus, you can add biometric ID for iOS and Android to enable unlocking with Touch ID or Face ID.

## Salesforce App: Improved Mobile Notifications and Sales Features

The latest version of the Salesforce app includes a new process for setting up custom notifications on records that matter the most to your users. We also improved assigning territories to accounts and added enhancements to help keep your users notified and productive no matter where their busy days take them.

### IN THIS SECTION:

#### [Access the Salesforce Mobile App](#)

Your users have several options for accessing Salesforce on mobile devices that meet minimum platform requirements.

#### [Everything That's New in the Salesforce App](#)

Our latest round of new and improved Salesforce app features makes it easier to access Salesforce on the go.

### Access the Salesforce Mobile App

Your users have several options for accessing Salesforce on mobile devices that meet minimum platform requirements.

- Install Salesforce for Android or iOS. Users can download the app from Google Play or the App Store.
- Access Salesforce mobile web from a supported mobile browser on select Android or iOS mobile devices. This option doesn't require anything to be installed.

For the current minimum platform requirements, see [Requirements for the Salesforce App](#) in Salesforce Help.

### Everything That's New in the Salesforce App

Our latest round of new and improved Salesforce app features makes it easier to access Salesforce on the go.

The Salesforce mobile app is available for all editions, except Database.com, without an additional license. Your org's Salesforce edition and licenses, as well as a user's assigned profile and permission sets, determines the Salesforce data and features that are available to each user.

Salesforce App Enhancements and Changes	Salesforce for Android	Salesforce for iOS	Salesforce Mobile Web	Set Up in the Full Site
<b>Device and Browser Support</b>				
<a href="#">Meet the Updated Salesforce App Requirements</a>	✓	✓	✓	
<a href="#">Salesforce App Version Numbers Are Now Aligned with Desktop</a>	✓	✓		
<b>Sales Features</b>				
<a href="#">Improve Your Sales Process by Using Path with Leads in the Salesforce App</a>	✓	✓	✓	✓

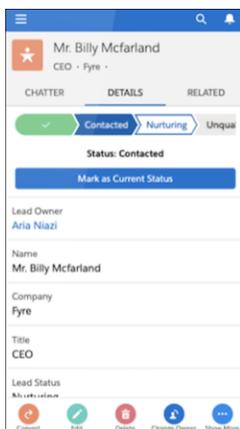
Salesforce App Enhancements and Changes	Salesforce for Android	Salesforce for iOS	Salesforce Mobile Web	Set Up in the Full Site
<a href="#">Celebrate When Path Users Reach Sales Milestones on the Road</a>	✓	✓	✓	✓
<a href="#">Maintain Partner Relationships in the Salesforce App</a>	✓	✓	✓	✓
<b>Productivity Features</b>				
<a href="#">Create an Event Series with Quick Actions</a>	✓	✓	✓	✓
<a href="#">Create Events with New Event Action in Today</a>	✓	✓		
<b>Salesforce Communities</b>				
<a href="#">Build Mobile Apps that Display a User's Lightning Communities</a>	✓	✓		
<b>Notifications</b>				
<a href="#">Keep Users in the Know with Notification Builder</a>	✓	✓		✓
<a href="#">Push Notifications No Longer Sent to Inactive Users</a>	✓	✓		✓
<a href="#">Locate Notification Invocable Actions Quickly for Flows</a>	✓	✓		✓

## Improve Your Sales Process by Using Path with Leads in the Salesforce App

If you've configured a lead path for desktop, your sales teams now see the same path on their mobile devices. Previously, the Salesforce app supported Path only for opportunities.

**Where:** This change applies to Lightning Experience and all versions of the Salesforce app in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** Mobile device users who work leads can now use Path to get the provided guidance and update their pipeline.

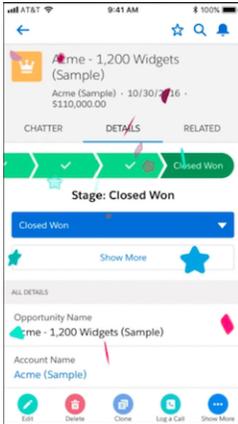


## Celebrate When Path Users Reach Sales Milestones on the Road

When your reps close deals on the road, help them celebrate. Toss some virtual confetti when reps reach a designated Path stage, like winning an opportunity.

**Where:** This change applies to Lightning Experience and all versions of the Salesforce app in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** A confetti celebration creates a little fun when reps reach a milestone.



**How:** To select the picklist values that trigger a celebration and the frequency with which celebrations are triggered, use Path Settings in Setup.

SEE ALSO:

[Path: Celebrate Sales Milestones](#)

## Maintain Partner Relationships in the Salesforce App

If your company collaborates with partners on opportunities or accounts, sales teams can now maintain partner relationships on the go. Mobile device users can use the Partners related list to manage relationships between opportunities and business or person accounts. Previously, the Partners related list was read-only in the Salesforce app.

**Where:** For orgs created in Summer '09 or later, this change applies to Lightning Experience and all versions of the Salesforce app in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions. For orgs created before Summer '09, this change applies to Lightning Experience and all versions of the Salesforce app in all editions.

SEE ALSO:

[Maintain Partner Relationships in Lightning Experience](#)

## Create an Event Series with Quick Actions

Sales reps can create a repeatable event using quick actions when you add the Repeat field on your quick action layouts. Previously, you could create only single event records.

**Where:** This change applies to Lightning Experience and all versions of the Salesforce app in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Create an Event Series from Anywhere with Quick Actions](#)

## Meet the Updated Salesforce App Requirements

Salesforce is available on many popular mobile platforms. Salesforce is revising the requirements for using the Salesforce mobile app for Android, iOS and mobile web. Learn about the mobile platform requirements and the devices that we use for feature and performance testing as we continue improving the Salesforce experience.

### Mobile Platform Requirements

Users can run Salesforce on mobile devices that meet these mobile platform requirements.

Operating System and Version Requirements	Mobile Browser Requirements <sup>*</sup>
Android 6.0 or later	Google Chrome on Android
iOS 12.0 or later	Apple Safari on iOS

<sup>\*</sup> The latest mobile browser version is required. Mobile browser requirements apply to Salesforce mobile web only.

To allow for innovation and to keep Salesforce current in the rapidly evolving mobile market, minimum platform requirements are subject to change at the sole discretion of Salesforce, with or without advance notice.

### Mobile Devices Used for Salesforce Testing

Salesforce performs automated and manual testing of the Salesforce app for Android, iOS and mobile web on a select set of mobile devices. For the Summer '19 release, this is the list of devices used for testing.

Platform	Phones	Tablets
<b>Android</b>	<ul style="list-style-type: none"> <li>• Google Pixel 3</li> <li>• Google Pixel 2 / Pixel 2 XL</li> <li>• Google Pixel</li> <li>• Google Nexus 6P</li> <li>• Samsung Galaxy S9 / S9+</li> <li>• Samsung Galaxy S8</li> <li>• Samsung Galaxy S7 / S7 Edge</li> <li>• Samsung Galaxy Note 9</li> <li>• Samsung Galaxy Note 5</li> <li>• Samsung Galaxy Note 4</li> </ul>	<ul style="list-style-type: none"> <li>• Samsung Tab A 9.7</li> <li>• Samsung Tab A 8.0</li> </ul>
<b>iOS</b>	<ul style="list-style-type: none"> <li>• iPhone XS Max</li> <li>• iPhone X</li> <li>• iPhone 8 / 8 Plus</li> <li>• iPhone 7 / 7 Plus</li> <li>• iPhone 6S / 6S Plus</li> <li>• iPhone 6 / 6 Plus</li> <li>• iPhone 5S</li> </ul>	<ul style="list-style-type: none"> <li>• iPad Pro 12.9" (2nd Generation)</li> <li>• iPad Pro 10.5"</li> <li>• iPad Pro 9.7"</li> <li>• iPad 2017 (5th Generation)</li> <li>• iPad Air 2</li> <li>• iPad Mini 4</li> </ul>

Platform	Phones	Tablets
	<ul style="list-style-type: none"> <li>iPhone SE</li> </ul>	

Customers aren't blocked from using Salesforce on untested devices that meet current platform requirements. Salesforce may not be able to replicate some issues for customers using Salesforce on untested devices on due to manufacturer-specific customizations.

To allow for innovation and to keep Salesforce current in the rapidly evolving mobile market, the list of Salesforce-tested devices is subject to change at the sole discretion of Salesforce, with or without advance notice.

## Salesforce Updates

Customers whose devices meet current minimum platform requirements are eligible to receive Salesforce feature updates and fixes.

Our goal is to release Salesforce mobile feature and functionality updates to coincide with each Salesforce major release. This information is provided to help with your release planning, but is subject to change at Salesforce's discretion.

### Salesforce Mobile Web

Enhanced features and functionality are automatically available with each Salesforce major release.

### Salesforce for Android and iOS

Enhanced features and functionality are provided in major version updates. We aim to release a new major version of the Salesforce mobile app for Android and iOS after the completion of each Salesforce major release to all production instances. The timeframe in which a new major version is released varies and can be impacted by factors outside of Salesforce's control, including new requirements from Apple or Google or changes to the iOS or Android operating systems.

Customers can install new major and bug fix versions from the App Store and Google Play as long as their mobile devices meet Salesforce's current minimum mobile operating system requirements. If a device is running an older operating system, updated versions of Salesforce don't appear in the app stores.

## Customer Support Services for Salesforce

Salesforce Customer Support uses commercially reasonable efforts to troubleshoot issues with Salesforce, provided:

- A user's device meets current minimum platform requirements
- Salesforce for Android and iOS users have the most recent version installed

When customers run Salesforce on Salesforce-tested devices, it's more efficient for us to troubleshoot issues. For customers using untested devices, even those meeting minimum platform requirements, we might not be able to replicate some issues due to device manufacturer-specific customizations.

Running Salesforce on older devices or devices with low computation and memory capabilities can adversely impact performance, as compared to performance on Salesforce-tested devices.

Because we enhance functionality with every release, install the latest update of the Salesforce app available in Google Play or the App Store. We can only support the latest version.

## Salesforce App Version Numbers Are Now Aligned with Desktop

The Salesforce mobile app and the desktop experience have more in common with each release. That's why we're changing the version numbers for the mobile app to match the desktop platform. If you were expecting to upgrade your Salesforce app to version 19 but saw version 220 instead, don't worry! You didn't miss 201 updates.

**Where:** This change applies to the Salesforce app for Android and iOS in all editions, except Database.com.

## Manage Navigation with the pageReference Class

The Salesforce app now supports the pageReference JavaScript object. Previously, navigation with pageReference was supported only for the full desktop site. Now you can control navigation without parsing or creating URLs directly.

**Where:** This change applies to the Salesforce app for Android and iOS in all editions, except Database.com.

## Create Events with New Event Action in Today

To create an event in the Today app, tap the new **New Event** action. This action replaces the **New** action, with no change to functionality.

**Where:** This change applies to Salesforce for Android and Salesforce for iOS version 220.0 in all editions, except Database.com.

## Keep Users in the Know with Notification Builder

Send customized notifications when important events occur. For example, alert an account owner if a new support case is logged while trying to close a deal. Or, send a notification for a unique workflow built entirely with custom objects. Previously, you could send only standard notifications for use cases predefined by Salesforce. Notification Builder puts you in control of who needs to know what and when.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions and all versions of the Salesforce app.

**How:** Add the Send Custom Notification action to a process in Process Builder.

The screenshot displays the Salesforce Process Builder interface for a process named 'Account\_Won'. On the left, a flowchart shows a process starting with 'Account', leading to a 'New Criterion' decision diamond. If 'TRUE', it triggers 'IMMEDIATE ACTIONS' (highlighted with an orange box) and then 'STOP'. If 'FALSE', it leads to another decision diamond with '+ Add Criteria'. If 'TRUE', it triggers another 'IMMEDIATE ACTIONS' block (with '+ Add Action') and then 'STOP'. If 'FALSE', it leads to 'STOP'.

On the right, the 'Select and Define Action' configuration panel is shown. The 'Action Type' dropdown is set to 'Send Custom Notification' (highlighted with an orange box). Other fields include:
 

- Action Name: (empty text field)
- Notification Type: (dropdown menu)
- Notification Recipient: (dropdown menu)
- Notification Title: (text area with a 'Merge Field' search icon and placeholder text 'Add a title here...')
- Notification Body: (text area with a 'Merge Field' search icon and placeholder text 'Add body text...')
- Target Object: (dropdown menu showing 'Account Object that started the process')

 At the bottom of the configuration panel are 'Save' and 'Cancel' buttons.

SEE ALSO:

[Send a Custom Notification from a Process](#)

## Push Notifications No Longer Sent to Inactive Users

Previously, you had to manually delete a push registration if the refresh token was revoked. We now automatically delete the registration, along with the token. You can be sure that push notifications aren't being sent to inactive users or users without access.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions, except Database.com.

## Locate Notification Invocable Actions Quickly for Flows

Invocable actions are declarative building blocks for flows. To make them easier to find, we categorized them. For mobile and desktop notifications, invocable actions include customNotificationAction.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Invocable actions and quick actions are available based on your org permissions.

**How:** When you're building your flow, drag the Action flow element onto the Flow Builder canvas. Under Filter By, select the category you want. Use search to find the invocable action or quick action you want to add to your flow, or view a list of all available for.

SEE ALSO:

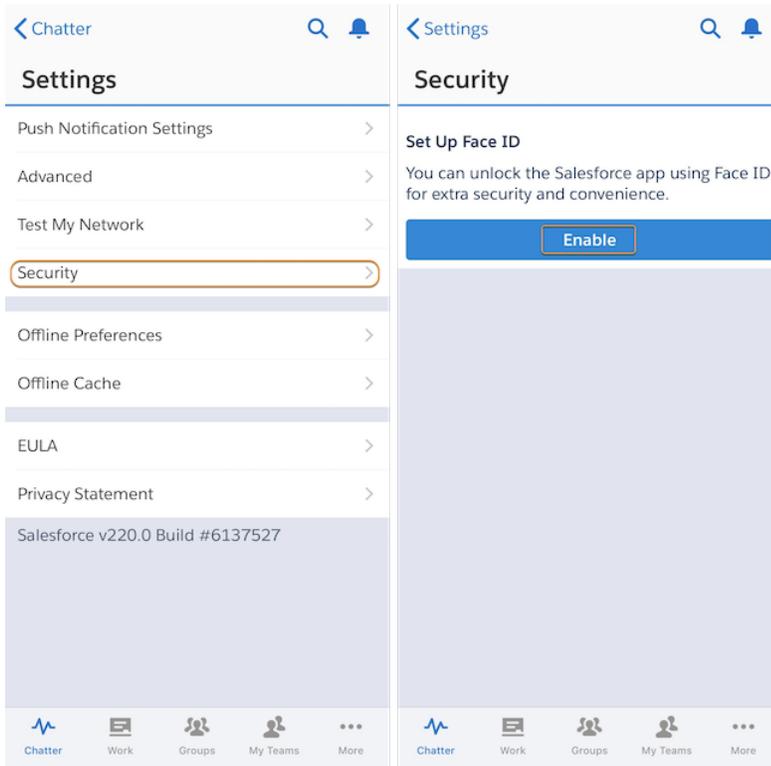
[Find Actions by Type or Category When Building Flows](#)

## Unlock Your App with the Speed and Security of Biometric ID

You can now unlock your Salesforce app with Touch ID and Face ID instead of a passcode. Biometric ID gets you back in and back to work with a tap or a glance.

**Where:** This change applies to the Salesforce app for iOS in all editions, except Database.com.

**How:** Users with a biometric ID set up on their device can enable unlocking with Touch ID or Face ID for Salesforce in device settings.



## Mobile Publisher: Privacy Policy, Sandbox Community, Unlock with Biometric ID

Brighten up your Communities with significant changes, amazing features, and improvements. You can add a privacy policy to your Mobile Publisher project to your Salesforce Lightning Communities app for iOS and Android. In addition to the community in production, community members now have a sandbox org in the sandbox community to beta test in. Plus, you can add biometric ID for iOS and Android to enable unlocking with Touch ID or Face ID.

### IN THIS SECTION:

#### [Unlock Your App with Biometric ID for Android and iOS](#)

Unlock your Lightning Communities app with Touch ID and Face ID. Biometric ID gets you back to work quickly with a glance or a tap. Users with biometric ID set up on their iOS or Android device can enable unlocking with Touch ID or Face ID.

#### [Enable Testing a Sandbox Community in the Mobile Publisher Project for Communities App](#)

Admins can now enable users to test the sandbox or production communities by configuring the sandbox community URL.

#### [Brand Assets with New Fields in Your Salesforce Lightning Communities App](#)

Apply your company's branding to the Salesforce Lightning Communities app for iOS and Android. You can also customize the app to include your own privacy policy URL on the App Store listing.

## Unlock Your App with Biometric ID for Android and iOS

Unlock your Lightning Communities app with Touch ID and Face ID. Biometric ID gets you back to work quickly with a glance or a tap. Users with biometric ID set up on their iOS or Android device can enable unlocking with Touch ID or Face ID.

**Where:** This change applies to Lightning communities accessed through Lightning Experience in Enterprise, Performance, Unlimited, and Developer editions. Touch ID is supported on iOS and Android, and Face ID is supported only on iOS.

## Enable Testing a Sandbox Community in the Mobile Publisher Project for Communities App

Admins can now enable users to test the sandbox or production communities by configuring the sandbox community URL.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

## Brand Assets with New Fields in Your Salesforce Lightning Communities App

Apply your company's branding to the Salesforce Lightning Communities app for iOS and Android. You can also customize the app to include your own privacy policy URL on the App Store listing.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

## Industries: Ready-Made Solutions for Your Line of Business

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Salesforce goes industry-specific with tailored solutions for financial services and health care. In this release, Financial Services Cloud gets new insurance capabilities; Health Cloud gets new data models to help manage provider relationships and life sciences programs; and users can book financial and health appointments with Lightning Scheduler.

### IN THIS SECTION:

[Financial Services Cloud: Insurance, Lightning Flow, Inbound Scheduling in Lightning Scheduler, Action Plans Enhancements, and More](#)

Unify the policyholder experience with Insurance for Financial Services Cloud. Capture and address customer service requests with easy-to-use, customizable flows. Connect customers to your business with self-service scheduling in Lightning Scheduler. Deliver consistent and compliant customer engagements with Action Plans enhancements. And go from data to insights faster with a set of analytics dashboards customized for retail banking.

[Health Cloud: Programs and Provider Management, MuleSoft Connectors, and More](#)

Reduce attrition and increase engagement by enrolling patients in programs. Help users find the right provider by specialty, credentials, and insurance network. Patients can schedule their own appointments, and providers can reserve space or equipment. Using MuleSoft CAQH connector, you can integrate Health Cloud for enhanced provider credentialing. And you have complex business logic wrapped within four new Business APIs.

## Financial Services Cloud: Insurance, Lightning Flow, Inbound Scheduling in Lightning Scheduler, Action Plans Enhancements, and More

Unify the policyholder experience with Insurance for Financial Services Cloud. Capture and address customer service requests with easy-to-use, customizable flows. Connect customers to your business with self-service scheduling in Lightning Scheduler. Deliver consistent and compliant customer engagements with Action Plans enhancements. And go from data to insights faster with a set of analytics dashboards customized for retail banking.

## IN THIS SECTION:

[Insurance for Financial Services Cloud: Addressing the Needs of Insurance Agents and Reps \(Generally Available\)](#)

Deepen customer relationships, discover new business opportunities, and grow your books of business with Salesforce's new insurance data model and Lightning components. The tailored Insurance Agent Console helps agents and service reps track their performance and stay focused on their goals. Add the Person Life Event and Policy components to the Account record page to give agents a consolidated view of their clients' life events, insurance policies, claims, and related details.

[Handle Service Requests Better and Faster with Lightning Flow for Financial Services Cloud](#)

Give your customer service reps a productivity boost with pre-assembled flows to help them handle customer service requests faster. The flows provide step-by-step guidance for common service requests, such as change of address, change of nominee, and change of beneficiary, without the need to navigate to different screens. The flows are available in English.

[Empower Customers to Schedule Appointments with Lightning Scheduler](#)

Customers and prospects can quickly schedule appointments with a self-service interface in Lightning Scheduler.

[Connect Action Plans to Appointments with Lightning Scheduler](#)

Do more with Action Plans, now certified for use with Lightning Scheduler. Relate action plans to appointments created in Lightning Scheduler, or create appointments based on status changes to action plans.

[Create Action Plans for More Objects](#)

Enhance collaboration and productivity for more of your repeatable processes using Action Plans. Expanded support for standard and custom objects now lets you deliver consistent and compliant customer engagement for processes like case resolution and product onboarding.

[See More on the Relationship Map with Usability Enhancements](#)

In the Relationship Map, text now wraps to show customers' full names for Related Accounts. Each role gets its own line, so you can see all the roles an individual plays at a glance. You can also customize labels for Related Accounts and Related Contacts.

[Boost Predictive Power for Retail Bankers with Einstein Analytics for Financial Services Enhancements](#)

Give retail bankers the insights they need with a customized set of analytics dashboards.

[Financial Services Cloud Has New Objects](#)

Do more with new Financial Services Cloud objects.

## Insurance for Financial Services Cloud: Addressing the Needs of Insurance Agents and Reps (Generally Available)

Deepen customer relationships, discover new business opportunities, and grow your books of business with Salesforce's new insurance data model and Lightning components. The tailored Insurance Agent Console helps agents and service reps track their performance and stay focused on their goals. Add the Person Life Event and Policy components to the Account record page to give agents a consolidated view of their clients' life events, insurance policies, claims, and related details.

## IN THIS SECTION:

[Plan, Perform, and Stay Smart with the Insurance App](#)

Insurance agents and customer service reps can manage and grow their books of business with Insurance Agent Console, a tailored Lightning console app. Performance metrics and report charts help agents and service reps monitor their goals and accomplishments, plan their work better, and improve sales and service.

[Deepen Customer Relationships with the Person Life Event Component](#)

Give insurance agents an at-a-glance view of their clients' life milestones to help them identify upcoming opportunities and devise timely personalized offers and engagement.

### Get a 360-Degree View of Policyholders with the Policy Component

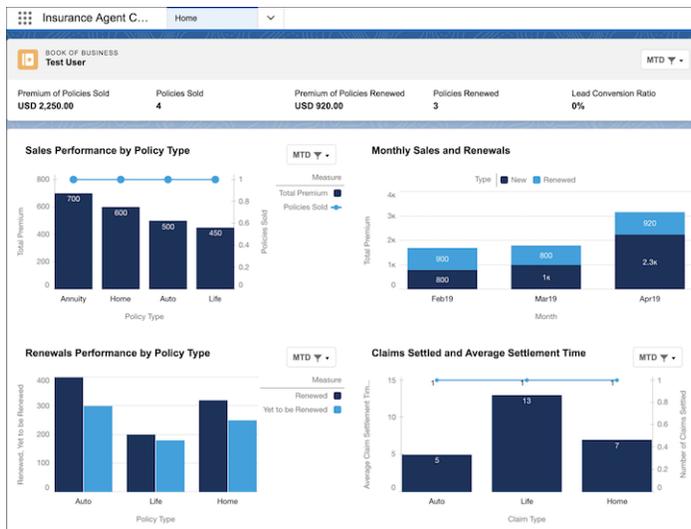
Give insurance agents a consolidated view of their clients' insurance policies, claims, and other related details. With greater visibility into these details, agents can better understand and address their clients' needs. You can also customize the Policy component to show the information that your agents need the most to do their work efficiently.

## Plan, Perform, and Stay Smart with the Insurance App

Insurance agents and customer service reps can manage and grow their books of business with Insurance Agent Console, a tailored Lightning console app. Performance metrics and report charts help agents and service reps monitor their goals and accomplishments, plan their work better, and improve sales and service.

**Where:** This change applies to Lightning Experience in Professional, Enterprise, and Unlimited editions that have Financial Services Cloud enabled.

**Why:** Choose from the prepackaged performance metrics and report charts to create custom home pages that suit the needs of your agents and service reps. Agents and service reps can view metrics and reports for a month, quarter, or year.



**How:** In the App Launcher, click **Insurance Agent Console**.

SEE ALSO:

[Salesforce Help: Enable Insurance for Financial Services Cloud \(can be outdated or unavailable during release preview\)](#)

## Deepen Customer Relationships with the Person Life Event Component

Give insurance agents an at-a-glance view of their clients' life milestones to help them identify upcoming opportunities and devise timely personalized offers and engagement.

**Where:** This change applies to Lightning Experience in Professional, Enterprise, and Unlimited editions that have Financial Services Cloud enabled.

**How:** Clone an account record page or create one. Then add the Person Life Event component to the page.

The screenshot displays a Salesforce record for a Person Account, Mrs. Rachel Adams. At the top, there are buttons for '+ Follow', 'Edit', 'New Case', and 'New Note'. Below this, account details are listed: Account Number (7823-783-6784), Category (Platinum), Lifetime Value (\$278,740.00), Email (rachel@maven.org), and Phone (+14158822871). The 'Life Events' section is highlighted, showing a timeline of events: Birth (Feb 1, 1988), Graduated From CB... (May 15, 2006), Business Analyst At... (Sep 21, 2006), Married To Nigel (Dec 6, 2017), Moved To San Franci... (Jul 4, 2018), and Bought Second Car (Mar 19, 2019). A 'Show recents first' toggle and a 'New Event' button are also visible.

SEE ALSO:

[Salesforce Help: Enable Insurance for Financial Services Cloud \(can be outdated or unavailable during release preview\)](#)

## Get a 360-Degree View of Policyholders with the Policy Component

Give insurance agents a consolidated view of their clients' insurance policies, claims, and other related details. With greater visibility into these details, agents can better understand and address their clients' needs. You can also customize the Policy component to show the information that your agents need the most to do their work efficiently.

**Where:** This change applies to Lightning Experience in Professional, Enterprise, and Unlimited editions that have Financial Services Cloud enabled.

**How:** Clone an account record page or create one. Then add the Policy component to the page.

The screenshot shows the 'Policies and Claims' component in Salesforce. It features a summary section with 'PREMIUM PAID \$6,512.00', 'OPEN CLAIMS CM-4326', and 'UP FOR RENEWAL SG234-5336'. Below this, there are sections for 'Policies (2)' and 'Claims (2)'. The 'Policies (2)' section lists two policies: SG234-5335 (Home, \$240.00, Feb 2, 2019) and SG234-5336 (Home, \$240.00, Feb 2, 2019). The 'Claims (2)' section lists two claims: CM-4325 (Closed, Hurricane Damage, 4/2/2019 12:00 PM) and CM-4326 (Open, Hurricane Damage, 4/3/2019 12:00 PM). A 'View All' link is provided for the claims. At the bottom, there is a section for 'Beneficiary' SG7687-234 (Life, \$500.00, Apr 30, 2018). Navigation links for 'All Owned Policies' and 'Other Policies' are at the bottom.

SEE ALSO:

[Salesforce Help: Enable Insurance for Financial Services Cloud \(can be outdated or unavailable during release preview\)](#)

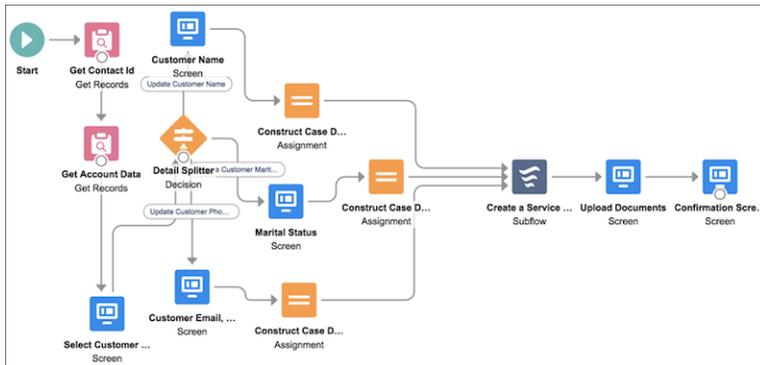
## Handle Service Requests Better and Faster with Lightning Flow for Financial Services Cloud

Give your customer service reps a productivity boost with pre-assembled flows to help them handle customer service requests faster. The flows provide step-by-step guidance for common service requests, such as change of address, change of nominee, and change of beneficiary, without the need to navigate to different screens. The flows are available in English.

**Where:** This change applies to Lightning Experience in Professional, Enterprise, and Unlimited editions that have Financial Services Cloud enabled.

**When:** This feature is available in Financial Services Cloud by late July.

**How:** Clone the flows, and then customize them according to your business processes.



SEE ALSO:

[Salesforce Help: Lightning Flow for Financial Services Cloud \(can be outdated or unavailable during release preview\)](#)

## Empower Customers to Schedule Appointments with Lightning Scheduler

Customers and prospects can quickly schedule appointments with a self-service interface in Lightning Scheduler.

**Where:** This change applies to Lightning Experience in Enterprise and Unlimited editions.

SEE ALSO:

[Lightning Scheduler: Inbound Appointment Scheduling, Event Management, Action Plans, and More](#)

## Connect Action Plans to Appointments with Lightning Scheduler

Do more with Action Plans, now certified for use with Lightning Scheduler. Relate action plans to appointments created in Lightning Scheduler, or create appointments based on status changes to action plans.

**Where:** This change applies to Lightning Experience in Enterprise and Unlimited editions where Financial Services Cloud is enabled.

SEE ALSO:

[Pair Your Action Plans with Lightning Scheduler](#)

## Create Action Plans for More Objects

Enhance collaboration and productivity for more of your repeatable processes using Action Plans. Expanded support for standard and custom objects now lets you deliver consistent and compliant customer engagement for processes like case resolution and product onboarding.

**Where:** This change applies to Lightning Experience in Enterprise, Unlimited, and Developer editions that have Financial Services Cloud enabled.

**Why:** In addition to Account, Action Plan Templates now support these standard objects: Campaign, Case, Contact, Contract, Lead, and Opportunity. You can also create Action Plan Templates for your custom objects that have activities enabled. In addition, Account, Case, and Opportunity support role resolution for assigning tasks to Account, Case, and Opportunity team members, respectively.

 **Important:** We made Action Plans available to multiple objects. If you're using process automation to implement Action Plans, update references to `TargetID` with lookups to the parent object and the target record in the related table.

SEE ALSO:

[Financial Services Cloud Upgrade Guide: Update API Implementations of Action Plans \(can be outdated or unavailable during release preview\)](#)

## See More on the Relationship Map with Usability Enhancements

In the Relationship Map, text now wraps to show customers' full names for Related Accounts. Each role gets its own line, so you can see all the roles an individual plays at a glance. You can also customize labels for Related Accounts and Related Contacts.

**Where:** This change applies to Lightning Experience in Enterprise and Unlimited editions.

## Boost Predictive Power for Retail Bankers with Einstein Analytics for Financial Services Enhancements

Give retail bankers the insights they need with a customized set of analytics dashboards.

**Where:** The Retail Banking app is part of Einstein Analytics for Financial Services, which is available for an extra cost in Enterprise, Unlimited, and Developer editions.

**Why:** The new app gives branch managers and retail bankers full visibility into customers, deposits, leads, referrals, and branch activity. Regional managers and personal bankers can also take advantage of insights from the dashboards to increase loans and deposits as well as customer satisfaction. Key performance indicators also help you build your retail banking business by increasing higher referral conversions, accelerating loan applications, and building customer retention.

**How:** In Analytics Studio, select **Create**, choose **App**, and select **Start from Template**. Select the Analytics for Retail Banking template, and follow the instructions in the wizard.

**When:** These features are being added to Analytics templates on a rolling basis during the Summer '19 release.

## Financial Services Cloud Has New Objects

Do more with new Financial Services Cloud objects.

### Credentialing

#### Store a person's or organization's professional awards

Use the new Award object.

**Store the licenses of a party role like healthcare provider or producer**

Use the new BusinessLicense object.

**Store information about professional education for a person in a party role**

Use the new PersonEducation object.

## Insurance

**Store types of claims**

Use the new Claim object.

**Associate the Claim object with the Case object**

Use the new ClaimCase junction object.

**Store the participants of a claim**

Use the new ClaimParticipant object, a junction object that associates the Claim object with the Account object.

**Store the type of coverage**

Use the new CoverageType object.

**Store the insurable and insured properties of a customer**

Use the new CustomerProperty object.

**Associate the Claim object with the InsurancePolicyAsset object**

Use the new InsuranceClaimAsset junction object.

**Store the type of insurance policy**

Use the new InsurancePolicy object.

**Store the customer property insured through the insurance policy**

Use the new InsurancePolicyAsset object.

**Associate the InsurancePolicy object with the ProductCoverage object**

Use the new InsurancePolicyCoverage object.

**Associate the InsurancePolicyAsset object with the InsurancePolicyParticipant object**

Use the new InsurancePolicyMemberAsset junction object.

**Store the participants of an insurance policy**

Use the new InsurancePolicyParticipant object, a junction object that associates the InsurancePolicy object with the Account object. Insurance policy participants include policy owners and beneficiaries.

**Store the insurance-related attributes for the insured member**

Use the new InsuranceProfile object.

**Store the life events of an individual**

Use the new PersonLifeEvent object.

**Store an agent or an agency selling insurance**

Use the new Producer object.

**Associate the Product object with the CoverageType object**

Use the new ProductCoverage junction object.

## Lightning Flow

**Store the JSON output from flows and record the data interchange between integrated systems**

Use the new CaseGatewayRequest object.

## Action Plans

**BEHAVIOR CHANGE: For API version 46 and later, supported parent objects are Account, Campaign, Case, Contact, Contract, Lead, and Opportunity as well as custom objects with activities enabled. (In API version 45 and earlier, this field is the ID of the parent Account record that relates to this action plan.)**

This change affects the ActionPlan object's TargetId field.

**Identify the parent object that relates to this action plan template. This field is available in API version 46.0 and later.**

Use the ActionPlanTemplate object's new TargetEntityType field.

## Health Cloud: Programs and Provider Management, MuleSoft Connectors, and More

Reduce attrition and increase engagement by enrolling patients in programs. Help users find the right provider by specialty, credentials, and insurance network. Patients can schedule their own appointments, and providers can reserve space or equipment. Using MuleSoft CAQH connector, you can integrate Health Cloud for enhanced provider credentialing. And you have complex business logic wrapped within four new Business APIs.

Health Cloud is available in Salesforce Classic

Available in: **Enterprise, Performance, and Unlimited** Editions

### IN THIS SECTION:

#### [Increase Engagement with Life Sciences Program Management](#)

Maximize the impact of your life sciences programs with new enrollment and management tools to help drive patient adherence and improve outcomes. Use this new data model to define programs and manage relationships and activities within them. We've also included a new Communities component that you can deploy to show the programs a person is enrolled in.

#### [Create a Directory of Providers with the Provider Relationship Management Data Model](#)

Manage your network of provider relationships with insight into the specialties that they practice, the insurance networks they belong to, and the professional credentials they've earned. Health Cloud now includes an industry-specific data model that unifies information about providers and organizations, including affiliations, locations, networks, and specialties.

#### [Empower Patients and Members to Schedule Appointments with Lightning Scheduler](#)

Patients and members can schedule non-medical appointments by embedding Lightning Scheduler in a website, app, or community. Using pre-built flows and a convenient self-service scheduling interface, patients and members can sign up for health education and wellness coaching. Or let them reserve medical equipment, like oxygen tanks and hospital beds. It's easy to search and select the right person, location, and date and time. Patients and members can schedule and modify appointments through embedded services in your company's website or community.

#### [Scroll Through Patient Timeline Events](#)

We added vertical scrolling to the timeline to show events that don't fit in the view. Scroll to see all the events on a particular day—even when the date has many patient events.

#### [Integrate Health Cloud Using MuleSoft CAQH Connector](#)

MuleSoft facilitates interoperability across multiple systems. This release provides ease of connectivity to CAQH Proview<sup>(R)</sup> and DirectAssure<sup>(R)</sup> services via MuleSoft connector for CAQH, allowing you to visually define complex integrations between Health Cloud and CAQH to enable enhanced provider credentialing. Licensing terms & conditions between the customer and CAQH apply. The MuleSoft connector simplifies the mechanism to access the licensed CAQH services. For more information, see [MuleSoft Connectors Documentation](#).

### [Make Processes Easier for Customers with Flows](#)

Help your call center reps handle service requests from patients and members using providing wizard-like flows they can launch from the Health Cloud console. The provided flows help with appealing a coverage decision, changing the member's primary care provider, and requesting a new insurance card. You can clone the provided flows and create new ones to fit your business processes.

### [Build Integrations with the Health Cloud Business APIs](#)

Use the Health Cloud Business APIs for building integrations with Health Cloud. The APIs wrap complex business logic by executing multiple tasks within a single API call. Most of the APIs are RESTful APIs, but a few are also available through Apex classes and methods. With the new ANSI 278 friendly Authorization APIs, payer organizations can receive prior authorization requests and a variety of other care services requests electronically. The care program enrollment API simplifies enrollments of multiple patients to any care program.

### [Health Cloud Has New and Changed Objects](#)

Access more data through these new and changed Health Cloud objects

### [New and Changed Health Cloud Lightning Components](#)

We've added another component and made improvements to other Health Cloud components.

## Increase Engagement with Life Sciences Program Management

Maximize the impact of your life sciences programs with new enrollment and management tools to help drive patient adherence and improve outcomes. Use this new data model to define programs and manage relationships and activities within them. We've also included a new Communities component that you can deploy to show the programs a person is enrolled in.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Professional, Performance, and Unlimited editions where Health Cloud is enabled.

**Why:** A program is any ongoing, organized activity that patients or members can enroll or be enrolled in; for example, a diet and nutrition class, a clinical trial, or an employer-sponsored wellness program.

- For care providers, programs can help encourage patients to stick with care plans and seek treatment more quickly. A patient's program enrollments can be shown in their patient card, care plan, and timeline.
- For payers, programs can help reduce costs by aggregating members with similar characteristics, such as shared workplaces or conditions.
- For life sciences organizations, programs can help support adherence to therapies and trials, leading to better outcomes.

**When:** The care program data model features are made available through the new Health Cloud Foundation permission set license. This permission set license is provisioned to all Health Cloud customers, based on their contracts, after the Summer '19 production release upgrade. After the features are available in production orgs, you can replicate a new sandbox org and have access to the functionality.

**How:** To access the objects, you must have the Health Cloud license provisioned in your org. Then, assign the Health Cloud and the Health Cloud Platform permission set licenses to your users.

The screenshot displays a 'My Care Programs' dashboard with a blue header. It contains four program cards, each with an 'End Date', a title, an 'Active' status badge, and a brief description:

- Knee Rehabilitation** (End Date: May 2, 2019): Your knee is a complex joint with many components, making it vulnerable to a variety of injuries. Some of the most common knee injuries include ...
- Probiotic Burger Initiative** (End Date: Jul 11, 2019): While some chefs have groused quietly about the insatiable demand for burgers, most are philosophical. "All chefs can be frustrated by the buying ...
- Can I Vegan ?** (End Date: Aug 17, 2019): Vegan diets are regarded as appropriate for all stages of life including during infancy and pregnancy by the American Academy of Nutrition and ...
- Brand Niku** (End Date: Sep 21, 2019): Some people eat only the flesh of animals that they believe have not been mistreated, and abstain from the flesh of animals raised in factory farms ...

SEE ALSO:

[Health Cloud Has New and Changed Objects](#)

## Create a Directory of Providers with the Provider Relationship Management Data Model

Manage your network of provider relationships with insight into the specialties that they practice, the insurance networks they belong to, and the professional credentials they've earned. Health Cloud now includes an industry-specific data model that unifies information about providers and organizations, including affiliations, locations, networks, and specialties.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Professional, Performance, and Unlimited editions where Health Cloud is enabled.

**When:** The provider relationship management data model features are made available through the new Health Cloud Platform permission set license. This permission set license is provisioned to all Health Cloud customers, based on their contracts, after the Summer '19 production release upgrade. After the features are available in production orgs, you can replicate a new sandbox org and have access to the functionality.

**How:** To access the objects, you must have the Health Cloud license provisioned in your org. Then, assign the Health Cloud Platform permission set license, and the Health Cloud Foundation permission set to users.

SEE ALSO:

[Health Cloud Has New and Changed Objects](#)

## Empower Patients and Members to Schedule Appointments with Lightning Scheduler

Patients and members can schedule non-medical appointments by embedding Lightning Scheduler in a website, app, or community. Using pre-built flows and a convenient self-service scheduling interface, patients and members can sign up for health education and wellness coaching. Or let them reserve medical equipment, like oxygen tanks and hospital beds. It's easy to search and select the right person, location, and date and time. Patients and members can schedule and modify appointments through embedded services in your company's website or community.

**Where:** This change applies to Lightning Experience in Enterprise and Unlimited editions.

**How:** To get started, clone and modify a pre-built template flow or create your own in Flow Builder.

SEE ALSO:

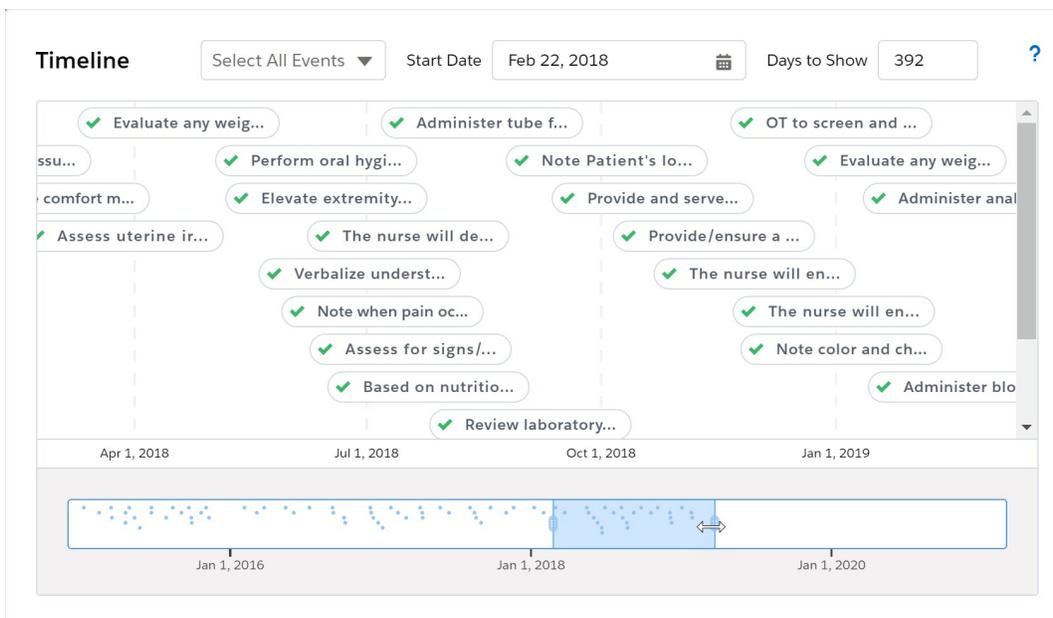
[Salesforce Help: Manage Appointments with Lightning Scheduler \(can be outdated or unavailable during release preview\)](#)

## Scroll Through Patient Timeline Events

We added vertical scrolling to the timeline to show events that don't fit in the view. Scroll to see all the events on a particular day—even when the date has many patient events.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, and Unlimited editions where Health Cloud is enabled. It requires the Health Cloud Platform permission set license.

**Why:** When there are too many events to fit in the view, use vertical scrolling to see all events.



## Integrate Health Cloud Using MuleSoft CAQH Connector

MuleSoft facilitates interoperability across multiple systems. This release provides ease of connectivity to CAQH Proview<sup>(R)</sup> and DirectAssure<sup>(R)</sup> services via MuleSoft connector for CAQH., allowing you to visually define complex integrations between Health Cloud and CAQH to enable enhanced provider credentialing. Licensing terms & conditions between the customer and CAQH apply. The MuleSoft connector simplifies the mechanism to access the licensed CAQH services. For more information, see [MuleSoft Connectors Documentation](#).

**When:** You can use the MuleSoft CAQH connector via Anypoint Exchange when the Summer'19 release is generally available. For updates, keep an eye on [MuleSoft Connector Release Notes](#).

SEE ALSO:

[MuleSoft Connectors Documentation](#)

## Make Processes Easier for Customers with Flows

Help your call center reps handle service requests from patients and members using providing wizard-like flows they can launch from the Health Cloud console. The provided flows help with appealing a coverage decision, changing the member's primary care provider, and requesting a new insurance card. You can clone the provided flows and create new ones to fit your business processes.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Professional, Performance, and Unlimited editions where Health Cloud is enabled.

**When:** These flow templates are provided as part of a package. To install the package, you'll need the Health Cloud Managed Package installed and the Health Cloud permission set assigned.

**How:** To set up and deploy the flows, you must have a standard Health Cloud license. Community users are covered by your community user license.

## Build Integrations with the Health Cloud Business APIs

Use the Health Cloud Business APIs for building integrations with Health Cloud. The APIs wrap complex business logic by executing multiple tasks within a single API call. Most of the APIs are RESTful APIs, but a few are also available through Apex classes and methods. With the new ANSI 278 friendly Authorization APIs, payer organizations can receive prior authorization requests and a variety of other care services requests electronically. The care program enrollment API simplifies enrollments of multiple patients to any care program.

**Who:** The Health Cloud add-on or Health Cloud Platform licenses are required to access the Business APIs. The user must have the Health Cloud Utilization Management Permission Set, which includes the Health Cloud Platform licenses.

 **Note:** Health Cloud Business APIs follow the same conventions as Chatter REST APIs for authentication, rate limits, and so on.

## ANSI 278 Friendly Authorization APIs

Three functionally rich RESTful APIs provide a simplified interface to ANSI 278 transaction data, also known as Health Care Services Review and Response. These business level APIs help payer organizations electronically receive requests for care services, including prior-authorization and referral requests. Senders could be providers, payers, plan sponsors, or other entities involved in healthcare services review, such as clearinghouses.

The APIs facilitate communication between two parties for the following cases:

- Appeals
- Drug requests
- Admissions
- Healthcare service requests
- Referrals
- Complaints
- Grievances

### Create or update one or more care services review requests

Make a `POST` or `PATCH` request to `/services/data/vXX.X/connect/health/care-services` with a list of care services requests. Each care service request can contain details such as diagnoses, care requests, drugs, care request items, case, patient, subscriber, and transport locations.

### Get the status of multiple care services review requests

Make a `GET` request to `/services/data/vXX.X/connect/health/care-services/{ids}` to return details about care requests, drugs, diagnoses, subscribers, case, patient, and transport locations.

## Care Program Enrollment API

Enroll multiple patients in a single care program. The API creates the patient enrollment cards and enrollee products for the specified patients.

### Enroll multiple patients into a single care program

Make a `POST` request to `/services/data/vXX.X/connect/health/care-programs/enrollments` with the care program and a list of patients to enroll.

## Health Cloud Has New and Changed Objects

Access more data through these new and changed Health Cloud objects

**Where:** This change applies to Enterprise, Performance, and Unlimited editions.

**When:** Life Sciences Program Management and Provider Relationship Management data model features are provisioned to all Health Cloud customers, based on their contracts, after the Summer '19 release upgrade. After the features are available in production orgs, you can replicate a new sandbox org and have access to the functionality.

**How:** To access the objects for Life Sciences Program Management and Provider Relationship Management, you must have the Health Cloud license provisioned in your org. Then, assign the Health Cloud and the Health Cloud Platform permission set licenses to your users. For Provider Relationship Management, you must also assign the Health Cloud Foundation permission set to users.

## Life Sciences Program Management

### Create and manage activities offered to participants by an employer or insurer

Use the new `CareProgram` object.

### Associate one or more campaigns to a program

Use the new `CareProgramCampaign` object.

### Define the criteria for patient care program enrollment eligibility

Use the new `CareProgramEligibilityRule` object.

### Create a participant enrolled in a care program

Use the new `CareProgramEnrollee` object.

### Associate a care program enrollee with a care program product, a care program provider, or both

Use the new `CareProgramEnrolleeProduct` object.

### Create a care program membership card that includes a membership number or enrollment code

Use the new `CareProgramEnrollmentCard` object.

### Create a business or clinical goal related to a care program

Use the new `CareProgramGoal` object.

### Associate a care program with a care program product, care program provider, or both

Use the new `CareProgramProduct` object.

### Create a business account that is the service provider for a care program product

Use the new `CareProgramProvider` object.

### Create a person who delivers services under a program

Use the new `CareProgramTeamMember` object.

### Map source system fields to Salesforce target entities and attributes

Use the new `CareSystemFieldMapping` object.

### Define patient enrollment eligibility for one or more care programs

Use the new `EnrollmentEligibilityCriteria` object.

## Provider Relationship Management

### Create the professional accreditation of a facility

Use the new Accreditation object.

### Create records for a person's or organization's professional awards

Use the new Award object.

### Track a practitioner's board certifications

Use the new BoardCertification object.

### Track the licenses of a role, like healthcare provider or producer

Use the new BusinessLicense object.

### Manage provider specialty codes and descriptions

Use the new CareSpecialty object.

### Manage a static list of taxonomy codes

Use the new CareTaxonomy object.

### Identify the insurance network that a location or business entity is part of

Use the new HealthcareFacilityNetwork object.

### Manage the different locations in which a practitioner provides services

Use the new HealthcarePractitionerFacility object.

### Capture the business-level details about the healthcare organization or the practitioner

Use the new HealthcareProvider object.

### Manage the identifiers from the National Provider Identifier that are assigned to every facility and licensed practitioner in the United States

Use the new HealthcareProviderNpi object.

### Track the specialties for a practitioner or a provider service organization.

Use the new HealthcareProviderSpecialty object.

### Manage taxonomy or subspecialty codes for a practitioner or facility

Use the new HealthcareProviderTaxonomy object.

### Track information about professional education for a person in a party role.

Use the new PersonEducation object.

## Utilization Management

### Create extra details for a care request, such as the subscriber details for the member's health plan, home health care status, and ambulance transportation details

Use the new CareRequestExtension object.

### Capture the gender of the member

Use the new MemberGender field on the existing CareRequest object.

### Track the provider's prognosis of the member's health

Use the new MemberPrognosis field on the existing CareRequest object.

### Capture the status of a member's admissions, date of outpatient services, or start of care

Use the new MemberStatus field on the existing CareRequest object.

### Capture the quantity type for the request, such as days, units, or visits

Use the new QuantityType field on the existing CareRequest object.

**Capture distance traveled during ambulance transport**

Use the new `AmbulanceTransportDistance` field on the existing `CareRequestItem` object.

**Capture the reason for ambulance transport**

Use the new `AmbulanceTransportReason` field on the existing `CareRequestItem` object.

**Capture the type of ambulance transport**

Use the new `AmbulanceTransportType` field on the existing `CareRequestItem` object.

**Let users create a free-form description of a procedure**

Use the new `FreeFormProcedureDescription` field on the existing `CareRequestItem` object.

**Let users add an extra modifier for a service code**

Use the new `Modifier2` field on the existing `CareRequestItem` object.

**Let users add a description for an extra service code modifier**

Use the new `Modifier2Description` field on the existing `CareRequestItem` object.

**Let users add an extra modifier for a service code**

Use the new `Modifier3` field on the existing `CareRequestItem` object.

**Let users add a description for an extra service code modifier**

Use the new `Modifier3Description` field on the existing `CareRequestItem` object.

**Let users add an extra modifier for a service code**

Use the new `Modifier4` field on the existing `CareRequestItem` object.

**Let users add a description for an extra service code modifier**

Use the new `Modifier4Description` field on the existing `CareRequestItem` object.

**Track a quantity type for a service request such as days, units, or visits**

Use the new `QuantityType` field on the existing `CareRequestItem` object.

**Capture the authorization status of a service request**

Use the new `Status` field on the existing `CareRequestItem` object.

**Capture the reason for the authorization status of a service request**

Use the new `StatusReason` field on the existing `CareRequestItem` object.

**Capture the destination location for ambulance transportation**

Use the new `TransportLocationId` field on the existing `CareRequestItem` object.

## SEE ALSO:

[Create a Directory of Providers with the Provider Relationship Management Data Model](#)

[Increase Engagement with Life Sciences Program Management](#)

## New and Changed Health Cloud Lightning Components

We've added another component and made improvements to other Health Cloud components.

The following component is new.

### Component Name

Care Programs for Health Cloud Empower Component

The following components have changed.

### Component Name

Description

### EDITIONS

Health Cloud is available in Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

## myTrailhead: Your Content and Brand on Trailhead

With myTrailhead, you can offer your users the same skill-based, gamified learning experience as Salesforce Trailhead with content that you create for your company. You can also brand myTrailhead with your company logo, banner image, and color.

### IN THIS SECTION:

#### [Reinvent Learning at Your Company](#)

You can create as many myTrailhead modules and trails for your users as you like. myTrailhead comes with Trailmaker, an easy-to-use platform for creating, managing, and publishing your content. And you can build trailmixes—learning paths that combine your custom content with resources outside myTrailhead to offer a well-rounded educational experience.

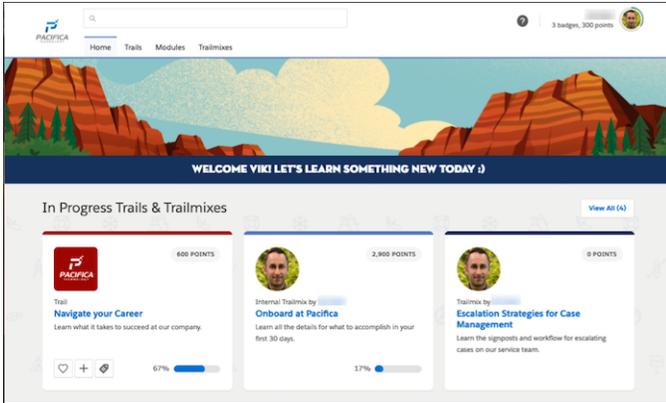
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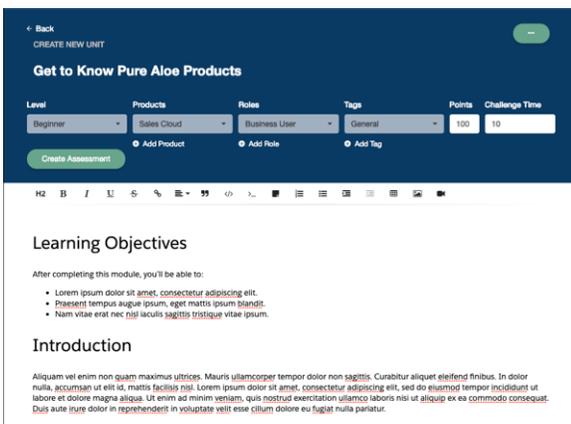
**Where:** myTrailhead is available to customers with Enterprise, Performance, or Unlimited editions for an extra cost.

**Who:** Users with the myTrailhead Content Access permission can log in to their company's myTrailhead site and earn badges and points. To work with Trailmaker, customize branding, or create trailmixes with custom steps, users need extra permissions.

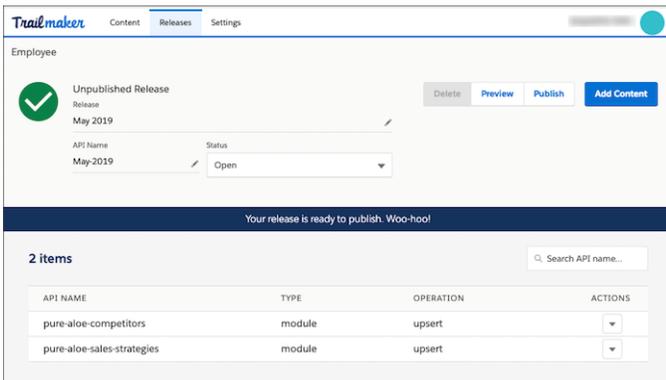
**Why:** myTrailhead fosters a culture of continuous learning that keeps employees engaged and nurtures their career development. Your HR department can create content to welcome new employees and orient them to their job and your company. Managers and learning professionals can design custom training programs, such as sales processes, service case management, or career navigation. Writers, editors, and subject matter experts can promote the adoption of systems by collaborating on content that zeroes in on your company's use cases.



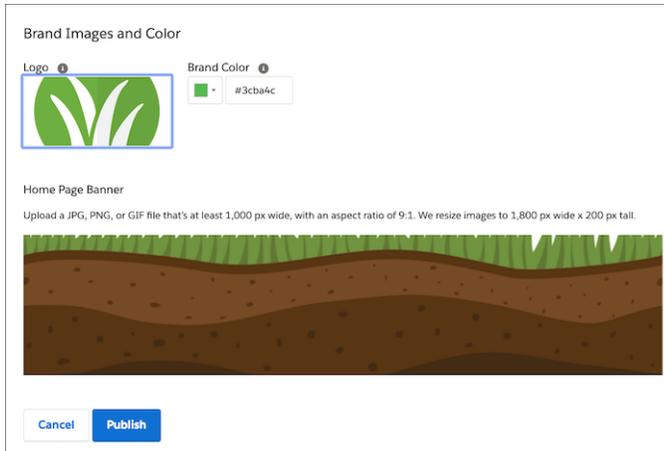
**How:** Format your content, add graphics and videos, and create quizzes with Trailmaker Content, an intuitive content-styling tool.



Create releases for your content, and publish them with the click of a button using Trailmaker Release.



Customize myTrailhead with your company's imagery and color using the Branding feature.



Earn badges and points whenever you choose on your company's myTrailhead site.

SEE ALSO:

[Salesforce Help: myTrailhead \(can be outdated or unavailable during release preview\)](#)

## Customization: Einstein Prediction Builder, Einstein Next Best Action, and Flow Enhancements

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Make sure your data leads to quality predictions and be more precise with filter conditions in Einstein Prediction Builder. Get better recommendations and predictions with Einstein Next Best Action. Build flows more easily with a more robust Flow Builder and a host of new features.

IN THIS SECTION:

### [Einstein Prediction Builder](#)

Use Data Checker to assess the quantity and quality of your data to ensure a successful prediction. Customize your condition logic so your prediction is based on the records you specify.

### [Einstein Next Best Action: Easier Expressions, Dynamic Delivery and Enhancements for Recommendations, and Packaging for Strategies and Recommendations](#)

Create expressions for filtering recommendations in simple or advanced mode. Connect to an external datasource to quickly create recommendations that can be generated dynamically for large numbers of items. Enhance recommendations with real-time updates and AI-driven prediction scores. Package Next Best Action strategies for distribution across multiple internal orgs or to customers.

### [Lightning Flow: Enhanced Flow Builder Experience, Standard Flows, and Simplified Data Integration with Apex Types](#)

Build flows faster with features like Undo and Redo, get standard flows with certain Salesforce features, and simplify your data integration with Apex types for flows.

### [Lightning App Builder: New Record Page Template, Plus New and Enhanced Components](#)

Create record pages similar to Salesforce Classic with a new record page template. The updated Einstein Analytics Dashboard component improves usability, and the new Quip Notifications and Email Tracking - Individual Receipt components help users stay productive.

### [Salesforce Connect: External Change Data Capture, External Object Picklists, External Object Reporting, and Named Credential Authentication Protocols](#)

Track changes made to data stored outside your Salesforce org with External Change Data Capture. Your external objects are improved with picklist fields and more records evaluated when reporting. Build simpler, secure access to more external data sources than before with extra authentication protocols for named credentials.

### [Data Protection and Privacy: New Consent Management Objects and Data Classification Improvements](#)

Use the new authorization form objects to track and store your customers' consent. Additional features make it easier to classify customers' sensitive data at the field level.

### [Objects and Fields: Prediction Fields in Formulas, Increased Hard Limit for Custom Objects, and Improved Deleted Fields Information](#)

Use Einstein Prediction Builder values in formulas, install more custom objects, and see more information on the Deleted Fields detail page.

### [Sharing: Enhancements to External Org-Wide Defaults](#)

We improved external org-wide defaults to help you better secure your data. Custom objects have stricter default external access settings, and we enabled external org-wide defaults in all orgs with communities or portals.

### [Globalization: Enhanced Right-to-Left Layout in Beta, New Locale Formats in Pilot, and 3 New Platform Languages](#)

Enjoy a better layout for right-to-left languages, and check out new and improved formats for international dates and times. Plus, we added Burmese and two languages for our customers in New Zealand.

### [AppExchange: Find the Right Salesforce Consultant for Your Project](#)

New tools and features on AppExchange make it easier to find Salesforce consultants whose qualifications match your company's needs. The Consultant Finder gathers your project requirements using simple questions and then recommends the most relevant consultants. New listing components let you quickly understand a consultant's areas of expertise, geographic focus, and achievements.

### [General Setup: Custom Object Creator, Actions Categorized in Flows, Streamlined Quip Processes, and Big Object Enhancements](#)

Create a custom object more efficiently by importing all its data from a spreadsheet. In flows, we categorized invocable actions and quick actions so that they're easier to find. Connect and add users to Quip more quickly with fewer clicks. Increased index lengths and specialized field types make it more efficient to work with big objects.

## Einstein Prediction Builder

Use Data Checker to assess the quantity and quality of your data to ensure a successful prediction. Customize your condition logic so your prediction is based on the records you specify.

### IN THIS SECTION:

#### [Catch Errors Before They Happen with Data Checker in Einstein Prediction Builder](#)

Don't wait until you're done setting up a prediction to find out you don't have enough records in your dataset or that the prediction quality is low. Einstein can determine how many example records and how many true and false values you need to make a useful prediction. Use Data Checker to get this information as you go. Find out early on that you don't have enough records in your filtered dataset so that you can adjust your segment or example filters, and then recheck your data.

#### [Fine-Tune Your Filters with Custom Logic in Einstein Prediction Builder](#)

When you build a prediction, you use filters to define the set of records in your data set that your prediction is based on. Now you can apply custom logic to your filter conditions to be more precise about the set of records that you want to include.

### SEE ALSO:

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

[Salesforce Help: Einstein Prediction Builder \(can be outdated or unavailable during release preview\)](#)

## Catch Errors Before They Happen with Data Checker in Einstein Prediction Builder

Don't wait until you're done setting up a prediction to find out you don't have enough records in your dataset or that the prediction quality is low. Einstein can determine how many example records and how many true and false values you need to make a useful prediction. Use Data Checker to get this information as you go. Find out early on that you don't have enough records in your filtered dataset so that you can adjust your segment or example filters, and then recheck your data.

**Where:** This change applies to Lightning Experience in Enterprise and Developer editions.

**Who:** This feature is available to admins with the Einstein Analytics Plus or Einstein Predictions license.

**How:** When you select the object that contains the field you want to predict, check your data to make sure that you have enough records. If you're focusing your prediction on a segment of your data set, define that segment first before checking your data.

The screenshot shows the 'Select an object to predict' interface. The search bar contains 'Contact'. Below it, there are radio buttons for 'No segment' and 'Yes, focus on a segment (Advanced)'. The 'Advanced' option is selected, and a table shows one row with 'Contact' as the object, 'Gender' as the field, 'Equals' as the operator, and 'Female' as the value. There are also radio buttons for 'All of the conditions are met (AND)', 'Any of the conditions are met (OR)', and 'Customize the logic'. The 'Data Checker' panel on the right shows a green checkmark and '3488 Total records (400 minimum)'. Below that, it says 'Record count looks good!' and has a 'Check Data' button. The 'Prediction Settings' section shows 'SELECTED OBJECT' as 'Contact'.

Check your data again when you select a field to predict and define your example set. If you're predicting a field with true and false values, Data Checker also tells you whether your dataset has enough examples of each value.

The screenshot shows the 'Select a field to predict' interface. The search bar contains 'Homeowner'. Below it, there are radio buttons for 'All of the conditions are met (AND)', 'Any of the conditions are met (OR)', and 'Customize the logic'. The 'Data Checker' panel on the right shows a red 'X' and '215 Example records (400 minimum)'. Below that, it shows '109 False (100 minimum)' and '106 True (100 minimum)'. The total records to predict is 6828. There is a red 'X' and 'Not enough records' message. The 'Check Data' button is visible. The 'Prediction Settings' section shows 'SELECTED OBJECT' as 'Contact'.

If you get the green light to move forward, you have one more chance to check your data before building your prediction. If the Data Checker says you don't have enough records, add data or modify your filter conditions.

The screenshot shows the Einstein Prediction Builder interface. At the top, it says "Einstein Prediction Builder". Below that, there's a section titled "Does everything look good?" with a red warning box stating: "Einstein can't build a prediction because your example data set doesn't have enough records. Try removing some conditions or using all records as examples." Below this is an information icon and text: "After you click Build Prediction, Einstein gets busy evaluating your data and making predictions. You can't make any changes to your prediction until Einstein finishes this process. It can take up to 24 hours." There are two expandable sections: "Name" and "Object". The "Name" section shows "PREDICTION NAME" as "ContactStandard" and "PREDICTION API NAME" as "ContactStandard1". The "Object" section shows "PREDICTED OBJECT" as "Contact" and "DATA SEGMENT" as "All Data". On the right, there's a blue header "Einstein is here to help" with a cartoon Einstein character. Below that is a "Data Checker" section with a summary: "215 Example records (400 minimum)", "109 False (100 minimum)", "106 True (100 minimum)", and "6828 Records to predict". There's a red "X" icon and text "Not enough records" with a "Check Data" button. Below that is a "What happens next?" section with text: "When Einstein is done building your prediction, you'll get a scorecard telling you how accurate the prediction is likely to be. Then, you decide whether to turn it on to start saving predictions to records." At the bottom, there's a "Back" button, a progress indicator with 6 steps, and a "Build Prediction" button.

## SEE ALSO:

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

[Salesforce Help: Einstein Prediction Builder \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Check Your Data \(can be outdated or unavailable during release preview\)](#)

## Fine-Tune Your Filters with Custom Logic in Einstein Prediction Builder

When you build a prediction, you use filters to define the set of records in your data set that your prediction is based on. Now you can apply custom logic to your filter conditions to be more precise about the set of records that you want to include.

**Where:** This change applies to Lightning Experience in Enterprise and Developer editions.

**Who:** This feature is available to admins with the Einstein Analytics Plus or Einstein Predictions license.

**How:** For example, you're building a prediction on the Contact object. You decide to have Einstein look at only a segment of your data based on whether the contact is a homeowner, has dependents, and is married. Rather than being limited to using all conditions or any conditions, you use custom logic to look at all homeowners who either have dependents or are married.

**Select an object to predict**

Search  
Contact

Want to focus on a particular segment in your data set?

No segment (use data from all records on the selected object)

Yes, focus on a segment (Advanced)

	* Object	* Field	* Operator	* Value
1	Contact	Homeowner	Equals	True
2	Contact	Dependents	Equals	True
3	Contact	Marital Status	Equals	Married

+ Add Row

All of the conditions are met (AND)

Any of the conditions are met (OR)

Customize the logic

\* Logic ⓘ

1 AND (2 OR 3)

Back

Custom logic is available when defining a segment on your predicted object, and when defining the set of records to use as examples (what data science nerds call the training filter).

#### SEE ALSO:

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

[Salesforce Help: Build a Prediction \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Segment Your Dataset \(can be outdated or unavailable during release preview\)](#)

## Einstein Next Best Action: Easier Expressions, Dynamic Delivery and Enhancements for Recommendations, and Packaging for Strategies and Recommendations

Create expressions for filtering recommendations in simple or advanced mode. Connect to an external datasource to quickly create recommendations that can be generated dynamically for large numbers of items. Enhance recommendations with real-time updates and AI-driven prediction scores. Package Next Best Action strategies for distribution across multiple internal orgs or to customers.

## IN THIS SECTION:

[Create Expressions for Filtering Recommendations More Easily in Next Best Action Strategies](#)

Einstein Next Best action now lets you create expressions for filtering recommendations more quickly and accurately. Expressions use resources, operators, and values, and you can build them in two different modes: simple and advanced. Simple is declarative: just select or search to build your formula. Need a more complex expression? Advanced is the way to go: type your expression following the formatting and syntax guidelines you'll find on the screen.

[Dynamically Deliver and Enhance Next Best Action Recommendations from Salesforce Objects or External Data Sources](#)

Now, instead of relying on static, pre-created recommendations, you can get dynamic recommendations and AI-driven predictions using two new elements: Generate and Enhance.

[Use the Map Element to Add Simple Enhancements or Map Recommendation Fields to Flow Input Variables](#)

The new Map element lets you use formulas to create new fields and modify existing fields without having to use Apex code.

[Package Next Best Action Strategies for Distribution](#)

Packaging lets strategy builders distribute their Next Best Action strategies easily and at scale. Enterprise developers can package strategies for use in multiple Salesforce orgs, and independent software vendors (ISVs) can add strategies to AppExchange for distribution to their customers. You can package your strategies and certain dependencies and distribute them in both managed and unmanaged packages. Change sets are also supported.

## Create Expressions for Filtering Recommendations More Easily in Next Best Action Strategies

Einstein Next Best action now lets you create expressions for filtering recommendations more quickly and accurately. Expressions use resources, operators, and values, and you can build them in two different modes: simple and advanced. Simple is declarative: just select or search to build your formula. Need a more complex expression? Advanced is the way to go: type your expression following the formatting and syntax guidelines you'll find on the screen.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

## Dynamically Deliver and Enhance Next Best Action Recommendations from Salesforce Objects or External Data Sources

Now, instead of relying on static, pre-created recommendations, you can get dynamic recommendations and AI-driven predictions using two new elements: Generate and Enhance.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** Generate and Enhance elements help you programatically scale your integrations by providing efficient new ways to create and modify large numbers of recommendations dynamically.

Instead of defining recommendations manually as records in Salesforce, you can use the Generate element. Connect this element to an Apex action that returns a list of recommendations and those recommendations will become part of the current strategy execution. This functionality allows personalized recommendations to be created dynamically in situations where the large number of possibilities makes manual recommendation creation inconvenient. For example, if you have a product database with 200,000 products, you don't want to create 200,000 recommendations one at a time.

Need smarter recommendations? The Enhance element allows you to use AI-driven predictions from services such as Einstein Discovery and Einstein Prediction Builder to enhance recommendations with additional information, such as propensity scores, from a connected external datasource.

Let's look at an example. Your company is an auto parts dealer with a large catalog of parts and accessories and you use a screen flow to recommend parts to your customers based on a car's make, model, and year. Instead of creating a single, static recommendation for each individual part or accessory, you can maintain that information in the Product object in Salesforce or use SQL to retrieve data from an external database. Use a Generate element with an Apex invocable action to call the Apex class and generate part and accessory recommendations dynamically for your strategy.

Now assume that your company integrates separate datasources from the manufacturers of the parts and accessories you sell, and those datasources include information about the current availability of each item (in stock, back ordered, or unavailable). You can connect an Enhance element to your strategy's Load or Generate element to provide that availability information to users in the recommendation.

**How:** To use the Enhance or Generate recommendation element, just drag it onto the canvas of your Next Best Action strategy. Select the Apex action. Note that an Apex class must have a method marked as an invocable method in order to appear as an Apex action in declarative tools like Strategy Builder.

The screenshot shows a 'New Generate' dialog box with the following fields and values:

- Label:** Load Product Catalog
- API Name:** Load\_Product\_Catalog
- Description:** (Empty text area)
- Apex Action:** Generated Product Recommendations
- Argument:**
  - accountNumber:** SRecord.Account.AccountNumber
  - customerType:** TEXT(SRecord.Account.Type)

Buttons: Cancel, Done

## Use the Map Element to Add Simple Enhancements or Map Recommendation Fields to Flow Input Variables

The new Map element lets you use formulas to create new fields and modify existing fields without having to use Apex code.

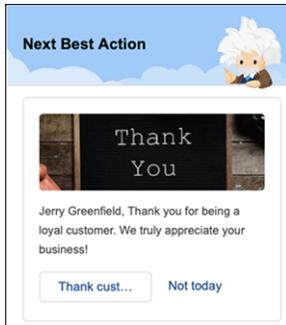
**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** Mapping lets recommendation fields show more helpful information to flow users, and it makes recommendation data from strategies and external sources play nicely with flows. Use the Map element to let data be passed from a Recommendation field with one name to a Flow input with a different name. Or use Map to modify Description, Name, and other current field values, personalizing them with context-specific data.

For example, you can personalize a recommendation with text and also include the name of the contact in that recommendation. To do that, in the Name field, select **Description** and in the Value field, enter this expression.

`$Record.Contact.Name+"", "+Description`. Leave the Type field as *Text*.

If the contact Name field value is *Jerry Greenfield*, and the Description field value is *Thank you for being a loyal customer. We truly appreciate your business!*, then your output looks like this. Sweet!



**How:** To use the Map recommendation element in your Next Best Action strategy, drag it onto the Strategy canvas. Look for the guidelines and examples provided on the page.

## Package Next Best Action Strategies for Distribution

Packaging lets strategy builders distribute their Next Best Action strategies easily and at scale. Enterprise developers can package strategies for use in multiple Salesforce orgs, and independent software vendors (ISVs) can add strategies to AppExchange for distribution to their customers. You can package your strategies and certain dependencies and distribute them in both managed and unmanaged packages. Change sets are also supported.

**Where:** This change applies to Lightning Experience in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** From Setup, enter *Package Manager* in the Quick Find box and select **Recommendation Strategy** as the component type.

SEE ALSO:

[Salesforce Help: Components Available in Change Sets \(can be outdated or unavailable during release preview\)](#)

## Lightning Flow: Enhanced Flow Builder Experience, Standard Flows, and Simplified Data Integration with Apex Types

Build flows faster with features like Undo and Redo, get standard flows with certain Salesforce features, and simplify your data integration with Apex types for flows.

IN THIS SECTION:

[Analyze Your Automated Business Processes in Automation Home \(Beta\)](#)

Our new Automation Home helps you get started with automated business processes. Explore flow templates on AppExchange, or navigate to an automation tool. Get a quick view of the most commonly used automation types. See your org's flow activity in charts, such as total errors and total started automations. Learn how much time it's taking users to complete screen flows, so you can optimize as needed.

[Process Builder](#)

Get a better save and activation experience for flows. Automate your business processes with custom metadata types.

[Process and Flow Design](#)

We've simplified data integration in flows with Apex-defined data types. User input can now be required for dependent picklist screen components in flows. And you can use a flow's start time in Decision elements and resources in your flow.

### Flow Builder

Get a better, faster, more efficient new flow experience with more controls and more options. Use feature-based categories to find standard invocable actions and quick actions that you can use in flows.

### Lightning Scheduler Flows

Get standard flows for Lightning Scheduler out of the box. With a new global variable, optimize the user experience for various form factors: desktops, tablets, and phones.

### New Flow Content

We heard the call for new and updated Flow Builder content, and we answered. Learn basic flow concepts and then put them into practice with our brand-new trail. Set up and use flow features with greater confidence, thanks to our updated and reorganized considerations content.

### Other Changes for Lightning Flow

Learn about other changes we've made in Lightning Flow.

### Critical Updates for Lightning Flow

These critical updates are new in Summer '19.

### Retiring Features

It's time to say goodbye to Process Visualizer and Swing flows. And Cloud Flow Designer is retiring as well.

## Analyze Your Automated Business Processes in Automation Home (Beta)

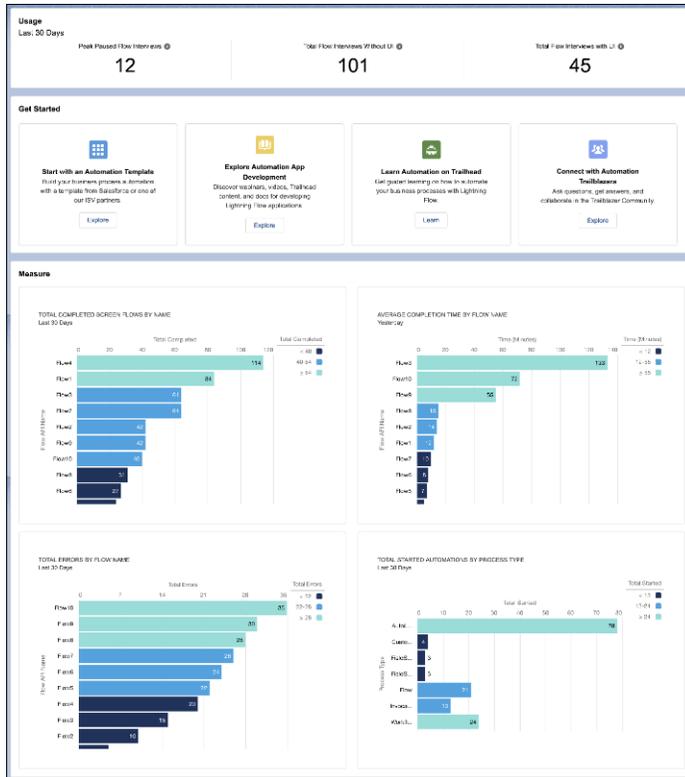
Our new Automation Home helps you get started with automated business processes. Explore flow templates on AppExchange, or navigate to an automation tool. Get a quick view of the most commonly used automation types. See your org's flow activity in charts, such as total errors and total started automations. Learn how much time it's taking users to complete screen flows, so you can optimize as needed.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Professional, Enterprise, Performance, and Unlimited editions.

 **Note:** As a beta feature, Automation Home is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for Automation Home in the [Trailblazer Community](#).

**Who:** To view all charts, you need the *View All Data* and *View Setup and Configuration* user permissions.

**How:** From Setup, enter *Automation* in the Quick Find box, and then select **Automation Home (Beta)**.



## Process Builder

Get a better save and activation experience for flows. Automate your business processes with custom metadata types.

### IN THIS SECTION:

#### [Prevent Invalid Processes from Being Saved](#)

Previously, processes with warnings were saved, leading to potential issues upon activation. Now, processes are not saved if they contain warnings. Instead, you'll see a corresponding error, so you know what to fix.

#### [Reference Custom Metadata Type Records in Process Builder](#)

Reference custom metadata type records from a Process Builder formula to automate your business processes reusing functionality that you define. To change a value, you can update it in the custom metadata type instead of in your process and any hard-coded formulas that your process uses.

#### [Integrate Einstein Predictions Using Prediction Events](#)

Einstein features, such as Prediction Builder, automatically write predicted values to AI prediction fields. Subscribe to the `AIPredictionEvent` platform event to capture these changes in a custom process that runs actions based on values Einstein predicts.

## Prevent Invalid Processes from Being Saved

Previously, processes with warnings were saved, leading to potential issues upon activation. Now, processes are not saved if they contain warnings. Instead, you'll see a corresponding error, so you know what to fix.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

## Reference Custom Metadata Type Records in Process Builder

Reference custom metadata type records from a Process Builder formula to automate your business processes reusing functionality that you define. To change a value, you can update it in the custom metadata type instead of in your process and any hard-coded formulas that your process uses.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Professional, Enterprise, Performance, and Unlimited editions.

SEE ALSO:

[Reference Custom Metadata Type Records in Process Builder](#)

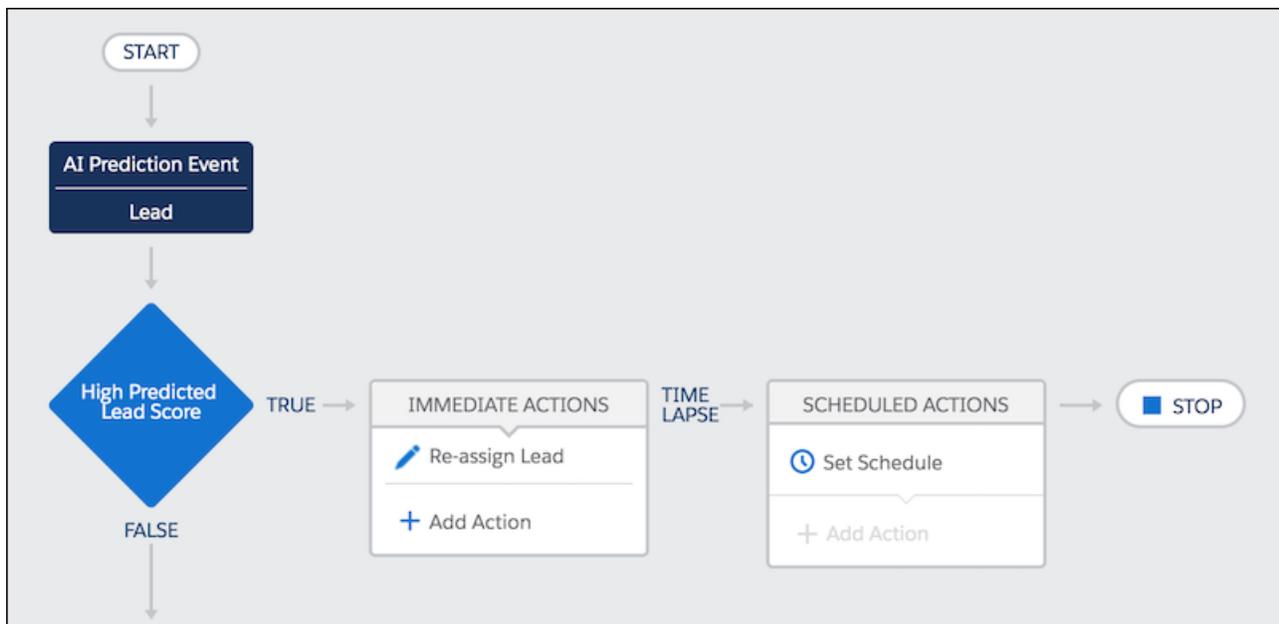
## Integrate Einstein Predictions Using Prediction Events

Einstein features, such as Prediction Builder, automatically write predicted values to AI prediction fields. Subscribe to the AIPredictionEvent platform event to capture these changes in a custom process that runs actions based on values Einstein predicts.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise and Unlimited editions where Einstein features such as Prediction Builder or Case Classification are enabled.

**How:** When Einstein features write prediction results back to AI prediction fields, custom logic, such as Apex triggers, workflow rules, and assignment rules, aren't run for efficiency reasons. To add custom logic based on Einstein prediction results, use processes, Apex triggers, flows, or Streaming API to subscribe to AIPredictionEvent. Each time prediction results are written back to a Salesforce record, an AIPredictionEvent event is created and AIPredictionEvent subscribers are notified.

To capture changes made by Einstein predictions, create an event process that uses AIPredictionEvent as the event trigger. Add matching conditions, process criteria, and actions to match your use case. Here's an example process that's triggered by AIPredictionEvent messages. It reassigns Leads with high predicted score values.



If your process updates a field that is used by an Einstein prediction, Einstein runs the prediction again and writes back the new results. The new results generate a new AIPredictionEvent that could trigger your process again, resulting in a loop. To avoid creating a process loop, only update fields that aren't used in Einstein predictions.

## Process and Flow Design

We've simplified data integration in flows with Apex-defined data types. User input can now be required for dependent picklist screen components in flows. And you can use a flow's start time in Decision elements and resources in your flow.

### IN THIS SECTION:

#### [Manipulate Complex Internet Data in Flows Without Code Using Apex-Defined Data Types](#)

Flows now have the ability to manipulate the kinds of complex data objects that are typically returned from calls to web services. Create Apex-defined variables in flows and directly process JSON returned from web calls.

#### [Make Dependent Picklist Screen Components Required](#)

You can now require user input for dependent picklist screen components in flow screens. For example, if you have to capture both the make and model of a car, you can now do it with a dependent picklist screen component, by making both picklists required.

#### [Access the Flow Interview Start Time with a New System Variable](#)

With the new `$Flow.InterviewStartTime` system variable, you can use the start time of the flow interview in Decision elements, formula resources, and elsewhere in the flow. For flows that are launched by Subflow elements, `$Flow.InterviewStartTime` specifies when the initial master flow starts.

#### [Add Quip Documents and Chat to Your Processes and Flows](#)

Process Builder and Flow Builder now include standard Quip actions, so you can easily include Quip documents and chat rooms in your automated Salesforce processes. You can also deploy customized auto-fill Quip templates and standardized Quip documents based on specific actions taken in their connected Salesforce records.

#### [Keep Users in the Know with Notification Builder](#)

Send customized notifications when important events occur. For example, alert an account owner if a new support case is logged while trying to close a deal. Or, send a notification for a unique workflow built entirely with custom objects. Previously, you could send only standard notifications for use cases predefined by Salesforce. Notification Builder puts you in control of who needs to know what and when.

## Manipulate Complex Internet Data in Flows Without Code Using Apex-Defined Data Types

Flows now have the ability to manipulate the kinds of complex data objects that are typically returned from calls to web services. Create Apex-defined variables in flows and directly process JSON returned from web calls.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Why:** Previously, Apex Actions and External Service Registrations were used to manipulate web data, but that data had to be in the form of primitive data types like strings and numbers. Enterprise data from the web retrieved via integration solutions like Mulesoft is rarely composed solely or primarily of primitive data types.

With the new Apex-defined resources in flows, a flow no longer needs to use Apex code to process complex JSON returned from web calls. A developer defines an Apex class to serve as a pattern for automatic conversion from web to a flow, and then full manipulation of the resulting objects can be carried out in a flow using declarative approaches and no additional code. This solution is particularly useful for connecting flows to rich external web objects accessed via Mulesoft and REST calls. If a data type is not supported, flows can pass the value to an Aura component and you can use Apex to operate on it.

For example, a car dealership has a screen flow that lets customers search the dealership's inventory data, which is stored in another database. The dealership creates an Apex class in their org to define the Car data type. Then, the dealership creates a screen flow that includes two Apex-defined variables. The flow passes the variables between the flow, an Apex action, and an Aura component.

The Car Apex class defines fields, such as contact, registration, and model. The `@AuraEnabled` annotation is required for each field that you want to expose to Flow.

```
public class Car {

    @AuraEnabled
    public Contact contact {get;set;}

    @AuraEnabled
    public String registration {get;set;}

    @AuraEnabled
    public String model {get;set;}

}
```

The entire `Car` object, including its nested `contact`, is stored in an Apex defined variable `{!Car_Inventory}`.

The screenshot shows the 'New Resource' configuration screen. The fields are as follows:

- Resource Type:** Variable
- API Name:** Car\_Inventory
- Description:** (Empty text area)
- Data Type:** Apex-Defined
- Allow multiple values (collection):**
- Apex Class:** Car

A flow screen collects an input value for the car model and stores it in the `{!Car_Model}` text variable. The text variable is assigned to the `{!Car_Inventory.model}` Apex-defined variable.

The screenshot shows the 'Edit Assignment' configuration screen. The fields are as follows:

- Label:** Assign input value to variable
- API Name:** Assign\_input\_value\_to\_variable
- Description:** (Empty text area)
- Set Variable Values:**

Each variable is modified by the operator and value combination.

Variable	Operator	Value
<code>{!Car_Inventory.model}</code>	Equals	<code>{!Car_Model}</code>

An invocable method defines the Find Cars Apex action that performs logic to return car results.

```
global class FindCars {

    @InvocableMethod(label='Find Cars')
    //Perform logic to return car results based on the model.

    Return results;

}
```

The Find Cars Apex action results are stored in the flow as the `{!Car_Result}` Apex-defined variable.

An Aura component defines the `DisplayCar` screen component with the `CarResult` attribute. The attribute's type is the `Car` Apex class that defines the Apex-defined data type. The screen component displays the attribute's value.

```
<aura:component implements="lightning:availableForFlowScreens" access="global">
  <aura:attribute name="CarResult" type="Car" access="global"/>

  <!--Add some styling to the component and display the attribute's value-->
  <div style="border: 1px solid #ccc; padding: 5px;">
    <p>{!v.CarResult.model} : {!v.CarResult.buildDate}</p>
  </div>
</aura:component>
```

In the `DisplayCar` screen component, the `CarResult` attribute contains the `{!CarResult}` Apex-defined variable and displays its value during runtime.

When using Apex-defined data types, keep these considerations in mind:

- Supported data types in an Apex class are Boolean, Integer, Long, Decimal, Double, Date, DateTime, and String. Single values as well as lists are supported for each data type. Multiple Apex classes can be combined to represent complex web objects.
- The first time you open an element or resource window in an org with over 200 Apex classes that have the `@AuraEnabled` annotation, the window may take a while to load.
- As of Summer '19, if a flow invokes Apex, the running user must have the corresponding Apex class assignment in their profile or permission set.

## Make Dependent Picklist Screen Components Required

You can now require user input for dependent picklist screen components in flow screens. For example, if you have to capture both the make and model of a car, you can now do it with a dependent picklist screen component, by making both picklists required.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions. Dependent picklist screen components are supported only in Lightning runtime.

**How:** To make a picklist within a dependent picklist screen component required, set the `Picklist 1 Required`, `Picklist 2 Required`, or `Picklist 3 Required` attributes to `{!$GlobalConstant.True}`.

## Access the Flow Interview Start Time with a New System Variable

With the new `$Flow.InterviewStartTime` system variable, you can use the start time of the flow interview in Decision elements, formula resources, and elsewhere in the flow. For flows that are launched by Subflow elements, `$Flow.InterviewStartTime` specifies when the initial master flow starts.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Salesforce Help: Flow Resource: Flow System Variables \(can be outdated or unavailable during release preview\)](#)

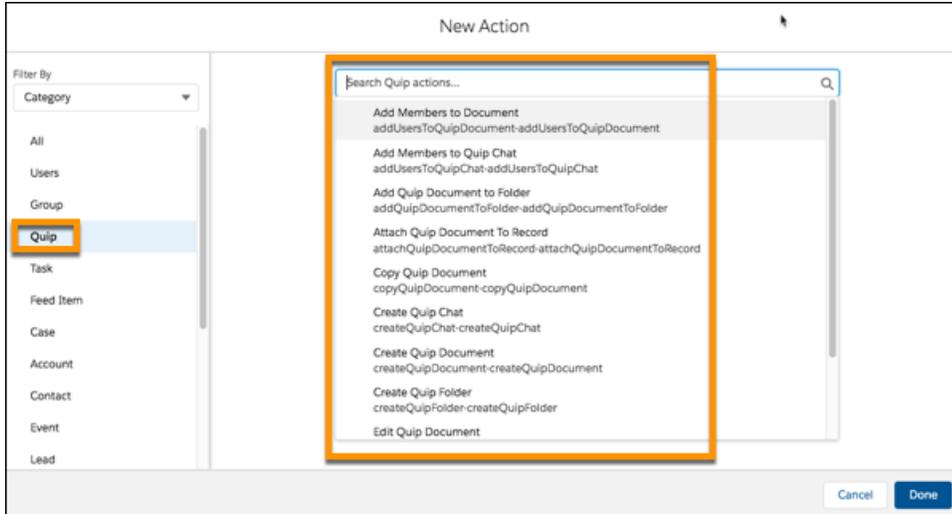
## Add Quip Documents and Chat to Your Processes and Flows

Process Builder and Flow Builder now include standard Quip actions, so you can easily include Quip documents and chat rooms in your automated Salesforce processes. You can also deploy customized auto-fill Quip templates and standardized Quip documents based on specific actions taken in their connected Salesforce records.

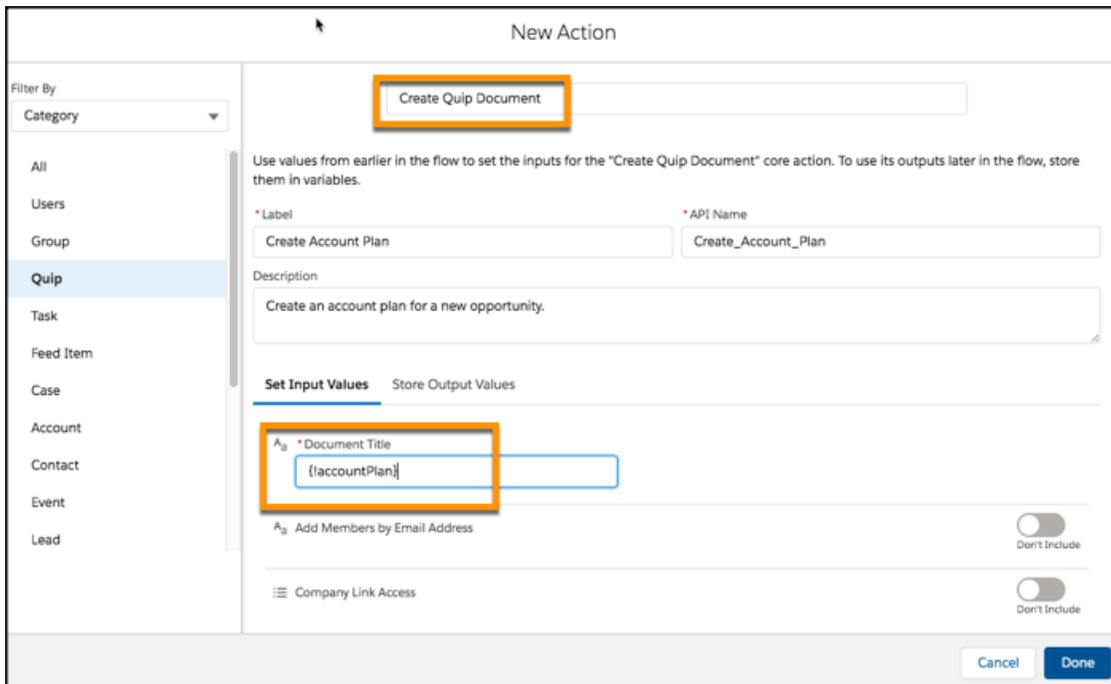
**Where:** This change applies to Lightning apps in Lightning Experience in Essentials, Professional, Performance, Unlimited, and Developer editions.

**Who:** This change is available in orgs with a Quip Enterprise plan or free trial.

**Why:** Flow Builder includes a new Quip category in the New Action page and 11 Quip-related actions that you can add to your flows. The new actions include creating Quip documents, adding chat messages to a document or chat room, creating a chat room, editing a Quip document, and more.



Here's an example of creating a Quip document. You must specify a document name which, as a power Flow Builder user, you've probably stored in a variable. You can also optionally do all kinds of fun things, like share the document, add initial content, and put it in an existing folder.



If you prefer to use Process Builder, don't worry, you're not missing out! Process Builder now includes a Quip Action type and the same 11 Quip actions as Flow Builder. Here's how you can create a Quip document in Process Builder.

And these are the new Quip actions that you can use.

You're now fully equipped to be a super-collaborator. Go forth and chat!

SEE ALSO:

[Find Actions by Type or Category When Building Flows](#)

## Keep Users in the Know with Notification Builder

Send customized notifications when important events occur. For example, alert an account owner if a new support case is logged while trying to close a deal. Or, send a notification for a unique workflow built entirely with custom objects. Previously, you could send only standard notifications for use cases predefined by Salesforce. Notification Builder puts you in control of who needs to know what and when.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions and all versions of the Salesforce app.

**How:** Add the Send Custom Notification action to a process in Process Builder.

The screenshot displays the Salesforce Process Builder interface for a process named 'Account\_Won'. On the left, a flow diagram shows a sequence of steps: 'START' leads to an 'Account' object, followed by a 'New Criterion' decision diamond. If the criterion is TRUE, it leads to an 'IMMEDIATE ACTIONS' box containing a 'Send Custom Notification' action. If FALSE, it leads to another decision diamond with an 'Add Criteria' button. Below this, another 'IMMEDIATE ACTIONS' box is shown, and the flow ends at a 'STOP' node.

On the right, the 'Select and Define Action' configuration panel is open. The 'Action Type' dropdown is set to 'Send Custom Notification'. The 'Action Name' field is empty. The 'Notification Type' dropdown is set to 'Select a notification type...'. Below this, there are fields for 'Notification Recipient' (set to 'Select a recipient type...'), 'Notification Title' (with a 'Merge Field' search box and a text area containing 'Add a title here...'), and 'Notification Body' (with a 'Merge Field' search box and a text area containing 'Add body text...'). The 'Target Object' is set to 'Account Object that started the process'. 'Save' and 'Cancel' buttons are at the bottom.

SEE ALSO:

[Send a Custom Notification from a Process](#)

## Flow Builder

Get a better, faster, more efficient new flow experience with more controls and more options. Use feature-based categories to find standard invocable actions and quick actions that you can use in flows.

IN THIS SECTION:

[Create Flows from Flow Templates](#)

Our new flow building experience makes getting started a lot easier. Now you can quickly choose the right flow type based on our helpful descriptions. Feeling efficient? Use a flow template. First, filter available templates based on the flow type you need, and then choose a template. Customize the flow to meet the requirements of your specific business process.

[See Only Available Building Blocks for Your Flow Type in Flow Builder](#)

Flow Builder helps you create flows more efficiently by making only usable elements, resources, and screen components available *while you're building*. For example, you can't use screen elements if you're building an autolaunched flow. Previously, Flow Builder displayed all elements, resources, and components for all flow types.

### [Build Flows Faster with a Full-Featured, Easier Experience](#)

Flow Builder just got a whole lot better! Accidents can happen when you build flows, and now you can easily fix them with features like undo and redo. Need to use an element similar to one you've already built? Duplicate and modify it as needed. Is finding something in your complex flow like looking for a needle in a haystack? From the Manager tab, quickly find existing elements on the flow builder canvas.

### [Use Rich Text in Display Text Screen Components, Choice Labels, Help Text, and More](#)

Rich text has come to Flow Builder! Add rich text to a Display Text screen component, the label of a Choice resource, help text, Pause confirmation screens, and input validation. Control the font, size, color, and alignment of text. Add merge fields, HTML links, bullet points, or numbered lists.

### [Include Images in Rich Text Controls \(Beta\)](#)

Upload and insert images in flows. Images included in the rich text editor are not supported in packages.

### [Find Actions by Type or Category When Building Flows](#)

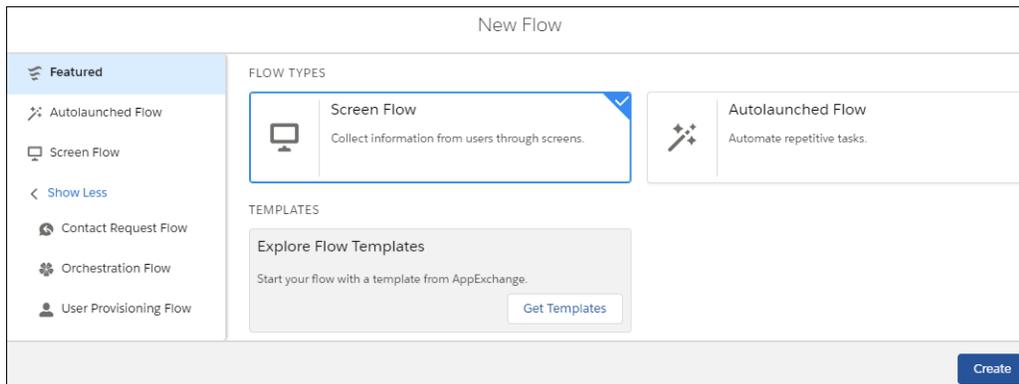
Standard flow actions are now easier to find and use for building flows. Select the type or category you want to find the action you need. Not sure about your category? Select **All** and search by keyword. With all actions combined in one Action element, we simplified the toolbox by moving the Action and Subflow elements into the top category with the Screen element.

## Create Flows from Flow Templates

Our new flow building experience makes getting started a lot easier. Now you can quickly choose the right flow type based on our helpful descriptions. Feeling efficient? Use a flow template. First, filter available templates based on the flow type you need, and then choose a template. Customize the flow to meet the requirements of your specific business process.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, and Unlimited editions.

**Why:** Previously, you couldn't choose a flow type until you saved your flow. If you wanted to start building a flow with a template, you had to know its name to create a copy. Now you get helpful guidance before you start building. And you only see elements and components that work for the flow type you choose.



SEE ALSO:

[See Only Available Building Blocks for Your Flow Type in Flow Builder](#)

## See Only Available Building Blocks for Your Flow Type in Flow Builder

Flow Builder helps you create flows more efficiently by making only usable elements, resources, and screen components available *while you're building*. For example, you can't use screen elements if you're building an autolaunched flow. Previously, Flow Builder displayed all elements, resources, and components for all flow types.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, and Unlimited editions.

SEE ALSO:

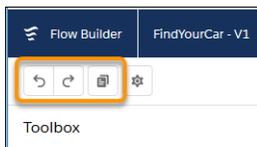
[Create Flows from Flow Templates](#)

## Build Flows Faster with a Full-Featured, Easier Experience

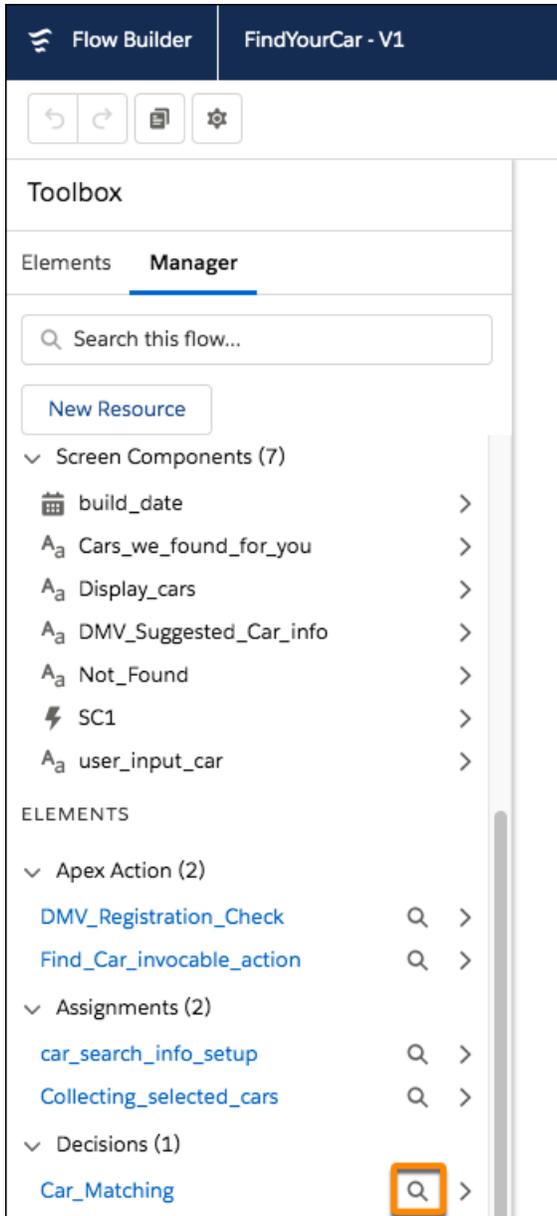
Flow Builder just got a whole lot better! Accidents can happen when you build flows, and now you can easily fix them with features like undo and redo. Need to use an element similar to one you've already built? Duplicate and modify it as needed. Is finding something in your complex flow like looking for a needle in a haystack? From the Manager tab, quickly find existing elements on the flow builder canvas.

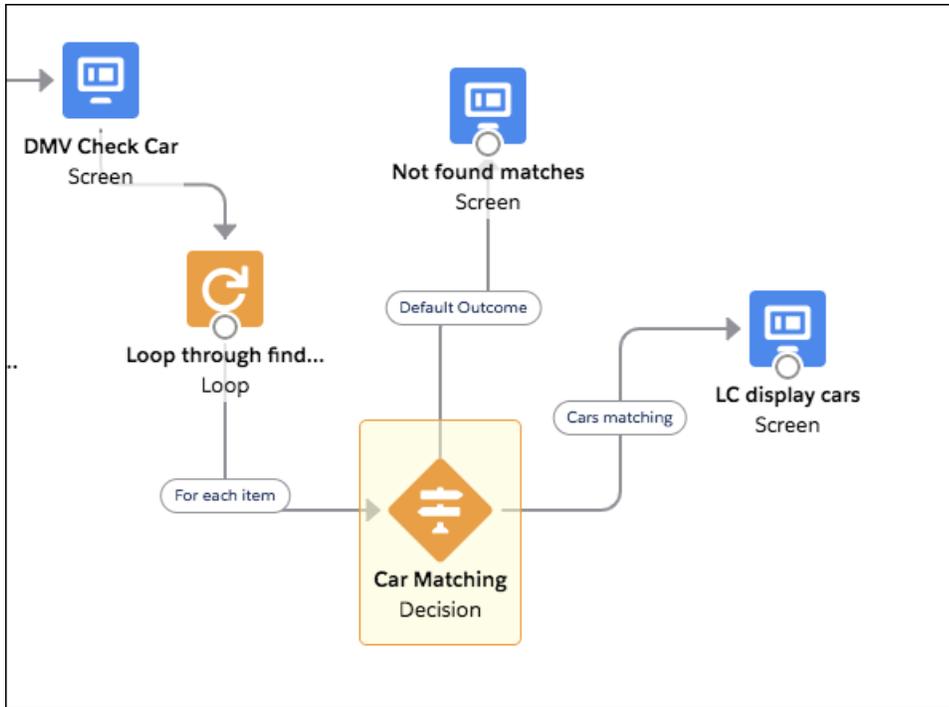
**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Undo, redo, and duplicate buttons can be found at the top left hand side of the Flow Builder.



In the Manager tab of the Toolbox, click the magnifying glass to locate the element on the flow builder canvas.





## Use Rich Text in Display Text Screen Components, Choice Labels, Help Text, and More

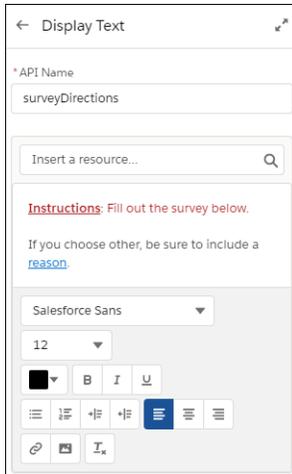
Rich text has come to Flow Builder! Add rich text to a Display Text screen component, the label of a Choice resource, help text, Pause confirmation screens, and input validation. Control the font, size, color, and alignment of text. Add merge fields, HTML links, bullet points, or numbered lists.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** The following unsupported HTML techniques are no longer available in the Display Text screen component, Choice resource labels, help text, Pause confirmation screens, and input validation:

- HTML that is pasted directly into the rich text control no longer is rendered at run time. All formatting must be done through the toolbar.
- As a result, HTML tags that are not supported by the rich text editor, such as `<style>` (which was not supported by Salesforce but could be inserted via copy and paste) can no longer be added to flows.

Flows that already incorporate unsupported HTML tags will continue to work in Flow Builder and render as expected at run time, but if you attempt to edit a rich text field containing unsupported HTML tags, the tags will be stripped out as the content is converted to the new rich text format.



## Include Images in Rich Text Controls (Beta)

Upload and insert images in flows. Images included in the rich text editor are not supported in packages.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** This release contains a beta version of image addition functionality in the Flow Builder rich text editor. The images feature isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for the images in the Flow builder rich text editor in the IdeaExchange.

SEE ALSO:

[Use Rich Text in Display Text Screen Components, Choice Labels, Help Text, and More](#)

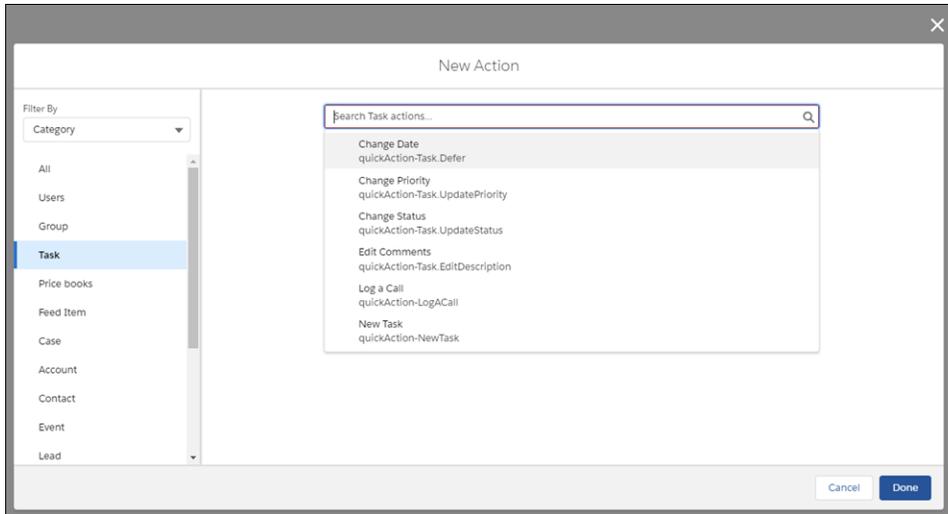
## Find Actions by Type or Category When Building Flows

Standard flow actions are now easier to find and use for building flows. Select the type or category you want to find the action you need. Not sure about your category? Select **All** and search by keyword. With all actions combined in one Action element, we simplified the toolbox by moving the Action and Subflow elements into the top category with the Screen element.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Standard actions are available based on your org permissions.

**Why:** Standard actions are declarative building blocks for flows. And filtering by type or category make finding available actions faster and easier. For example, if you want your autolaunched flow to create a Chatter post, select the **Messaging** category and search for the **Post to Chatter** invocable action. If you want your screen flow to let users log a call for a case, select **Case** and search for the **Log a Call** quick action.



**How:** When you're building your flow, drag the Action flow element onto the Flow Builder canvas. Under Filter By, select **Type** to view available actions based on technology, or select **Category** to view available actions based on objects. Then select the category you want. To view all available categorized actions, select **All**.

## Lightning Scheduler Flows

Get standard flows for Lightning Scheduler out of the box. With a new global variable, optimize the user experience for various form factors: desktops, tablets, and phones.

### IN THIS SECTION:

[Streamline Customer Appointment Scheduling with Standard Flows and Templates for Lightning Scheduler](#)

Lightning Scheduler comes with standard flows that are ready to use out of the box. Because the standard flows are also templates, you can clone and customize the clones to create your own Lightning Scheduler flows.

[Optimize the User Experience in Custom Lightning Scheduler Flows with the \\$Client.FormFactor Global Variable](#)

Lightning Scheduler flows can run on devices with various form factors, such as desktops (large), tablets (medium), and phones (small). Use the `$Client.FormFactor` global variable to optimize the user experience for each form factor. This new global variable is available only in Lightning Scheduler flows and is supported only in Decision elements.

## Streamline Customer Appointment Scheduling with Standard Flows and Templates for Lightning Scheduler

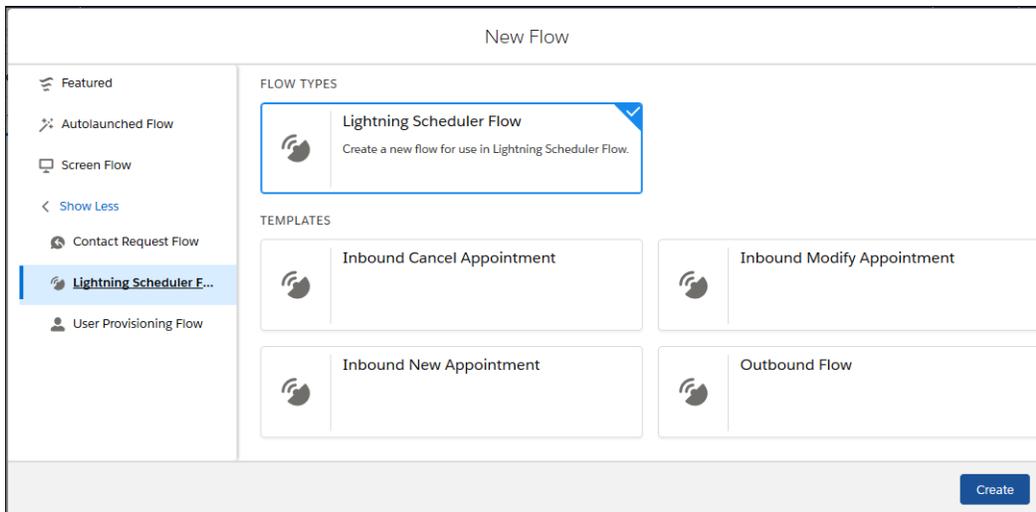
Lightning Scheduler comes with standard flows that are ready to use out of the box. Because the standard flows are also templates, you can clone and customize the clones to create your own Lightning Scheduler flows.

**Where:** This change applies to Lightning Experience in Enterprise and Unlimited editions where Lightning Scheduler is enabled.

**How:** The standard outbound flow is available to your users via the Schedule Appointment quick action in the highlight panel of record home pages for accounts, leads, and opportunities.

To make a standard inbound flow available to customer users and partner users in a community, configure it in Community Builder or Embedded Services.

To create a custom Lightning Scheduler flow, clone a standard flow. Select the standard flow as the template when you create your custom flow.



After you've built, tested, and activated your custom Lightning Scheduler flow, you can distribute the flow to users. You can add a custom outbound flow as a quick action on account, lead, and opportunity pages. To make a custom inbound flow available to customer users and partner users in a community, configure it in Community Builder or Embedded Services.

For information about customer users and partner users, see [Create Communities Users](#) in Salesforce Help.

#### SEE ALSO:

[Lightning Scheduler: Inbound Appointment Scheduling, Event Management, Action Plans, and More](#)

[Optimize the User Experience in Custom Lightning Scheduler Flows with the `\$Client.FormFactor` Global Variable](#)

[Salesforce Help: Distribute Flows to Users in Your Org](#)

[Salesforce Help: Distribute Flows to Users Outside Your Org](#)

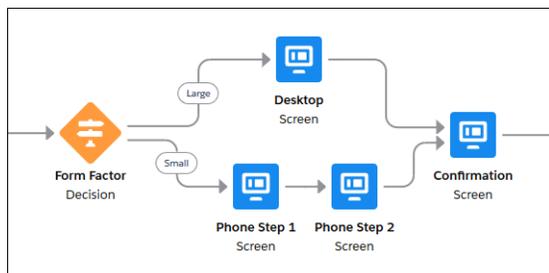
## Optimize the User Experience in Custom Lightning Scheduler Flows with the `$Client.FormFactor` Global Variable

Lightning Scheduler flows can run on devices with various form factors, such as desktops (large), tablets (medium), and phones (small). Use the `$Client.FormFactor` global variable to optimize the user experience for each form factor. This new global variable is available only in Lightning Scheduler flows and is supported only in Decision elements.

**Where:** This change applies to Lightning Experience in Enterprise and Unlimited editions where Lightning Scheduler is enabled.

**How:** At run time, the `$Client.FormFactor` global variable is automatically set to Large, Medium, or Small, depending on the device that's running the Lightning Scheduler flow.

As you build a custom Lightning Scheduler flow, use a Decision element to create a path for each device form factor. In each path, use screens that are optimized for that path's form factor.



Reference the `!$Client.FormFactor` global variable in the conditions that specify when to execute each outcome path.

#### SEE ALSO:

- [Lightning Scheduler: Inbound Appointment Scheduling, Event Management, Action Plans, and More](#)
- [Streamline Customer Appointment Scheduling with Standard Flows and Templates for Lightning Scheduler](#)
- [Salesforce Help: Flow Resource: Global Variables \(can be outdated or unavailable during release preview\)](#)

## New Flow Content

We heard the call for new and updated Flow Builder content, and we answered. Learn basic flow concepts and then put them into practice with our brand-new trail. Set up and use flow features with greater confidence, thanks to our updated and reorganized considerations content.

#### IN THIS SECTION:

[Explore our New Trail: Build Flows with Flow Builder](#)

New to flow building and need to learn more? Experienced builder in need of a refresher? Flows are powerful, but complex. So we make flow building fun and rewarding to learn with the [Build Flows with Flow Builder](#) trail. Learn basic concepts and then apply them as you build a simple flow. From there, add resources, screens, logic, and actions, and then learn how to test and distribute.

[Get up to Speed Easily Before You Set Up and Use Flow Features](#)

Implementing Flow Builder or building, testing, and distributing? Working with external objects? Need troubleshooting help? Check out our updated and reorganized considerations content, now collected into a one-stop considerations shop.

## Explore our New Trail: Build Flows with Flow Builder

New to flow building and need to learn more? Experienced builder in need of a refresher? Flows are powerful, but complex. So we make flow building fun and rewarding to learn with the [Build Flows with Flow Builder trail](#). Learn basic concepts and then apply them as you build a simple flow. From there, add resources, screens, logic, and actions, and then learn how to test and distribute.

## Get up to Speed Easily Before You Set Up and Use Flow Features

Implementing Flow Builder or building, testing, and distributing? Working with external objects? Need troubleshooting help? Check out our updated and reorganized considerations content, now collected into a one-stop considerations shop.

**Why:** Considerations are things admins need to know about before setting up or using a product or feature. Think limits and limitations—or complex feature interactions or behaviors. Some people call them “gotchas,” but we don’t want it to get that far.

Previously, our considerations content was distributed across the Lightning Flow help set, but now it’s collected into a single, dedicated section in our help set: [Flow Limits and Considerations](#). Go there and get smart before you start!

## Other Changes for Lightning Flow

Learn about other changes we’ve made in Lightning Flow.

### IN THIS SECTION:

#### [Get Increased Usage-Based Entitlements for Processes and Flows in Enterprise and Unlimited Editions](#)

Each org with Enterprise or Unlimited edition is now granted 20,000,000 flow interviews with UI per month and 10,000,000,000 flow interviews without UI per month. Also, with each purchased Service Cloud User or Salesforce CRM Content User license, the org is granted an additional allocation of flow interviews with UI per month. In Enterprise edition, each Service Cloud User or Salesforce CRM Content User license grants the org an extra 50 flow interviews with UI per month. In Unlimited edition, each Service Cloud User or Salesforce CRM Content User license grants the org an extra 100 flow interviews with UI per month.

#### [Misconfigured Values in Flow Assignments Now Result in Errors](#)

In rare cases, flow admins have been able to save and run flows that contain misconfigured values in Assignment elements. Previously, these misconfigured values didn’t result in errors, but at run time the values often didn’t evaluate as expected. Now when you save, deploy, or install a flow, we display error messages for misconfigured values so that you know to fix them. But you might also need to fix your existing flows.

#### [Create and Debug Flows More Efficiently with New Errors, Warnings, and Debug Details](#)

Flow Builder now provides better, more effective guidance to help you create and debug flows. Get back on track faster with error messages for Start, Pause, and Assignment elements. Stay consistent with the latest Flow Builder terminology in Metadata API. For example, `wait` and `waitEvent` are now `pause` and `pauseConfiguration`, respectively.

#### [Improved Validation and Error Messages for Flow Assignment Elements](#)

We improved how we check Assignment elements for errors when you save, deploy, or install a flow. We also updated the error messages for assignments. If you’ve written code that checks for specific error strings, you might need to update that code.

#### [Get More Intuitive Dependent Picklist Labels](#)

Previously, dependent picklist screen components had a default value of `Select: for Picklist 1 Label, Picklist 2 Label, and Picklist 3 Label`. Now, if you don’t enter a picklist label when building your flow, the field’s label shows by default to users when they run the flow. This change saves time by using your existing customizations in the UI.

### [Remove EventSubscription and EventDelivery from Existing Packages](#)

EventSubscription and EventDelivery metadata types are no longer needed for deploying or retrieving with Metadata API. When you activate a process that is triggered by a platform event, an EventSubscription and an EventDelivery record are created automatically. Previously, the records were created after you saved the platform event to trigger the process and the object to operate on. When you retrieved or deployed the event process with Metadata API, you included the event subscription and event delivery files. Now you don't have to.

## Get Increased Usage-Based Entitlements for Processes and Flows in Enterprise and Unlimited Editions

Each org with Enterprise or Unlimited edition is now granted 20,000,000 flow interviews with UI per month and 10,000,000,000 flow interviews without UI per month. Also, with each purchased Service Cloud User or Salesforce CRM Content User license, the org is granted an additional allocation of flow interviews with UI per month. In Enterprise edition, each Service Cloud User or Salesforce CRM Content User license grants the org an extra 50 flow interviews with UI per month. In Unlimited edition, each Service Cloud User or Salesforce CRM Content User license grants the org an extra 100 flow interviews with UI per month.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise and Unlimited editions.

**Who:** The additional allocations that are granted based on purchased user licenses apply to the entire org. It doesn't matter which users run the flows.

SEE ALSO:

[Salesforce Help: Flow Usage-Based Entitlements](#)

## Misconfigured Values in Flow Assignments Now Result in Errors

In rare cases, flow admins have been able to save and run flows that contain misconfigured values in Assignment elements. Previously, these misconfigured values didn't result in errors, but at run time the values often didn't evaluate as expected. Now when you save, deploy, or install a flow, we display error messages for misconfigured values so that you know to fix them. But you might also need to fix your existing flows.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** When you save, deploy, or install a flow that contains a misconfigured value in an Assignment element, you'll see this error message: "A value of type FlowElementReferenceOrValue requires exactly one field, such as stringValue, booleanValue, or elementReference." The message also includes the API name of the Assignment element that contains multiple or no fields.

In Flow Builder, open the Manager tab and search for the API name that appears in the error message. Edit the Assignment element, and reenter all entries in the Values column.

## Create and Debug Flows More Efficiently with New Errors, Warnings, and Debug Details

Flow Builder now provides better, more effective guidance to help you create and debug flows. Get back on track faster with error messages for Start, Pause, and Assignment elements. Stay consistent with the latest Flow Builder terminology in Metadata API. For example, `wait` and `waitEvent` are now `pause` and `pauseConfiguration`, respectively.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, and Unlimited editions.

SEE ALSO:

[Salesforce Help: Flow Builder vs. Cloud Flow Designer](#)

[Salesforce Help: Flow Limits and Considerations](#)

## Improved Validation and Error Messages for Flow Assignment Elements

We improved how we check Assignment elements for errors when you save, deploy, or install a flow. We also updated the error messages for assignments. If you've written code that checks for specific error strings, you might need to update that code.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** We noticed that a lot of similar and complex validations and error messages for assignment items could be replaced with a much simpler set. Now you get one of these four error messages for common mistakes.

- "My\_Constant" isn't a variable that can be set by an Assignment element.
- In an Assignment element, the "Add" operator can't be used with the "My\_Record\_Var" variable.
- In an Assignment element, "Fabulous" isn't a valid value when the "My\_Number\_Var" variable is set with the Equals operator.
- In an Assignment element, "My\_Boolean\_Screen\_Field" isn't a valid reference for the value when the "My\_Number\_Var" variable is set with the Subtract operator.

## Get More Intuitive Dependent Picklist Labels

Previously, dependent picklist screen components had a default value of `Select: for Picklist 1 Label, Picklist 2 Label, and Picklist 3 Label`. Now, if you don't enter a picklist label when building your flow, the field's label shows by default to users when they run the flow. This change saves time by using your existing customizations in the UI.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions. Dependent picklist screen components are supported only in Lightning runtime.

## Remove EventSubscription and EventDelivery from Existing Packages

EventSubscription and EventDelivery metadata types are no longer needed for deploying or retrieving with Metadata API. When you activate a process that is triggered by a platform event, an EventSubscription and an EventDelivery record are created automatically. Previously, the records were created after you saved the platform event to trigger the process and the object to operate on. When you retrieved or deployed the event process with Metadata API, you included the event subscription and event delivery files. Now you don't have to.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise and Unlimited editions.

**How:** If a process that's triggered by a platform event is in a managed or unmanaged package, make sure to update the process.

Before you deploy metadata using API version 46.0, update your event subscription and delivery files. As part of this update, event subscriptions and deliveries are no longer necessary when you deploy or retrieve with Metadata API.

For details about updating event processes and metadata, see the knowledge article [Update Event Processes for Summer '19](#).

## Critical Updates for Lightning Flow

These critical updates are new in Summer '19.

## IN THIS SECTION:

[Evaluate Criteria Based on Original Record Values in Process Builder \(Critical Update\)](#)

This critical update ensures that a process with multiple criteria and a record update evaluates the *original* value of the field that began the process with a value of null.

[Use the BR\(\) Function in Flows and Processes Correctly \(Critical Update\)](#)

This critical update ensures that `BR()` functions in flows and processes result in a line break. Previously, a `BR()` in a formula resource resolved to `_BR_ENCODED_` and not to a line break.

[Improve Security by Requiring User Access to Apex Classes Invoked by Flow \(Critical Update\)](#)

This critical update requires a user running a flow to have access to all Apex classes invoked by that flow. If a flow invokes Apex, the running user must have the corresponding Apex class assignment in their profile or permission set.

["Check for Null Record Variables or Null Values of Lookup Relationship Fields in Process and Flow Formulas" \(Critical Update, Postponed\)](#)

This critical update, released in Spring '19, was scheduled for auto-activation in Summer '19, but has been postponed to Spring '20. The critical update was previously called "Return Null Values in Process and Flow Formulas."

## Evaluate Criteria Based on Original Record Values in Process Builder (Critical Update)

This critical update ensures that a process with multiple criteria and a record update evaluates the *original* value of the field that began the process with a value of null.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** From Setup, enter *Critical Updates* in the Quick Find box. Then select **Critical Updates**. For Evaluate Criteria Based on Original Record Values in Process Builder, click **Acknowledge**.

If you have a process with the **Do you want to execute the actions only when specified changes are made to the record?** option selected, or it uses the `ISCHANGED()` function in your criteria, this update could cause the process to behave differently.

## Use the BR() Function in Flows and Processes Correctly (Critical Update)

This critical update ensures that `BR()` functions in flows and processes result in a line break. Previously, a `BR()` in a formula resource resolved to `_BR_ENCODED_` and not to a line break.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** From Setup, enter *Critical Updates* in the Quick Find box. Then select **Critical Updates**. For Use the BR() Function in Flows and Processes, click **Acknowledge**.

If you've hard-coded `_BR_ENCODED_` as a literal value, this update causes the flow or process to behave differently.

## Improve Security by Requiring User Access to Apex Classes Invoked by Flow (Critical Update)

This critical update requires a user running a flow to have access to all Apex classes invoked by that flow. If a flow invokes Apex, the running user must have the corresponding Apex class assignment in their profile or permission set.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions. This change applies only to flows executed in Lightning runtime.

**When:** This critical update begins auto-activating on December 2, 2019.

**How:** From Setup, enter *Critical Updates* in the Quick Find box. Then select **Critical Updates**. For Require User Access to Apex Classes Invoked by Flow, click **Activate**.

Admins might need to adjust profiles or permission sets for users who run flows that invoke Apex classes. A flow stops working if it invokes an Apex class that the running user doesn't have access to.

## "Check for Null Record Variables or Null Values of Lookup Relationship Fields in Process and Flow Formulas" (Critical Update, Postponed)

This critical update, released in Spring '19, was scheduled for auto-activation in Summer '19, but has been postponed to Spring '20. The critical update was previously called "Return Null Values in Process and Flow Formulas."

SEE ALSO:

[Spring '19 Release Notes: Return Null Values in Process and Flow Formulas \(Critical Update\)](#)

[Critical Updates](#)

## Retiring Features

It's time to say goodbye to Process Visualizer and Swing flows. And Cloud Flow Designer is retiring as well.

IN THIS SECTION:

[Flow Builder Is Replacing Cloud Flow Designer](#)

We're replacing Cloud Flow Designer with a much faster tool: Flow Builder. Flow Builder streamlines flow building and maintenance with a simplified user interface.

[Process Visualizer Is Retiring](#)

Process Visualizer is a graphical representation of an approval process in your org. It requires Adobe Flash Player, which is also being retired.

[Swing Flows Is Retiring](#)

We're saying goodbye to the Swing Flow UI—also known as Desktop Flow Builder—with the Summer '19 release.

## Flow Builder Is Replacing Cloud Flow Designer

We're replacing Cloud Flow Designer with a much faster tool: Flow Builder. Flow Builder streamlines flow building and maintenance with a simplified user interface.

**When:** Flow Builder is available now. Cloud Flow Designer is still available, but it's disabled in Salesforce by default. It will be retired in Winter '20.

SEE ALSO:

[Salesforce Help: Flow Builder](#)

## Process Visualizer Is Retiring

Process Visualizer is a graphical representation of an approval process in your org. It requires Adobe Flash Player, which is also being retired.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer Editions.

**When:** Retirement is targeted for June 2019 and is subject to change. For details, see the knowledge article [Process Visualizer Retirement](#).

SEE ALSO:

[Adobe: Discontinued or unsupported products](#)

## Swing Flows Is Retiring

We're saying goodbye to the Swing Flow UI—also known as Desktop Flow Builder—with the Summer '19 release.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer Editions.

**When:** Retirement is targeted for June 2019 and is subject to change. For details, see the knowledge article [Swing Flow UI Retirement](#).

## Lightning App Builder: New Record Page Template, Plus New and Enhanced Components

Create record pages similar to Salesforce Classic with a new record page template. The updated Einstein Analytics Dashboard component improves usability, and the new Quip Notifications and Email Tracking - Individual Receipt components help users stay productive.

IN THIS SECTION:

### [Get More Options When Creating Record Pages](#)

We added more options to choose from when you create a Lightning Experience record page. You can still clone the existing record page view, or you can clone the new Full view option. The Full view option gives your users a view that is similar to Salesforce Classic.

### [Quickly Build Contextual Filters for Einstein Analytics Dashboards](#)

The Wave Dashboard component is now called "Einstein Analytics Dashboard". And you get a new Filter Builder option for record pages. With the Filter Builder, you can point and click to configure dynamic filters for your embedded dashboards. This makes it easier to set up a dashboard to show the relevant data for each record page in which it appears.

### [Display Einstein Discovery Predictions in Lightning Experience Record Pages](#)

Add Einstein Discovery predictions as a standard Lightning component in any record detail page. In the Lightning App Builder, drag the new Einstein Predictions component onto your record page. Then simply choose a prediction definition, set prediction units, and select display settings. On the record page, predictions are updated in real time, and no writeback to Salesforce is necessary.

### [View Quip Notifications Directly in Salesforce](#)

Give your users a break from switching between Salesforce and Quip by adding the new Quip Notifications component to your Salesforce Home, record, or app pages. Users are notified every time they're @mentioned or when a colleague updates or comments on their embedded Quip documents. Users can then search their notifications, filter for unread notifications, and even mark notifications as read. All this without ever leaving Salesforce.

### [Track Individual Emails in the Outlook](#)

Add the Email Tracking - Individual Receipt component to the email application pane.

### [Explore Pardot Data on Salesforce Campaigns](#)

To share Pardot data visualization tools with your sales and marketing users, add the Engagement History Dashboard component to campaign records.

### [Switch Between Pinned and Non-Pinned Page Templates](#)

We removed the restriction against switching from a non-pinned region template to a pinned region template. You can now switch between them to your heart's content.

## Get More Options When Creating Record Pages

We added more options to choose from when you create a Lightning Experience record page. You can still clone the existing record page view, or you can clone the new Full view option. The Full view option gives your users a view that is similar to Salesforce Classic.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[View Records Using Full View \(Beta\)](#)

## Quickly Build Contextual Filters for Einstein Analytics Dashboards

The Wave Dashboard component is now called “Einstein Analytics Dashboard”. And you get a new Filter Builder option for record pages. With the Filter Builder, you can point and click to configure dynamic filters for your embedded dashboards. This makes it easier to set up a dashboard to show the relevant data for each record page in which it appears.

**Where:** These changes apply to Einstein Analytics in Lightning Experience. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

SEE ALSO:

[Quickly Build Contextual Filters for Dashboards Embedded in Record Pages](#)

## Display Einstein Discovery Predictions in Lightning Experience Record Pages

Add Einstein Discovery predictions as a standard Lightning component in any record detail page. In the Lightning App Builder, drag the new Einstein Predictions component onto your record page. Then simply choose a prediction definition, set prediction units, and select display settings. On the record page, predictions are updated in real time, and no writeback to Salesforce is necessary.

**Where:** These changes apply to Einstein Analytics in Lightning Experience. Einstein Analytics is available in Developer Edition and for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** Drag the Einstein Predictions Standard Lightning Component to the page layout. Choose the prediction to show and, optionally, configure the settings. For instructions, see [Add Einstein Predictions to a Lightning Page](#).

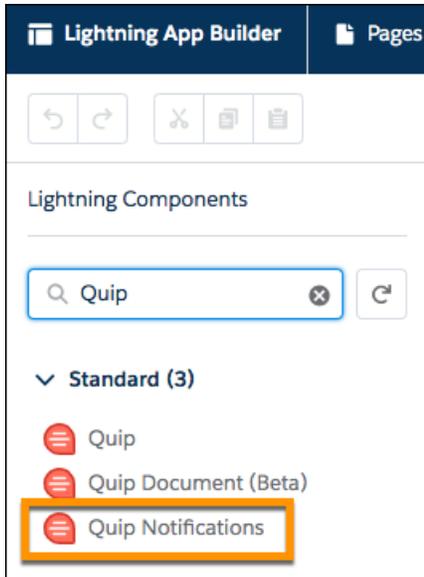
## View Quip Notifications Directly in Salesforce

Give your users a break from switching between Salesforce and Quip by adding the new Quip Notifications component to your Salesforce Home, record, or app pages. Users are notified every time they're @mentioned or when a colleague updates or comments on their embedded Quip documents. Users can then search their notifications, filter for unread notifications, and even mark notifications as read. All this without ever leaving Salesforce.

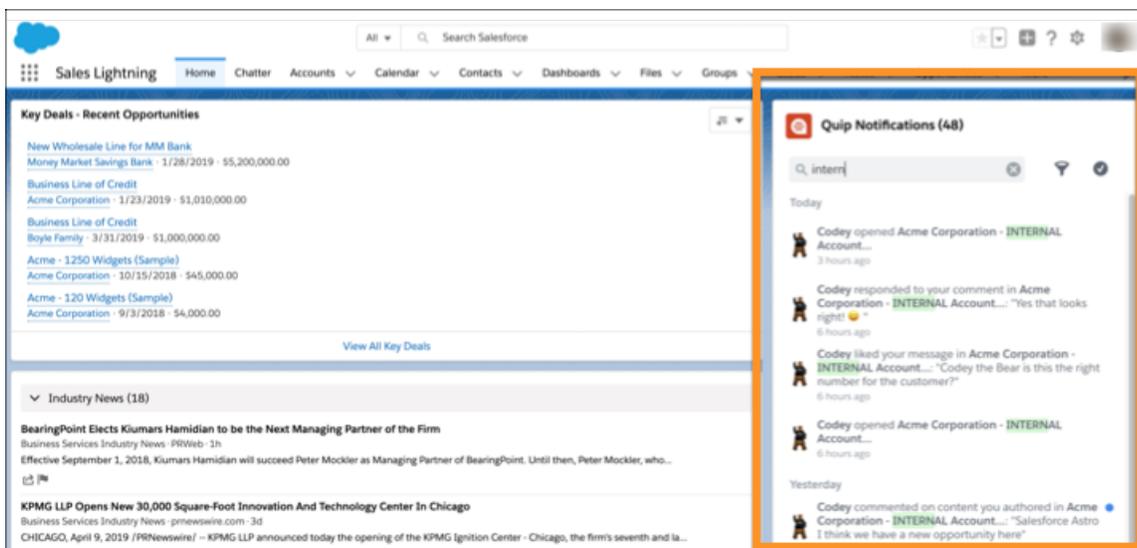
**Where:** This change applies to Lightning apps in Lightning Experience in Essentials, Professional, Performance, Unlimited, and Developer editions.

**Who:** This change is available in orgs with a Quip Enterprise plan or free trial.

**How:** If you haven't already done it, connect your Salesforce org to Quip. In Setup, enter *Quip* in the Quick Find box, and following the steps. Then launch Lightning App Builder, and add the new Quip Notifications component to a page.



The next time a user visits the Lightning page with the Quip Notifications component, the user is prompted to connect to Quip. After connecting, the Quip Notifications pane displays live messages and updates.



## Track Individual Emails in the Outlook

Add the Email Tracking - Individual Receipt component to the email application pane.

**Where:** This change applies to Lightning Experience and Salesforce Classic with Salesforce Inbox on desktop. Inbox is available for an extra cost in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Access Tracking Details for an Individual Email in Outlook](#)

## Explore Pardot Data on Salesforce Campaigns

To share Pardot data visualization tools with your sales and marketing users, add the Engagement History Dashboard component to campaign records.

**Where:** This change applies to Lightning Experience in all Pardot editions with Salesforce Professional, Enterprise, and Unlimited editions.

**How:** Learn more about the Engagement History Dashboard component in this release note: [Explore Marketing Report Data on Campaign Records](#).

## Switch Between Pinned and Non-Pinned Page Templates

We removed the restriction against switching from a non-pinned region template to a pinned region template. You can now switch between them to your heart's content.

**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions. This change doesn't apply to orgs participating in the Lightning on Mobile pilot.

SEE ALSO:

[Get Lightning Experience on Your Phone with Lightning on Mobile \(Pilot\)](#)

## Salesforce Connect: External Change Data Capture, External Object Picklists, External Object Reporting, and Named Credential Authentication Protocols

Track changes made to data stored outside your Salesforce org with External Change Data Capture. Your external objects are improved with picklist fields and more records evaluated when reporting. Build simpler, secure access to more external data sources than before with extra authentication protocols for named credentials.

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise, Performance, and Unlimited** Editions

IN THIS SECTION:

[Track Data Changes to External Objects More Easily \(Generally Available\)](#)

With External Change Data Capture, now generally available in Salesforce Connect using the OData 4.0 adapter, you can track changes made to data that's stored outside your Salesforce org. You can build automation to respond to changes to increase productivity or provide a better customer experience. And you can now distribute External Change Data Capture components in managed packages, including a framework for testing your Apex triggers. External Change Data Capture was called External Data Change Tracking in its Winter '18 pilot release and renamed Trigger in its Spring '19 beta release.

[Build Picklists on External Objects from OData Adapters](#)

Picklist fields simplify data entry, standardize values, improve reporting, and you can put them in the order that you want. Now you have even more to love because picklists are available for your Salesforce Connect external objects created from OData 2.0 and 4.0 adapters. Previously, picklists were available only for cross-org external objects.

[Get More Records for External Object Reports](#)

To help you analyze and surface external data, reports that include a Salesforce Connect external object can now evaluate up to 20,000 external records. Previously, only 2,000 records were evaluated. As a reminder, a report can display up to 2,000 records, regardless of whether an external object is included.

[Choose from Expanded Authentication Protocols for Your External Services](#)

You can now use JWT or JWT Token Exchange as authentication protocols to build named credentials for your external services. These protocols use open standards with wide adoption, providing secure access to even more sources than before.

[Related Updates for Developers](#)

## Track Data Changes to External Objects More Easily (Generally Available)

With External Change Data Capture, now generally available in Salesforce Connect using the OData 4.0 adapter, you can track changes made to data that's stored outside your Salesforce org. You can build automation to respond to changes to increase productivity or provide a better customer experience. And you can now distribute External Change Data Capture components in managed packages, including a framework for testing your Apex triggers. External Change Data Capture was called External Data Change Tracking in its Winter '18 pilot release and renamed Trigger in its Spring '19 beta release.

**Where:** This change applies to Lightning Experience and Salesforce Classic as part of Salesforce Connect using the OData 4.0 adapter. Salesforce Connect is free for Developer Edition and available for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** Configure the external data source to allow Salesforce to monitor changes according to OData standards. Enable External Change Data Capture on external objects by selecting to track data changes for an object. After you enable change tracking, a publication channel is created under the topic for the external object. For example, `/data/Object Name__ChangeEvent` appears as `data/Products__ChangeEvent`. Salesforce polls the external system at configurable intervals for tracked changes.

Use Apex triggers to subscribe to change events, or use a Bayeux client to subscribe to Streaming API on the publication channel. After subscribing, observe change event notifications after you perform a DML operation on an external object. Changes to the external object from within Salesforce and changes made outside of Salesforce are tracked.

To help you test Apex triggers that use External Change Data Capture, a unit test code example of a trigger reacting to a simulated external change is available in the Developer Guide. Include External Change Data Tracking components in a managed package by selecting your test from the Apex Class Component Type list. The trigger, test, External Data Source, external object, and other related assets are brought into the package for distribution.

## Build Picklists on External Objects from OData Adapters

Picklist fields simplify data entry, standardize values, improve reporting, and you can put them in the order that you want. Now you have even more to love because picklists are available for your Salesforce Connect external objects created from OData 2.0 and 4.0 adapters. Previously, picklists were available only for cross-org external objects.

**Where:** This change applies to Lightning Experience and Salesforce Classic as part of Salesforce Connect. Salesforce Connect is free for Developer Edition and available for an extra cost in Enterprise, Performance, and Unlimited editions.

**How:** Build new external object picklists using a global or local value set corresponding to your external data source's values. Keep values the same between your org and your external data source. Add new values like you would a regular picklist, but instead of deleting unused values, deactivate them. Choose to allow values outside the picklist to avoid mismatch error messages.

You can convert existing external object text fields to picklists. Delete the text field, and create a picklist pointing to the text field's existing External Column Name.

### SEE ALSO:

[Salesforce Help: Picklists for Salesforce Connect-OData 2.0 and 4.0 Adapters \(can be outdated or unavailable during release preview\)](#)

## Get More Records for External Object Reports

To help you analyze and surface external data, reports that include a Salesforce Connect external object can now evaluate up to 20,000 external records. Previously, only 2,000 records were evaluated. As a reminder, a report can display up to 2,000 records, regardless of whether an external object is included.

**Where:** This change applies to Lightning Experience and Salesforce Classic as part of Salesforce Connect using the OData 4.0 adapter. Salesforce Connect is free for Developer Edition and available for an extra cost in Enterprise, Performance, and Unlimited editions.

## Choose from Expanded Authentication Protocols for Your External Services

You can now use JWT or JWT Token Exchange as authentication protocols to build named credentials for your external services. These protocols use open standards with wide adoption, providing secure access to even more sources than before.

**Where:** This change applies to Lightning Experience and Salesforce Classic as part of Salesforce Connect. Salesforce Connect is free for Developer Edition and available for an extra cost in Enterprise, Performance, and Unlimited editions.

SEE ALSO:

[Choose from More Authentication Protocols for Named Credentials](#)

*Salesforce Help: Choose an Authentication Protocol (can be outdated or unavailable during release preview)*

## Related Updates for Developers

### New and Updated NamedCredential Fields

The NamedCredential type has several new fields and an update to expand your authorization protocol options. The existing protocol field has new values: AwsSig4, Jwt, and JwtExchange. The new NamedCredential fields, awsAccessKey, awsService, awsRegion, awsAccessSecret, authTokenEndpointUrl, jwtAudience, jwtFormulaSubject, jwtIssuer, jwtSigningCertificate, jwtTextSubject, and jwtValidityPeriodSeconds, are used for configuring the new protocol options.

SEE ALSO:

[Metadata API](#)

*Salesforce Help: ExternalDataSource Metadata API Developer Guide (can be outdated or unavailable during release preview)*

## Data Protection and Privacy: New Consent Management Objects and Data Classification Improvements

Use the new authorization form objects to track and store your customers' consent. Additional features make it easier to classify customers' sensitive data at the field level.

IN THIS SECTION:

[Track Customer Consent with Authorization Form Objects](#)

Keep track of data related to authorization forms, such as terms of service and data use agreements. Store when and how your customers consented, as well as information about the form's language and version number. You can even indicate the lifespan of the authorization form and the data use purpose with which it is associated.

[Classify Your Sensitive Data to Support Your Data Management Policies \(Generally Available\)](#)

Classify your data to help meet your data management policies. Record the data owner, field usage, and sensitivity of the data in any field. You can then apply a default data-sensitivity level value to all contacts, leads, person accounts, and users.

### [Add Credit Score and Influencer Information to Your Data Privacy Records](#)

Data privacy records based on the Individual object now include fields that store information about credit scores and providers. Plus, you get a rating that quantifies a customer's influence within your market. You can access these fields when you configure the page layout for your data privacy records and through the API.

### [Customize Data Sensitivity Values for Fields](#)

When you classify data at the field level, you can now add descriptions that explain each data sensitivity level. You can also indicate whether a value contains data that is highly sensitive to your company.

### [Get Data Protection and Privacy by Default](#)

We're bringing data privacy records to all of Salesforce by enabling Data Protection and Privacy in all orgs, both existing and new. You can disable this preference if you don't want to track data privacy preferences for your users.

## Track Customer Consent with Authorization Form Objects

Keep track of data related to authorization forms, such as terms of service and data use agreements. Store when and how your customers consented, as well as information about the form's language and version number. You can even indicate the lifespan of the authorization form and the data use purpose with which it is associated.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions.

SEE ALSO:

[Salesforce Help: Authorization Form Objects \(can be outdated or unavailable during release preview\)](#)

## Classify Your Sensitive Data to Support Your Data Management Policies (Generally Available)

Classify your data to help meet your data management policies. Record the data owner, field usage, and sensitivity of the data in any field. You can then apply a default data-sensitivity level value to all contacts, leads, person accounts, and users.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions.

SEE ALSO:

[Salesforce Help: Classify Sensitive Data to Support Data Management Policies \(can be outdated or unavailable during release preview\)](#)

## Add Credit Score and Influencer Information to Your Data Privacy Records

Data privacy records based on the Individual object now include fields that store information about credit scores and providers. Plus, you get a rating that quantifies a customer's influence within your market. You can access these fields when you configure the page layout for your data privacy records and through the API.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions.

## Customize Data Sensitivity Values for Fields

When you classify data at the field level, you can now add descriptions that explain each data sensitivity level. You can also indicate whether a value contains data that is highly sensitive to your company.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions.

**How:** To customize data sensitivity values, from Setup, enter *Data Classification Settings* in the Quick Find box and select **Data Classification Settings**. Select **Edit Data Sensitivity Picklist Values**, and add, delete, or edit any value.

SEE ALSO:

[Classify Your Sensitive Data to Support Your Data Management Policies \(Generally Available\)](#)

[Salesforce Help: Set Up Data Classification Metadata \(can be outdated or unavailable during release preview\)](#)

## Get Data Protection and Privacy by Default

We're bringing data privacy records to all of Salesforce by enabling Data Protection and Privacy in all orgs, both existing and new. You can disable this preference if you don't want to track data privacy preferences for your users.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions.

SEE ALSO:

[Salesforce Help: Set Up Tracking and Storage of Certain Data Privacy Preferences \(can be outdated or unavailable during release preview\)](#)

[Knowledge Article: Unexpected Profile Change by Random Administrator with Change to Consent Management](#)

## Objects and Fields: Prediction Fields in Formulas, Increased Hard Limit for Custom Objects, and Improved Deleted Fields Information

Use Einstein Prediction Builder values in formulas, install more custom objects, and see more information on the Deleted Fields detail page.

IN THIS SECTION:

[Show Einstein Predictions in Formula Fields](#)

Einstein Prediction Builder generates probabilities and predictions, like how much a customer is likely to pay for a service. When creating a custom formula field, you can now reference AI prediction fields.

[Work with More Custom Objects in Your Org](#)

We raised the total hard limit for custom objects in an org to 2,500 so that you can install more custom objects from packages. Each Salesforce edition has a specific limit on the number of custom objects that you can create in your org. Beyond the edition limit, the hard limit governs how many custom objects you can install from managed packages, such as apps publicly posted on AppExchange. The new 2,500 limit includes the maximum number of custom objects created and installed in your org.

[Monitor and Accelerate Removing Deleted Custom Fields from Your Org](#)

When you delete a custom field from an object, the field is removed but is available in your org for recovery for 15 days. During that time, the field continues to count toward your custom field allocation. After 15 days, the field is hard deleted, and Salesforce removes it from your custom field allocation. To free up your allocation sooner, you can now accelerate the hard-deletion process. We also added more information on the Deleted Fields detail page to help make decisions regarding the hard-delete process.

[Global Value Set Behavior Is Standardized in Managed Packages](#)

In the Spring '18 release, we announced that we changed the behavior for global value sets in managed packages to match the behavior of standard value sets. However, the enhancement didn't behave as expected and was delayed to this release. Now, label and API names for individual values in global value sets don't change in subscriber orgs.

## Show Einstein Predictions in Formula Fields

Einstein Prediction Builder generates probabilities and predictions, like how much a customer is likely to pay for a service. When creating a custom formula field, you can now reference AI prediction fields.

**Where:** This change applies to Lightning Experience and Salesforce Classic. Available in Enterprise, Unlimited, and Developer editions. Prediction fields are available for all custom objects and some standard objects. See Salesforce Help for the list of supported standard objects.

**Who:** This feature is available to admins with the EinsteinBuilderFree license.

**How:** When you create a custom formula field, refer to a prediction-based number field in the formula. For example, create a number field to predict the payment for a service named *LikelyCost\_\_c*. Select **AI Prediction**, then create a formula field called *InitialOffer\_\_c* with a formula of *LikelyCost\_\_c \* 1.5*. In this case, *LikelyCost\_\_c* is a numeric AI Prediction field, and *InitialOffer\_\_c* is a custom formula field. The resulting value is powered by Einstein Prediction Builder.

SEE ALSO:

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

## Work with More Custom Objects in Your Org

We raised the total hard limit for custom objects in an org to 2,500 so that you can install more custom objects from packages. Each Salesforce edition has a specific limit on the number of custom objects that you can create in your org. Beyond the edition limit, the hard limit governs how many custom objects you can install from managed packages, such as apps publicly posted on AppExchange. The new 2,500 limit includes the maximum number of custom objects created and installed in your org.

**Where:** This change applies to all editions.

**Why:** For example, in Unlimited Edition, you can create up to 2,000 custom objects in your org. On top of that limit, you can also install up to 500 custom objects from packages. If your org is approaching the 2,500 total limit, we recommend that you hard delete or erase custom objects that you no longer need.

## Monitor and Accelerate Removing Deleted Custom Fields from Your Org

When you delete a custom field from an object, the field is removed but is available in your org for recovery for 15 days. During that time, the field continues to count toward your custom field allocation. After 15 days, the field is hard deleted, and Salesforce removes it from your custom field allocation. To free up your allocation sooner, you can now accelerate the hard-deletion process. We also added more information on the Deleted Fields detail page to help make decisions regarding the hard-delete process.

**Where:** The ability to monitor deleted fields applies to Salesforce Classic in all editions. The ability to purge deleted fields is only available in Salesforce Classic in Performance and Unlimited editions.

**Why:** When you reach your limit of your custom field allocation and try to create or edit a custom field, you might receive an error message, such as "Unable to access page" or "No clean data columns available for custom fields." This feature helps you free up your allocation and get details about deleted fields to help make decisions.

**How:** To get information about custom fields waiting to be hard deleted, click **Deleted Fields**.

When you click **Erase**, the field is immediately made ready for the hard-delete process and waits for Salesforce to move the field to the hard-delete process. The timing depends on system priorities to ensure that this process doesn't impact overall performance.

As your org reaches its allocation for custom fields (75%) for the current object, you see a Purge button on the Deleted Fields page if you have Performance or Unlimited edition. To bypass waiting for the hard-deletion queue and accelerate the hard-delete process, click **Purge**. Purge initiates the hard-delete process sooner than the automated process.

## Account Deleted Fields [Help for this Page](#)

Salesforce starts to hard delete these fields after 15 days. The hard-delete process permanently removes all metadata and system data for the field. Erase skips the 15 day grace period, and immediately sets the field to ready for the hard-delete process. Undelete (if available) restores the field.

Deleted Custom Fields & Relationships						
Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By
<a href="#">Erase</a>   <a href="#">Undelete</a>	<a href="#">Bonus</a>	Bonus_del__c	Number(6, 0)			3/26/2019, 2:42 PM

Note: A deleted field counts toward your total custom field allocation until the hard-delete process finishes. When you hard delete a compound field, such as a geolocation field, your available allocation grows by more than one field, depending on the field type deleted.

Custom fields in the hard-delete process: 3  
 Custom fields ready for the hard-delete process (this value may include system data related to field management): 1

[Purge](#) 

## Global Value Set Behavior Is Standardized in Managed Packages

In the Spring '18 release, we announced that we changed the behavior for global value sets in managed packages to match the behavior of standard value sets. However, the enhancement didn't behave as expected and was delayed to this release. Now, label and API names for individual values in global value sets don't change in subscriber orgs.

**Where:** This change applies to all managed packages for all editions.

**Why:** This change makes global value set behavior more predictable in managed packages and consistent for all picklist values. Global value sets in managed package upgrades now have the following behavior.

- Label and API names for field values don't change in subscriber orgs.
- New field values aren't added to the subscriber orgs.
- Active and inactive value settings in subscriber orgs don't change.
- Default values in subscriber orgs don't change.
- Global value set label names change if the package upgrade includes a global value set label change.

## Sharing: Enhancements to External Org-Wide Defaults

We improved external org-wide defaults to help you better secure your data. Custom objects have stricter default external access settings, and we enabled external org-wide defaults in all orgs with communities or portals.

### IN THIS SECTION:

#### [Safeguard Your Data by Setting External Access Levels for More Standard Objects \(Beta\)](#)

You can now set external access levels for many more standard objects. Select more restrictive access for external users without changing the default internal access level. The objects available for external org-wide defaults vary depending on your org's licenses and other settings.

### [User and Custom Object Access Settings Default to Private](#)

After you enable external org-wide defaults, the external access level for User is set to Private, instead of matching the internal access level. When you create custom objects, the external access level also defaults to Private. Previously, the external access level for custom objects defaulted to Public Read/Write.

### [External Org-Wide Defaults Are Enabled in Orgs with Communities or Portals \(Critical Update\)](#)

On June 17, 2019, external org-wide defaults will be enabled in all orgs with communities or portals. This critical update helps you secure your data, because you can set more restrictive levels of access for external users.

## Safeguard Your Data by Setting External Access Levels for More Standard Objects (Beta)

You can now set external access levels for many more standard objects. Select more restrictive access for external users without changing the default internal access level. The objects available for external org-wide defaults vary depending on your org's licenses and other settings.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Professional, Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** As a beta feature, External Org-Wide Defaults for Additional Standard Objects is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for External Org-Wide Defaults for Additional Standard Objects in the group in the [Trailblazer Community](#). For information on enabling this feature in your org, contact Salesforce.

**How:** To set external org-wide defaults, from Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**. Under Organization-Wide Defaults, edit the default external access.

SEE ALSO:

[Salesforce Help: External Organization-Wide Defaults Overview \(can be outdated or unavailable during release preview\)](#)

## User and Custom Object Access Settings Default to Private

After you enable external org-wide defaults, the external access level for User is set to Private, instead of matching the internal access level. When you create custom objects, the external access level also defaults to Private. Previously, the external access level for custom objects defaulted to Public Read/Write.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** To edit the external access level for custom objects, from Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**. Under Organization-Wide Defaults, edit the default external access.

SEE ALSO:

[Salesforce Help: External Organization-Wide Defaults Overview \(can be outdated or unavailable during release preview\)](#)

## External Org-Wide Defaults Are Enabled in Orgs with Communities or Portals (Critical Update)

On June 17, 2019, external org-wide defaults will be enabled in all orgs with communities or portals. This critical update helps you secure your data, because you can set more restrictive levels of access for external users.

**Where:** This change applies to all communities accessed through Lightning Experience and Salesforce Classic in Essentials, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Enable External Org-Wide Defaults in Orgs with Communities or Portals \(Critical Update, Enforced\)](#)

## Globalization: Enhanced Right-to-Left Layout in Beta, New Locale Formats in Pilot, and 3 New Platform Languages

Enjoy a better layout for right-to-left languages, and check out new and improved formats for international dates and times. Plus, we added Burmese and two languages for our customers in New Zealand.

IN THIS SECTION:

[Go Global with New International Date and Time Formats \(Pilot\)](#)

To help you do business wherever you are and give your customers the best experience possible, we're adopting the internationally standardized formats for dates and times provided by the International Components for Unicode (ICU). ICU sets the international standard for these formats in just about every locale you can think of. We're not switching everything over to these new formats just yet, but you can get in on the ground floor by joining our ICU Pilot Program. With these new formats, you get a consistent experience across the entire Salesforce platform and improved integration with ICU-compliant applications across the globe.

[Connect with More Customers with New Platform Languages](#)

We added support for these languages and locales: Burmese, English (New Zealand), and Maori (New Zealand). They're all available as platform languages.

[Get Things Right with Right-to-Left Languages \(Beta\)](#)

To make right-to-left (RTL) language users feel more at home, columns and sidebars flow from right to left, and text is aligned appropriately. RTL layout is now the default for Arabic, Hebrew, and Urdu. Arabic and Hebrew are available as end-user languages in Lightning Experience, while Urdu is supported as a platform language.

## Go Global with New International Date and Time Formats (Pilot)

To help you do business wherever you are and give your customers the best experience possible, we're adopting the internationally standardized formats for dates and times provided by the International Components for Unicode (ICU). ICU sets the international standard for these formats in just about every locale you can think of. We're not switching everything over to these new formats just yet, but you can get in on the ground floor by joining our ICU Pilot Program. With these new formats, you get a consistent experience across the entire Salesforce platform and improved integration with ICU-compliant applications across the globe.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions, except **Database.com**.

 **Note:** We provide ICU locale formats to selected customers through a pilot program that requires agreement to specific terms and conditions. To be nominated to participate in the program, contact your Success Manager or log a case. Pilot programs are subject to change, and we can't guarantee acceptance. ICU locale formats aren't generally available unless or until Salesforce

announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for ICU locale formats by clicking **?** and selecting **Give Feedback about Salesforce**.

**How:** You can join the ICU pilot program today by contacting your Success Manager or by logging a case in <https://help.salesforce.com/home>.

SEE ALSO:

[Salesforce Help: Welcome to the Pilot for Salesforce's New Locale Formats! \(can be outdated or unavailable during release preview\)](#)

## Connect with More Customers with New Platform Languages

We added support for these languages and locales: Burmese, English (New Zealand), and Maori (New Zealand). They're all available as platform languages.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions, except **Database.com**.

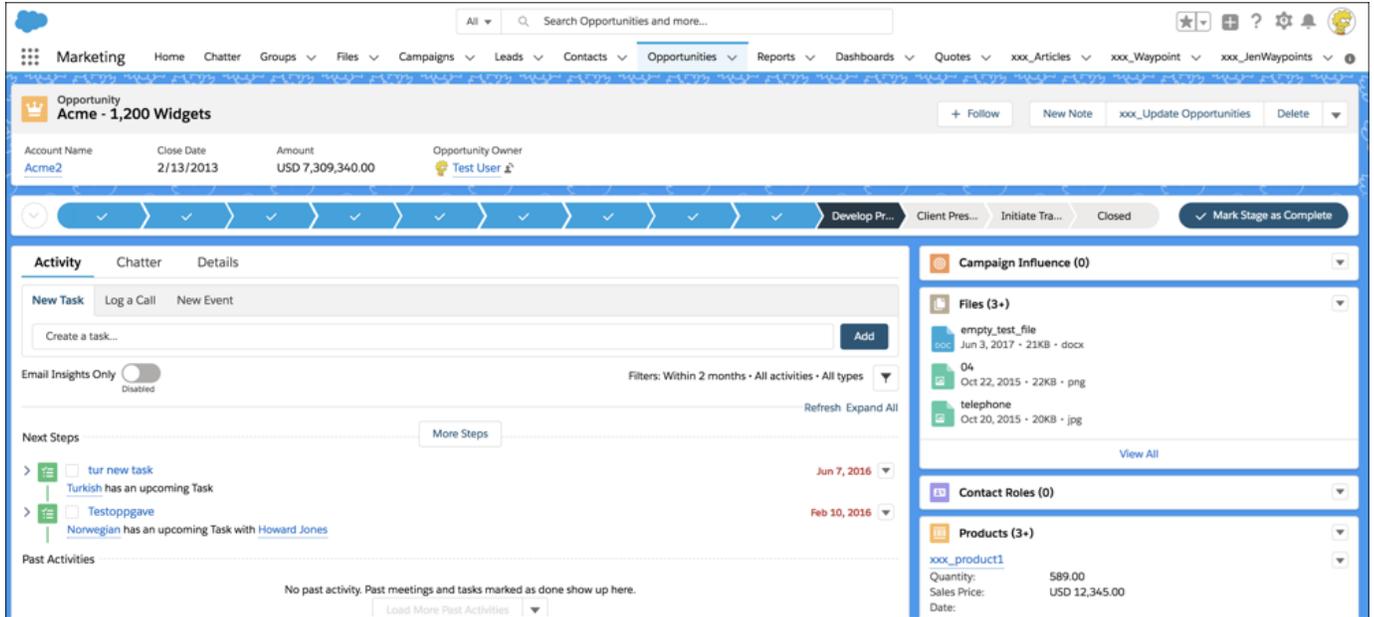
## Get Things Right with Right-to-Left Languages (Beta)

To make right-to-left (RTL) language users feel more at home, columns and sidebars flow from right to left, and text is aligned appropriately. RTL layout is now the default for Arabic, Hebrew, and Urdu. Arabic and Hebrew are available as end-user languages in Lightning Experience, while Urdu is supported as a platform language.

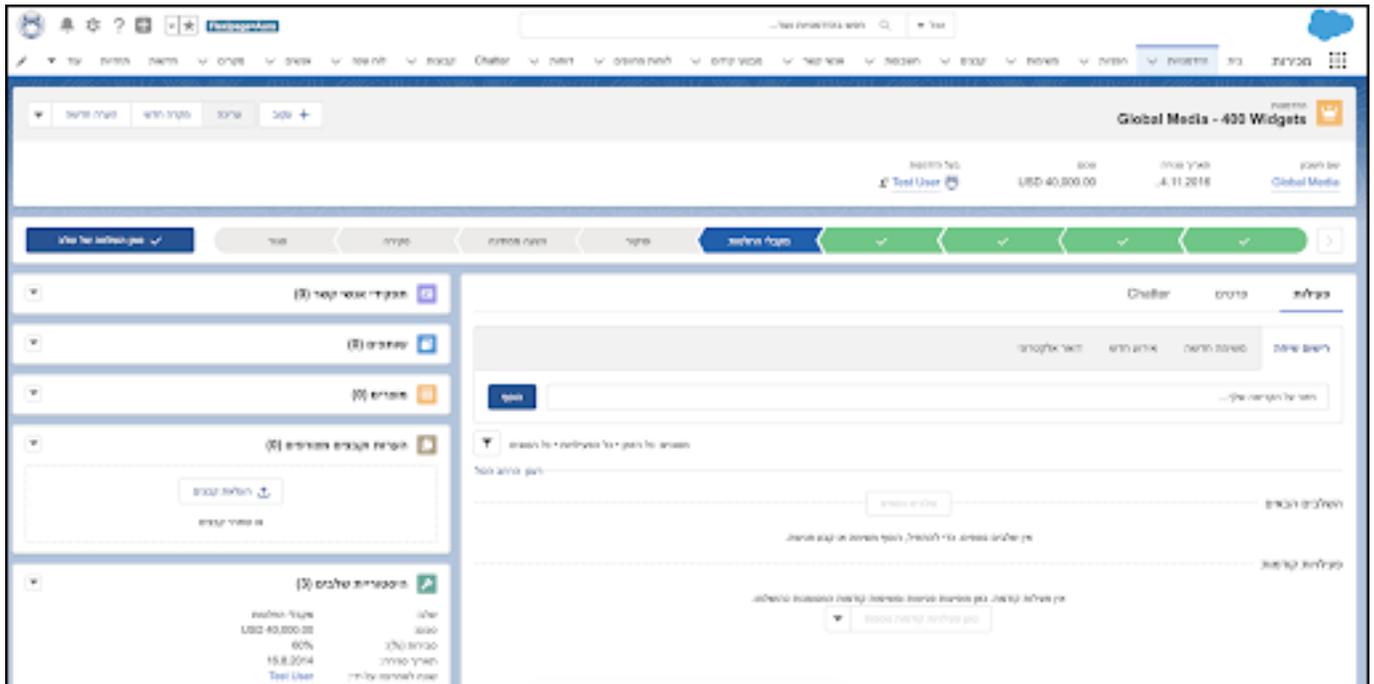
**Where:** This change applies to Lightning Experience in Group, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer Editions.

 **Note:** As a beta feature, right-to-left support is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for right-to-left language support by clicking **?** and selecting **Give Feedback about Salesforce**.

**Why:** A left-to-right layout in English in Lightning Experience...



Looks like this in Hebrew, right to left.



SEE ALSO:

[Salesforce Help: Enhanced Right-to-Left \(RTL\) Language Layout in Lightning Experience \(Beta\)\(can be outdated or unavailable during release preview\)](#)

## AppExchange: Find the Right Salesforce Consultant for Your Project

New tools and features on AppExchange make it easier to find Salesforce consultants whose qualifications match your company's needs. The Consultant Finder gathers your project requirements using simple questions and then recommends the most relevant consultants. New listing components let you quickly understand a consultant's areas of expertise, geographic focus, and achievements.

**Where:** This change applies to the AppExchange website.

**Why:** Be sure that the consultant you hire is the right fit for your project. Answer a few questions and the Consultant Finder helps you discover the Salesforce experts whose skills best align with your project requirements.

**CONSULTANT FINDER**  
Find the right expert to bring your Salesforce project to life.

What kind of expert are you looking for?

- I'm Not Sure
- Salesforce Product Expert
- Industry Expert

Which industries?

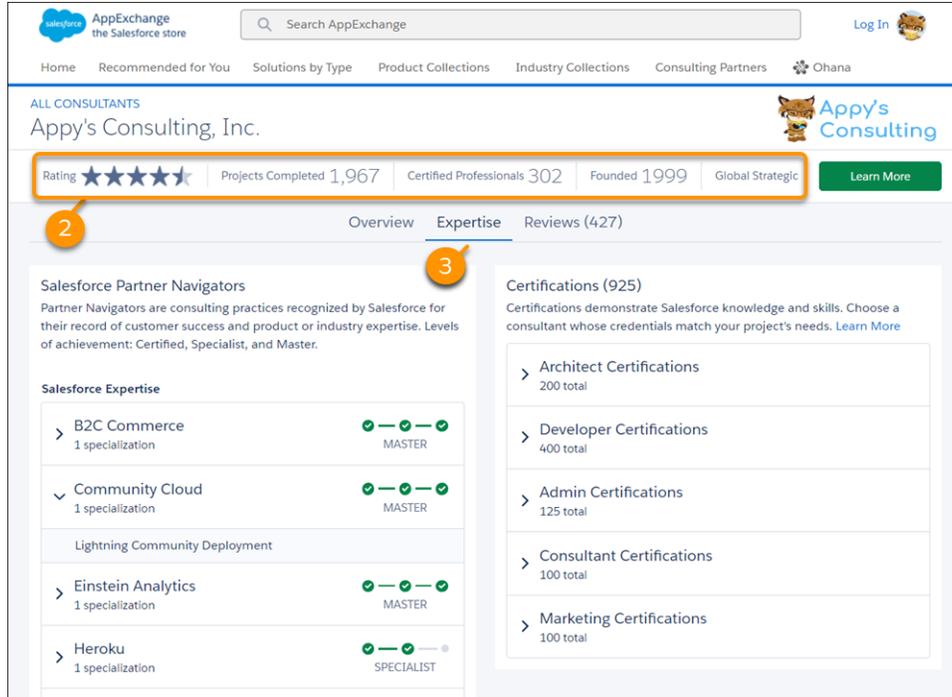
- Auto & Manufacturing
- Consumer Goods & Retail
- Energy
- Financial Services
- Healthcare & Life Sciences
- High Tech
- Higher Education
- Media & Communications
- Nonprofit
- Professional Services
- Public Sector
- Salesforce Industries
- Travel, Transportation & Hospitality

What size company do you want to work with?

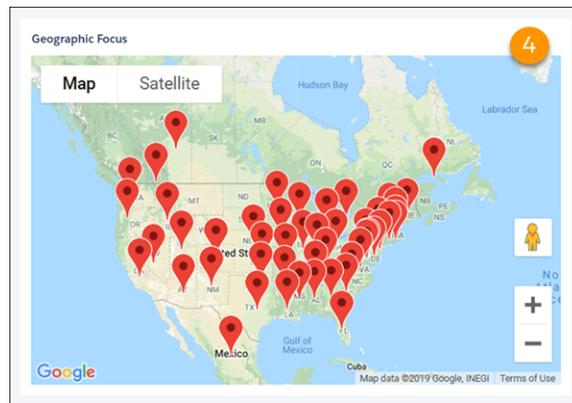
- No Preference  
Any Size
- Small  
1-10 Experts
- Medium  
11-100 Experts
- Large  
100+ Experts

We found 123 matches. Ready to see them? **1** [Show Consultants](#)

For example, you're interested in hiring a Salesforce expert with financial services experience. You also prefer to work with a small company. You can share these details in the Consultant Finder and we'll tell you who's a good match (1).

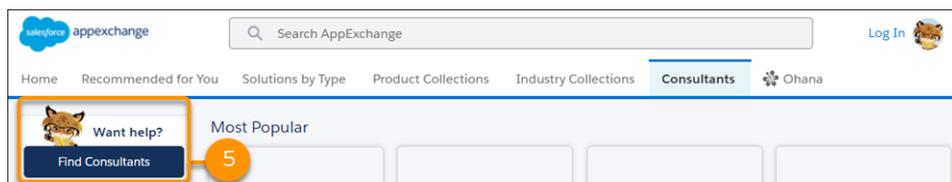


We also reimagined the listing experience to better showcase a consultant’s background and accomplishments. The summary bar (2) provides key details about the consultant, such as the number of projects they’ve completed. The Expertise section (3) highlights the consultant’s qualifications, such as Salesforce certifications and achievements in the [Partner Navigator](#) program.



Location is an important hiring consideration, so we added a map widget (4) that makes it easy to see where the consultant operates.

**How:** To browse consultant listings, go to [AppExchange](#) and click **Consultants**.



To try the Consultant Finder, click **Find Consultants** (5).

## General Setup: Custom Object Creator, Actions Categorized in Flows, Streamlined Quip Processes, and Big Object Enhancements

Create a custom object more efficiently by importing all its data from a spreadsheet. In flows, we categorized invocable actions and quick actions so that they're easier to find. Connect and add users to Quip more quickly with fewer clicks. Increased index lengths and specialized field types make it more efficient to work with big objects.

### IN THIS SECTION:

#### [Add Flexibility to Your Permission Set Group with Muted Permissions \(Pilot\)](#)

Use a muting permission set with a permission set group to mute certain permissions. For instance, you have a subscriber org using a managed package that contains a permission set group. To use the existing permission set group, the subscriber org can disable specific permissions with a muting permission set. Or, perhaps you have a permission set group that contains several permission sets managed by different departments. Use a muting permission set to disable specific permissions based on your needs.

#### [Create Objects from Spreadsheets](#)

Now with a few clicks, you can create a custom object by importing its fields and field data from a Google sheet, an .xlsx file, or a .csv file. Not only can you create an object and its fields quickly, but when you're done, all its data is there, too.

#### [Standard Invocable Actions for Session-Based Permission Sets Are Categorized for Flows](#)

We categorized invocable actions and quick actions for building flows to make them easier to find. For Session-based permission sets, invocable actions include Activate Session-Based Permission Set and Deactivate Session-Based Permission Set.

#### [Gain Insight into Your Company's Installed AppExchange Packages](#)

Discover how your company is taking advantage of the AppExchange packages that you've installed by reviewing usage summaries. Usage summaries are available for managed packages that have passed security review.

#### [Set Up Quip Faster](#)

We streamlined the process of connecting your Quip site to Salesforce by eliminating the step to enable Files Connect.

#### [Add Salesforce Users to Your Quip Site Faster](#)

You can now quickly add users from Salesforce to your Quip admin site with a few clicks. No more manually entering each user's name and email address in the Quip Admin console.

#### [Use More Characters in a Big Object's Index](#)

To provide more flexibility when creating a big object's index, the total number of characters allowed across all index fields has increased from 50 to 100. Because an index includes user-defined fields, you don't always know the exact length beforehand, so set the field lengths as high as possible while keeping within the character limit.

#### [Define More Field Types for Big Objects](#)

Custom fields store all the information unique to a big object in your org. Previously, you had to store specialized data, like email addresses, in a generic Text field type. You can now use the Email, Phone, and URL field types with big objects. Defining specific types stores data more efficiently and adds data-specific field-level validation for your big data.

#### [Enable Enhanced Permission Set Component Views](#)

When you have large numbers of Apex class assignments for permission sets, enable a paginated result set, standard filtering, and sorting to work more efficiently.

### Enhanced External Services: Get Better Connections for a Better Tomorrow (Pilot)

External Services is getting an upgraded way to create and use connections to outside services. New registrations can use more-complex swagger2 schema, disregard Apex word and character limitations, and receive ongoing benefits as they become available. If editing or registering new connections to an outside service, use Enhanced External Services now to get the upgraded benefits and save yourself time later.

### Updated Topic Assignment Label

To provide better context, we changed the Topic Assignment label from Record to Topic Assignment. The change appears in a few places, including Process Builder and reports.

### Match Production Licenses for Orgs on Different Releases

Use the Match Production Licenses button in sandbox with production orgs, even if the orgs run different releases. Previously, this button wasn't available in a sandbox if its production org ran on a different release version, such as during the Sandbox Preview period.

### Add a Namespace Prefix to pageReference.state Properties and Query Parameters (Critical Update, Enforced)

Add a Namespace Prefix to Query Parameters and pageReference.state Properties was a critical update in Winter '19 and is enforced for the Summer '19 release. This critical update resolves naming conflicts for query parameters between package components. Starting on May 17, 2019, this update begins to auto-activate on a rolling basis. The actual date it auto-activates for your org depends on when you update to the Summer '19 release. All orgs will be updated by June 17, 2019. As with all critical updates, you can activate the update manually before Salesforce auto-activates it.

### Protect Your Custom Settings and Custom Metadata Values

When you define custom settings or custom metadata, use Schema Settings options to make sure that your values are available only for Apex, flow, and formula operations. This extra level of security hides fields and values from the Enterprise WSDL, prevents access through SOAP API, and requires users to have Customize Application permission.

### Require Customize Application Permission for Direct Read Access to Custom Settings (Critical Update)

Currently users without Customize Application permission can read custom settings using different APIs that are provided by Salesforce. Following the "secure by default" approach, read access for users without Customize Application permission will be revoked with this update. This change affects Visualforce pages and Lightning components that directly reference custom settings.

## Add Flexibility to Your Permission Set Group with Muted Permissions (Pilot)

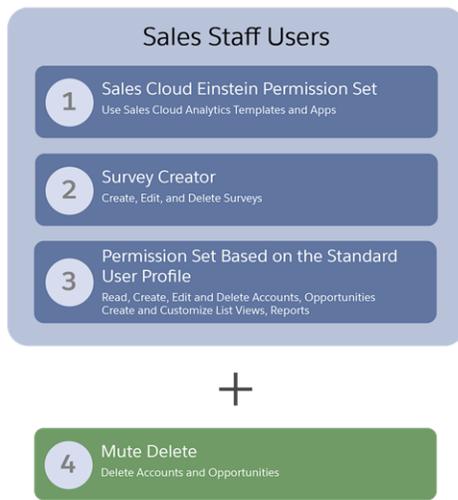
Use a muting permission set with a permission set group to mute certain permissions. For instance, you have a subscriber org using a managed package that contains a permission set group. To use the existing permission set group, the subscriber org can disable specific permissions with a muting permission set. Or, perhaps you have a permission set group that contains several permission sets managed by different departments. Use a muting permission set to disable specific permissions based on your needs.

**Where:** This change applies to Lightning Experience in Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** We provide this feature to selected customers through a pilot program that requires agreement to specific terms and conditions. To be nominated to participate in the program, contact your Success Manager or log a case in <https://help.salesforce.com/home>. Because pilot programs are subject to change, we can't guarantee acceptance. This pilot feature isn't generally available, as referenced in this document or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available features.

**Who:** If you're an ISV partner, to fully benefit from the pilot, enlist subscriber customers to participate. Using permission set groups along with a subscriber org lets you move through a full cycle on a branched version of a managed package. If you participate in the pilot without a subscriber org, the feature is limited to Developer edition orgs and your test environment.

**Why:** You have a permission set group called Sales Staff Users that contains three permission sets. One set contains a delete permission that you no longer want all group members to have. However, another permission set group called Managers also references this permission set.



Instead of creating another permission set, use a muting permission set. The muting permission set contains the delete permission that you want to disable. When you add the muting permission set to the Sales Staff Users group, those members no longer have the delete permission, but the Managers members do. You can add only one muting permission set to a permission set group.

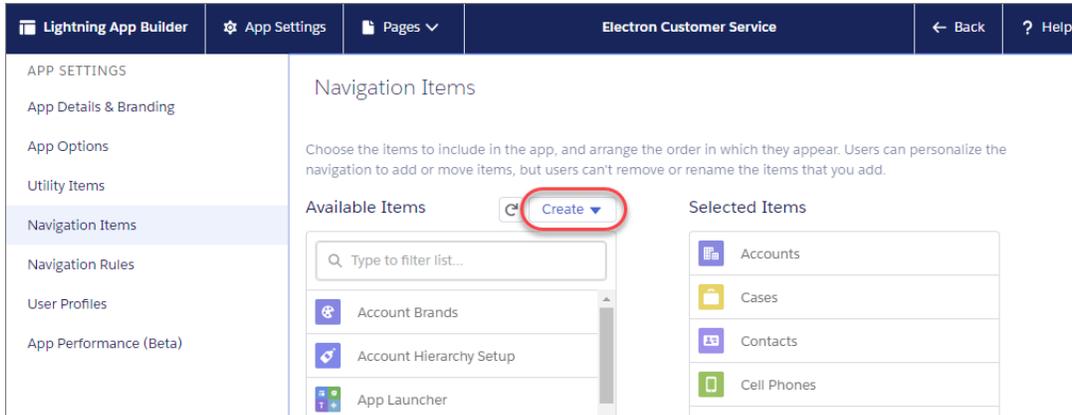


## Create Objects from Spreadsheets

Now with a few clicks, you can create a custom object by importing its fields and field data from a Google sheet, an .xlsx file, or a .csv file. Not only can you create an object and its fields quickly, but when you're done, all its data is there, too.

**Where:** This change applies to Lightning Experience in the Contact Manager, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** You can create a custom object from a spreadsheet in two places: from the Create button on any page in Setup or from the Navigation Items tab inside a Lightning app. Edit a Lightning app, go to the Navigation Items tab, and you see a new Create button at the top of the Available Items list.



## Standard Invocable Actions for Session-Based Permission Sets Are Categorized for Flows

We categorized invocable actions and quick actions for building flows to make them easier to find. For Session-based permission sets, invocable actions include Activate Session-Based Permission Set and Deactivate Session-Based Permission Set.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Invocable actions and quick actions are available based on your org permissions.

**How:** When you're building your flow, drag the Action flow element onto the Flow Builder canvas. Under Filter By, select **Category** and then select **Users**. Click **Search Users actions...** to find the invocable action you want to add to your flow.

SEE ALSO:

[Find Actions by Type or Category When Building Flows](#)

## Gain Insight into Your Company's Installed AppExchange Packages

Discover how your company is taking advantage of the AppExchange packages that you've installed by reviewing usage summaries. Usage summaries are available for managed packages that have passed security review.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essential, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** From Setup, enter *Package Usage* in the Quick Find box, and then select **Package Usage**. To download a .csv file of your managed package usage data, click **Request Summary**.

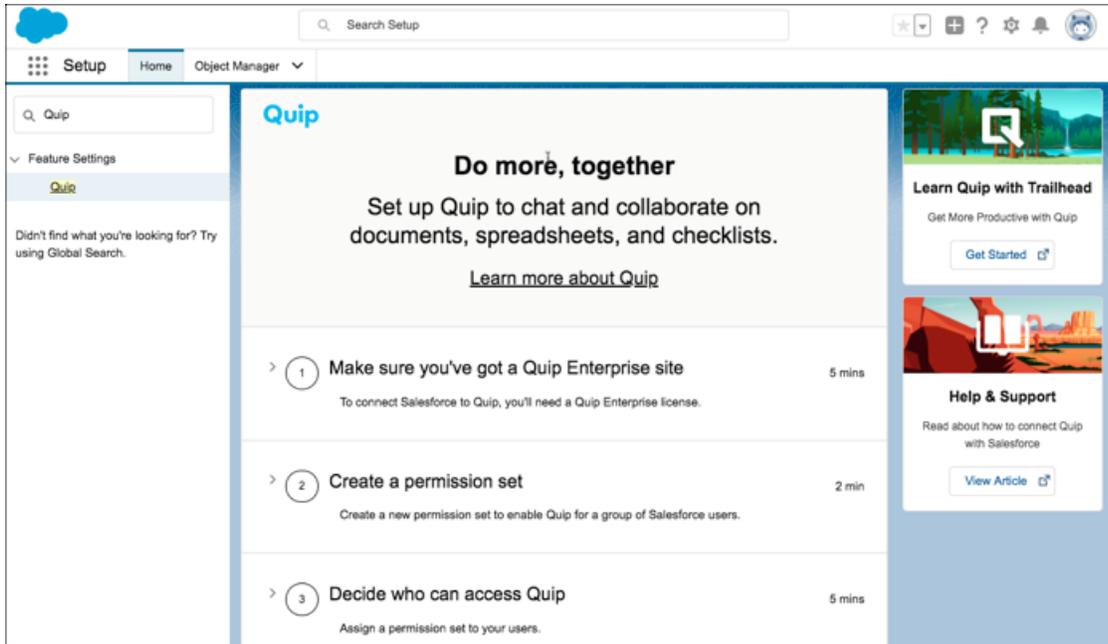
The link to download a requested usage summary expires after 15 minutes.

## Set Up Quip Faster

We streamlined the process of connecting your Quip site to Salesforce by eliminating the step to enable Files Connect.

**Where:** This change applies to Lightning apps in Lightning Experience in Essentials, Professional, Performance, Unlimited, and Developer editions. For Essentials edition, the change applies only to new Summer '19 orgs and later.

**Why:** Files Connect is now automatically enabled in your org.



## Add Salesforce Users to Your Quip Site Faster

You can now quickly add users from Salesforce to your Quip admin site with a few clicks. No more manually entering each user's name and email address in the Quip Admin console.

**Where:** This change applies to Lightning apps in Lightning Experience in Essentials, Professional, Performance, Unlimited, and Developer editions.

**Who:** This change is available in orgs with a Quip Enterprise plan or free Quip Enterprise trial.

**How:** If you haven't already done it, connect Salesforce to Quip. In Setup, enter *quip* in the Quick Find box, and follow the steps. When you get to the step to add users to your Quip site, click the link for the Quip Admin Console. When you click **Provision Members**, the console page displays an option to add all Salesforce users.

Click **Continue** and enter the credentials to connect to Salesforce. The page displays the invalid Salesforce accounts that can't be provisioned. Click **Continue** and select the Salesforce user accounts you want to add to Quip. Click **Next** and **Submit**, and you're done.

SEE ALSO:

[Quip Support: Your Complete Guide to Being a Quip Admin](#)

## Use More Characters in a Big Object's Index

To provide more flexibility when creating a big object's index, the total number of characters allowed across all index fields has increased from 50 to 100. Because an index includes user-defined fields, you don't always know the exact length beforehand, so set the field lengths as high as possible while keeping within the character limit.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**How:** For example, if your index includes Number, Text, and Date/Time fields, set the lengths to 40, 40, and 20, respectively. The total of these lengths is within the 100-character limit.

## Define More Field Types for Big Objects

Custom fields store all the information unique to a big object in your org. Previously, you had to store specialized data, like email addresses, in a generic Text field type. You can now use the Email, Phone, and URL field types with big objects. Defining specific types stores data more efficiently and adds data-specific field-level validation for your big data.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**How:** Keep the field lengths in mind when building your index, which has a maximum length of 100 characters. URL fields are too large and can't be included in the big object's index.

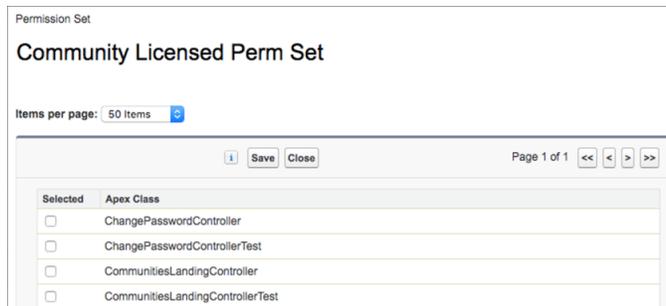
- Email – 80 characters
- Phone – 40 characters
- URL – 255 characters

## Enable Enhanced Permission Set Component Views

When you have large numbers of Apex class assignments for permission sets, enable a paginated result set, standard filtering, and sorting to work more efficiently.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Contact Manager, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**How:** Enable Enhanced Permission Set Component Views from User Management Settings. Select a permission set, and then select **Apex Class Access** and click **Edit**. If you have many classes assigned to the permission set, select the number of items per page to view or use arrows to scroll through pages.



## Enhanced External Services: Get Better Connections for a Better Tomorrow (Pilot)

External Services is getting an upgraded way to create and use connections to outside services. New registrations can use more-complex swagger2 schema, disregard Apex word and character limitations, and receive ongoing benefits as they become available. If editing or registering new connections to an outside service, use Enhanced External Services now to get the upgraded benefits and save yourself time later.

**Where:** This change applies to Lightning Experience in Enterprise, Performance, Unlimited, and Developer editions.



**Note:** We provide this feature to selected customers through a pilot program that requires agreement to specific terms and conditions. To be nominated to participate in the program, contact your Success Manager or log a case in <https://help.salesforce.com/home>. Because pilot programs are subject to change, we can't guarantee acceptance. This pilot feature isn't generally available, as referenced in this document or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available features.

**How:** After turning on Enhanced External Services, register new external services the same way you did before. Actions generated by your schema are created as External Service Actions in Flow Builder.

To recreate existing registrations to get the Enhanced External Services benefits, copy the name, schema, and other characteristics into a new registration. Update the flows that use the old Apex Action to the new External Service Action. Finally, delete the old registration, and say hello to the future.

## Updated Topic Assignment Label

To provide better context, we changed the Topic Assignment label from Record to Topic Assignment. The change appears in a few places, including Process Builder and reports.

**Where:** This change applies to Lightning Experience and Salesforce Classic in all editions.

## Match Production Licenses for Orgs on Different Releases

Use the Match Production Licenses button in sandbox with production orgs, even if the orgs run different releases. Previously, this button wasn't available in a sandbox if its production org ran on a different release version, such as during the Sandbox Preview period.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Professional, Enterprise, Performance, and Unlimited editions.

## Add a Namespace Prefix to `pageReference.state` Properties and Query Parameters (Critical Update, Enforced)

Add a Namespace Prefix to Query Parameters and `pageReference.state` Properties was a critical update in Winter '19 and is enforced for the Summer '19 release. This critical update resolves naming conflicts for query parameters between package components. Starting on May 17, 2019, this update begins to auto-activate on a rolling basis. The actual date it auto-activates for your org depends on when you update to the Summer '19 release. All orgs will be updated by June 17, 2019. As with all critical updates, you can activate the update manually before Salesforce auto-activates it.

 **Note:** Previous versions of the release notes didn't include a clarification about the roll-out date. Always consult the most recent release notes for the latest information.

SEE ALSO:

[Spring '19 Release Notes: Add a Namespace Prefix to `pageReference.state` Properties and Query Parameters](#)

## Protect Your Custom Settings and Custom Metadata Values

When you define custom settings or custom metadata, use Schema Settings options to make sure that your values are available only for Apex, flow, and formula operations. This extra level of security hides fields and values from the Enterprise WSDL, prevents access through SOAP API, and requires users to have Customize Application permission.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Contact Manager, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** We recommend that you keep sensitive custom metadata and custom settings, such as secrets, personally identifying information, or any private data, secure in their own managed package with their visibility set to **protected**. However, some customers choose to deploy these values with other customizations, which leaves them exposed in certain contexts. To secure these custom metadata values, use the new Schema Settings options. For more information about packaging, see [Access Rules When Packaging Custom Metadata Types and Records](#).

**How:** From Schema Settings in Setup, enable **Restrict access to custom metadata** or **Restrict access to custom settings**.

SEE ALSO:

[Require Customize Application Permission for Direct Read Access to Custom Settings \(Critical Update\)](#)

## Require Customize Application Permission for Direct Read Access to Custom Settings (Critical Update)

Currently users without Customize Application permission can read custom settings using different APIs that are provided by Salesforce. Following the "secure by default" approach, read access for users without Customize Application permission will be revoked with this update. This change affects Visualforce pages and Lightning components that directly reference custom settings.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Contact Manager, Essentials, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**When:** This critical update will be enforced starting January 3, 2020, as part of the Spring '20 release (originally planned for September 6, 2019, then postponed).

**How:** This update enables **Restrict access to custom settings** for your org's Schema Settings in Setup. We recommend that you test this update in a sandbox before enabling it in your production org.

To activate this critical update before the enforcement date, from Setup, enter *Critical Updates* in the Quick Find box, then select **Critical Updates**. For Require Customize Application permission for direct read access to custom settings, click **Activate**.

This change doesn't affect accessibility of custom settings from Apex or system mode contexts. Custom settings retrieved using Apex code will continue to work after this update.

 **Note:** With the org-wide setting **Restrict access to custom settings** enabled, use the ViewAllCustomSettings permission in a profile or permission set to allow users read access to custom settings outside of Apex code or system mode contexts. We do not recommend disabling the org-wide setting.

SEE ALSO:

[Protect Your Custom Settings and Custom Metadata Values](#)

## Security and Identity: OAuth Custom Scopes, Case-Insensitive Filter-Preserving Encryption, Session-Security-Level Policies, and Event Manager

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You can now use OAuth custom scopes to define a connected app's access to an external entity's protected data. Filter the data you encrypt with the case-insensitive deterministic encryption scheme. Require users to have a high-assurance session security level before accessing certain Setup pages or objects. And monitor events using a new dashboard with Event Manager.

IN THIS SECTION:

[Authentication and Identity: OAuth Custom Scopes, Customized Passwordless Community Logins, and New Trailhead Modules](#)

Salesforce Authentication and Identity now supports OAuth custom scopes to define a connected app's access to an external entity's protected data. You can now customize your community's passwordless login experience. We also support Lightning Login for My Domain Login Discovery, an extra password complexity requirement, and a failed login counter. Other enhancements include resetting passwords in right-to-left languages and enabling the external identity contactless user feature directly from the UI. The new Salesforce Identity for Mobile-Centric Customers Trailhead module shows you how to optimize sign-up and login processes for mobile-device convenience. And a Connected App Basics Trailhead module introduces you to the feature.

[Salesforce Shield: Case-Insensitive Filter-Preserving Encryption, Encryption for More Fields, and New Event Manager](#)

Shield Platform Encryption now offers encryption for Chat transcripts and statistics about your encrypted field history and feed tracking data. Also, case-insensitive deterministic encryption is now generally available with support for compound fields with custom indexes. View and update your Event Monitoring events with the new Event Manager dashboard.

[Other Security Changes: TLS 1.2 Compliance and Session-Security-Level Policies](#)

Starting in October 2019, all inbound connections to or outbound connections from your Salesforce org must use TLS 1.2. You can now require that users have a high-assurance session security level before accessing sensitive Setup pages or objects, or you can block users based on session level.

## Authentication and Identity: OAuth Custom Scopes, Customized Passwordless Community Logins, and New Trailhead Modules

Salesforce Authentication and Identity now supports OAuth custom scopes to define a connected app's access to an external entity's protected data. You can now customize your community's passwordless login experience. We also support Lightning Login for My Domain Login Discovery, an extra password complexity requirement, and a failed login counter. Other enhancements include resetting passwords in right-to-left languages and enabling the external identity contactless user feature directly from the UI. The new Salesforce Identity for Mobile-Centric Customers Trailhead module shows you how to optimize sign-up and login processes for mobile-device convenience. And a Connected App Basics Trailhead module introduces you to the feature.

### IN THIS SECTION:

#### [Give a Connected App Permission to Access External Resources with Custom Scopes](#)

A connected app can use the OAuth authorization protocol to access protected resources. As part of the protocol, OAuth default scopes fine-tune the app's permissions to access protected resources in Salesforce. But these default scopes don't help when an external entity is hosting the protected resource. That's why Salesforce now supports OAuth custom scopes. OAuth custom scopes define which protected resources a connected app can access from an external entity.

#### [Use Lightning Login with My Domain Login Discovery](#)

Login Discovery for My Domain now supports Lightning Login. If you set up your org with My Domain and use the Login Discovery page type, users can now verify themselves with a password, their SSO credentials, or Lightning Login. With Lightning Login, internal users can log in with Salesforce Authenticator instead of a password.

#### [Choose from More Authentication Protocols for Named Credentials](#)

You can now use JWT, a JWT Token Exchange, and AWS Signature Version 4 as authentication protocols to build named credentials for your callouts. These protocols leverage open standards with wide adoption, providing secure access to even more sources than before. Using JWT or JWT Token Exchange, your user's external service authentication credentials are handled for them instead of relying on users to manually configure credentials. With AWS Signature Version 4, you can perform callouts to resources in Amazon Web Services over HTTP using the Signature Version 4 signing process.

#### [Reset Passwords with Right-to-Left Languages \(Beta\)](#)

You can now use right-to-left (RTL) languages, such as Arabic, Hebrew, and Urdu, to reset your password.

#### [Enhance Security with Increased Password Complexity](#)

We now offer a password complexity option that requires users to include at least three of the following in their passwords: one number, one uppercase letter, one lowercase letter, and one special character (! " # \$ % & ' ( ) \* + , - . / : ; < = > ? @ [ \ ] ^ \_ ` { | } ~). You can set password complexity requirements on the Password Policies page.

#### [See the Number of Failed Login Attempts on a User Account](#)

You can now monitor the number of times a failed login attempt has been made on a user's account in User Details. When the maximum number of failed login attempts is reached, which is configured in Password Policies, the account is locked. You can unlock the user's account from User Details.

#### [Create Your Own Verify Page for Community Passwordless Logins](#)

You can now fully customize your community's passwordless login experience. When users log in to your community with an email address or phone number (passwordless login), Salesforce sends them a verification code. At the same time, Salesforce generates a Verify page where users enter the verification code to confirm their identity. Instead of using the default Salesforce Verify page, you can create your own page using Visualforce and Apex.

### [Meet the New Password Reset Page for Login Discovery](#)

When you use Login Discovery to log in internal (My Domain) or external (Communities) users, password resets behave differently. With the default login process, if users forget their password, they get a Forget Your Password page with a prompt to enter their username. Then they receive an email to reset their password. With Login Discovery, the Forget Your Password page directs users to click a Reset button to receive an email with a password-reset link. No typing involved.

### [Enable Contactless External Identity Users from the UI](#)

Make the external identity contactless user feature available in your org. Until now, only Salesforce Customer Support could enable it. Reduce the overhead of managing external identity users by creating users without contact information.

### [Enable Logout Event Streaming Using a New UI \(Beta\)](#)

We removed the Enable Logout Event Streaming setting from the Session Settings page. You now enable event data streaming for the Logout event (beta) on the Event Manager page.

### [Changed SAML ACS URLs for SSO](#)

When you set up single sign-on (SSO), Salesforce generates SAML Assertion Consumer Service (ACS) URLs. Until now, the generated URLs ended with the `so=orgID` suffix. For example,

```
https://mycompany.my.salesforce.com?so=00Dx0000000001
```

To improve performance, when you configure SSO in a new org, subdomain and community URLs don't contain the suffix. For existing orgs and new orgs without a My Domain subdomain, the URLs still contain the `so=orgID` suffix.

### [Restrict Object Access with the Default External Identity User Profile](#)

To avoid unintended data leaks, users provisioned with the External Identity User license now have stricter object permissions. The default External Identity User profile now contains a more limited set of object permissions that you can assign to an external identity user. You can increase object access by cloning the default profile and changing object permissions as needed. This change doesn't affect external identity users provisioned before Summer '19.

### [Learn About Mobile-First Identity with Trailhead](#)

Salesforce Identity has added various features in the past few releases to improve the login experience for customers who primarily access communities with their mobile devices. The new Trailhead module, Salesforce Identity for Mobile-Centric Customers, shows how to use these features.

### [Learn About Connected App Basics with Trailhead](#)

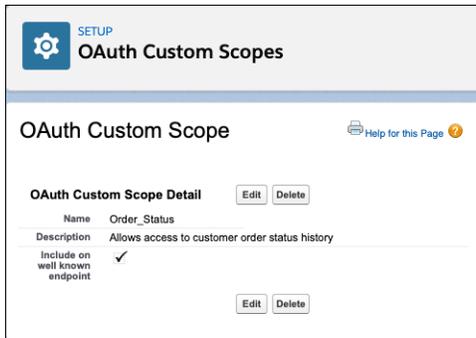
If you're familiar with connected apps, you know that you can use them in a multitude of ways. And if you're not familiar with connected apps, we introduce you to the feature in the new Connected App Basics Trailhead module. Familiar or not, this module shows you that connected apps are the framework to connect your users, external services, and Salesforce.

## Give a Connected App Permission to Access External Resources with Custom Scopes

A connected app can use the OAuth authorization protocol to access protected resources. As part of the protocol, OAuth default scopes fine-tune the app's permissions to access protected resources in Salesforce. But these default scopes don't help when an external entity is hosting the protected resource. That's why Salesforce now supports OAuth custom scopes. OAuth custom scopes define which protected resources a connected app can access from an external entity.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

**Why:** For example, you want to build a Customer Order Status web app that pulls the status of customer orders from your order system API. The order system API can potentially reveal all sorts of information about the customer, such as billing, but the custom app only needs access to order status information. So you create an `order_status` custom scope in your Salesforce org and assign it to the app. In your external entity, which hosts the order system API, you create a policy that requires a requesting client to have the `order_status` custom scope. Without this scope, the client can't access customer order status information. As your final step, you assign this new policy to the order system API. So now the order system API shares only customer order status data with the Customer Order Status web app. All other information associated with the customer remains locked up.



SEE ALSO:

[Salesforce Help: OAuth Custom Scopes \(can be outdated or unavailable during release preview\)](#)

## Use Lightning Login with My Domain Login Discovery

Login Discovery for My Domain now supports Lightning Login. If you set up your org with My Domain and use the Login Discovery page type, users can now verify themselves with a password, their SSO credentials, or Lightning Login. With Lightning Login, internal users can log in with Salesforce Authenticator instead of a password.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Why:** Login Discovery provides a more flexible and targeted login process. It determines how to authenticate the user based on the identifier entered at the login page prompt. For example, if the user enters an email address or phone number at the login page prompt and is set up for Lightning Login, the user logs in with a verification code. If not eligible, the user logs in with a password.

**How:** Implement Login Discovery for My Domain with the Apex `MyDomainLoginDiscoveryHandler` interface. For Lightning Login, the value of the `Auth.LoginDiscoveryMethod` enum is `LightningLogin`.

Several criteria must be met for a user to be eligible to log in with Lightning Login. To determine eligibility programmatically, use the `Auth.getLightningLoginEligibility` method. Use the `Auth.LightningLoginEligibility` enum to check which of these criteria is met.

- Lightning Login is enabled.
- Salesforce Authenticator is enabled.
- The user is allowed to use Lightning Login.
- The user has the LightningLogin user permission.
- The user has enrolled in Lightning Login.

SEE ALSO:

[Apex Developer Guide: UserManagement Class \(can be outdated or unavailable during release preview\)](#)

## Choose from More Authentication Protocols for Named Credentials

You can now use JWT, a JWT Token Exchange, and AWS Signature Version 4 as authentication protocols to build named credentials for your callouts. These protocols leverage open standards with wide adoption, providing secure access to even more sources than before. Using JWT or JWT Token Exchange, your user's external service authentication credentials are handled for them instead of relying on users to manually configure credentials. With AWS Signature Version 4, you can perform callouts to resources in Amazon Web Services over HTTP using the Signature Version 4 signing process.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions.

SEE ALSO:

[Salesforce Help: Choose an Authentication Protocol \(can be outdated or unavailable during release preview\)](#)

## Reset Passwords with Right-to-Left Languages (Beta)

You can now use right-to-left (RTL) languages, such as Arabic, Hebrew, and Urdu, to reset your password.

**Where:** This change applies to Lightning Experience and Salesforce Classic in all editions.



**Note:** As a beta feature, RTL language support is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature.

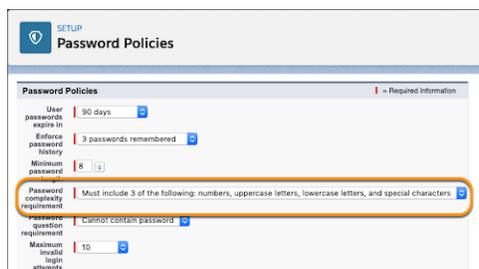
SEE ALSO:

[Salesforce Help: Enhanced Right-to-Left \(RTL\) Language Layout in Lightning Experience \(Beta\) \(can be outdated or unavailable during release preview\)](#)

## Enhance Security with Increased Password Complexity

We now offer a password complexity option that requires users to include at least three of the following in their passwords: one number, one uppercase letter, one lowercase letter, and one special character (! " # \$ % & ' ( ) \* + , - . / : ; < = > ? @ [ \ ] ^ \_ ` { | } ~). You can set password complexity requirements on the Password Policies page.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Contact Manager, Essentials, Group, Professional, Enterprise, Performance, Unlimited, Developer, and Database.com editions.



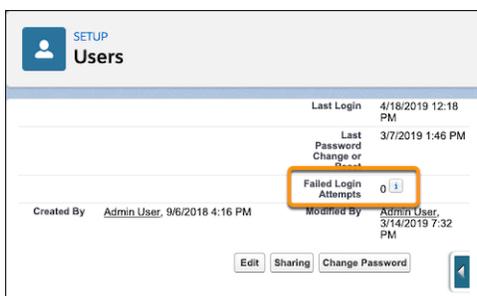
SEE ALSO:

[Salesforce Help: Set Password Policies \(can be outdated or unavailable during release preview\)](#)

## See the Number of Failed Login Attempts on a User Account

You can now monitor the number of times a failed login attempt has been made on a user's account in User Details. When the maximum number of failed login attempts is reached, which is configured in Password Policies, the account is locked. You can unlock the user's account from User Details.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Contact Manager, Essentials, Group, Professional, Enterprise, Performance, Unlimited, Developer, and Database.com editions.



SEE ALSO:

[Salesforce Help: Set Password Policies \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Unlock Users \(can be outdated or unavailable during release preview\)](#)

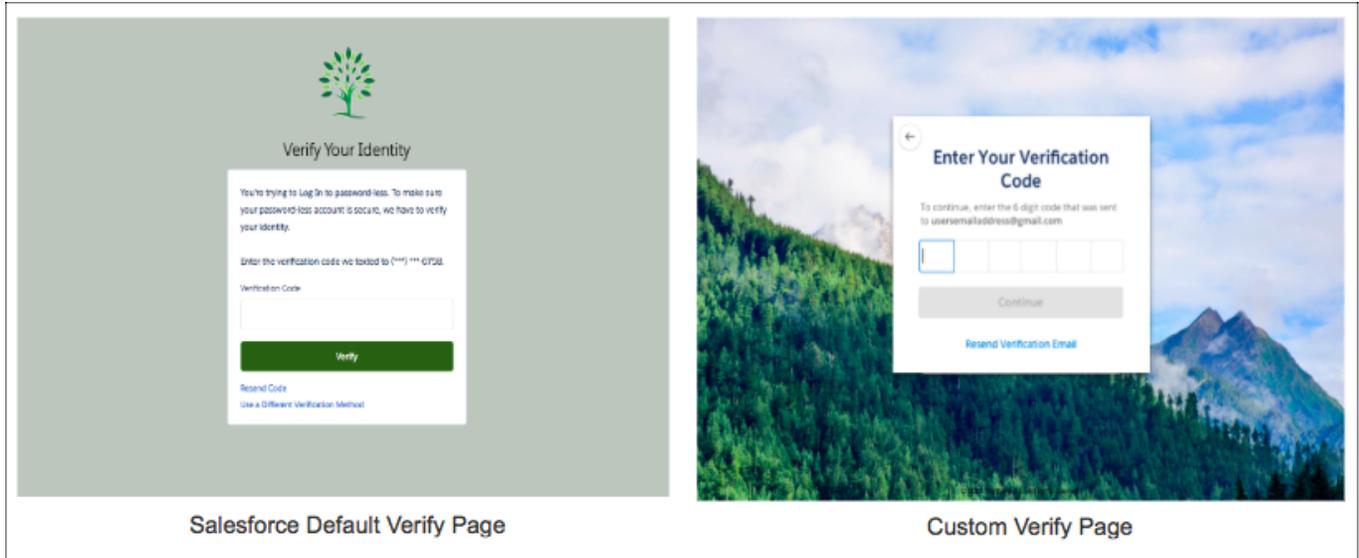
## Create Your Own Verify Page for Community Passwordless Logins

You can now fully customize your community's passwordless login experience. When users log in to your community with an email address or phone number (passwordless login), Salesforce sends them a verification code. At the same time, Salesforce generates a Verify page where users enter the verification code to confirm their identity. Instead of using the default Salesforce Verify page, you can create your own page using Visualforce and Apex.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic. Communities are available in Enterprise, Performance, Unlimited, and Developer editions.

**How:**

Here you can compare between the default Salesforce-generated Verify page and a custom page created in Visualforce. The Salesforce Verify page allows you to change your logo, background, and button colors. This custom Visualforce page uses different fonts and text colors. It also has a custom layout where users enter their verification code.



Implement the passwordless login process with a pair of Apex methods. The `System.UserManagement.initPasswordlessLogin` method starts the login process and sends a verification code to the user. Then the `System.UserManagement.verifyPasswordlessLogin` method checks whether the user entered the correct verification code. If so, it directs the user to the community home page.

Only users who have previously verified their identity with Salesforce can log in without a password.

As of this release, you can customize the Verify page for both passwordless login and self-registration.

SEE ALSO:

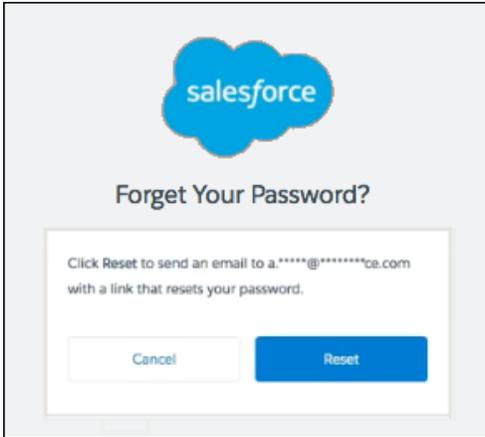
[Apex Developer Guide: UserManagement Class \(can be outdated or unavailable during release preview\)](#)

## Meet the New Password Reset Page for Login Discovery

When you use Login Discovery to log in internal (My Domain) or external (Communities) users, password resets behave differently. With the default login process, if users forget their password, they get a Forget Your Password page with a prompt to enter their username. Then they receive an email to reset their password. With Login Discovery, the Forget Your Password page directs users to click a Reset button to receive an email with a password-reset link. No typing involved.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic. Communities are available in Enterprise, Performance, Unlimited, and Developer editions.

**Why:** When users enter their identifier at the login page prompt, Login Discovery retrieves their user information. So if users don't recall their password when prompted, no need to ask for additional information to reset their password. Instead, users are informed that they can get a reset-password sent to the email address associated with the user who's logging in.

**SEE ALSO:**

[Salesforce Help: Use Login Discovery to Simplify Login \(can be outdated or unavailable during release preview\)](#)

[Salesforce Help: Create an Interview-Based Login Page with My Domain Login Discovery \(can be outdated or unavailable during release preview\)](#)

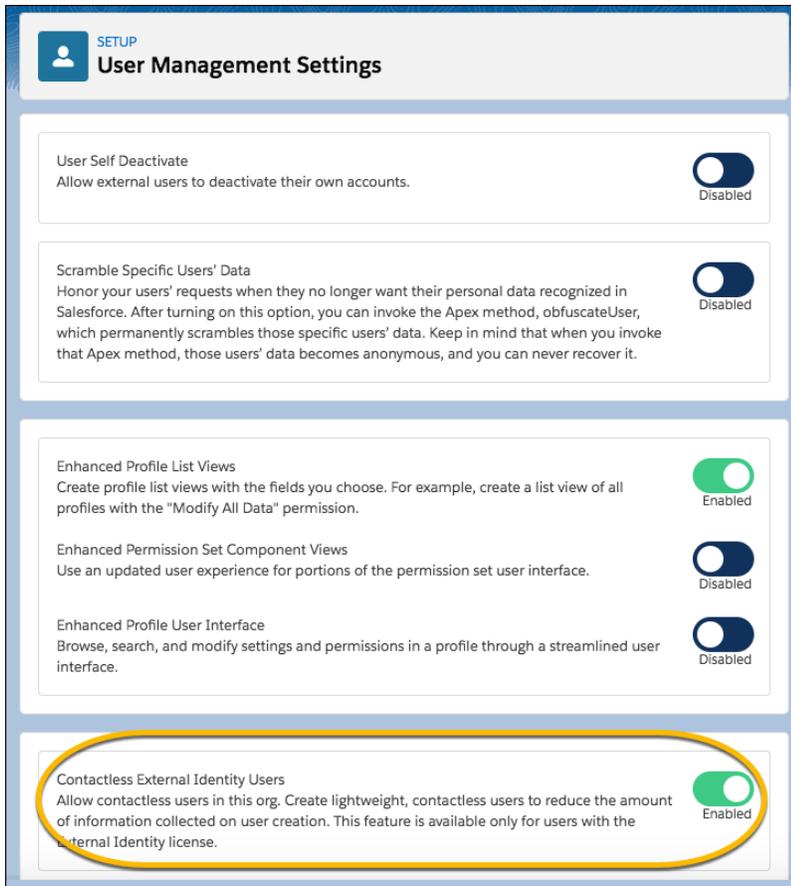
## Enable Contactless External Identity Users from the UI

Make the external identity contactless user feature available in your org. Until now, only Salesforce Customer Support could enable it. Reduce the overhead of managing external identity users by creating users without contact information.

**Where:** This change applies to all communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** The contactless user feature is available to users with the External Identity license—users with the Identity for Customers and Partners product.

**How:** Enable the contactless user feature from User Management Settings.



SEE ALSO:

[Salesforce Help: User Management Settings \(can be outdated or unavailable during release preview\)](#)

## Enable Logout Event Streaming Using a New UI (Beta)

We removed the Enable Logout Event Streaming setting from the Session Settings page. You now enable event data streaming for the Logout event (beta) on the Event Manager page.

**Where:** This change applies to Lightning Experience in Enterprise, Performance, Unlimited, and Developer editions where Event Monitoring is enabled.

**Note:** As a beta feature, the LogoutEvent object is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for this feature in the [Salesforce Identity group in the Trailblazer Community](#). For information on enabling this feature in your org, contact Salesforce.

**Who:** To enable streaming and storing events, enable the View Data Leakage Detection Events user permission.

**How:** From Setup, in the Quick Find box, enter *Event Manager*. Next to Logout Event, click the dropdown and select **Enable Streaming**.

SEE ALSO:

[Salesforce Help: Real-Time Event Monitoring \(Beta\) \(can be outdated or unavailable during release preview\)](#)

## Changed SAML ACS URLs for SSO

When you set up single sign-on (SSO), Salesforce generates SAML Assertion Consumer Service (ACS) URLs. Until now, the generated URLs ended with the `so=orgID` suffix. For example, `https://mycompany.my.salesforce.com?so=00Dx0000000001`. To improve performance, when you configure SSO in a new org, subdomain and community URLs don't contain the suffix. For existing orgs and new orgs without a My Domain subdomain, the URLs still contain the `so=orgID` suffix.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**How:** Here's how the Single Sign-On Settings page looked before this release. Notice that Login URL contains the `so=` suffix. Also OAuth 2.0 Token Endpoint appears under Communities endpoints.

**Endpoints**  
View SAML endpoints for your organization, communities, or custom domains.

Your Organization

Login URL	https://.salesforce.com?so=00().p
Logout URL	https://.salesforce.com/services/auth/sp/saml2/logout
OAuth 2.0 Token Endpoint	https://.salesforce.com/services/oauth2/token?so=00().p

▼ For Communities

Community Name: Portal

Login URL	https://www.().org/.../login?so=00().cp
Logout URL	https://www.().org/.../services/auth/sp/saml2/logout
OAuth 2.0 Token Endpoint	https://www.().org/.../services/oauth2/token?so=00().Kdcp

Here's how the Single Sign-On Settings page looks with the SAML ACS URL changes. Login URL doesn't contain an org ID. Also, OAuth 2.0 Token Endpoint doesn't appear. Salesforce Communities doesn't support the SAML assertion flow, so its associated OAuth endpoint isn't listed.

**Endpoints**  
View SAML endpoints for your organization, communities, or custom domains.

Your Organization

Login URL	https://.salesforce.com?so=C().p
Logout URL	https://.salesforce.com/services/auth/sp/saml2/logout
OAuth 2.0 Token Endpoint	https://.salesforce.com/services/oauth2/token?so=(().p

▼ For Communities

Community Name: Portal

Login URL	https://.().org/.../login
Logout URL	https://.().org/.../services/auth/sp/saml2/logout

## Restrict Object Access with the Default External Identity User Profile

To avoid unintended data leaks, users provisioned with the External Identity User license now have stricter object permissions. The default External Identity User profile now contains a more limited set of object permissions that you can assign to an external identity user. You can increase object access by cloning the default profile and changing object permissions as needed. This change doesn't affect external identity users provisioned before Summer '19.

**Where:** This change applies to Lightning communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** This change applies to communities created with the external identity and all community licenses provisioned in Summer '19 or later.

SEE ALSO:

[Salesforce External Identity Implementation Guide: External Identity License Details \(can be outdated or unavailable during release preview\)](#)

## Learn About Mobile-First Identity with Trailhead

Salesforce Identity has added various features in the past few releases to improve the login experience for customers who primarily access communities with their mobile devices. The new Trailhead module, *Salesforce Identity for Mobile-Centric Customers*, shows how to use these features.

**Where:** This module applies to all communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.



SEE ALSO:

[Trailhead Module: Identity for Mobile-Centric Users \(can be outdated or unavailable during release preview\)](#)

## Learn About Connected App Basics with Trailhead

If you're familiar with connected apps, you know that you can use them in a multitude of ways. And if you're not familiar with connected apps, we introduce you to the feature in the new Connected App Basics Trailhead module. Familiar or not, this module shows you that connected apps are the framework to connect your users, external services, and Salesforce.

**Where:** This module applies to Lightning Experience and Salesforce Classic in Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.



SEE ALSO:

[Trailhead Module: Connected App Basics \(can be outdated or unavailable during release preview\)](#)

## Salesforce Shield: Case-Insensitive Filter-Preserving Encryption, Encryption for More Fields, and New Event Manager

Shield Platform Encryption now offers encryption for Chat transcripts and statistics about your encrypted field history and feed tracking data. Also, case-insensitive deterministic encryption is now generally available with support for compound fields with custom indexes. View and update your Event Monitoring events with the new Event Manager dashboard.

IN THIS SECTION:

[Shield Platform Encryption: More Encryption Stats, More Fields, and Case-Insensitive Filter-Preserving Encryption Generally Available](#)

Add another layer of security to your Chat body fields. View statistics about encrypted field history and feed tracking changes on the Encryption Statistics page. Case-insensitive filter-preserving encryption is now generally available, giving you better filtering on data that you encrypt with the case-insensitive deterministic encryption scheme.

[Event Monitoring: Lightning Page View EPT Improvement, Real-Time Event Monitoring \(Beta\), Enhanced Transaction Security \(Beta\), and Event Manager](#)

Effective page time (EPT) outlier values are now filtered out of Lightning Page View event logs to increase data readability in reports and dashboards. Stream and store data about various new events with Real-Time Event Monitoring, in beta this release. Use Enhanced Transaction Security (beta) to create transaction security policies for several new events to enforce policies on any standard or custom object. View and update your events with Event Manager, a centralized dashboard for Event Monitoring events. Log and view changes to transaction security policies in the Setup Audit Trail.

## Shield Platform Encryption: More Encryption Stats, More Fields, and Case-Insensitive Filter-Preserving Encryption Generally Available

Add another layer of security to your Chat body fields. View statistics about encrypted field history and feed tracking changes on the Encryption Statistics page. Case-insensitive filter-preserving encryption is now generally available, giving you better filtering on data that you encrypt with the case-insensitive deterministic encryption scheme.

## IN THIS SECTION:

[See More Statistics About Your Encrypted Data](#)

Knowing the history behind who's interacting with your data is an important part of meeting your compliance requirements. The Encryption Statistics and Data Sync page now has an easy-to-read tab that shows data about your encrypted field history and feed tracking changes.

[Encrypt Your Chat Transcripts](#)

Customers talk with agents about all kinds of topics, even topics that include sensitive information. Now you can encrypt the transcribed chats between agents and customers with Shield Platform Encryption. Encryption is available for the Chat Body and Chat Supervisor Transcript Body fields.

[Encrypt Data in Your Scratch Orgs](#)

For developers interested in including Shield Platform Encryption in tests or product development, you can now enable Shield Platform Encryption in scratch orgs. This compatibility lets you create and test Shield Platform Encryption-compatible apps and features with confidence.

[Get Exact Matching with Case-Insensitive Deterministic Encryption \(Generally Available\)](#)

Power your SOQL queries with exact, case-insensitive matching. For example, if you query against the Lead object, where Company = Acme, your filter results return Acme, acme, and ACME. Similarly, when the filter-preserving scheme tests for unicity (uniqueness), each version of Acme is considered identical. This release adds support for compound fields with custom indexes. Support for skinny tables is also available (beta).

[Encrypt Activity Subject Data](#)

You can now encrypt the Activity Subject field, giving your data about tasks, events, and meetings an extra layer of security.

[Encrypt Your Email Messages \(Generally Available\)](#)

Emails and time management tools play an important role in your day-to-day workflow. For another layer of security and compliance controls, you can now encrypt Email and Email to Case messages. You control the life cycle of the keys used to encrypt your emails, helping you meet your compliance and regulatory obligations.

## See More Statistics About Your Encrypted Data

Knowing the history behind who's interacting with your data is an important part of meeting your compliance requirements. The Encryption Statistics and Data Sync page now has an easy-to-read tab that shows data about your encrypted field history and feed tracking changes.

**Where:** This change applies to Salesforce Classic and Lightning Experience in Enterprise, Performance, Unlimited, and Developer editions.

**How:** To see statistics about encrypted field history and feed tracking entries, make sure that these values are encrypted. On the Advanced Settings page in Setup, turn on **Encrypt Field History and Feed Tracking Values**. From now on, field history and feed tracking values are encrypted every time you sync data from the Encryption Statistics page.

To view statistics about these values, go to the Encryption Statistics page in Setup. Select an object, and select the **History** tab in the right pane.

The screenshot shows the 'Contact' record page in Salesforce. At the top, there are buttons for 'Gather Statistics' and 'Sync'. Below that, there are tabs for 'Fields' and 'History'. The 'Fields' tab is active, displaying a table with encryption statistics for three fields: Name, Phone, and Email. The table has six columns: Field, API Name, Encrypted Field History, Unencrypted Field History, Encrypted Feed Tracking, and Unencrypted Feed Tracking. Below the table, there are navigation controls showing '1-3 of 3' items.

Field	API Name	Encrypted Field History	Unencrypted Field History	Encrypted Feed Tracking	Unencrypted Feed Tracking
Name	Name	13	34	6	0
Phone	Phone	13	34	0	0
Email	Email	0	0	0	0

SEE ALSO:

[Salesforce Help: Get Statistics About Your Encryption Coverage \(can be outdated or unavailable during release preview\)](#)

## Encrypt Your Chat Transcripts

Customers talk with agents about all kinds of topics, even topics that include sensitive information. Now you can encrypt the transcribed chats between agents and customers with Shield Platform Encryption. Encryption is available for the Chat Body and Chat Supervisor Transcript Body fields.

**Where:** This change applies to Salesforce Classic and Lightning Experience in Enterprise, Performance, Unlimited, and Developer editions.

**How:** To access Shield Platform Encryption for Chat transcripts, contact Salesforce Customer Support.

Before you can apply encryption to Chat fields, add the Supervisor Transcript Body field to the LiveChatTranscript record home layout. Then go to the Encryption Policy page in Setup. Click **Encrypt Fields**, then click **Edit**, and apply encryption to Chat fields.

SEE ALSO:

[Salesforce Help: Which Standard Fields Can I Encrypt? \(can be outdated or unavailable during release preview\)](#)

[Encrypt Conversations](#)

## Encrypt Data in Your Scratch Orgs

For developers interested in including Shield Platform Encryption in tests or product development, you can now enable Shield Platform Encryption in scratch orgs. This compatibility lets you create and test Shield Platform Encryption-compatible apps and features with confidence.

**Where:** This change applies to Salesforce Classic and Lightning Experience in Enterprise, Performance, Unlimited, and Developer editions.

**How:** When you create your scratch org, add `PlatformEncryption` as a feature in your scratch org definition file.

```
{
  "orgName": "My Scratch Org",
  "edition": "Enterprise",
  "features": ["PlatformEncryption"],
  "settings": {
    "orgPreferenceSettings": {
      "slDesktopEnabled": true
    }
  }
}
```

```
}
}
```

After you create your scratch org, you can set up Shield Platform Encryption as a user. Assign the required permissions, generate or upload key material, and then encrypt data.

## Get Exact Matching with Case-Insensitive Deterministic Encryption (Generally Available)

Power your SOQL queries with exact, case-insensitive matching. For example, if you query against the Lead object, where Company = Acme, your filter results return Acme, acme, and ACME. Similarly, when the filter-preserving scheme tests for unicity (uniqueness), each version of Acme is considered identical. This release adds support for compound fields with custom indexes. Support for skinny tables is also available (beta).

**Where:** This change applies to Salesforce Classic and Lightning Experience in Enterprise, Performance, Unlimited, and Developer editions.

**How:** To enable case-insensitive deterministic encryption, turn on deterministic encryption on the Advanced Settings page in Setup and generate or upload a Data in Salesforce (Deterministic) type key. Then you can apply case-insensitive deterministic encryption–supported standard and custom fields on a field-by-field basis.

Case-insensitive deterministic encryption support for skinny tables, which is in beta, improves your query results. To enable this feature, contact Salesforce Customer Support.

 **Note:** As a beta feature, Skinny Tables for Case-Insensitive Deterministic Encryption is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only from generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only. It's offered as is, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for Skinny Tables for Case-Insensitive Deterministic Encryption in the [IdeaExchange](#) and through the [Trailblazer Community](#). For information about enabling this feature in your organization, contact Salesforce.

SEE ALSO:

[Salesforce Help: Encrypt Data with the Deterministic Encryption Scheme \(can be outdated or unavailable during release preview\)](#)

## Encrypt Activity Subject Data

You can now encrypt the Activity Subject field, giving your data about tasks, events, and meetings an extra layer of security.

**Where:** This change applies to Salesforce Classic and Lightning Experience in Enterprise, Performance, Unlimited, and Developer editions.

**How:** On the Encryption Policy page in Setup, click **Encrypt Fields**, then click **Edit**, and select **Activity Subject**. You can then apply either the probabilistic or deterministic encryption scheme to the field.

SEE ALSO:

[Salesforce Help: General Shield Platform Encryption Considerations \(can be outdated or unavailable during release preview\)](#)

## Encrypt Your Email Messages (Generally Available)

Emails and time management tools play an important role in your day-to-day workflow. For another layer of security and compliance controls, you can now encrypt Email and Email to Case messages. You control the life cycle of the keys used to encrypt your emails, helping you meet your compliance and regulatory obligations.

**Where:** This change applies to Salesforce Classic and Lightning Experience in Enterprise, Performance, Unlimited, and Developer editions.

**Why:** You can encrypt the From Name, From Address, To Address, CC Address, BCC Address, Subject, Text Body, HTML Body, and Headers fields in your email messages. Shield Platform Encryption also supports the Relation Address field on the Email Message Relation object.

**How:** Encrypt email message fields on the Encryption Policy page in Setup. You can apply probabilistic or deterministic encryption to these fields.

SEE ALSO:

[Salesforce Help: Which Standard Fields Can I Encrypt? \(can be outdated or unavailable during release preview\)](#)

## Event Monitoring: Lightning Page View EPT Improvement, Real-Time Event Monitoring (Beta), Enhanced Transaction Security (Beta), and Event Manager

Effective page time (EPT) outlier values are now filtered out of Lightning Page View event logs to increase data readability in reports and dashboards. Stream and store data about various new events with Real-Time Event Monitoring, in beta this release. Use Enhanced Transaction Security (beta) to create transaction security policies for several new events to enforce policies on any standard or custom object. View and update your events with Event Manager, a centralized dashboard for Event Monitoring events. Log and view changes to transaction security policies in the Setup Audit Trail.

IN THIS SECTION:

### [Stream and Store Event Data in Near Real-Time \(Beta\)](#)

Announcing Real-Time Event Monitoring, Salesforce's latest event monitoring feature. You can stream and store data and create transaction security policies for several new events in Salesforce, all in real time. You automatically get Enhanced Transaction Security (beta)—Salesforce's latest and greatest feature for creating transaction security policies— when you enable Real-Time Event Monitoring (beta). Use the Event Manager dashboard to view, monitor, and update events in your org.

### [Create Transaction Security Policies to Protect Any Object \(Beta\)](#)

Meet Enhanced Transaction Security, the latest incarnation of Salesforce's transaction security monitoring feature. With Enhanced Transaction Security, you can create transaction security policies for several new events in Salesforce to enforce policies on any standard or custom object. Enhanced Transaction Security is available in Real-Time Event Monitoring (beta).

### [Enable Login Event Storage Using a New UI](#)

We removed the Login Forensics setting from Event Monitoring Settings. Now, enable event data storage on the Login event on the Event Manager page.

### [Manage Event Monitoring Events in One Place](#)

Introducing Event Manager, your one-stop shop to view and update your streaming and stored Event Monitoring events. Now you can easily see all your Event Monitoring events from a simple dashboard.

### [View Changes to Transaction Security Policies in Setup Audit Trail](#)

When you change a transaction security policy, you can now view a log of those changes in Setup Audit Trail. Previously, we didn't track changes to transaction security policies in the Setup Audit Trail. You can also see a log of changes to transaction security policies that you create using Enhanced Transaction Security, part of Real-Time Event Monitoring (beta).

### [Get More Relevant Effective Page Times in Lightning Page View Logs](#)

Effective page time (EPT) outlier values are now filtered out of the Lightning Page View event logs. Outlier values include page times greater than 60 seconds (EPT is measured in milliseconds). Removing the outlier values increases the usefulness and readability of the data in reports and dashboards. When an outlier value is detected, Salesforce replaces the value with null. You might see an increase in null values in the EFFECTIVE\_PAGE\_TIME field because of this change.

[Changed Data Type for Fields in Apex Unexpected Exception Event Type](#)

In the Apex Unexpected Exception event type of EventLogFile, we changed the data type of the `EXCEPTION_MESSAGE` field and `STACK_TRACE` field from String to Text.

## Stream and Store Event Data in Near Real-Time (Beta)

Announcing Real-Time Event Monitoring, Salesforce's latest event monitoring feature. You can stream and store data and create transaction security policies for several new events in Salesforce, all in real time. You automatically get Enhanced Transaction Security (beta)—Salesforce's latest and greatest feature for creating transaction security policies—when you enable Real-Time Event Monitoring (beta). Use the Event Manager dashboard to view, monitor, and update events in your org.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions where Event Monitoring is enabled.

 **Note:** As a beta feature, Real-Time Event Monitoring is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for this feature in the [Salesforce Real-Time Events Beta group in the Trailblazer Community](#).

**Who:** Available to customers who purchased Salesforce Shield or Salesforce Event Monitoring add-on subscriptions. To view or manage events, enable the View Data Leakage Detection Events user permission.

**Why:** With Real-Time Event Monitoring, you can subscribe to several streaming events in Salesforce, including:

- AdminSetupEventStream
- ApiEventStream
- LightningUriEventStream
- ListViewEventStream
- LoginAsEventStream
- LoginEventStream
- LogoutEventStream
- ReportEventStream
- UriEventStream

Need to store streaming event data? Enable storage for streaming events to up to seven days. The following new objects store event data for their respective EventStream objects.

- AdminSetupEvent
- ApiEvent
- LightningUriEvent
- ListViewEvent
- LoginAsEvent
- LoginEvent
- LogoutEvent
- ReportEvent
- UriEvent

Use [Enhanced Transaction Security \(beta\)](#) to create transaction security policies for some of these new Event objects.

**How:** To view and manage events with Event Manager, from Setup, in the Quick Find box, enter *Event Manager*, and select **Event Manager**.

SEE ALSO:

[Salesforce Help: Real-Time Event Monitoring \(Beta\) \(can be outdated or unavailable during release preview\)](#)

[IdeaExchange: Event Monitoring - Reduce the 24h Delay](#)

## Create Transaction Security Policies to Protect Any Object (Beta)

Meet Enhanced Transaction Security, the latest incarnation of Salesforce's transaction security monitoring feature. With Enhanced Transaction Security, you can create transaction security policies for several new events in Salesforce to enforce policies on any standard or custom object. Enhanced Transaction Security is available in Real-Time Event Monitoring (beta).

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions where Event Monitoring is enabled.

 **Note:** As a beta feature, Real-Time Event Monitoring is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for this feature in the [Salesforce Real-Time Events Beta group in the Trailblazer Community](#).

**Who:** Available to customers who purchased Salesforce Shield or Salesforce Event Monitoring add-on subscriptions. To create and manage transaction security policies, enable the Customize Application and View All Data user permissions.

**Why:** With Enhanced Transaction Security, you can create transaction security policies for several events, including:

- AdminSetupEvent (beta)
- ApiEvent (beta)
- ListViewEvent (beta)
- LoginEvent (GA)
- ReportEvent (beta)

In addition, you can create transaction security policies declaratively using Condition Builder or with code using Apex.

To create an Apex transaction security policy using the features that are available in Enhanced Transaction Security, developers can use the new `TxnSecurity.EventCondition` Apex interface.

**How:** From Setup, in the Quick Find box, enter *Transaction Security*, and select **Transaction Security Policies**.

To create a transaction security policy, click **New**. To create a policy declaratively, select **Condition Builder**. To create policy with Apex, select **Apex > Enhanced Transaction Security**.

SEE ALSO:

[Salesforce Help: Stream Data, Enforce Transaction Security Policies, and Store Data \(can be outdated or unavailable during release preview\)](#)

## Enable Login Event Storage Using a New UI

We removed the Login Forensics setting from Event Monitoring Settings. Now, enable event data storage on the Login event on the Event Manager page.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions where Event Monitoring is enabled.

**Who:** Available to customers who purchased Salesforce Shield or Salesforce Event Monitoring add-on subscriptions. To enable streaming and storing events, you must have the Customize Application user permission.

**How:** From Setup, in the Quick Find box, enter *Event Manager*. Next to Login Event, click the dropdown, and select **Enable Storing**.

SEE ALSO:

[Salesforce Help: Monitor Login Activity with Login Forensics \(can be outdated or unavailable during release preview\)](#)

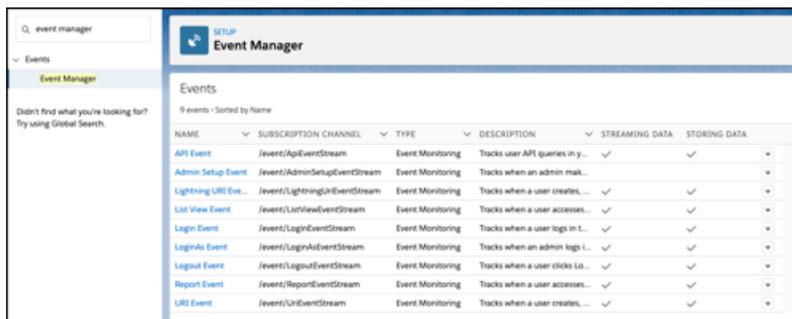
## Manage Event Monitoring Events in One Place

Introducing Event Manager, your one-stop shop to view and update your streaming and stored Event Monitoring events. Now you can easily see all your Event Monitoring events from a simple dashboard.

**Where:** This change applies to Lightning Experience and Salesforce Classic in all editions.

**Who:** Available to all customers. To enable and disable events, enable the View Setup and Customize Application user permissions.

**How:** From Setup, in the Quick Find box, enter *Events* and select **Event Manager**.



NAME	SUBSCRIPTION CHANNEL	TYPE	DESCRIPTION	STREAMING DATA	STORING DATA
API Event	/event/ApiEventStream	Event Monitoring	Tracks user API queries in y...	✓	✓
Admin Setup Event	/event/AdminSetupEventStream	Event Monitoring	Tracks when an admin mak...	✓	✓
Lightning URI Eve...	/event/LightningUriEventStream	Event Monitoring	Tracks when a user creates, ...	✓	✓
List View Event	/event/ListViewEventStream	Event Monitoring	Tracks when a user accesses...	✓	✓
Login Event	/event/LoginEventStream	Event Monitoring	Tracks when a user logs in t...	✓	✓
Logins Event	/event/LoginsEventStream	Event Monitoring	Tracks when an admin logs l...	✓	✓
Logout Event	/event/LogoutEventStream	Event Monitoring	Tracks when a user clicks Lo...	✓	✓
Report Event	/event/ReportEventStream	Event Monitoring	Tracks when a user accesses...	✓	✓
URI Event	/event/UriEventStream	Event Monitoring	Tracks when a user creates, ...	✓	✓

SEE ALSO:

[Salesforce Help: Monitor Streaming Events \(can be outdated or unavailable during release preview\)](#)

## View Changes to Transaction Security Policies in Setup Audit Trail

When you change a transaction security policy, you can now view a log of those changes in Setup Audit Trail. Previously, we didn't track changes to transaction security policies in the Setup Audit Trail. You can also see a log of changes to transaction security policies that you create using Enhanced Transaction Security, part of Real-Time Event Monitoring (beta).

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Available to customers who purchased Salesforce Shield or Salesforce Event Monitoring add-on subscriptions. To create and manage transaction security policies, you must have the Customize Application user permission.

**How:** From Setup, in the Quick Find box, enter *Setup Audit Trail* and select **View Setup Audit Trail**.

SEE ALSO:

[Salesforce Help: Monitor Setup Changes \(can be outdated or unavailable during release preview\)](#)

## Get More Relevant Effective Page Times in Lightning Page View Logs

Effective page time (EPT) outlier values are now filtered out of the Lightning Page View event logs. Outlier values include page times greater than 60 seconds (EPT is measured in milliseconds). Removing the outlier values increases the usefulness and readability of the data in reports and dashboards. When an outlier value is detected, Salesforce replaces the value with null. You might see an increase in null values in the `EFFECTIVE_PAGE_TIME` field because of this change.

**Where:** This change applies to Lightning Experience in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Available to customers who purchased Salesforce Shield or Salesforce Event Monitoring add-on subscriptions.

SEE ALSO:

[Object Reference for Salesforce and Lightning Platform: Lightning Page View Event Type \(can be outdated or unavailable during release preview\)](#)

## Changed Data Type for Fields in Apex Unexpected Exception Event Type

In the Apex Unexpected Exception event type of EventLogFile, we changed the data type of the `EXCEPTION_MESSAGE` field and `STACK_TRACE` field from String to Text.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Who:** Available to customers who purchased Salesforce Shield or Salesforce Event Monitoring add-on subscriptions.

SEE ALSO:

[Object Reference for Salesforce and Lightning Platform: Apex Unexpected Exception Event Type](#)

## Other Security Changes: TLS 1.2 Compliance and Session-Security-Level Policies

Starting in October 2019, all inbound connections to or outbound connections from your Salesforce org must use TLS 1.2. You can now require that users have a high-assurance session security level before accessing sensitive Setup pages or objects, or you can block users based on session level.

IN THIS SECTION:

[Require TLS 1.2 for HTTPS Connections \(Critical Update\)](#)

To maintain the highest security standards and promote the safety of your data, Salesforce is disabling the older Transport Layer Security (TLS) 1.1 encryption protocol. Starting in October 2019, all inbound connections to or outbound connections from your Salesforce org must use TLS 1.2. Verify that your browser access, API integrations, and other Salesforce features are compliant with TLS 1.2.

### [Manage Access to Certificates and Event Log Files with Session-Security-Level Policies](#)

Require that users have a high-assurance session level before accessing certain Setup pages or objects. You can even block users altogether. Manage access to two-factor authentication, certificates, connected apps, and event log files by modifying session-security-level policies.

### [Stabilize the Hostname for My Domain URLs in Sandboxes \(Critical Update, Postponed\)](#)

This critical update, released in Summer '18, was scheduled for auto-activation in Winter '20, but has been postponed to Summer '20.

## Require TLS 1.2 for HTTPS Connections (Critical Update)

To maintain the highest security standards and promote the safety of your data, Salesforce is disabling the older Transport Layer Security (TLS) 1.1 encryption protocol. Starting in October 2019, all inbound connections to or outbound connections from your Salesforce org must use TLS 1.2. Verify that your browser access, API integrations, and other Salesforce features are compliant with TLS 1.2.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions.

**When:** This critical update is enforced on October 25, 2019. Orgs created after this date require TLS 1.2 by default.

**How:** We recommend that you test this update in a sandbox or Developer Edition org to verify end-to-end compatibility before enabling it in your production org.

To activate this critical update before October 25, 2019, from Setup, enter *Critical Updates* in the Quick Find box, then select **Critical Updates**. For Require TLS 1.2 for HTTPS Connections, click **Activate**.

SEE ALSO:

[Knowledge Article: Salesforce Disabling TLS 1.1](#)

[Require TLS 1.2 for HTTPS Connections in Communities and Sites \(Critical Update\)](#)

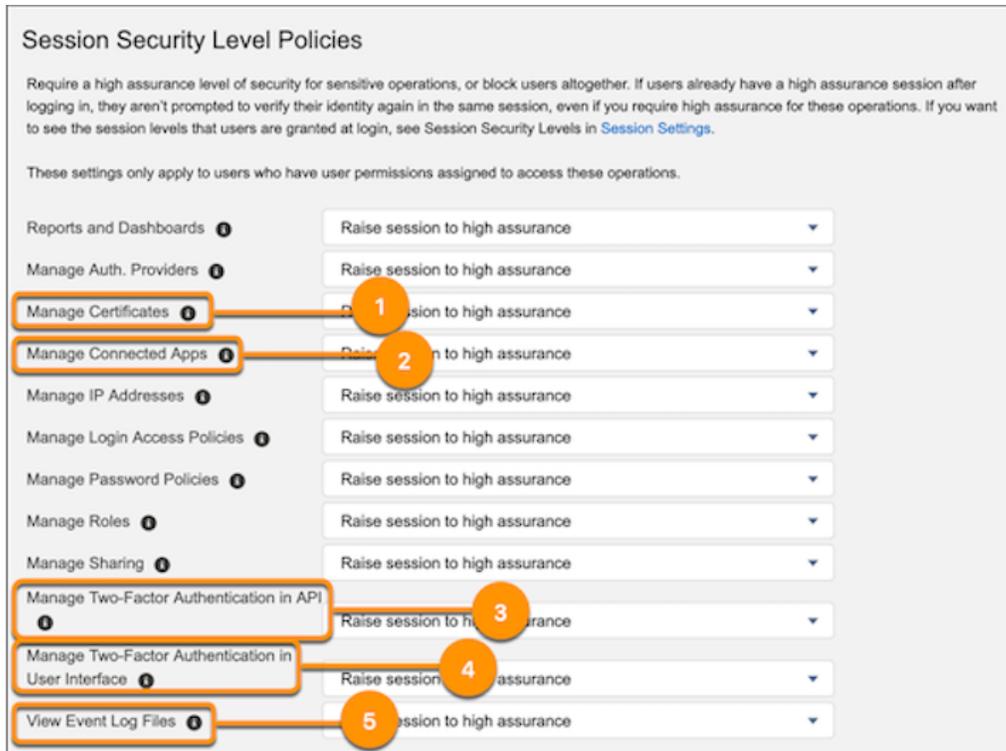
## Manage Access to Certificates and Event Log Files with Session-Security-Level Policies

Require that users have a high-assurance session level before accessing certain Setup pages or objects. You can even block users altogether. Manage access to two-factor authentication, certificates, connected apps, and event log files by modifying session-security-level policies.

**Where:** This change applies to Salesforce Classic and Lightning Experience in all editions.

**Why:** These session-security-level policies are new.

- Manage Certificates (1)—Controls access to the Certificate and Key Management Setup page, Single Sign-On Settings Setup page, and the Certificate object.
- Manage Connected Apps (2)—Controls access to the Connected Apps Setup pages and to creating connected apps through the App Manager Setup page.
- Manage Two-Factor Authentication in API (3)—Controls access to the VerificationHistory, TwoFactorInfo, and TwoFactorTempCode objects.
- Manage Two-Factor Authentication in User Interface (4)—Controls access to the Identity Verification History Setup page and the VerificationHistory, TwoFactorInfo, and TwoFactorTempCode objects.
- View Event Log Files (5)—Controls access to the EventLogFile object.



**How:** From Setup, enter *Identity Verification* in the Quick Find box, then select **Identity Verification**. Locate the Session Security Level Policies section, and update the Manage Sharing setting.

SEE ALSO:

[Salesforce Help: Require High-Assurance Session Security for Sensitive Operations \(can be outdated or unavailable during release preview\)](#)

## Stabilize the Hostname for My Domain URLs in Sandboxes (Critical Update, Postponed)

This critical update, released in Summer '18, was scheduled for auto-activation in Winter '20, but has been postponed to Summer '20.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Professional, Enterprise, Performance, Unlimited, and Database.com editions.

SEE ALSO:

[Summer '18 Release Notes: Stabilize the Hostname for My Domain URLs in Sandboxes \(Critical Update\)](#)

## Deployment: New Change Set Components

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New components are available for deployment.

## IN THIS SECTION:

[New and Changed Components for Change Sets](#)

The components available for a change set vary by edition. These components are now available for change sets.

## New and Changed Components for Change Sets

The components available for a change set vary by edition. These components are now available for change sets.

**Classic Letterhead**

This component was listed as **Letterhead** in previous releases.

**Lightning Bolt**

Represents the definition of a Lightning Bolt Solution, which can include custom apps, flow categories, and Lightning Community templates.

**Permission Set Group**

(Pilot) Represents a group of permission sets and the permissions within them.

**Prompt**

(Beta) Represents the metadata associated with in-app guidance prompts.

**Recommendation Strategy**

Represents a recommendation strategy. Recommendation strategies are applications, similar to data flows, that determine a set of recommendations to be delivered to the client through data retrieval, branching, and logic operations.

**RecordAction Deployment**

Represents an Actions & Recommendations deployment in your org. This change is a label change. In the previous version, this component was called Guided Actions List. You don't need to update any change sets.

## Salesforce IoT: Strategic Name Change

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IoT Insights has a new name: Event Insights.

## IN THIS SECTION:

[IoT Insights Is Now Event Insights](#)

We changed the name to Event Insights to reflect the broader use cases that this feature serves. This name change applies to the Event Insights Lightning standard component in Lightning Experience and Field Service Mobile component in Android.

## IoT Insights Is Now Event Insights

We changed the name to Event Insights to reflect the broader use cases that this feature serves. This name change applies to the Event Insights Lightning standard component in Lightning Experience and Field Service Mobile component in Android.

**Where:** This change applies to Enterprise, Performance, Unlimited, and Developer Editions, in both Salesforce Classic and Lightning Experience.

**Who:** IoT Explorer and IoT Plus customers can use the Event Insights standard Lightning component and the Field Service Mobile component for Android. Sales and Service customers can be nominated for the Summer '19 Event Insights Pilot, which gives them access to the Event Insights Lightning component.

SEE ALSO:

[Salesforce Help: Show Your Data Anywhere in Salesforce with Event Insights](#)

## Development: Creating Your Own Salesforce App

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Whether you're using Lightning components, Visualforce, Apex, or our APIs with your favorite programming language, these enhancements help you develop amazing applications, integrations, and packages for resale to other organizations.

IN THIS SECTION:

[Lightning Components: Lightning Web Components in More Places](#)

Use Lightning web components in standalone apps, Visualforce pages, and Lightning Out (beta). Use Apex continuations from a Lightning web component or an Aura component to make a long-running request to an external web service. We improved the save-time validation for Aura components too.

[Einstein Platform Services: Image Recognition and Natural Language Processing](#)

Not a data scientist or machine-learning expert, but still want to integrate AI into your apps? Use the Einstein Platform Services APIs to easily AI-enable your apps with image recognition and natural language processing. Using the Einstein Vision APIs, you can leverage pre-trained classifiers or train custom classifiers to solve a vast array of image recognition use cases. With the Einstein Language APIs, you can harness the power of natural language processing to analyze text and infer the sentiment or intent behind the text. Make your apps smarter and look like a genius at the same time.

[Visualforce: Introducing Live Controller \(Pilot\), Update Your Guest Access to Private Static Resources, CKEditor Replaces FCKEditor](#)

Use the live controller Visualforce component to display changes to data in real time. Update your guest user access to Static Resources with Private Cache control. Visualforce no longer supports the FCKEditor rich text editor

[Apex](#)

Apex has a new security feature for field-level data protection, which is accessed through the `System.Security` and `System.SObjectAccessDecision` classes. You can now use the power of platform cache with scratch orgs and leverage cached data to speed up your Visualforce pages. Batch Apex classes can fire platform events when encountering an error or exception.

[API](#)

The Modify Metadata through Metadata API Functions permission is generally available. There are pilots available for Mass Operations in REST API and for Query in Bulk API 2.0.

[Custom Metadata Types: Referencing Records from Process Builder and Increased Capacity](#)

When you use Process Builder, reference a custom metadata type record to reuse functionality. When working with custom metadata types, enjoy increased capacity and an updated user interface.

[Salesforce CLI: Faster Load Times, Expanded Project Scaffolding](#)

The Salesforce command-line interface (CLI) continues to evolve with more features and commands that support the org development and package development models. Use it to create environments for development and testing, synchronize source code, run tests, and control the full application life cycle.

### [Scratch Orgs: New Features](#)

A scratch org is a dedicated and configurable Salesforce environment that you can quickly spin up for many different purposes. It can be your own personal development environment, or you can create a headless scratch org for automated tests. You can create scratch orgs if you turned on Dev Hub in your production org or a Developer Edition org, or have a Dev Hub trial org. We continually add support for new features.

### [Sandboxes: CLI Commands](#)

Speed up your sandbox management with new Salesforce CLI commands.

### [Salesforce Extensions for VS Code: Enhanced Aura Components Support, Upcoming Force.com IDE Retirement](#)

In addition to the changes we've made in weekly releases, Salesforce Extensions for VS Code v46 includes some major enhancements. Accelerate Aura component development with the VS Code Aura Components extension. Start preparing now for the October 2019 retirement of Force.com IDE.

### [Developer Console: Prettified Code, Accurate Dates in Different Time Zones](#)

The Fix Code Formatting feature uses the Prettier code formatter to format your Aura components. In the Developer Console Tests tab, the correct date and time now appear in the Enqueued Time field regardless of your computer's locale settings.

### [Debugging: More Debug Log Storage](#)

We increased the storage limits for debug logs.

### [Packaging: Unlocked Packaging and Second-Generation Managed Packaging Enhancements](#)

Customize how unlocked packages are installed, easily modify namespaced unlocked packages, and track leads and licenses for second-generation managed packages.

### [AppExchange Partners: Analytics for Managed Packages and the AppExchange Marketplace, ISV Hammer \(Pilot\)](#)

Build a thriving AppExchange business with tools and features for Salesforce partners. Discover how customers find and interact with your AppExchange listing in the Marketplace Analytics dashboard. Learn how subscribers use your managed packages by exploring App Analytics data. Test your package versions with ISV Hammer (pilot).

### [Change Data Capture: Apex Triggers, Custom Channels, and More Object Support](#)

Get Apex trigger support for subscribing to change event messages, custom streams of notifications, additional object support, and more.

### [Platform Events: Event Publishing Behavior, Trigger Batch Size, Error Notifications for Publishing, and Lightning Web Component](#)

You can now specify when the publishing of a platform event occurs in a transaction. Control the event trigger batch size, and recover from uncaught exceptions. Monitor the publishing of event messages by subscribing to a channel for asynchronous error notifications. Take advantage of the Lightning web component programming model with the `lightning/empApi` module.

### [New and Changed Items for Developers](#)

Here is where you can find new and changed objects, calls, classes, components, commands, and more that help you customize Salesforce features.

## Lightning Components: Lightning Web Components in More Places

Use Lightning web components in standalone apps, Visualforce pages, and Lightning Out (beta). Use Apex continuations from a Lightning web component or an Aura component to make a long-running request to an external web service. We improved the save-time validation for Aura components too.

For more information about the two programming models for Lightning components, see:

- [Lightning Web Components Developer Guide](#)
- [Lightning Aura Components Developer Guide](#)

 **Note:** Looking for [new and changed Lightning web components, Aura components, and Aura component interfaces](#)? We consolidated the lists of new and changed items at the end of the Development section.

#### IN THIS SECTION:

##### [Make Long-Running Callouts with Continuations](#)

Use the `Continuation` class in Apex to make a long-running request to an external web service from an Aura component or a Lightning web component. Process the response in a callback method. An asynchronous callout made with a continuation doesn't count toward the Apex limit of 10 synchronous requests that last longer than five seconds. Therefore, you can make more long-running callouts and integrate your component with a complex back-end API.

##### [Use Lightning Web Components in Standalone Aura Apps](#)

Adding a Lightning web component to a standalone Aura app is now supported.

##### [Use Lightning Web Components in Visualforce Pages](#)

Add a Lightning web component to a Visualforce page to combine features that you've built using both technologies. Implement new functionality using Lightning web components and then use it with existing Visualforce pages.

##### [Add Lightning Web Components to Apps with Lightning Out \(Beta\)](#)

Use Lightning Out to run Lightning web components outside of Salesforce servers. Whether it's a Node.js app running on Heroku or a department server inside the firewall, build your Lightning web components in a standalone Aura app. Then, run them wherever your users are. Lightning Out is already available for Aura components. This change offers equivalent functionality for Lightning web components.

##### [DOM Inspection Tests Are Subject to Change](#)

The content and structure of HTML, CSS, and the DOM in Lightning Experience can change at any time and can't be considered a stable API. UI tests that use tools like Selenium WebDriver to reach into component internals require your ongoing maintenance. This is not a change in Summer '19, as we've never guaranteed backward-compatible HTML, CSS and the DOM. We're calling out the fragility of these tests again due to changes in this release as Lightning Experience continues to evolve with modern web standards. We understand the value that our customers gain from automated UI testing, and the maintenance burden this puts on them.

##### [Improved Save-Time Validation for Aura Components](#)

We've improved save-time validations so that any errors in your custom Aura components are identified at save time. Previously, some code errors weren't consistently caught at save time and were seen only at runtime. This change might uncover previously undetected errors in your custom components at save time.

##### [Prevent Creation of Function Expressions in Dynamically Created Aura Components \(Critical Update\)](#)

To improve security and stability, this update prevents attribute values passed to `$.createComponent()` or `$.createComponents()` from being interpreted as Aura function expressions.

##### [Disable Access to Non-global Apex Controller Methods in Managed Packages \(Previously Released Critical Update\)](#)

As mentioned in the Spring '19 release notes, this critical update corrects access controls on Apex controller methods in managed packages. When this update is enabled, only methods marked with the `global` access modifier are accessible by Aura components from outside the package namespace. These access controls prevent you from using unsupported API methods that the package author didn't intend for global access.

##### [Use without sharing for @AuraEnabled Apex Controllers with Implicit Sharing \(Critical Update, Postponed\)](#)

This critical update, released in Spring '18, was scheduled for auto-activation in Summer '19, but has been postponed to Winter '20.

##### [Extend Email Integrations with Lightning Web Components](#)

When creating custom components, rest assured that the custom Lightning web components that you create are supported in the Outlook and Gmail integration panes. Use the target tag `lightning__Inbox` to ensure components you create can seamlessly integrate with Outlook and Gmail integrations.

### [Configure Your Component for Different Devices](#)

If your Lightning component is used on a Lightning page, you can declare which form factors your component supports: desktop, phone, or both. For example, on an app page—which supports both desktop and phone—you can now configure a component to only render when that app page is viewed on a particular device. If you restrict form factor support for your component to phone only, the app page drops the component when the page is viewed on desktop, and displays it when the page is viewed on a phone.

### [Test JavaScript for Lightning Locker Compatibility](#)

Lightning Locker tools have improved usability. Locker Console shows detailed instructions and sample code in the text area to help you get started using the tool to evaluate your code. Locker API Viewer and Locker Console have new icons and updated styling.

### [Add Static Resources to CORS Whitelist](#)

You can now add static resources to the CORS whitelist. For example, say that you use Lightning Out to display Lightning components on an external site, like SAP. If your components rely on static resources stored in Salesforce, save SAP to the CORS whitelist in Setup. If a domain isn't in the CORS whitelist, browsers don't load fonts or JavaScript file referenced from static resources.

#### SEE ALSO:

[Lightning Web Components Developer Guide](#)

[Lightning Aura Components Developer Guide](#)

## Make Long-Running Callouts with Continuations

Use the `Continuation` class in Apex to make a long-running request to an external web service from an Aura component or a Lightning web component. Process the response in a callback method. An asynchronous callout made with a continuation doesn't count toward the Apex limit of 10 synchronous requests that last longer than five seconds. Therefore, you can make more long-running callouts and integrate your component with a complex back-end API.

**Where:** This change applies to Aura components and Lightning web components in Lightning Experience, Salesforce Classic, Lightning communities, and all versions of the Salesforce app.

**How:** Continuations can lead to multiple long-running actions, so be aware of these limits when using them.

### Up to three callouts per continuation

A single `Continuation` object can contain a maximum of three callouts.

### Serial processing for continuation actions

The framework processes actions containing a continuation serially from the client. The previous continuation action call must have completed before the next continuation action call is made. At any time, you can have only one continuation in progress on the client.

### DML operation restrictions

An Apex method that returns a `Continuation` object can't perform Data Manipulation Language (DML) operations. DML statements insert, update, merge, delete, and restore data in Salesforce. If a DML operation is performed within the continuation method, the continuation execution doesn't proceed, the transaction is rolled back, and an error is returned.

You can perform DML operations in the Apex callback method for the continuation.

#### SEE ALSO:

[Lightning Aura Components Developer Guide](#)

[Lightning Web Components Developer Guide](#)

## Use Lightning Web Components in Standalone Aura Apps

Adding a Lightning web component to a standalone Aura app is now supported.

**Where:** This change applies to Lightning web components in standalone Aura apps.

**How:** The naming convention to reference a Lightning web component is `<namespace:camelCaseComponentName>`, which is the same as the naming convention for using a Lightning web component in an Aura component.

This standalone Aura app uses the `myComponent` Lightning web component in the default `c` namespace.

```
<!-- sampleApp.app -->
<aura:application>
  <c:myComponent />
</aura:application>
```

SEE ALSO:

[Lightning Web Components Developer Guide: Compose Aura Components from Lightning Web Components](#)

## Use Lightning Web Components in Visualforce Pages

Add a Lightning web component to a Visualforce page to combine features that you've built using both technologies. Implement new functionality using Lightning web components and then use it with existing Visualforce pages.

**Where:** This change applies to Lightning web components in Visualforce pages. To create a Lightning web component, use Enterprise, Performance, Unlimited, and Developer editions.

**How:** Adding a Lightning web component to a Visualforce page is a three-step process.

1. Add the Lightning Web Components for Visualforce JavaScript library to your Visualforce page using the `<apex:includeLightning/>` component.
2. Create and reference a standalone Aura app that declares your component dependencies.
3. Write a JavaScript function that creates the component on the page using `$Lightning.createComponent()`.

Use the `<namespace:camelCaseComponentName>` naming convention to reference a Lightning web component in a Visualforce page.

For more details, see the [Lightning Web Components Developer Guide](#).

## Add Lightning Web Components to Apps with Lightning Out (Beta)

Use Lightning Out to run Lightning web components outside of Salesforce servers. Whether it's a Node.js app running on Heroku or a department server inside the firewall, build your Lightning web components in a standalone Aura app. Then, run them wherever your users are. Lightning Out is already available for Aura components. This change offers equivalent functionality for Lightning web components.

**Where:** This change applies to Lightning web components running outside of Salesforce servers.

 **Note:** As a beta feature, Lightning Out is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature.

**How:** Developing Lightning web components that you can deploy anywhere is generally the same as developing them to run within Salesforce. Everything you know about Lightning web component development still applies. The difference is how you embed your app in the remote web container.

On the remote web container, include the Lightning Out JavaScript library in the page that contains your standalone Aura app. Add markup to configure and activate your standalone Aura app. When initialized, Lightning Out pulls in your app over a secure connection, spins it up, and inserts it into the DOM of the page it's running on. When it reaches this point, your Lightning web component code takes over and runs the show.

In addition to some straightforward markup, you do a modest amount of setup and preparation within Salesforce to enable the secure connection between Salesforce and the remote web container. And because the remote web container is hosting the app, you need to manage authentication with your own code.

For more details, see the [Lightning Web Components Developer Guide](#).

## DOM Inspection Tests Are Subject to Change

The content and structure of HTML, CSS, and the DOM in Lightning Experience can change at any time and can't be considered a stable API. UI tests that use tools like Selenium WebDriver to reach into component internals require your ongoing maintenance. This is not a change in Summer '19, as we've never guaranteed backward-compatible HTML, CSS and the DOM. We're calling out the fragility of these tests again due to changes in this release as Lightning Experience continues to evolve with modern web standards. We understand the value that our customers gain from automated UI testing, and the maintenance burden this puts on them.

**Where:** This release note applies to Lightning Experience and Salesforce Classic.

**Why:** In Summer '19, Lightning record pages use Lightning web components instead of Aura components.

Lightning web components are based on the Web Components standard. This standard includes Shadow DOM, which hides a component's markup, style, and behavior from other components. This encapsulation poses challenges for UI tests, especially tests that rely on globally searching the DOM or reaching into the internals of custom elements.

**How:** Elements that are rendered by Lightning web components contain a `shadowRoot` property that encapsulates an element's DOM subtree. This `shadowRoot` is represented as a `DocumentFragment` in the DOM and elements inside this DOM subtree are not available by traditional DOM querying methods. These elements are hidden from normal DOM queries.

We recommend using unit-testing tools to test individual Aura components and Lightning web components, and only using UI testing tools for end-to-end testing.

For Aura components, use [Lightning Testing Service](#) to write unit tests. Lightning Testing Service supports testing with standard JavaScript test frameworks. It provides easy-to-use wrappers for using Jasmine and Mocha.

For Lightning web components, use [lwc-jest](#) to write unit tests.

For end-to-end UI tests, adapt your existing tests for Shadow DOM use. How to do this varies by tool, and is rapidly evolving. At this moment in time, [this article](#) is a good example for Selenium WebDriver.

## Improved Save-Time Validation for Aura Components

We've improved save-time validations so that any errors in your custom Aura components are identified at save time. Previously, some code errors weren't consistently caught at save time and were seen only at runtime. This change might uncover previously undetected errors in your custom components at save time.

**Where:** This change applies to Aura components in Lightning Experience, Salesforce Classic, and all versions of the Salesforce app.

**How:** Let's look at some examples of errors. The error messages aren't new but the errors are now consistently caught at save time or package upgrade time instead of runtime.

If a component implements `force:appHostable`, an attribute with a required value in the component must have a default value. This component generates an error at save time.

```
<aura:component implements="force:appHostable">
  <!--<aura:attribute name="whom" type="String" required="true" default="world"/>-->
  <aura:attribute name="whom" type="String" required="true" />
  Hello {!v.whom}!
</aura:component>
```

The error is:

```
You can't mark attributes 'XXXX' as required without specifying default values when the
component implements interface 'force:appHostable'
```

The fix is to swap out the attribute definition with the commented-out definition that has `default="world"`.

Another example is when a managed package removes a design attribute that was exposed in an earlier version of the managed package. This scenario now consistently results in an error during the package upgrade:

```
You can't remove design attributes 'xxxxxx' when the component implements a Lightning Page
interface.
```

The fix is to make sure that the design attribute is still in the package.

## Prevent Creation of Function Expressions in Dynamically Created Aura Components (Critical Update)

To improve security and stability, this update prevents attribute values passed to `$.createComponent()` or `$.createComponents()` from being interpreted as Aura function expressions.

**Where:** This change applies to orgs with Aura components in Lightning Experience, Salesforce Classic, and all versions of the Salesforce app.

**Why:** When the critical update is activated, using the key-value pair `{ "exprType": "FUNCTION" }` in an object passed as an attribute value to `$.createComponent()` or `$.createComponents()` throws an error instead of triggering unpredictable behavior.

**How:** To test this critical update, we recommend working in a sandbox.

1. From Setup, enter *Critical Updates* in the Quick Find box.
2. Select **Critical Updates**.
3. Review the details for the "Prevent Creation of Function Expressions When Using `$.createComponent()` or `$.createComponents()` in Aura Components" critical update.
4. Click **Activate**.
5. Test that the custom Aura components that you've developed are working correctly.

SEE ALSO:

[Lightning Aura Components Developer Guide: Dynamically Creating Components Critical Updates](#)

## Disable Access to Non-`global` Apex Controller Methods in Managed Packages (Previously Released Critical Update)

As mentioned in the Spring '19 release notes, this critical update corrects access controls on Apex controller methods in managed packages. When this update is enabled, only methods marked with the `global` access modifier are accessible by Aura components from outside the package namespace. These access controls prevent you from using unsupported API methods that the package author didn't intend for global access.

**Where:** This change applies to orgs with Aura components in Lightning Experience, Salesforce Classic, and all versions of the Salesforce app.

**Why:** When added to a managed package, only Apex controller methods marked `global` should be accessible by Aura components outside of that managed package's namespace. Methods marked `public` in their Apex definitions should be accessible only to Aura components included in the package's same namespace. When this update is enabled, these rules are enforced.

Prior to this update, non-`global` methods (that is, Apex controller methods that weren't marked with the `global` access modifier) could be accessed by Aura components outside of the package namespace.

When this update is enabled, if you've written code that incorrectly depends on non-`global` Apex methods in a managed package, server actions that call those methods fail. Update your code to use only the supported API methods provided by the package as `global` methods.

**How:** To test this critical update, we recommend working in a sandbox.

1. From Setup, enter *Critical Updates* in the Quick Find box.
2. Select **Critical Updates**.
3. Review the details for the "Disable Access to Non-`global` Controller Methods in Managed Packages" critical update.
4. Click **Activate**.
5. Test that the custom Aura components that you've developed are working correctly.

## Use **without sharing** for `@AuraEnabled` Apex Controllers with Implicit Sharing (Critical Update, Postponed)

This critical update, released in Spring '18, was scheduled for auto-activation in Summer '19, but has been postponed to Winter '20.

**Where:** This change applies to orgs with Lightning components in Lightning Experience, Salesforce Classic, and all versions of the mobile app.

SEE ALSO:

[Spring '18 Release Notes: Use without sharing for @AuraEnabled Apex Controllers with Implicit Sharing \(Critical Update\)](#)

## Extend Email Integrations with Lightning Web Components

When creating custom components, rest assured that the custom Lightning web components that you create are supported in the Outlook and Gmail integration panes. Use the target tag `lightning__Inbox` to ensure components you create can seamlessly integrate with Outlook and Gmail integrations.

**Where:** This change applies to Lightning Experience, Lightning Communities, and all versions of the Salesforce app in all editions.

SEE ALSO:

[Lightning Web Components Developer Guide](#)

## Configure Your Component for Different Devices

If your Lightning component is used on a Lightning page, you can declare which form factors your component supports: desktop, phone, or both. For example, on an app page—which supports both desktop and phone—you can now configure a component to only render when that app page is viewed on a particular device. If you restrict form factor support for your component to phone only, the app page drops the component when the page is viewed on desktop, and displays it when the page is viewed on a phone.

**Where:** This change applies to Aura components and Lightning web components in Lightning Experience and all versions of the Salesforce mobile app.

**How:**

### Aura Components

To designate which device form factors an Aura component supports, use the `design:supportedFormFactors` tag set the component's design file. The `design:supportedFormFactor` subtag supports the `type` attribute. Valid `type` values are `Large` (desktop) and `Small` (phone).

This "Hello World" component design file adds support for both desktop and phone form factors.

```
<design:component label="Hello World">
  <design:attribute name="subject" label="Subject" description="Name of the person you
  want to greet" />
  <design:attribute name="greeting" label="Greeting" />
  <design:supportedFormFactors>
    <design:supportedFormFactor type="Large"/>
    <design:supportedFormFactor type="Small"/>
  </design:supportedFormFactors>
</design:component>
```

### Lightning Web Components

In the `<targetConfigs>` section of your Lightning web component configuration file, use the `supportedFormFactors` tag set to declare which form factors the component supports.

For example, this component is supported for two page types. There are different `<targetConfigs>` entries for each page type, which means that the component can work differently on different types of pages.

```
<?xml version="1.0" encoding="UTF-8"?>
<LightningComponentBundle xmlns="http://soap.sforce.com/2006/04/metadata">
  <apiVersion>42.0</apiVersion>
  <isExposed>>false</isExposed>
  <masterLabel>Best Component Ever</masterLabel>
  <description>This is a demo component.</description>
  <targets>
    <target>lightning__RecordPage</target>
    <target>lightning__AppPage</target>
  </targets>
  <targetConfigs>
    <targetConfig targets="lightning__RecordPage">
      <property name="prop1" type="String" />
      <supportedFormFactors>
        <supportedFormFactor type="Large" />
      </supportedFormFactors>
    </targetConfig>
```

```
<targetConfig targets="lightning__AppPage">
  <property name="prop2" type="Boolean" />
  <supportedFormFactors>
    <supportedFormFactor type="Small" />
    <supportedFormFactor type="Large" />
  </supportedFormFactors>
</targetConfig>
</LightningComponentBundle>
```

The two page types have been configured for different form factors. On app pages (`lightning__AppPage`), the component is supported for the phone (`Small`) and desktop (`Large`). On record pages (`lightning__RecordPage`), the component is supported for desktop only.

## Test JavaScript for Lightning Locker Compatibility

Lightning Locker tools have improved usability. Locker Console shows detailed instructions and sample code in the text area to help you get started using the tool to evaluate your code. Locker API Viewer and Locker Console have new icons and updated styling.

**Where:** These changes apply to the [Locker Console](#) and [Locker API Viewer](#). The tools are also available from the Component Library in your org at `your-domain.com/docs/component-library`.

**How:** For more information, see [Lightning Aura Components Developer Guide](#).

## Add Static Resources to CORS Whitelist

You can now add static resources to the CORS whitelist. For example, say that you use Lightning Out to display Lightning components on an external site, like SAP. If your components rely on static resources stored in Salesforce, save SAP to the CORS whitelist in Setup. If a domain isn't in the CORS whitelist, browsers don't load fonts or JavaScript file referenced from static resources.

**Where:** This change applies to Aura components and Lightning web components in Lightning Experience and Salesforce Classic and all communities.

SEE ALSO:

[Salesforce Help: Use CORS to Access Salesforce Resources from Web Browsers](#)

## Einstein Platform Services: Image Recognition and Natural Language Processing

Not a data scientist or machine-learning expert, but still want to integrate AI into your apps? Use the Einstein Platform Services APIs to easily AI-enable your apps with image recognition and natural language processing. Using the Einstein Vision APIs, you can leverage pre-trained classifiers or train custom classifiers to solve a vast array of image recognition use cases. With the Einstein Language APIs, you can harness the power of natural language processing to analyze text and infer the sentiment or intent behind the text. Make your apps smarter and look like a genius at the same time.

IN THIS SECTION:

[Training Requests from Paid Plans Are Prioritized](#)

Training requests from customers with a paid plan are prioritized before requests from customers on a free plan. A training request is any call to a `/train` or `/retrain` resource. You could experience a delay in training if you're on the free tier of service and other requests are in the queue.

### [Number of API Calls to Return Examples Is Limited to 30 Calls Per Month](#)

Each Einstein Platform Services account is now limited to 30 calls per calendar month to Einstein Vision and Einstein Language endpoints that return examples. This limit applies across all APIs that return examples. If you exceed this limit, you receive an error message.

### [Einstein Vision: Dataset Maximum Size Increased, New language Field](#)

Tap into the power of AI and train deep-learning models to recognize and classify images at scale. You can use pre-trained classifiers or train your own custom classifiers to solve unique use cases.

### [Einstein Language: Dataset Maximum Size Increased, New language Parameter and Field](#)

Use the Einstein Language APIs to build natural language processing into your apps and unlock powerful insights within text. The language APIs include the Einstein Intent API and the Einstein Sentiment API.

## Training Requests from Paid Plans Are Prioritized

Training requests from customers with a paid plan are prioritized before requests from customers on a free plan. A training request is any call to a `/train` or `/retrain` resource. You could experience a delay in training if you're on the free tier of service and other requests are in the queue.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Group, Professional, Enterprise, Performance, Unlimited, Developer, and Contact Manager editions.

**How:** Use this API usage cURL call to find out what type of plan you have.

```
curl -X GET -H "Authorization: Bearer <TOKEN>" -H "Cache-Control: no-cache"
https://api.einstein.ai/v2/apiusage
```

The free plan has a `plan` value of `STARTER`. The response for a paid plan looks similar to this JSON.

```
{
  "object": "list",
  "data": [
    {
      "id": "243121",
      "organizationId": "108",
      "startsAt": "2019-02-01T00:00:00.000+0000",
      "endsAt": "2019-03-01T00:00:00.000+0000",
      "planData": [
        {
          "plan": "SFDC_1M_EDITION",
          "amount": 1,
          "source": "SALESFORCE"
        }
      ],
      "licenseId": "QnbapKxcaJ",
      "object": "apiusage",
      "predictionsRemaining": 1000000,
      "predictionsUsed": 0,
      "predictionsMax": 1000000
    }
  ]
}
```

```
  ]
}
```

## SEE ALSO:

[Einstein Platform Services Developer Guide: Get API Usage](#)

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

## Number of API Calls to Return Examples Is Limited to 30 Calls Per Month

Each Einstein Platform Services account is now limited to 30 calls per calendar month to Einstein Vision and Einstein Language endpoints that return examples. This limit applies across all APIs that return examples. If you exceed this limit, you receive an error message.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Group, Professional, Enterprise, Performance, Unlimited, Developer, and Contact Manager editions.

**How:** These API endpoints return examples.

- Get all Einstein Vision examples—GET `/v2/vision/datasets/<DATASET_ID>/examples`
- Get all Einstein Vision examples for a label—GET `/v2/vision/examples?labelId=<LABEL_ID>`
- Get all Einstein Language examples—GET `/v2/language/datasets/<DATASET_ID>/examples`
- Get all Einstein Language examples for a label—GET `/v2/language/examples?labelId=<LABEL_ID>`

## SEE ALSO:

[Einstein Platform Services Developer Guide: Get All Examples \(Einstein Vision\)](#)

[Einstein Platform Services Developer Guide: Get All Examples \(Einstein Language\)](#)

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

## Einstein Vision: Dataset Maximum Size Increased, New `language` Field

Tap into the power of AI and train deep-learning models to recognize and classify images at scale. You can use pre-trained classifiers or train your own custom classifiers to solve unique use cases.

## IN THIS SECTION:

[Maximum Image Dataset Size Increased to 2 GB](#)

Get the bigger picture. We doubled the maximum size of an image dataset from 1 GB to 2 GB.

[Exceeding the Maximum Dataset Size Returns an Error](#)

When you create an image dataset (using the POST call) or add data to an image dataset (using the PUT call), if the resulting dataset exceeds 2 GB, the call fails and an error is returned.

[API Response JSON Contains a New `language` Field](#)

The response JSON for any Einstein Vision API call that returns dataset information now contains the `language` field. The return value is `N/A`.

### [API Response JSON Contains a New numOfDuplicates Field](#)

The response JSON for any Einstein Vision API call that returns dataset information now includes the `numOfDuplicates` field. This field indicates the number of images not added to the dataset because they're duplicates.

SEE ALSO:

[Einstein Platform Services Developer Guide: Introduction to Salesforce Einstein Vision](#)

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

## Maximum Image Dataset Size Increased to 2 GB

Get the bigger picture. We doubled the maximum size of an image dataset from 1 GB to 2 GB.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Group, Professional, Enterprise, Performance, Unlimited, Developer, and Contact Manager editions.

## Exceeding the Maximum Dataset Size Returns an Error

When you create an image dataset (using the POST call) or add data to an image dataset (using the PUT call), if the resulting dataset exceeds 2 GB, the call fails and an error is returned.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Group, Professional, Enterprise, Performance, Unlimited, Developer, and Contact Manager editions.

SEE ALSO:

[Einstein Platform Services Developer Guide: Create a Dataset from a Zip File Asynchronously](#)

[Einstein Platform Services Developer Guide: Create a Dataset from a Zip File Synchronously](#)

[Einstein Platform Services Developer Guide: Create Examples from a Zip File](#)

## API Response JSON Contains a New `language` Field

The response JSON for any Einstein Vision API call that returns dataset information now contains the `language` field. The return value is N/A.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Group, Professional, Enterprise, Performance, Unlimited, Developer, and Contact Manager editions.

**How:** The `language` field appears in the response for these calls.

- Create a dataset asynchronously—POST `/v2/vision/datasets/upload`
- Create a dataset synchronously—POST `/v2/vision/datasets/upload/sync`
- Create a dataset—POST `/v2/vision/datasets`
- Get a dataset—GET `/v2/vision/datasets/<DATASET_ID>`
- Get all datasets—GET `/v2/vision/datasets`
- Create examples from a .zip file—PUT `/v2/vision/datasets/<DATASET_ID>/upload`
- Create feedback examples from a .zip file—PUT `/v2/vision/bulkfeedback`

The call to return a dataset looks similar to this JSON.

```
{
  "id": 1014119,
```

```

    "name": "mountainvsbeach",
    "createdAt": "2019-03-06T18:54:01.000+0000",
    "updatedAt": "2019-03-06T18:54:07.000+0000",
    "labelSummary": {
      "labels": [
        {
          "id": 78375,
          "datasetId": 1014119,
          "name": "Mountains",
          "numExamples": 231
        },
        {
          "id": 78376,
          "datasetId": 1014119,
          "name": "Beaches",
          "numExamples": 232
        }
      ]
    },
    "totalExamples": 463,
    "totalLabels": 2,
    "available": true,
    "statusMsg": "SUCCEEDED",
    "type": "image",
    "language": "N/A",
    "numOfDuplicates": 12,
    "object": "dataset"
  }

```

**SEE ALSO:**

- [Einstein Platform Services Developer Guide: Create a Dataset from a Zip File Asynchronously](#)
- [Einstein Platform Services Developer Guide: Create a Dataset from a Zip File Synchronously](#)
- [Einstein Platform Services Developer Guide: Create a Dataset](#)
- [Einstein Platform Services Developer Guide: Get a Dataset](#)
- [Einstein Platform Services Developer Guide: Get All Datasets](#)

**API Response JSON Contains a New `numOfDuplicates` Field**

The response JSON for any Einstein Vision API call that returns dataset information now includes the `numOfDuplicates` field. This field indicates the number of images not added to the dataset because they're duplicates.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Group, Professional, Enterprise, Performance, Unlimited, Developer, and Contact Manager editions.

**Why:** When you create a dataset or add data to a dataset, duplicate images are omitted. The `numOfDuplicates` field appears in the response for these calls.

- Create a dataset asynchronously—POST `/v2/vision/datasets/upload`
- Create a dataset synchronously—POST `/v2/vision/datasets/upload/sync`
- Create a dataset —POST `/v2/vision/datasets`
- Get a dataset—GET `/v2/vision/datasets/<DATASET_ID>`

- Get all datasets—GET /v2/vision/datasets
- Create examples from a .zip file—PUT /v2/vision/datasets/<DATASET\_ID>/upload
- Create feedback examples from a .zip file—PUT /v2/vision/bulkfeedback

The call to return a dataset looks similar to this JSON.

```
{
  "id": 1014119,
  "name": "mountainvsbeach",
  "createdAt": "2019-03-06T18:54:01.000+0000",
  "updatedAt": "2019-03-06T18:54:07.000+0000",
  "labelSummary": {
    "labels": [
      {
        "id": 78375,
        "datasetId": 1014119,
        "name": "Mountains",
        "numExamples": 231
      },
      {
        "id": 78376,
        "datasetId": 1014119,
        "name": "Beaches",
        "numExamples": 232
      }
    ]
  },
  "totalExamples": 463,
  "totalLabels": 2,
  "available": true,
  "statusMsg": "SUCCEEDED",
  "type": "image",
  "language": "N/A",
  "numOfDuplicates": 12,
  "object": "dataset"
}
```

#### SEE ALSO:

[Einstein Platform Services Developer Guide: Create a Dataset from a Zip File Asynchronously](#)

[Einstein Platform Services Developer Guide: Create a Dataset from a Zip File Asynchronously](#)

[Einstein Platform Services Developer Guide: Create a Dataset](#)

[Einstein Platform Services Developer Guide: Get a Dataset](#)

[Einstein Platform Services Developer Guide: Get All Datasets](#)

## Einstein Language: Dataset Maximum Size Increased, New `language` Parameter and Field

Use the Einstein Language APIs to build natural language processing into your apps and unlock powerful insights within text. The language APIs include the Einstein Intent API and the Einstein Sentiment API.

## IN THIS SECTION:

[Maximum Text Dataset Size Increased to 2 GB](#)

Store more words. We doubled the maximum size of a text dataset from 1 GB to 2 GB.

[Exceeding the Maximum Dataset Size Returns an Error](#)

When you create a text dataset (using the POST call) or add data to a text dataset (using the PUT call), if the resulting dataset exceeds 2 GB, the call fails and an error is returned.

[Use the Optional language Parameter When Creating a Text Dataset](#)

When creating a text dataset, you can now specify a language with the new `language` parameter. The default is `ENGLISH`. We created this parameter for future use, so you don't need to do anything now.

[API Response JSON Contains a New language Field](#)

The response JSON for any Einstein Language API call that returns dataset information now contains the `language` field. The return value for existing datasets is `ENGLISH`.

[API Response JSON Contains a New numOfDuplicates Field](#)

The response JSON for any Einstein Language API call that returns dataset information now includes the `numOfDuplicates` field. This field indicates the number of text strings not added to the dataset because they're duplicates.

## SEE ALSO:

[Einstein Platform Services Developer Guide: Introduction to Salesforce Einstein Language](#)

[Salesforce Einstein: Bots Faster to Set Up, Data Checker in Prediction Builder, and Sales Cloud Quarterly Forecasts](#)

## Maximum Text Dataset Size Increased to 2 GB

Store more words. We doubled the maximum size of a text dataset from 1 GB to 2 GB.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Group, Professional, Enterprise, Performance, Unlimited, Developer, and Contact Manager editions.

## Exceeding the Maximum Dataset Size Returns an Error

When you create a text dataset (using the POST call) or add data to a text dataset (using the PUT call), if the resulting dataset exceeds 2 GB, the call fails and an error is returned.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Group, Professional, Enterprise, Performance, Unlimited, Developer, and Contact Manager editions.

## SEE ALSO:

[Einstein Platform Services Developer Guide: Create a Dataset from a File Asynchronously](#)

[Einstein Platform Services Developer Guide: Create a Dataset from a File Synchronously](#)

[Einstein Platform Services Developer Guide: Create Examples from a File](#)

## Use the Optional language Parameter When Creating a Text Dataset

When creating a text dataset, you can now specify a language with the new `language` parameter. The default is `ENGLISH`. We created this parameter for future use, so you don't need to do anything now.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Group, Professional, Enterprise, Performance, Unlimited, Developer, and Contact Manager editions.

**How:** The `language` parameter is available in these calls.

- Create a dataset asynchronously—POST `/v2/language/datasets/upload`
- Create a dataset synchronously—POST `/v2/language/datasets/upload/sync`

## API Response JSON Contains a New `language` Field

The response JSON for any Einstein Language API call that returns dataset information now contains the `language` field. The return value for existing datasets is `ENGLISH`.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Group, Professional, Enterprise, Performance, Unlimited, Developer, and Contact Manager editions.

**How:** The `language` field appears in the response for these calls.

- Create a dataset asynchronously—POST `/v2/language/datasets/upload`
- Create a dataset synchronously—POST `/v2/language/datasets/upload/sync`
- Get a dataset—GET `/v2/language/datasets/<DATASET_ID>`
- Get all datasets—GET `/v2/language/datasets`
- Create examples from a file—PUT `/v2/language/datasets/<DATASET_ID>/upload`

The call to return a dataset looks similar to this JSON.

```
{
  "id": 1001108,
  "name": "sentiment_dataset",
  "createdAt": "2018-06-14T20:48:46.000+0000",
  "updatedAt": "2019-03-02T07:59:53.000+0000",
  "labelSummary": {
    "labels": [
      {
        "id": 17568,
        "datasetId": 1001108,
        "name": "negative",
        "numExamples": 300
      },
      {
        "id": 17569,
        "datasetId": 1001108,
        "name": "neutral",
        "numExamples": 300
      },
      {
        "id": 17570,
        "datasetId": 1001108,
        "name": "positive",
        "numExamples": 300
      }
    ]
  },
  "totalExamples": 900,
  "totalLabels": 3,
  "available": true,
  "statusMsg": "SUCCEEDED",
  "type": "text-sentiment",
}
```

```

    "language": "ENGLISH",
    "numOfDuplicates": 23,
    "object": "dataset"
  }

```

**SEE ALSO:**

[Einstein Platform Services Developer Guide: Create a Dataset from a File Asynchronously](#)

[Einstein Platform Services Developer Guide: Create a Dataset from a File Synchronously](#)

[Einstein Platform Services Developer Guide: Get a Dataset](#)

[Einstein Platform Services Developer Guide: Get All Datasets](#)

[Einstein Platform Services Developer Guide: Create Examples from a File](#)

**API Response JSON Contains a New `numOfDuplicates` Field**

The response JSON for any Einstein Language API call that returns dataset information now includes the `numOfDuplicates` field. This field indicates the number of text strings not added to the dataset because they're duplicates.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Group, Professional, Enterprise, Performance, Unlimited, Developer, and Contact Manager editions.

**Why:** When you create a dataset or add data to a dataset, duplicate text strings are omitted. The `numOfDuplicates` field appears in the response for these calls.

- Create a dataset asynchronously—POST `/v2/language/datasets/upload`
- Create a dataset synchronously—POST `/v2/language/datasets/upload/sync`
- Get a dataset—GET `/v2/language/datasets/<DATASET_ID>`
- Get all datasets—GET `/v2/language/datasets`
- Create examples from a file—PUT `/v2/language/datasets/<DATASET_ID>/upload`

The call to return a dataset looks similar to this JSON.

```

{
  "id": 1001108,
  "name": "sentiment_dataset",
  "createdAt": "2018-06-14T20:48:46.000+0000",
  "updatedAt": "2019-03-02T07:59:53.000+0000",
  "labelSummary": {
    "labels": [
      {
        "id": 17568,
        "datasetId": 1001108,
        "name": "negative",
        "numExamples": 300
      },
      {
        "id": 17569,
        "datasetId": 1001108,
        "name": "neutral",
        "numExamples": 300
      },
      {
        "id": 17570,

```

```

        "datasetId": 1001108,
        "name": "positive",
        "numExamples": 300
    }
]
},
"totalExamples": 900,
"totalLabels": 3,
"available": true,
"statusMsg": "SUCCEEDED",
"type": "text-sentiment",
"language": "ENGLISH",
"numOfDuplicates": 23,
"object": "dataset"
}

```

## SEE ALSO:

- [Einstein Platform Services Developer Guide: Create a Dataset from a File Asynchronously](#)
- [Einstein Platform Services Developer Guide: Create a Dataset from a File Synchronously](#)
- [Einstein Platform Services Developer Guide: Get a Dataset](#)
- [Einstein Platform Services Developer Guide: Get All Datasets](#)
- [Einstein Platform Services Developer Guide: Create Examples from a File](#)

## Visualforce: Introducing Live Controller (Pilot), Update Your Guest Access to Private Static Resources, CKEditor Replaces FCKEditor

Use the live controller Visualforce component to display changes to data in real time. Update your guest user access to Static Resources with Private Cache control. Visualforce no longer supports the FCKEditor rich text editor

For more information on features affected by these enhancements, refer to the [Visualforce Developer's Guide](#).

## IN THIS SECTION:

### [View Data Updates in Real Time with Live Controller \(Pilot\)](#)

Live controller is a standard Visualforce component that dynamically re-renders a Visualforce page to display changes to data in real time. Visualforce pages automatically re-render the way your Lightning components do with Lightning Data Service. You can use live controller anywhere that you use Visualforce in Lightning Experience. You can have only one live controller per Visualforce page.

### [Update Your Guest User Access to Private Static Resources](#)

To increase security, we removed guest user access to Static Resources with Private Cache control. If your customizations require guest users to have this access, grant it by editing your profile permissions. If you don't modify the guest user profile, guest users can only access Static Resources with Cache Control set to Public.

### [CKEditor Replaces FCKEditor for Rich-Text Editing in Visualforce Pages](#)

Visualforce no longer supports the FCKEditor rich text editor. All standard Visualforce components now use the CKEditor rich text editor, which is more secure. Remove hard-coded references to FCKEditor in your Visualforce pages.

## EDITIONS

Available in: **Contact Manager, Group, Professional, Enterprise, Performance, Unlimited, and Developer** Editions

[Remove Instance Names from URLs for Visualforce, Community Builder, Site.com Studio, and Content Files \(Critical Update, Postponed\)](#)

This critical update, released in Spring '18, was scheduled for auto-activation in Winter '20, but has been postponed to Summer '20.

## View Data Updates in Real Time with Live Controller (Pilot)

Live controller is a standard Visualforce component that dynamically re-renders a Visualforce page to display changes to data in real time. Visualforce pages automatically re-render the way your Lightning components do with Lightning Data Service. You can use live controller anywhere that you use Visualforce in Lightning Experience. You can have only one live controller per Visualforce page.

**Where:** This feature is available in Lightning Experience.

 **Note:** We provide live controller to selected customers through a pilot program that requires agreement to specific terms and conditions. To be nominated to participate in the program, contact Salesforce. Pilot programs are subject to change, and we can't guarantee acceptance. Live controller isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

**When:** This pilot feature is available on June 19, 2019.

You can use live controller to listen for updates on a single record with a standard controller or across multiple records with a standard list controller. You can also use it with custom controllers.

**How:** Include live controller in your Visualforce page with the syntax `<apex:liveController />`.

Here's how to use live controller to view updates to a single account record.

```
<apex:page standardController="Account">
  <apex:liveController/>
  <apex:detail subject="{!account.id}"/>
</apex:page>
```

First, you define the standard controller. In the second line, you create the live controller, which listens for updates to the standard controller record. Live controller updates the Visualforce page when the account updates.

With custom controllers, use the live controller `records` attribute to track changes to a record. This example renders a list of account names for the custom controller `accountsController`. To get all the records associated with the Account object, assign the expression `{!accounts}` to the `records` attribute. Then, create a form to hold a table, where you iterate over the list of accounts. An account name in each row is displayed.

```
<apex:page controller="accountsController" tabstyle="Account">
  <apex:liveController records="{!accounts}"/>
  <apex:form>
    <apex:pageBlockSection >
      <apex:dataList value="{!accounts}" var="acct" type="1">
        <apex:outputText value="{!acct.name}"/>
      </apex:dataList>
    </apex:pageBlockSection>
  </apex:form>
</apex:page>
```

Live controller provides additional attributes to control the behavior of an update. This example uses the `oncomplete` attribute to display an alert when an update occurs.

```
<apex:page standardController="Account">
  <script language="javascript">
    function complete() {
      alert("An update has occurred");
    }
  </script>
  <apex:liveController oncomplete="complete"/>
  <apex:detail subject="{!account.id}"/>
</apex:page>
```

```

    }
  </script>

  <apex:liveController onComplete="complete();" />
  <apex:detail subject="{!account.id}" />
</apex:page>

```

Here, a JavaScript function `complete()` shows an alert message. When you create the live controller, you assign `complete()` to the `oncomplete` attribute so that the code runs when live controller detects an update to an account record.

SEE ALSO:

[Visualforce Developer Guide: Quick Start: Get Started with Live Controller in Lightning Experience](#)

## Update Your Guest User Access to Private Static Resources

To increase security, we removed guest user access to Static Resources with Private Cache control. If your customizations require guest users to have this access, grant it by editing your profile permissions. If you don't modify the guest user profile, guest users can only access Static Resources with Cache Control set to Public.

**Where:** This change applies to Lightning communities and Salesforce Tabs+ Visualforce communities accessed through Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**How:** If your existing customizations rely on access to Private Static Resources, enable the permission **View Private Static Resources** permission for your guest user profile.

For Communities:

1. In Community Builder, under Settings, select **General**.
2. Under Guest User Profile, click the profile name.
3. Click **System Permissions**.
4. Click **Edit**.
5. Select the View Private Static Resources permission and click **Save**.

For Salesforce Sites:

1. From Setup, enter `sites` in the Quick Find box, select **Sites**.
2. Click the name of the site that you want to control.
3. Click **Public Access Settings**.
4. Click **System Permissions**.
5. Click **Edit**.
6. Select the **View Private Static Resources** permission, and click **Save**.

## CKEditor Replaces FCKEditor for Rich-Text Editing in Visualforce Pages

Visualforce no longer supports the FCKEditor rich text editor. All standard Visualforce components now use the CKEditor rich text editor, which is more secure. Remove hard-coded references to FCKEditor in your Visualforce pages.

**Where:** This change applies to Salesforce Classic.

**How:** The FCKEditor is loaded in an iframe or with inline JavaScript that points to the path `"/apexpages/fckeditor."` To remove the editor, search your code for this path and remove the associated code.

To migrate current customizations to CKEditor, use the built-in Visualforce component `<apex:inputTextarea richText="true" />`, or use the `<apex:inputField />` component when working with sObject fields.

You can also use FCKEditor as a static resource. Download the FCKEditor source code [here](#) and add it to your org as a static resource. Reference the resource using the Visualforce `URLFOR()` function.

## Remove Instance Names from URLs for Visualforce, Community Builder, Site.com Studio, and Content Files (Critical Update, Postponed)

This critical update, released in Spring '18, was scheduled for auto-activation in Winter '20, but has been postponed to Summer '20.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Contact Manager, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Spring '18 Release Notes: Remove Instance Names from URLs for Visualforce, Community Builder, Site.com Studio, and Content Files \(Critical Update\)](#)

## Apex

Apex has a new security feature for field-level data protection, which is accessed through the `System.Security` and `System.sObjectAccessDecision` classes. You can now use the power of platform cache with scratch orgs and leverage cached data to speed up your Visualforce pages. Batch Apex classes can fire platform events when encountering an error or exception.

For more information on these enhancements, see the [Apex Developer Guide](#).

IN THIS SECTION:

### [Enforce Field-Level Security in Apex \(Pilot\)](#)

Apex has a new security feature for field-level data protection, which is accessed through the `Security` and `sObjectAccessDecision` classes. To ensure secure processing in Apex in the context of the current user's read, create, or update operation, use the `stripInaccessible` method. Based on the field-level security of the current user, this method can be used to strip the fields from query results that the user can't access. The method can also be used to remove inaccessible fields from sObjects before a DML operation to avoid exceptions and to sanitize sObjects that have been deserialized from an untrusted source.

### [Use Platform Cache with Scratch Orgs](#)

Give your scratch orgs the power of platform cache for faster performance. Speed up your Visualforce pages by leveraging cached data available to your entire org or for an individual session. Why run expensive SOQL and SOSL queries over and over and do the same callout multiple times? Load all that and your list of sObjects in the platform cache and fetch it faster whenever you want. Works with packaging, too!

### [Fire Platform Events from Batch Apex Classes \(Generally Available\)](#)

Batch Apex classes can fire platform events when an error or exception is encountered. A batch Apex class declaration must be using API version 44.0 or later to implement the `Database.RaisesPlatformEvents` interface and fire a platform event. A platform event record now includes the phase of the batch job (start, execute, or finish) when the error was encountered. The start and finish methods of the `Database.Batchable` interface now fire platform events on error (which they didn't do in the beta release).

### [Enable Improved Caching of Org Schema \(Critical Update, Postponed\)](#)

This critical update was scheduled for auto-activation in Summer '19 but has been postponed to Winter '19. This critical update enables improved caching of org schema details and resolves known issues with version-specific object and field handling.

SEE ALSO:

[Apex: New and Changed Items](#)

## Enforce Field-Level Security in Apex (Pilot)

Apex has a new security feature for field-level data protection, which is accessed through the `Security` and `SObjectAccessDecision` classes. To ensure secure processing in Apex in the context of the current user's read, create, or update operation, use the `stripInaccessible` method. Based on the field-level security of the current user, this method can be used to strip the fields from query results that the user can't access. The method can also be used to remove inaccessible fields from sObjects before a DML operation to avoid exceptions and to sanitize sObjects that have been deserialized from an untrusted source.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** This pilot feature is available automatically in sandbox, developer, and scratch organizations as a pilot program. The functionality of this feature is subject to change, and is not available for production organizations while in pilot. Pilot programs are subject to change, and we can't guarantee acceptance. This feature isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for this feature in the [Security.stripInaccessible](#) group in the [IdeaExchange](#).

**How:** The `stripInaccessible` method checks the source records for fields that don't meet the field-level security check for the current user and creates a return list of sObjects. The return list is identical to the source records, except that the fields that are inaccessible to the current user are removed.

 **Example:** If the user doesn't have the permission to create the `Probability` field of an Opportunity object, this example removes the `Probability` field before creating the records. The DML operation is completed without throwing an exception.

```
List<Opportunity> opportunities = new List<Opportunity>{
    new Opportunity(Name='Opportunity1'),
    new Opportunity(Name='Opportunity2', Probability=95)
};

// Strip fields that are not creatable
SObjectAccessDecision decision = Security.stripInaccessible(
    AccessType.CREATABLE,
    opportunities);

// Print stripped records
for (SObject strippedOpportunity : decision.getRecords()) {
    System.debug(strippedOpportunity);
}

// print modified indexes
System.debug(decision.getModifiedIndexes());

// Print removed fields
System.debug(decision.getRemovedFields());

//System.debug Output
```

```
// DEBUG|Opportunity:{Name=Opportunity1}
// DEBUG|Opportunity:{Name=Opportunity2}
// DEBUG|{1}
// DEBUG|{Opportunity={Probability}}
```

## Use Platform Cache with Scratch Orgs

Give your scratch orgs the power of platform cache for faster performance. Speed up your Visualforce pages by leveraging cached data available to your entire org or for an individual session. Why run expensive SOQL and SOSL queries over and over and do the same callout multiple times? Load all that and your list of sObjects in the platform cache and fetch it faster whenever you want. Works with packaging, too!

**Where:** This change applies to scratch orgs in any edition.

**How:** Add `PLATFORMCACHE` to the feature section of your scratch org's JSON configuration file, and create a scratch org through the CLI. Your scratch org has 3 MB of platform cache. The minimum required partition size has been reduced to 1 MB to provide more flexibility. To create, resize, or delete partitions, use Metadata API to deploy the `PlatformCachePartition` metadata type.

 **Note:** When you manually delete a scratch org or it expires, all cached data is deleted and its resources are cleared up. This operation is not reversible.

## Fire Platform Events from Batch Apex Classes (Generally Available)

Batch Apex classes can fire platform events when an error or exception is encountered. A batch Apex class declaration must be using API version 44.0 or later to implement the `Database.RaisesPlatformEvents` interface and fire a platform event. A platform event record now includes the phase of the batch job (start, execute, or finish) when the error was encountered. The start and finish methods of the `Database.Batchable` interface now fire platform events on error (which they didn't do in the beta release).

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**How:** To fire a platform event, a batch Apex class declaration must implement the `Database.RaisesPlatformEvents` interface.

```
public with sharing class YourSampleBatchJob implements Database.Batchable<SObject>,
    Database.RaisesPlatformEvents{
    // class implementation
}
```

## Enable Improved Caching of Org Schema (Critical Update, Postponed)

This critical update was scheduled for auto-activation in Summer '19 but has been postponed to Winter '19. This critical update enables improved caching of org schema details and resolves known issues with version-specific object and field handling.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Why:** This critical update fixes known bugs by improving internal systems that define and cache org schema, including standard objects, custom objects, and their fields. The documented behavior of your org's schema remains unchanged. The update fixes bugs where the documentation doesn't match the known behavior. This update also resolves rare, intermittent cases where undocumented object types are visible in Apex describe result methods or where version-specific schema details are improperly reused.

## API

The Modify Metadata through Metadata API Functions permission is generally available. There are pilots available for Mass Operations in REST API and for Query in Bulk API 2.0.

 **Note:** Looking for [new and changed API objects, types, and REST resources](#)? We received feedback that new features described in the Development section were hard to browse. In this release, we've consolidated the lists of new and changed items at the end of the Development section. We're still covering all the changes that you want to know about. Let us know what you think. Use the feedback form on release note topics or tweet us at [@salesforcedocs](#).

#### IN THIS SECTION:

##### [Limit User Access When Delegating Access to Metadata \(Generally Available\)](#)

Enable users to read and update metadata through Metadata API without assigning more access than necessary. Metadata API is used for deployments using change sets, the Ant Migration Tool, or the Salesforce CLI. The Modify Metadata through Metadata API Functions user permission doesn't impact the direct customization of metadata using Salesforce Setup pages, because those pages don't use Metadata API for updates.

##### [Use Query Jobs with Bulk API 2.0 \(Pilot\)](#)

Use bulk query jobs to handle queries that return large amounts of data.

##### [Perform Mass Operations With A Single API Call \(Pilot\)](#)

Perform operations on large numbers of records with a single API call.

##### [API Only Users Can Access Only Salesforce APIs \(Previously Released Critical Update\)](#)

If a user has the API Only User permission, they can access Salesforce only via APIs, regardless of their other permissions. This critical update was created in the Spring '19 release, but we neglected to mention it in the Spring '19 release notes.

#### SEE ALSO:

[API: New and Changed Items](#)

## Limit User Access When Delegating Access to Metadata (Generally Available)

Enable users to read and update metadata through Metadata API without assigning more access than necessary. Metadata API is used for deployments using change sets, the Ant Migration Tool, or the Salesforce CLI. The Modify Metadata through Metadata API Functions user permission doesn't impact the direct customization of metadata using Salesforce Setup pages, because those pages don't use Metadata API for updates.

**Who:** Users with the Modify Metadata through Metadata API Functions permission must also have the permission that enables use of the feature supported by the metadata they're trying to modify. Users must also have the permission that enables their deployment tool (change sets, the Ant Migration Tool, or the Salesforce CLI). The Modify Metadata through Metadata API Functions permission allows users to deploy Apex metadata, but if a user includes some Apex development and debugging features they still need the Modify All Data permission.

**How:** The Modify Metadata through Metadata API Functions permission is enabled automatically when either the Deploy Change Sets or the Author Apex permission is selected. The Modify Metadata through Metadata API Functions permission also includes read and update access to Apex when the user also has the Author Apex permission enabled.

 **Note:** Some metadata executes in system context, including Apex, so be careful how you delegate the Modify Metadata through Metadata API Functions and Author Apex permissions.

## Use Query Jobs with Bulk API 2.0 (Pilot)

Use bulk query jobs to handle queries that return large amounts of data.

**Who:** We provide Bulk API 2.0 Query to selected customers through a pilot program that requires agreement to specific terms and conditions. To be nominated to participate in the program, contact Salesforce. Pilot programs are subject to change, and we can't

guarantee acceptance. Bulk API 2.0 Query isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

**Why:** Bulk queries are also available in Bulk API, but the Bulk API 2.0 implementation has multiple advantages.

- The Bulk 2.0 implementation doesn't require you to handle batches. All results are returned in one set.
- Because batches are not involved, the limits are easier to understand.
- Bulk API 2.0 Query is also better integrated with other Salesforce REST APIs.
  - No special `X-SFDC-Session` header is required.
  - All the regular OAuth workflows are supported.
  - The design is more consistent with the design used in other APIs.

## Perform Mass Operations With A Single API Call (Pilot)

Perform operations on large numbers of records with a single API call.

**Who:** We provide Mass Operations to selected customers through a pilot program that requires agreement to specific terms and conditions. To be nominated to participate in the program, contact Salesforce. Pilot programs are subject to change, and we can't guarantee acceptance. Mass Operations isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

**Why:** Mass Operations is an extension of composite resources in REST API. This feature lets a client define a set of records and an operation to be performed for each record. For example:

- A marketing manager can perform a "create campaign member" operation to add multiple contacts to campaign at once.
- A sales manager can perform a "lead owned update" operation to reassign leads from one salesperson to another.
- An administrator can perform a "delete record" operation to delete records based on specific criteria.

## API Only Users Can Access Only Salesforce APIs (Previously Released Critical Update)

If a user has the API Only User permission, they can access Salesforce only via APIs, regardless of their other permissions. This critical update was created in the Spring '19 release, but we neglected to mention it in the Spring '19 release notes.

**When:** Salesforce will automatically activate this critical update on the auto-activation date listed on the Critical Updates page in Setup.

**Who:** This change affects users with the API Only User permission.

**How:** To test this critical update, we recommend working in a sandbox.

1. From Setup, enter *Critical Updates* in the Quick Find box.
2. Select **Critical Updates**.
3. Review the details for the "API Only Users Can Access Only Salesforce APIs" critical update.
4. Click **Activate**.
5. If any user can't access the Salesforce UI, ensure that they don't have the API Only User permission enabled.

# Custom Metadata Types: Referencing Records from Process Builder and Increased Capacity

When you use Process Builder, reference a custom metadata type record to reuse functionality. When working with custom metadata types, enjoy increased capacity and an updated user interface.

## IN THIS SECTION:

### [Reference Custom Metadata Type Records in Process Builder](#)

Reference custom metadata type records from a Process Builder formula to automate your business processes, reusing functionality that you define. To change a value, you can update it in the custom metadata type instead of in your process and any hard-coded formulas that your process uses.

### [Get More Custom Metadata Types](#)

We doubled the number of custom metadata types available per org from 100 to 200. This number includes all types developed in the org and installed from managed and unmanaged packages.

### [Monitor Custom Metadata Type Use in System Overview](#)

Understand your current custom metadata type usage pattern to plan for future custom metadata type work. You can now view custom metadata type usage in System Overview. You can get information about the number of custom metadata types and the size of the custom metadata type records used in your org.

### [Custom Metadata Type Creation Visibility Option Updated to New Functionality](#)

We changed the text in the Visibility selection to reflect the current functionality when creating a custom metadata type for a managed package. Previously, the second option stated, "Only Apex code in the same managed package can see the type." The Apex code must now be in the same namespace, so we updated the text accordingly.

## SEE ALSO:

[Protect Your Custom Settings and Custom Metadata Values](#)

## Reference Custom Metadata Type Records in Process Builder

Reference custom metadata type records from a Process Builder formula to automate your business processes, reusing functionality that you define. To change a value, you can update it in the custom metadata type instead of in your process and any hard-coded formulas that your process uses.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Professional, Enterprise, Performance, Unlimited, Developer, and Database.com editions. Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

**Why:** Let's say that you want to send an email or trigger some other action when the amount in the Account object's Annual Revenue field is greater than \$100,000.

1. Create a custom metadata type.
2. Create a custom field for your type named Minimum Revenue.
3. Create a record for your type, and name it FY20.
4. From System Variables, reference the custom metadata record in Process Builder.

```
$CustomMetadata.CustomMetadataTypeAPIName.RecordAPIName.FieldAPIName
```

Define Criteria for this Action Group

Criteria Name \* ⓘ  
Annual Revenue Check

Criteria for Executing Actions \*

Conditions are met

Formula evaluates to true

No criteria—just execute the actions!

Build Formula

Insert: Field Q Function Q System Varia... Q Operator ▼

[Account].AnnualRevenue >  
\$CustomMetadata.Annual\_Revenue\_\_mdt.Annual\_Revenue.Minimum\_Revenue\_\_c

> Advanced

Use the correct suffixes. For the custom metadata type, use `__mdt`. For fields, use `__c`. Records require no suffix. Your formula might look like this one.

```
[Account].AnnualRevenue >
$CustomMetadata.Annual_Revenue__mdt.Annual_Revenue.Minimum_Revenue__c
```

If the minimum revenue amount changes, edit the custom metadata record rather than your process.

## Get More Custom Metadata Types

We doubled the number of custom metadata types available per org from 100 to 200. This number includes all types developed in the org and installed from managed and unmanaged packages.

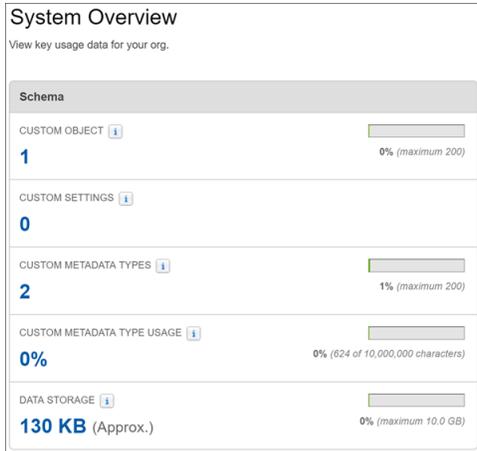
**Where:** This change applies to Lightning Experience and Salesforce Classic in Professional, Enterprise, Performance, Unlimited, Developer, and Database.com editions. Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

## Monitor Custom Metadata Type Use in System Overview

Understand your current custom metadata type usage pattern to plan for future custom metadata type work. You can now view custom metadata type usage in System Overview. You can get information about the number of custom metadata types and the size of the custom metadata type records used in your org.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Professional, Enterprise, Performance, Unlimited, Developer, and Database.com editions. Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

**How:** From Setup, enter *System Overview* in the Quick Find box, and then select **System Overview**.



## Custom Metadata Type Creation Visibility Option Updated to New Functionality

We changed the text in the Visibility selection to reflect the current functionality when creating a custom metadata type for a managed package. Previously, the second option stated, "Only Apex code in the same managed package can see the type." The Apex code must now be in the same namespace, so we updated the text accordingly.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Professional, Enterprise, Performance, Unlimited, Developer, and Database.com editions. Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

**Why:** The text now reflects current functionality, where Apex code in the same namespace can see the type.

**Custom Metadata Types**

**New Custom Metadata Type**

Custom Metadata Type Edit [Save] [Save & New] [Cancel]

**Custom Metadata Type Information**

The singular and plural labels are used in tabs, page layouts, and reports.

Label: [Text] Example: Example: Account Setting

Plural Label: [Text] Example: Example: Account Settings

Starts with vowel sound:

The Object Name is used when referencing the object via the API.

Object Name: [Text] Example: Account\_Setting

Description: [Text Area]

**Visibility** If this type is installed as a managed package:

- All Apex code and the APIs can use the type, and it is visible in Setup.
- Only Apex code in the same namespace can see the type. The name of the type and record are visible if referenced for validation rules.

[Save] [Save & New] [Cancel]

## Salesforce CLI: Faster Load Times, Expanded Project Scaffolding

The Salesforce command-line interface (CLI) continues to evolve with more features and commands that support the org development and package development models. Use it to create environments for development and testing, synchronize source code, run tests, and control the full application life cycle.

We release changes to Salesforce CLI regularly. Read the weekly release notes to learn about recent updates for [v45 of the core CLI plug-ins](#). For more information about the pre-release version, see [v46 of the Salesforce CLI Command Reference](#).

## IN THIS SECTION:

[Run Salesforce CLI Commands Faster with oclif](#)

We migrated Salesforce CLI to Heroku's Open CLI Framework (oclif) for v7 of Salesforce CLI (`sfdx-cli`). This framework fixes several long-standing issues with CLI updates and provides better CLI load times. It also prepares us to incorporate important features in the future, such as custom execution hooks and built-in autocompletion.

[Eliminate the Guesswork for DX Project Structure](#)

By default, Salesforce CLI and Salesforce Extensions for Visual Studio Code now create a Salesforce DX project structure with expanded scaffolding of source directories. You no longer need to figure out how to organize your source.

[Use source Commands for the Full Application Life Cycle \(Generally Available\)](#)

We heard you loud and clear! You want a consistent experience when developing, retrieving, or deploying in source format for scratch orgs, Developer Edition orgs, trial orgs, sandboxes, and even your production org. So, we updated `force:source:deploy` and `force:source:retrieve` to include the same parameters as the `force:mdapi:deploy` and `force:mdapi:retrieve` commands. The `source:deploy`, `source:retrieve`, and `source:delete` commands will be generally available on June 15, 2019.

## SEE ALSO:

[Salesforce CLI: New and Changed Commands](#)

## Run Salesforce CLI Commands Faster with oclif

We migrated Salesforce CLI to Heroku's Open CLI Framework (oclif) for v7 of Salesforce CLI (`sfdx-cli`). This framework fixes several long-standing issues with CLI updates and provides better CLI load times. It also prepares us to incorporate important features in the future, such as custom execution hooks and built-in autocompletion.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions.

## Eliminate the Guesswork for DX Project Structure

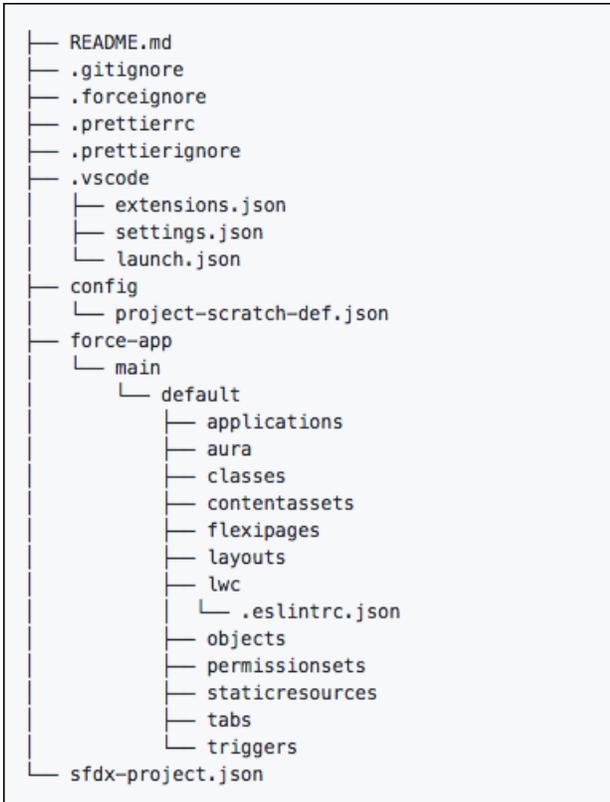
By default, Salesforce CLI and Salesforce Extensions for Visual Studio Code now create a Salesforce DX project structure with expanded scaffolding of source directories. You no longer need to figure out how to organize your source.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions.

**When:** In Salesforce CLI, for Spring '19 (v45), the default value for the `force:project:create --template` parameter is `empty`, which provides a minimal amount of scaffolding (maintaining the command's previous behavior). In Summer '19 (v46), the default is `standard`.

In Salesforce Extensions for VS Code, the SFDX: Create Project command generates projects that have the expanded structure as of April 25, 2019.

**Why:** The expanded project structure (`standard`) contains directories for more source types and facilitates pushing and pulling source to and from your orgs.



It also adds these files that Salesforce Extensions for VS Code uses.

- `.gitignore`—Makes it easier to start using Git for version control.
- `.prettierrc` and `.prettierignore`—Make it easier to start using Prettier to format your Aura components and Lightning web components (as well as standard file formats, like `.json`, `.md`, `.html`, and `.js`).
- `.vscode/extensions.json`—Causes Visual Studio Code, when launched, to prompt you to install the recommended extensions for your project.
- `.vscode/launch.json`—Configures Replay Debugger, making it more discoverable and easier to use.
- `.vscode/settings.json`—By default, this file has one setting for push or deploy on save, which is set to false. You can change this value or add other settings.

**How:** If you want expanded scaffolding, specify the `standard` template option when creating a Salesforce DX project.

```
force:project:create --template standard
```

If you want to create a project that doesn't include expanded scaffolding, specify `empty`.

```
force:project:create --template empty
```

SEE ALSO:

[Prettier](#)

## Use `source` Commands for the Full Application Life Cycle (Generally Available)

We heard you loud and clear! You want a consistent experience when developing, retrieving, or deploying in source format for scratch orgs, Developer Edition orgs, trial orgs, sandboxes, and even your production org. So, we updated `force:source:deploy` and `force:source:retrieve` to include the same parameters as the `force:mdapi:deploy` and `force:mdapi:retrieve` commands. The `source:deploy`, `source:retrieve`, and `source:delete` commands will be generally available on June 15, 2019.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions.

**How:** To use the new parameters now, install the pre-release version (v46) of the `salesforcedx` plug-in for Salesforce CLI.

SEE ALSO:

[Salesforce CLI: New and Changed Commands](#)

[Install the Pre-Release Version of Salesforce CLI](#)

## Scratch Orgs: New Features

A scratch org is a dedicated and configurable Salesforce environment that you can quickly spin up for many different purposes. It can be your own personal development environment, or you can create a headless scratch org for automated tests. You can create scratch orgs if you turned on Dev Hub in your production org or a Developer Edition org, or have a Dev Hub trial org. We continually add support for new features.

For more information, see [Scratch Orgs](#) in the *Salesforce DX Developer Guide*.

IN THIS SECTION:

[Select the Salesforce Release for a Scratch Org](#)

During a Salesforce release transition, you can specify the release (preview or previous) when creating a scratch org, based on the version of your Dev Hub.

[Create Environments with More Scratch Org Features](#)

We're providing more configurable features for scratch orgs.

[Configure Scratch Orgs with Einstein Bots](#)

Turn on Einstein features in your Dev Hub to eliminate the manual steps for enabling the Chatbot feature in scratch orgs. When you accept the Terms of Service for Einstein, a separate acceptance is not required in each scratch org created from this Dev Hub org. If you previously accepted the Terms of Service for Einstein to turn on an Einstein-related feature, this setting is already enabled.

## Select the Salesforce Release for a Scratch Org

During a Salesforce release transition, you can specify the release (preview or previous) when creating a scratch org, based on the version of your Dev Hub.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Developer, Enterprise, Group, and Professional editions.

**When:** You can select the version of a scratch org during a major Salesforce release transition. Preview start date is when sandbox instances are upgraded. Preview end date is when all instances are on the GA release.

Release Version	Preview Start Date	Preview End Date
Winter '20	September 6, 2019	October 12, 2019

Release Version	Preview Start Date	Preview End Date
Spring '20	January 3, 2020	February 15, 2020
Summer '20	May 8, 2020	June 13, 2020

**Why:** Normally, you create scratch orgs that are the same version as the Dev Hub. When you want to try out new features in an upcoming release, you no longer have to create a trial Dev Hub on the upcoming version to create preview scratch orgs. You can use your existing Dev Hub and existing scratch org active and daily limits.

**How:** Add the release option to your scratch org definition file, or indicate the release value directly on the command line.

In the scratch org definition file:

```
{
  "orgName": "Dreamhouse",
  "edition": "Developer",
  "release": "Preview",
  "settings": {
    "orgPreferenceSettings": {
      "s1DesktopEnabled": true
    }
  }
}
```

On the command line:

```
sfdx force:org:create -f config/project-scratch-def.json -a PreviewOrg -v DevHub
release=Preview
```

SEE ALSO:

[Salesforce DX Developer Guide: Select the Salesforce Release for a Scratch Org](#)

## Create Environments with More Scratch Org Features

We're providing more configurable features for scratch orgs.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Developer, Enterprise, Group, and Professional editions.

**How:** Add the features to your scratch org definition file.

- ActionPlans
- AddCustomObjects:<quantity> (Min 1: Max 30)
- AddCustomRelationships:<quantity> (Min 1: Max 30: Multiplier 5)
- AddDatacomCrmRecordCredit:<quantity> (Min 1: Max 30)
- AddInsightsQueryLimit:<quantity> (Min 1: Max 30: Multiplier 10)
- AnalyticsAdminPerms
- ChatterAnswersUser
- DatacomDnbAccounts
- DatacomFullClean

- DeferSharingCalc
- EinsteinAnalyticsPlus
- EinsteinBuilder
- EventLogFile
- ExternalIdentityLogin
- FieldService
- FlowSites
- HealthCloudUser
- IndustriesManufacturing
- InsightsPlatform
- JigsawUser
- MarketingUser
- MobileUser
- OfflineUser
- PlatformCache
- PlatformEncryption
- ProductsAndSchedules
- RecordTypes
- RetainFieldHistory
- SalesUser
- ServiceUser
- SurveyCreatorUser
- WavePlatform

See [Scratch Org Configuration Values](#) in the *Salesforce DX Developer Guide* for the complete list of supported features.

## Deprecated Scratch Org Features

These scratch org features were deprecated in Summer '19.

- SalesWave (use DevelopmentWave instead)
- ServiceWave (use DevelopmentWave instead)

## Configure Scratch Orgs with Einstein Bots

Turn on Einstein features in your Dev Hub to eliminate the manual steps for enabling the Chatbot feature in scratch orgs. When you accept the Terms of Service for Einstein, a separate acceptance is not required in each scratch org created from this Dev Hub org. If you previously accepted the Terms of Service for Einstein to turn on an Einstein-related feature, this setting is already enabled.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Developer, Enterprise, Group, and Professional editions.

**Who:** You must be an admin for the Dev Hub org.

**How:** Before you create a scratch org, on the Dev Hub Setup page, turn on **Enable Einstein Features**.

In the scratch org definition file, add the Chatbot feature. For example:

```
{
  "orgName": "AcmeCorp",
  "edition": "Developer",
  "features": ["ServiceCloud", "Chatbot"],
  "hasSampleData": "false",
  "settings": {
    "orgPreferenceSettings": {
      "s1DesktopEnabled": true,
      "selfSetPasswordInApi": true,
      "s1EncryptedStoragePref2": false
    }
  }
}
```

## Sandboxes: CLI Commands

Speed up your sandbox management with new Salesforce CLI commands.

### IN THIS SECTION:

[Use Salesforce CLI for Sandbox Operations \(Beta\)](#)

We added CLI functionality for sandbox operations to facilitate sandbox management. Salesforce CLI gives you command-line control of common org operations.

## Use Salesforce CLI for Sandbox Operations (Beta)

We added CLI functionality for sandbox operations to facilitate sandbox management. Salesforce CLI gives you command-line control of common org operations.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Professional, Enterprise, Performance, and Unlimited editions.

 **Note:** As a beta feature, Salesforce CLI for sandbox operations is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for Salesforce CLI for sandbox operations in the [Salesforce DX Trailblazer Community](#).

**When:** v46 of the `salesforcedx` aggregate plug-in releases on June 15, 2019. A pre-release version of v46 is available now.

**How:** Install Salesforce CLI and then run the `force:org` commands to work with your sandboxes. We added a command for sandbox cloning (`force:org:clone`) and another for getting the status of a sandbox creation process and then logging in to the sandbox (`force:org:status`). We also added command options to create a sandbox (`force:org:create --type sandbox`). We updated existing commands for deleting a sandbox (`force:org:delete`), listing sandboxes along with scratch orgs (`force:org:list`), and displaying more information about sandboxes (`force:org:display`).

For more information about the commands and functionality, see [Salesforce CLI: New and Changed Commands](#) and [org Commands](#) in the [Salesforce CLI Command Reference](#).

For information about installing the pre-release version of `salesforcedx`, see [Install the Pre-Release Version of Salesforce CLI](#).

## Salesforce Extensions for VS Code: Enhanced Aura Components Support, Upcoming Force.com IDE Retirement

In addition to the changes we've made in weekly releases, Salesforce Extensions for VS Code v46 includes some major enhancements. Accelerate Aura component development with the VS Code Aura Components extension. Start preparing now for the October 2019 retirement of Force.com IDE.

For information about getting started with Salesforce Extensions for VS Code, see the [Salesforce Extensions for VS Code documentation](#). To see all the VS Code extensions that Salesforce has published, visit our [publishers page](#) in the Visual Studio Code Marketplace.

For information about enhancements made in weekly releases, see the Salesforce Extensions for VS Code [change log](#).

### IN THIS SECTION:

#### [Force.com IDE Is Being Retired in October 2019](#)

The Force.com IDE plug-in for Eclipse is in a maintenance-only state. We will provide support through our official channels for the product until its retirement date on October 12, 2019, but the only updates will be for critical security issues that arise before the retirement date.

#### [Get a Better Editing Experience with the Aura Extension for VS Code](#)

The Salesforce Aura Extension for VS Code now supports code completion for Aura component tags, attributes, and JavaScript. View component reference and documentation for both Aura and Lightning web components in the Lightning Explorer View (beta).

### SEE ALSO:

#### [Eliminate the Guesswork for DX Project Structure](#)

## Force.com IDE Is Being Retired in October 2019

The Force.com IDE plug-in for Eclipse is in a maintenance-only state. We will provide support through our official channels for the product until its retirement date on October 12, 2019, but the only updates will be for critical security issues that arise before the retirement date.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Enterprise, Performance, Unlimited, and Developer editions.

**When:** On October 12, 2019, we will no longer provide support or updates of any kind for Force.com IDE. We will also begin archiving documentation and removing download links for the product on that date.

**How:** We recommend that you start migrating to [Salesforce Extensions for Visual Studio Code](#) or one of the great tools made by our partners. For more information, see [The Future of Salesforce IDEs](#) on the Salesforce Developers Blog.

The <https://github.com/forcedotcom/idecore> repository will be archived on October 12, 2019. The source code will remain available in the repository, but the repository will no longer accept pull requests. To contribute to Force.com IDE after the repository is archived, create a fork. For details about archived repositories, see [About archiving repositories](#) in GitHub Help.

## Get a Better Editing Experience with the Aura Extension for VS Code

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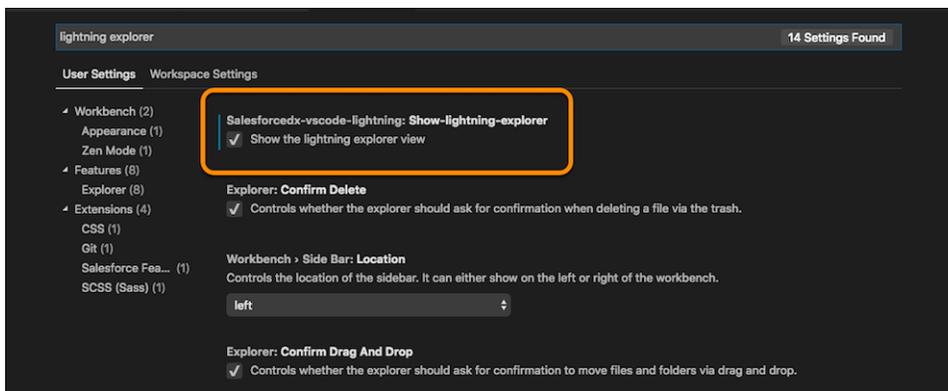
**Where:** This change applies to Lightning Experience and all versions of the Salesforce app in Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** As a beta feature, Lightning Explorer View is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. Lightning Explorer View is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. The use of this feature is governed by the [Salesforce.com Program Agreement](#). If you encounter any problems, or want to request an enhancement, open a Github issue.

**When:** This change is available for Salesforce Extensions for VS Code v45.8.0. For updates, keep an eye on the Salesforce Extensions for VS Code [change log](#).

**How:** Install the [Salesforce Extension Pack](#) from the VS Code Marketplace.

To enable the Lightning Explorer View (beta) in VS Code, under Preferences, enter `lightning explorer` in the search bar. Select **Show the lightning explorer view**.



SEE ALSO:

[Salesforce Extensions for Visual Studio Code](#)

[Open a Github Issue in Salesforce Extensions for Visual Studio Code](#)

## Developer Console: Prettified Code, Accurate Dates in Different Time Zones

The Fix Code Formatting feature uses the Prettier code formatter to format your Aura components. In the Developer Console Tests tab, the correct date and time now appear in the Enqueued Time field regardless of your computer's locale settings.

IN THIS SECTION:

[Format Your Code with Prettier in Developer Console](#)

The new Fix Code Formatting feature in Developer Console uses the Prettier code formatter to format your Aura components. This feature enables you and your teammates to use both Developer Console and desktop-based developer tools, like Salesforce Extensions for Visual Studio Code. Developer Console and Salesforce Extensions for VS Code now apply Aura component formatting consistently. Prettier is the standard code formatter in Salesforce Extensions for VS Code and for the apps in the Sample Gallery.

[Enqueued Time Field in Tests Tab Is Accurate in All Time Zones](#)

In the Developer Console Tests tab, the correct date and time now appear in the Enqueued Time field regardless of your computer's locale settings. Previously, the Enqueued Time value was inaccurate in some time zones.

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**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, Developer, and Database.com editions.

 **Note:** Fix Code Formatting isn't available in Internet Explorer.

**Who:** To use Developer Console, you need the API Enabled and View All Data permissions. To save changes to Lightning resources, you also need the Customize Application permission.

**How:** To prettify the code in an open file, select **Edit > Fix Code Formatting**. Or, press Ctrl+Alt+F. To configure your code-formatting settings, select **File > Preferences** and then adjust the settings whose names begin with **Prettier**.

SEE ALSO:

[Prettier](#)

[Prettier Docs: Options](#)

[Salesforce Extensions for Visual Studio Code Docs: Set Up the Prettier Code Formatter for Salesforce Projects](#)

[Sample Gallery](#)

[Salesforce Help: Supported Browsers](#)

## Enqueued Time Field in Tests Tab Is Accurate in All Time Zones

In the Developer Console Tests tab, the correct date and time now appear in the Enqueued Time field regardless of your computer's locale settings. Previously, the Enqueued Time value was inaccurate in some time zones.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, Developer, and Database.com editions.

## Debugging: More Debug Log Storage

We increased the storage limits for debug logs.

IN THIS SECTION:

[Store More and Larger Debug Logs](#)

We raised the maximum size of a debug log from 5 MB to 20 MB. With the 20 MB limit, 99.99% of debug logs aren't truncated. We also raised the limits for debug log storage per org and debug logs that you can generate in a 15-minute window from 250 MB to 1,000 MB.

## Store More and Larger Debug Logs

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**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Enterprise, Performance, Unlimited, Developer, and Database.com editions.

## Packaging: Unlocked Packaging and Second-Generation Managed Packaging Enhancements

Customize how unlocked packages are installed, easily modify namespaced unlocked packages, and track leads and licenses for second-generation managed packages.

### IN THIS SECTION:

#### [Track Leads and Manage Licenses for Second-Generation Managed Packages \(Beta\)](#)

When you link your second-generation managed packages to your License Management App (LMA), lead and license records are created when a subscriber installs the package. Control access to components and enforce licenses from your LMA. Edit and view feature parameters in the Feature Management app from your license management org.

#### [Customize How Unlocked Packages Are Installed and Upgraded](#)

You now have more options when installing and upgrading unlocked packages. You can specify whether to recompile Apex in just the package or your entire org. And during package version upgrades you can choose to delete or deprecate metadata types that are marked for removal in a new package version. You can use these customization options in Salesforce CLI and in the package installer UI.

#### [Modify and Debug Namespaced Unlocked Packages More Easily](#)

We made it easier to modify and debug unlocked packages with namespaces by making Apex logs and Apex code for Apex classes, Apex triggers, and Visualforce components visible. And in situations where you must immediately remove a component from a package in the installed org, you can easily do so from Setup without updating the package version. Released metadata retains the namespace of the package.

#### [Other Enhancements in Unlocked Packages](#)

Learn about other small, but mighty, changes in unlocked packages.

### SEE ALSO:

#### [Global Value Set Behavior Is Standardized in Managed Packages](#)

## Track Leads and Manage Licenses for Second-Generation Managed Packages (Beta)

When you link your second-generation managed packages to your License Management App (LMA), lead and license records are created when a subscriber installs the package. Control access to components and enforce licenses from your LMA. Edit and view feature parameters in the Feature Management app from your license management org.

**Where:** This change applies to Lightning Experience and Salesforce Classic in the Developer edition.

 **Note:** As a beta feature, Second-Generation Managed Packages is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for Feature in the [Unlocked Packages and Managed Packages 2GP](#) group in the Trailblazer Community.

**How:** To request access to this feature, post on the [Unlocked Packages and Managed Packages 2GP](#) group in the Trailblazer community.

## Customize How Unlocked Packages Are Installed and Upgraded

You now have more options when installing and upgrading unlocked packages. You can specify whether to recompile Apex in just the package or your entire org. And during package version upgrades you can choose to delete or deprecate metadata types that are marked for removal in a new package version. You can use these customization options in Salesforce CLI and in the package installer UI.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions. Dev Hub is available in Developer, Enterprise, Performance, and Unlimited editions.

**How:** To enable unlocked packages, first enable Dev Hub. From Setup, enter *Dev Hub* in the Quick Find box, and select **Dev Hub**. Then select **Enable Dev Hub**, and select **Enable Unlocked Packages (GA) and Second-Generation Managed Packages (Beta)**.

## Modify and Debug Namespaced Unlocked Packages More Easily

We made it easier to modify and debug unlocked packages with namespaces by making Apex logs and Apex code for Apex classes, Apex triggers, and Visualforce components visible. And in situations where you must immediately remove a component from a package in the installed org, you can easily do so from Setup without updating the package version. Released metadata retains the namespace of the package.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions. Dev Hub is available in Developer, Enterprise, Performance, and Unlimited editions.

**How:** To enable unlocked packages, first enable Dev Hub. From Setup, enter *Dev Hub* in the Quick Find box, and select **Dev Hub**. Then select **Enable Dev Hub**, and select **Enable Unlocked Packages (GA) and Second-Generation Managed Packages (Beta)**.

To release metadata from an installed unlocked package, from Setup, enter *Installed Packages* in the Quick Find box, then select **Installed Packages**. Select the package you want to remove metadata from, select **View Components**, and click **Remove**.

 **Note:** If you have an unlocked package and a managed package with the same namespace, the Apex code and logs remain hidden.

## Other Enhancements in Unlocked Packages

Learn about other small, but mighty, changes in unlocked packages.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions. Dev Hub is available in Developer, Enterprise, Performance, and Unlimited editions.

**Why:** Do more in your unlocked packages. Here's what changed.

- Include approval processes that reference related users or queues as approvers in no-namespace unlocked packages.
- Add permission sets referencing standard objects in an unlocked package.
- Override translations in unlocked packages using Translation Workbench.

**How:** To enable unlocked packages, first enable Dev Hub. From Setup, enter *Dev Hub* in the Quick Find box, and select **Dev Hub**. Then select **Enable Dev Hub**, and select **Enable Unlocked Packages (GA) and Second-Generation Managed Packages (Beta)**.

## AppExchange Partners: Analytics for Managed Packages and the AppExchange Marketplace, ISV Hammer (Pilot)

Build a thriving AppExchange business with tools and features for Salesforce partners. Discover how customers find and interact with your AppExchange listing in the Marketplace Analytics dashboard. Learn how subscribers use your managed packages by exploring App Analytics data. Test your package versions with ISV Hammer (pilot).

## IN THIS SECTION:

[See the Health of Your AppExchange Listing with Marketplace Analytics](#)

The Marketplace Analytics dashboard shows how customers find and interact with your AppExchange listing. Perform a quick checkup on the health of your listing with the dashboard activity summary. Dive deeper into the relationships between traffic sources, search terms, and activity on your listing with dashboard visualizations.

[Gain Insight into Managed Package Usage with App Analytics](#)

AppExchange App Analytics provides data about how subscribers use your managed packages. Identify attrition risks and inform feature development. Use the AppAnalyticsQueryRequest in SOAP API to request log files and monthly usage summaries.

[Test Your Package Versions with ISV Hammer \(Pilot\)](#)

Before each major release, Salesforce runs customers' Apex tests against the old and new versions of our app. We call this process hammer testing, and it helps us avoid breaking things when we roll out the new version. Now we're sharing the joy of hammers with you. Use ISV Hammer to test the installation of your package upgrades in copies of subscribers' orgs before you roll out new versions of your package. (These shape-only org copies contain no customer data, are not human-accessible, and are deleted at the end of each ISV Hammer run.) Join the ISV Hammer pilot to try out the new Salesforce CLI commands for ISV Hammer.

## See the Health of Your AppExchange Listing with Marketplace Analytics

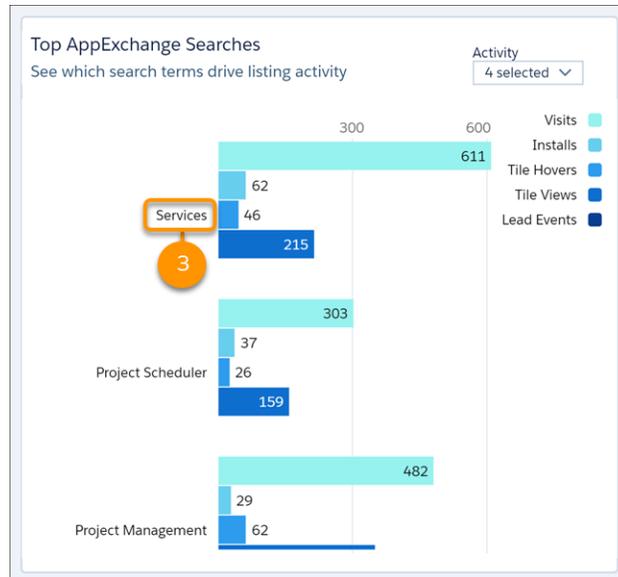
The Marketplace Analytics dashboard shows how customers find and interact with your AppExchange listing. Perform a quick checkup on the health of your listing with the dashboard activity summary. Dive deeper into the relationships between traffic sources, search terms, and activity on your listing with dashboard visualizations.

**Who:** To use Marketplace Analytics, you need the Manage Listings permission in the Salesforce Partner Community.

**Why:** More effectively apply your company's development and marketing resources to increase visits, installs, and purchases.

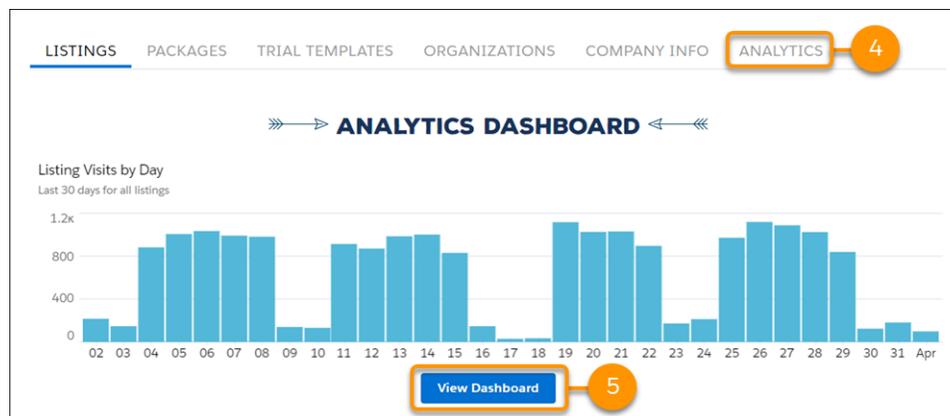


The activity summary puts your listing's key performance metrics, such as installs, in one place (1). Trend indicators show how metrics changed compared to the previous reporting period, so it's clear what's growing and where there are opportunities (2).



Visualizations show relationships between traffic sources, AppExchange search terms, and listing activities. This format makes it easy to spot patterns in your data, which you can use to answer questions and solve business problems. For example, you want to build awareness about new features in your solution. To boost traffic to your listing, check the dashboard to see which search terms result in the most visits, and then optimize your listing text accordingly (3).

**How:** From the Salesforce Partner Community, open the Publishing Console.



From the Publishing Console, click **Analytics** (4) or **View Dashboard** (5).

## Gain Insight into Managed Package Usage with App Analytics

AppExchange App Analytics provides data about how subscribers use your managed packages. Identify attrition risks and inform feature development. Use the AppAnalyticsQueryRequest in SOAP API to request log files and monthly usage summaries.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Developer edition.

**How:** To activate App Analytics, log a case in the [Salesforce Partner Community](#). App Analytics is available only for managed packages that have passed security review.

## Test Your Package Versions with ISV Hammer (Pilot)

Before each major release, Salesforce runs customers' Apex tests against the old and new versions of our app. We call this process hammer testing, and it helps us avoid breaking things when we roll out the new version. Now we're sharing the joy of hammers with you. Use ISV Hammer to test the installation of your package upgrades in copies of subscribers' orgs before you roll out new versions of your package. (These shape-only org copies contain no customer data, are not human-accessible, and are deleted at the end of each ISV Hammer run.) Join the ISV Hammer pilot to try out the new Salesforce CLI commands for ISV Hammer.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the mobile app in Developer edition.

 **Note:** We provide ISV Hammer to selected customers through a pilot program that requires agreement to specific terms and conditions. To be nominated to participate in the program, contact Salesforce. Pilot programs are subject to change, and we can't guarantee acceptance. ISV Hammer isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for ISV Hammer in the [ISV Hammer - Pilot](#) group in the Trailblazer Community.

**When:** The `salesforcedx v46` plug-in for Salesforce CLI releases on June 15, 2019. A pre-release version of v46 is available now.

**How:** To use ISV Hammer, your org must be enrolled in the ISV Hammer pilot. For information about joining the pilot, contact Salesforce.

For information about installing the pre-release version of the `salesforcedx` plug-in, see [Install the Pre-Release Version of Salesforce CLI](#).

**To start ISV Hammer tests, run the Salesforce CLI command `sfdx force:package:hammertest:run`.**

Use this command to run ISV Hammer for the specified package versions and subscriber orgs.

If Salesforce has enabled Multiple Managed Packages for your org, you can test more than one package version. Supply the IDs of the package versions you want to test in the desired order of execution.

The command creates a copy of each of the supplied subscriber orgs and tests the package upgrade in each of them.

If a scheduled date/time is supplied, validation and setup start immediately but the package upgrade test does not start until after the supplied date/time. Format the `--scheduledrundatetime` value as YYYY-MM-DD HH:mm:ss in the GMT timezone. This date cannot be more than 25 days from today.

To test against the Salesforce preview release version, during the sandbox preview window, include `--preview` and a `--scheduledrundatetime` value that's immediately after a staggered release, based on the Salesforce release calendar.

To run the package version's Apex tests in each subscriber org after successfully testing the package upgrade, include `--apextests`.

The command returns a request ID (starts with `0TW`). Use this `IsvHammerRequest` ID to query for the test status by running `sfdx force:package:hammertest:report -i 0TW...`

Examples:

```
sfdx force:package:hammertest:run --targetusername you@yourpackagingorg.com \
--packageversionids 04t...a,04t...b \
--subscriberorgs 00D...a,00Dx...b
```

```
sfdx force:package:hammertest:run -u you@yourpackagingorg.com -i 04t... \
--subscriberfile subscriberOrgs.txt
```

**For details about the status of an in-progress ISV Hammer run, or to see the results of a completed run, run `sfdx force:package:hammertest:report`.**

Example:

```
sfdx force:package:hammertest:report --targetusername you@yourpackagingorg.com \
--requestid 0TW...
```

**To list your ISV Hammer runs, run `sfdx force:package:hammer:test:list`.**

If you supply a `--packageversionid` value, this command returns test statuses for only the tests associated with specified package version. If you don't include the `--packageversionid` parameter, the command lists all test statuses.

Examples:

```
sfdx force:package:hammer:test:list --targetusername you@yourpackagingorg.com \  
--packageversionid 04t...
```

```
sfdx force:package:hammer:test:list -u you@yourpackagingorg.com
```

SEE ALSO:

[Salesforce CLI Command Reference: package Commands](#)

## Change Data Capture: Apex Triggers, Custom Channels, and More Object Support

Get Apex trigger support for subscribing to change event messages, custom streams of notifications, additional object support, and more.

IN THIS SECTION:

### [Process Change Event Messages in Apex Triggers](#)

With Apex change event triggers, you can now process change event messages on the Lightning Platform. Change event triggers run asynchronously after the database transaction is completed. Perform resource-intensive business logic asynchronously in the change event trigger and keep transaction-based logic in the Apex object trigger. By decoupling the processing of changes, change event triggers can help reduce transaction processing time.

### [Compose Streams of Change Data Capture Notifications with Custom Channels](#)

Subscribe to a custom channel to receive a stream of the types of events that your app consumes. For example, if you have an app that uses real-time information about sales objects (for example, Account, Contact, and Order), create a custom channel with these objects. When you subscribe to the custom channel, you receive notifications only for these objects.

### [Receive Change Event Notifications for More Objects](#)

With Change Data Capture, you can now receive notifications of record changes for the CampaignMember, CampaignMemberStatus, and Contract objects.

### [Use transactionKey Instead of isTransactionEnd for Synchronizing Changes Within Transaction Boundaries](#)

We removed the `isTransactionEnd` header field from change event messages because you couldn't always rely on it for transaction-based replication. To replicate data to your data store within transaction boundaries, use the `transactionKey` field instead. When the `transactionKey` value changes, commit all changes for the previous transaction key.

## Process Change Event Messages in Apex Triggers

With Apex change event triggers, you can now process change event messages on the Lightning Platform. Change event triggers run asynchronously after the database transaction is completed. Perform resource-intensive business logic asynchronously in the change event trigger and keep transaction-based logic in the Apex object trigger. By decoupling the processing of changes, change event triggers can help reduce transaction processing time.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**How:** Each change event processed in the trigger contains the record fields and metadata information about the change in header fields.

A change event trigger is an “after-insert” trigger, defined with the `after insert` keyword. The trigger fires after the change event message is published. You create an after-insert trigger in the Developer Console the same way you create an Apex object trigger. When you create a trigger, pick the change event object from the sObject dropdown, which is populated with the change events available in your org. For a supported standard object, the change event name is ***StandardObjectName***ChangeEvent. For a custom object, the change event name is ***CustomObjectName***\_\_ChangeEvent.

 **Example:** This trigger shows a simple change event trigger on AccountChangeEvent.

```
trigger MyAccountChangeTrigger on AccountChangeEvent (after insert) {
    for (AccountChangeEvent event : Trigger.New) {
        // Process event messages
    }
}
```

## Testing Change Event Triggers

Before you can package or deploy Apex change event triggers to production, you must provide Apex tests and sufficient code coverage.

To test change event triggers, enable the generation of change event notifications for the test method.

```
Test.enableChangeDataCapture();
```

The `Test.enableChangeDataCapture()` method ensures that Apex tests can fire change event triggers regardless of the entities selected in Setup. This method doesn't affect the Change Data Capture entity selections for the org.

After performing DML operations, deliver the event messages to the corresponding trigger with:

```
Test.getEventBus().deliver();
```

Alternatively, if you use the `Test.startTest()`, `Test.stopTest()` method block in your test, change event messages fire the associated trigger after `Test.stopTest()` executes.

 **Example:** This test method outlines the order of statements that must be executed in a test, starting with enabling Change Data Capture entities.

```
@isTest static void testChangeEventTrigger() {
    // Enable all Change Data Capture entities for notifications.
    Test.enableChangeDataCapture();

    // Insert one or more test records
    // ...

    // Deliver test change events
    Test.getEventBus().deliver();

    // Verify the change event trigger's execution
    // ...
}
```

## Compose Streams of Change Data Capture Notifications with Custom Channels

Subscribe to a custom channel to receive a stream of the types of events that your app consumes. For example, if you have an app that uses real-time information about sales objects (for example, Account, Contact, and Order), create a custom channel with these objects. When you subscribe to the custom channel, you receive notifications only for these objects.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**How:** You can create a custom channel with the Metadata API PlatformEventChannel type. You can also package channels to distribute with your apps. You can subscribe to a custom channel with Streaming API (CometD) using this subscription channel format:

```
/data/YourChannelName__chn
```

For example, if your channel name is `SalesEvents`, the subscription channel is:

```
/data/SalesEvents__chn
```

## Receive Change Event Notifications for More Objects

With Change Data Capture, you can now receive notifications of record changes for the CampaignMember, CampaignMemberStatus, and Contract objects.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**How:** Change Data Capture is available for all custom objects defined in your Salesforce org and a subset of standard objects. Select the objects that you want to get notifications for on the Change Data Capture page in Setup.

## Use `transactionKey` Instead of `isTransactionEnd` for Synchronizing Changes Within Transaction Boundaries

We removed the `isTransactionEnd` header field from change event messages because you couldn't always rely on it for transaction-based replication. To replicate data to your data store within transaction boundaries, use the `transactionKey` field instead. When the `transactionKey` value changes, commit all changes for the previous transaction key.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Why:** Previously, the `isTransactionEnd` field indicated the last change in a multistep transaction, such as a lead conversion. However, the field was useful only if you enabled Change Data Capture for all objects involved in the transaction. If the object corresponding to the last change wasn't enabled, the subscriber didn't receive a change event message with `isTransactionEnd=true`.

## Platform Events: Event Publishing Behavior, Trigger Batch Size, Error Notifications for Publishing, and Lightning Web Component

You can now specify when the publishing of a platform event occurs in a transaction. Control the event trigger batch size, and recover from uncaught exceptions. Monitor the publishing of event messages by subscribing to a channel for asynchronous error notifications. Take advantage of the Lightning web component programming model with the `lightning/empApi` module.

### IN THIS SECTION:

[Choose the Publishing Behavior for Your Platform Event](#)

When you define or modify a platform event, you can choose when the platform event message is published in a Lightning Platform transaction. Choose to have the event message published only after a transaction is committed or immediately when the publish call executes. Previously, platform event messages were published immediately.

### [Process Smaller Event Batches in Platform Event Triggers and Recover from Exceptions](#)

Set a checkpoint in the event stream for where the platform event trigger resumes execution in a new invocation. If an Apex governor limit is hit or another uncaught exception is thrown, the checkpoint is used during the next execution of the trigger. Trigger processing resumes after the last successfully checkpointed event message. You can also set a checkpoint to explicitly control the number of events processed in one trigger execution.

### [Get Notified of Asynchronous Platform Event Publish Errors \(Beta\)](#)

When you publish a high-volume platform event and `isSuccess()` returns `true`, the publishing operation is queued in Salesforce. If later an error occurs in the system that prevents the publish operation, you can be notified of the error by subscribing to the `/event/AsyncOperationEvent` channel.

### [Receive Streaming Events in Your Lightning Web Component](#)

In Winter '19, we introduced the `lightning:empApi` Aura component for subscribing to event streaming channels in your Aura components. Now you can do the same in your Lightning web components using the `lightning/empApi` module.

## Choose the Publishing Behavior for Your Platform Event

When you define or modify a platform event, you can choose when the platform event message is published in a Lightning Platform transaction. Choose to have the event message published only after a transaction is committed or immediately when the publish call executes. Previously, platform event messages were published immediately.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Why:** Choose to publish after a transaction is committed if subscribers rely on data that the publishing transaction commits. For example, a process publishes an event message and creates a task record. A second process that is subscribed to the event is fired and expects to find the task record. For this scenario, choose the post-commit publishing behavior for the platform event. Another reason for choosing this behavior is when you don't want the event message to be published if the transaction fails.

Choose to publish immediately if you want the event message to be available regardless of whether the transaction succeeds. Also choose this publishing behavior if the publisher and subscribers are independent and subscribers don't rely on data committed by the publisher. For example, the immediate publishing behavior is suitable for an event used for logging purposes.

**How:** You can define the publishing behavior in Setup or through Metadata API. In Setup, enter `Platform Events` in the Quick Find box, then select **Platform Events**. Add a platform event or edit an existing one.

In Metadata API, set the new `publishBehavior` field on the CustomObject type to a valid value.

For platform events created before Summer '19, the publish behavior remains publish immediately.

 **Note:** The publish behavior option applies to event messages published through the Lightning Platform, such as Apex, Process Builder, and Flow Builder, and through Salesforce APIs.

## Process Smaller Event Batches in Platform Event Triggers and Recover from Exceptions

Set a checkpoint in the event stream for where the platform event trigger resumes execution in a new invocation. If an Apex governor limit is hit or another uncaught exception is thrown, the checkpoint is used during the next execution of the trigger. Trigger processing resumes after the last successfully checkpointed event message. You can also set a checkpoint to explicitly control the number of events processed in one trigger execution.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

**Why:** By processing fewer event messages, your trigger is less likely to hit Apex governor limits. The maximum batch size of a platform event trigger is 2,000, while the maximum of an Apex object trigger is 200. Therefore, platform event triggers are more likely to reach limits and can benefit from this feature.

**How:** To set a checkpoint for trigger resumption, set the replay ID of the last successfully processed event message using the `setResumeCheckpoint(replayId)` method. When the trigger stops its flow of execution, either intentionally or because of an unhandled exception, such as a limit exception, it fires again with a new batch (the `sObject` list in `Trigger.New`). The new batch starts with the event message after the one with the replay ID that you set. The `setResumeCheckpoint(replayId)` method

doesn't cause the trigger execution to stop, but you can end the execution explicitly. For example, to control the batch size, end the execution flow after a certain number of event messages are processed.

 **Example:** This trigger sets the replay ID of the last processed event message in each iteration. If a limit exception occurs, the trigger is fired again and resumes processing starting with the event message after the one with the set replay ID.

```
trigger ResumeEventProcessingTrigger on Low_Ink__e (after insert) {
    for (Low_Ink__e event : Trigger.New) {
        // Process the event message.
        // ...

        // Set the Replay ID of the last successfully processed event message.
        // If a limit is hit, the trigger refires and processing starts with the
        // event after the last one processed (the set Replay ID).
        EventBus.TriggerContext.currentContext().setResumeCheckpoint(event.replayId);
    }
}
```

## Get Notified of Asynchronous Platform Event Publish Errors (Beta)

When you publish a high-volume platform event and `isSuccess()` returns `true`, the publishing operation is queued in Salesforce. If later an error occurs in the system that prevents the publish operation, you can be notified of the error by subscribing to the `/event/AsyncOperationEvent` channel.

**Where:** This change applies to Lightning Experience and Salesforce Classic in Enterprise, Performance, Unlimited, and Developer editions.

 **Note:** As a beta feature, the `/event/AsyncOperationEvent` channel is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. You can provide feedback and suggestions for the `/event/AsyncOperationEvent` channel in the [Trailblazer Community](#).

**Why:** Previously, you could get only synchronous error responses from the `SaveResult` that the publish call returns in Apex and the APIs. With the notification channel, you can now also receive errors that occur asynchronously after the publish call returns.

**How:** As part of this change, we added a new error status code: `PLATFORM_EVENT_PUBLISH_FAILED`. This status code is returned when the high-volume platform event message couldn't be published after one or more attempts due to a system error.

This example shows an `AsyncOperationEvent` message received for a high-volume event publish failure. The information about the failure is included in the `OperationDetails` object. The error status code for asynchronous publish failure is `PLATFORM_EVENT_PUBLISH_FAILED`. The event message that couldn't be published due to a system error is in the `SourceEvent` object. The error notification message also includes the `operationId` field, which is the same operation ID that the publish call returns. Use this ID to match the error with its corresponding publish call.

```
{
  "schema": "MKsvE2J5292JLE7HNWz6Dg",
  "payload": {
    "OperationDetails": [
      {
        "Status": "FAILURE",
```

```

    "Fields": [
      "HighVolumePlatformEvent"
    ],
    "Category": "PlatformEventPublishError",
    "Message": "The platform event message could not be published. Try again later.",
    "StatusCode": "PLATFORM_EVENT_PUBLISH_FAILED"
  }
],
"CreatedBy": "005xx000001X7gTAAS",
"OperationId": "f6477da8-f664-446a-ae8-df651f9c3a50",
"CreatedDate": "2019-02-26T00:48:46Z",
"SourceEvent": {
  "com.sforce.eventbus.News_Event__e": {
    "Location__c": "Mountain City"
  }
}
},
"event": {
  "replayId": 1
}
}

```

## Match the Error Notification with the Publish Call Using the Operation ID

When the publish call enqueues the event message in Salesforce and returns a successful response, it contains an operation ID. The operation ID uniquely identifies the publish operation and is used to match the error notification with the publish call. This example shows the response of a REST API sObject POST request to publish a platform event message. The response includes the operation ID in an `errors` array element in the `message` field with a status code of `OPERATION_ENQUEUED`.

```

{
  "id" : "e00xx0000000001AAA",
  "success" : true,
  "errors" : [ {
    "statusCode" : "OPERATION_ENQUEUED",
    "message" : "f6477da8-f664-446a-ae8-df651f9c3a50",
    "fields" : [ ]
  } ]
}

```

To get the operation ID in Apex, call the `EventBus.getOperationId(SaveResult)` and pass in the returned `SaveResult` that `EventBus.publish()` returns.

## Receive Streaming Events in Your Lightning Web Component

In Winter '19, we introduced the `lightning:empApi` Aura component for subscribing to event streaming channels in your Aura components. Now you can do the same in your Lightning web components using the `lightning/empApi` module.

**Where:** This change applies to Lightning Experience in Performance, Unlimited, Enterprise, and Developer editions.

**How:** To subscribe to an event channel, import the `lightning/empApi` module and use its methods. The events that you can receive include platform events, PushTopic events, generic events, and Change Data Capture events.

SEE ALSO:

[New and Changed Modules for Lightning Web Components](#)

## New and Changed Items for Developers

Here is where you can find new and changed objects, calls, classes, components, commands, and more that help you customize Salesforce features.

IN THIS SECTION:

[Lightning Components: New and Changed Items](#)

Build UI easily with these updated Lightning components.

[Apex: New and Changed Items](#)

These classes, enums, and interfaces are new or have changes.

[API: New and Changed Items](#)

Access more metadata types and data objects in API version 46.0. More settings are available in Metadata API.

[Salesforce CLI: New and Changed Commands](#)

We release changes to Salesforce CLI regularly. Read the weekly release notes to learn about recent updates for [v45 of the core CLI plug-ins](#). For more information about the pre-release version, see [v46 of the Salesforce CLI Command Reference](#).

## Lightning Components: New and Changed Items

Build UI easily with these updated Lightning components.

IN THIS SECTION:

[Changed Lightning Web Components](#)

Build UI easily with these changed components.

[New and Changed Modules for Lightning Web Components](#)

Use new modules to display custom chat UI, subscribe to streaming channels to listen to event messages, and navigate in communities.

[Changed Aura Components](#)

Build UI easily with these changed components.

## Changed Lightning Web Components

Build UI easily with these changed components.

 **Note:** In the [Component Reference](#), the Specification page for some Lightning web components lists attributes and methods that are not available to Salesforce customers. These attributes and methods are marked “Reserved for internal use”, and their implementation can change at any time.

Components that support icons automatically use a right-to-left (RTL) version of an icon when you set your personal Salesforce language setting to an RTL language such as Arabic, Hebrew, or Urdu. Only icons that imply a reading direction have an RTL version.

- `lightning-avatar`

- `lightning-button`
- `lightning-button-icon`
- `lightning-button-menu`
- `lightning-button-icon-stateful`
- `lightning-button-stateful`
- `lightning-card`
- `lightning-dual-listbox`
- `lightning-helptext`
- `lightning-icon`
- `lightning-menu-item`
- `lightning-pill`
- `lightning-tab`
- `lightning-vertical-navigation-item-icon`

**lightning-button-icon**

The following attribute is new.

- `tooltip`—Text to display when the user mouses over or focuses on the button. The tooltip is auto-positioned relative to the button and screen space.

The following attribute is now deprecated.

- `icon-class`—Due to Shadow DOM limitations, you can't apply your own CSS class to the icon svg element. Look for an alternative solution in a future release.

**lightning-button-menu**

The following attribute is new.

- `tooltip`—Text to display when the user mouses over or focuses on the button. The tooltip is auto-positioned relative to the button and screen space.

**lightning-checkbox-group**

The following attribute is new.

- `variant`—The variant changes the appearance of the checkbox group. Accepted variants include `standard` and `label-hidden`. The default is `standard`. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

**lightning-combobox**

The following attribute has changed.

- `variant`—The `label-inline` and `label-stacked` variants have been added. Use `label-inline` to horizontally align the label and combobox. Use `label-stacked` to place the label above the combobox. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

**lightning-datatable**

The following types have changed.

- `date`—The `hour12` attribute is determined by the user's locale. To display time in a 12-hour format, use `typeAttributes: { hour12: true }` in the column definition.
- `url`—Links now open in a new tab by default. To open a link in the current tab or window, use `typeAttributes: { target: '_self' }` in the column definition.

**lightning-dual-listbox**

The following attribute has changed.

- `variant`—The `label-inline` and `label-stacked` variants have been added. Use `label-inline` to horizontally align the label and dual listbox. Use `label-stacked` to place the label above the dual listbox. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

**lightning-icon**

The following attribute has changed.

- `variant`—The `success` variant has been added. Use the `success` variant to change the fill of an icon to green.

**lightning-input**

The following attributes are new.

- `date-style`—The display style of the date when `type='date'` or `type='datetime'`. Valid values are `short`, `medium`, and `long`. The default value is `medium`. The format of each style is specific to the locale. This attribute has no effect on mobile devices.

Dates are displayed by default in a medium-length style, such as Jan 7, 2019 in the en-US locale. To specify a short style such as 01/07/2019, set `date-style="short"`. To specify a long style such as January 7, 2019, set `date-style="long"`.

If a user enters a date using a different style, the component accepts the input and reformats it to the specified `date-style` during the `blur` event. The date entered must be valid for the user's Salesforce locale, and match one of the short, medium, or long styles.

- `time-style`—The display style of the time when `type='time'` or `type='datetime'`. Valid values are `short`, `medium`, and `long`. The default value is `short`. The `medium` and `long` styles currently have the same formatting.

Times are displayed by default in a short style, such as 6:53 PM in the en-US locale. To specify a style to include seconds such as 6:53:33 PM, set `time-style="medium"` or `time-style="long"`.

- `autocomplete`—Controls autofilling of the field. This attribute is supported for `email`, `search`, `tel`, `text`, and `url` input types. The values `on` and `off` are supported, but the autofill behavior depends on the browser. When you set the `autocomplete` attribute, the `lightning-input` component passes the value through to be interpreted by the browser.

The following attribute has changed.

- `variant`—The `label-inline` and `label-stacked` variants have been added. Use `label-inline` to horizontally align the label and input fields. Use `label-stacked` to place the label above the input fields. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

**lightning-input-address**

The following attribute has changed.

- `variant`—The `label-inline` and `label-stacked` variants have been added. Use `label-inline` to horizontally align the label and address fields. Use `label-stacked` to place the label above the address fields. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

**lightning-input-field**

The following method is new.

- `reset()`—Resets the form fields to their initial values.

The following attribute has changed.

- `class`—The `slds-form-element_1-col` class is now supported. Use this Lightning Design System class when your parent form uses a compact density and you want to reduce the 33/66% distribution of the label and input field.

**lightning-input-location**

The following attribute has changed.

- **variant**—The `label-inline` and `label-stacked` variants have been added. Use `label-inline` to horizontally align the label and geolocation fields. Use `label-stacked` to place the label above the geolocation fields. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

#### **lightning-input-name**

The following attribute has changed.

- **variant**—The `label-inline` and `label-stacked` variants have been added. Use `label-inline` to horizontally align the label and name fields. Use `label-stacked` to place the label above the name fields. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

#### **lightning-input-rich-text**

Strikethrough text now uses the `<strike>` tag instead of the `<s>` tag to support updating of rich text fields in Lightning Experience, Salesforce Classic, and the Salesforce app.

The following methods are new.

- `getFormat`—Returns an object representing the formats of the currently selected content. Valid formats are `font`, `size`, and `align`.
- `setFormat(formats)`—Sets a format in the editor from the cursor point onward. The format also applies to currently selected content. Valid formats are `font`, `size`, and `align`. `formats` is an array of key-value pairs with a format name and value.

#### **lightning-map**

`lightning-map` loads content from the Salesforce domain `maps.a.forceusercontent.com` in an `iframe`. You must whitelist `maps.a.forceusercontent.com` if you want to use this component in your own domain and you use the Content Security Policy `frame-src` directive, such as in Lightning Communities or Lightning Out.

The following attribute is new.

- **list-view**—Displays or hides the list of locations. Valid values are `visible`, `hidden`, or `auto`. The default is `auto`, which shows the list only when multiple markers are present. Passing in an invalid value hides the list view.

#### **lightning-output-field**

The following attribute has changed.

- **class**—The `slds-form-element_1-col` class is now supported. Use this Lightning Design System class when your parent form uses a compact density and you want to reduce the 33/66% distribution of the label and output field.

#### **lightning-pill**

When you do not provide an icon or avatar, the pill no longer leaves placeholder space for the image.

#### **lightning-radio-group**

The following attribute is new.

- **variant**—The variant changes the appearance of the radio group. Accepted variants include `standard` and `label-hidden`. The default is `standard`. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

#### **lightning-record-edit-form**

The following attribute is new.

- **density**—Sets the arrangement style of fields and labels in the form. Accepted values are `compact`, `comfy`, and `auto`. The default is `auto`, which lets the component dynamically set the density according to the user's Display Density setting and the width of the form. Use `compact` to display fields and their labels on the same line. Use `comfy` to display fields stacked below their labels.

The following event handler has changed.

- `onerror`—You can now return the error details when a required field is missing using `event.detail.output.fieldErrors`. To display the error message automatically on the form, include `lightning-messages` immediately before or after the `lightning-input-field` components.

Other changes include:

- In view mode, edit icons appear on editable fields only. Previously, edit icons appeared on all fields. Editable fields are fields that are marked `updateable` in the User Interface API. The edit icon on an editable field is grayed out until you hover over it.
- Encrypted fields are now masked only after the field is saved.
- When using the `fields` attribute, `lightning-messages` displays an error message about missing required fields on save if you don't include them.

### **lightning-record-form**

The following attribute is new.

- `density`—Sets the arrangement style of fields and labels in the form. Accepted values are `compact`, `comfy`, and `auto`. The default is `auto`, which lets the component dynamically set the density according to the user's Display Density setting and the width of the form. Use `compact` to display fields and their labels on the same line. Use `comfy` to display fields stacked below their labels.

The following event handler has changed.

- `onerror`—You can now return the error details when a required field is missing using `event.detail.output.fieldErrors`. To display the error message automatically on the form, include `lightning-messages` immediately before or after the `lightning-input-field` components.

Other changes include:

- In view mode, edit icons appear on editable fields only. Previously, edit icons appeared on all fields. Editable fields are fields that are marked `updateable` in the User Interface API. The edit icon on an editable field is grayed out until you hover over it.
- Encrypted fields are now masked only after the field is saved.
- When using the `fields` attribute, `lightning-messages` displays an error message about missing required fields on save if you don't include them.

### **lightning-record-view-form**

The following attribute is new.

- `density`—Sets the arrangement style of fields and labels in the form. Accepted values are `compact`, `comfy`, and `auto`. The default is `auto`, which lets the component dynamically set the density according to the user's Display Density setting and the width of the form. Use `compact` to display fields and their labels on the same line. Use `comfy` to display fields stacked below their labels.

### **lightning-textarea**

The following attribute has changed.

- `variant`—The `label-inline` and `label-stacked` variants have been added. Use `label-inline` to horizontally align the label and name fields. Use `label-stacked` to place the label above the textarea field. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

SEE ALSO:

[Component Library](#)

## New and Changed Modules for Lightning Web Components

Use new modules to display custom chat UI, subscribe to streaming channels to listen to event messages, and navigate in communities.

## New Modules

### **lightningsnapin/baseChatMessage**

Displays a custom chat UI with a message for the specified user type.

### **lightning/empApi**

Provides access to methods for subscribing to a streaming channel and listening to event messages. All streaming channels are supported, including channels for platform events, PushTopic events, generic events, and Change Data Capture events.

### **@salesforce/apexContinuation**

Provides access to an Apex method that returns a continuation that makes a long-running request to an external web service.

For more information, see [Make Long-Running Callouts with Continuations](#).

## Changed Modules

### **lightning/navigation**

Enhancements to support communities, including support for `pageReferences`, `state` attributes as query parameters for your URLs, and `currentPageReference`. As part of these updates, `standard__namedPage` is being deprecated in communities. Instead, use `comm__namedPage`.

### **@salesforce/user/isGuest**

A boolean value that specifies whether the user is a guest user.

SEE ALSO:

[Component Library](#)

## Changed Aura Components

Build UI easily with these changed components.

Components that support icons use a right-to-left (RTL) version of an icon when you set your personal Salesforce language setting to an RTL language such as Arabic, Hebrew, or Urdu. Only icons that imply a reading direction have an RTL version.

- `lightning:avatar`
- `lightning:button`
- `lightning:buttonIcon`
- `lightning:buttonMenu`
- `lightning:buttonIconStateful`
- `lightning:buttonStateful`
- `lightning:card`
- `lightning:dualListbox`
- `lightning:helptext`
- `lightning:icon`
- `lightning:menuItem`
- `lightning:pill`
- `lightning:tab`
- `lightning:verticalNavigationItemIcon`

**force:recordEdit**

On desktop, the **Image** button on the rich text editor now opens the Select Image dialog, which enables you to select an image available in your Files Home. You can also upload an image from the Select Image dialog. Selecting an image is not supported in Lightning Out and standalone apps. To display a record form with a rich text editor that uses the system file selector, use `lightning:recordEditForm` instead. On mobile devices, the rich text editor continues to use the native file selector.

**lightning:buttonIcon**

The following attribute is new.

- `tooltip`—Text to display when the user mouses over or focuses on the button. The tooltip is auto-positioned relative to the button and screen space.

**lightning:buttonMenu**

The following attribute is new.

- `tooltip`—Text to display when the user mouses over or focuses on the button. The tooltip is auto-positioned relative to the button and screen space.

**lightning:checkboxGroup**

The following attribute is new.

- `variant`—The variant changes the appearance of the checkbox group. Accepted variants include `standard`, `label-hidden`, `label-inline`, and `label-stacked`. The default is `standard`. Use `label-hidden` to hide the label but make it available to assistive technology. Use `label-inline` to horizontally align the label and checkbox group. Use `label-stacked` to place the label above the checkbox group. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

**lightning:combobox**

The following attribute has changed.

- `variant`—The `label-inline` and `label-stacked` variants have been added. Use `label-inline` to horizontally align the label and combobox. Use `label-stacked` to place the label above the combobox. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

**lightning:datatable**

The following types have changed.

- `date`—The `hour12` attribute is determined by the user's locale. To display time in a 12-hour format, use `typeAttributes: { hour12: true }` in the column definition.
- `url`—Links now open in a new tab by default. To open a link in the current tab or window, use `typeAttributes: { target: '_self' }` in the column definition.

**lightning:dualListbox**

The following attribute has changed.

- `variant`—The `label-inline` and `label-stacked` variants have been added. Use `label-inline` to horizontally align the label and dual listbox. Use `label-stacked` to place the label above the dual listbox. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

**lightning:icon**

The following attribute has changed.

- `variant`—The `success` variant has been added. Use the `success` variant to change the fill of an icon to green.

**lightning:input**

The following attributes are new.

- `dateStyle`—The display style of the date when `type='date'` or `type='datetime'`. Valid values are `short`, `medium`, and `long`. The default value is `medium`. The format of each style is specific to the locale. This attribute has no effect on mobile devices.

Dates are displayed by default in a medium-length style, such as Jan 7, 2019 in the en-US locale. To specify a short style such as 01/07/2019, set `dateStyle="short"`. To specify a long style such as January 7, 2019, set `dateStyle="long"`.

If a user enters a date using a different style, the component accepts the input and reformats it to the specified `dateStyle` during the `blur` event. The date entered must be valid for the user's Salesforce locale, and match one of the short, medium, or long styles.

- `timeStyle`—The display style of the time when `type='time'` or `type='datetime'`. Valid values are `short`, `medium`, and `long`. The default value is `short`. The `medium` and `long` styles currently have the same formatting.
- `autocomplete`—Controls autofilling of the field. This attribute is supported for `email`, `search`, `tel`, `text`, and `url` input types. The values `on` and `off` are supported, but the autofill behavior depends on the browser. When you set the `autocomplete` attribute, the `lightning:input` component passes the value through to be interpreted by the browser.

The following attribute has changed.

- `variant`—The `label-inline` and `label-stacked` variants have been added. Use `label-inline` to horizontally align the label and input fields. Use `label-stacked` to place the label above the input fields. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

#### **lightning:inputAddress**

The following attribute has changed.

- `variant`—The `label-inline` and `label-stacked` variants have been added. Use `label-inline` to horizontally align the label and address fields. Use `label-stacked` to place the label above the address fields. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

#### **lightning:inputField**

The following method is new.

- `reset()` —Resets the form fields to their initial values.

The following attribute has changed.

- `class`—The `slds-form-element_1-col` class is now supported. Use this Lightning Design System class when your parent form uses a compact density and you want to reduce the 33/66% distribution of the label and input field.

#### **lightning:inputLocation**

The following attribute has changed.

- `variant`—The `label-inline` and `label-stacked` variants have been added. Use `label-inline` to horizontally align the label and geolocation fields. Use `label-stacked` to place the label above the geolocation fields. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

#### **lightning:inputName**

The following attribute has changed.

- `variant`—The `label-inline` and `label-stacked` variants have been added. Use `label-inline` to horizontally align the label and name fields. Use `label-stacked` to place the label above the name fields. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

**lightning:inputRichText**

Strikethrough text now uses the `<strike>` tag instead of the `<s>` tag to support updating of rich text fields in Lightning Experience, Salesforce Classic, and the Salesforce app.

The following methods are new.

- `getFormat`—Returns an object representing the formats of the currently selected content. Valid formats are `font`, `size`, and `align`.
- `setFormat(formats)`—Sets a format in the editor from the cursor point onward. The format also applies to currently selected content. Valid formats are `font`, `size`, and `align`. `formats` is an array of key-value pairs with a format name and value.

**lightning:map**

`lightning:map` loads content from the Salesforce domain `maps.a.forceusercontent.com` in an iframe. You must whitelist `maps.a.forceusercontent.com` if you want to use this component in your own domain and you use the Content Security Policy `frame-src` directive, such as in Lightning Communities or Lightning Out.

The following attribute is new.

- `listView`—Displays or hides the list of locations. Valid values are `visible`, `hidden`, or `auto`. The default is `auto`, which shows the list only when multiple markers are present. Passing in an invalid value hides the list view.

**lightning:navigation**

Several enhancements for Lightning Communities have been added for the `pageReference` object.

- Added state property support.
- The Named Page type `standard__namedPage` is deprecated in communities. Use `comm__namedPage` for communities references.
- Added Login to the supported pages for Communities.

**lightning:outputField**

The following attribute has changed.

- `class`—The `slds-form-element_1-col` class is now supported. Use this Lightning Design System class when your parent form uses a compact density and you want to reduce the 33/66% distribution of the label and output field.

**lightning:radioGroup**

The following attribute is new.

- `variant`—The variant changes the appearance of the radio group. Accepted variants include `standard`, `label-hidden`, `label-inline`, and `label-stacked`. The default is `standard`. Use `label-hidden` to hide the label but make it available to assistive technology. Use `label-inline` to horizontally align the label and radio group. Use `label-stacked` to place the label above the radio group. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

**lightning:recordEditForm**

The following attribute is new.

- `density`—Sets the arrangement style of fields and labels in the form. Accepted values are `compact`, `comfy`, and `auto`. The default is `auto`, which lets the component dynamically set the density according to the user's Display Density setting and the width of the form. Use `compact` to display fields and their labels on the same line. Use `comfy` to display fields stacked below their labels.

The following event handler has changed.

- `onerror`—You can now return the error details when a required field is missing using `event.getParam("output").fieldErrors`. To display the error message automatically on the form, include `lightning:messages` immediately before or after the `lightning:inputField` components.

Other changes include:

- In view mode, edit icons appear only on editable fields. Previously, edit icons appeared on all fields. Editable fields are fields that are marked `updateable` in the User Interface API. The edit icon on an editable field is grayed out until you hover over it.
- Encrypted fields are now masked only after the field is saved.
- When using the `fields` attribute, `lightning:messages` displays an error message about missing required fields if you don't include them.

#### **lightning:recordForm**

The following attribute is new.

- `density`—Sets the arrangement style of fields and labels in the form. Accepted values are `compact`, `comfy`, and `auto`. The default is `auto`, which lets the component dynamically set the density according to the user's Display Density setting and the width of the form. Use `compact` to display fields and their labels on the same line. Use `comfy` to display fields stacked below their labels.

The following event handler has changed.

- `onerror`—You can now return the error details when a required field is missing using `event.getParam("output").fieldErrors`. To display the error message automatically on the form, include `lightning:messages` immediately before or after the `lightning:inputField` components.

Other changes include:

- In view mode, edit icons appear only on editable fields. Previously, edit icons appeared on all fields. Editable fields are fields that are marked `updateable` in the User Interface API. The edit icon on an editable field is grayed out until you hover over it.
- Encrypted fields are now masked only after the field is saved.
- When using the `fields` attribute, `lightning:messages` displays an error message about missing required fields if you don't include them.

#### **lightning:recordViewForm**

The following attribute is new.

- `density`—Sets the arrangement style of fields and labels in the form. Accepted values are `compact`, `comfy`, and `auto`. The default is `auto`, which lets the component dynamically set the density according to the user's Display Density setting and the width of the form. Use `compact` to display fields and their labels on the same line. Use `comfy` to display fields stacked below their labels.

#### **lightning:textarea**

The following attribute has changed.

- `variant`—The `label-inline` and `label-stacked` variants have been added. Use `label-inline` to horizontally align the label and textarea field. Use `label-stacked` to place the label above the textarea field. Use these variants instead of the `slds-form-element_horizontal` or `slds-form-element_stacked` Lightning Design System classes.

SEE ALSO:

[Component Library](#)

## Apex: New and Changed Items

These classes, enums, and interfaces are new or have changes.

For more information, refer to the [Apex Developer Guide](#).

## IN THIS SECTION:

[Apex: New and Changed Classes and Interfaces](#)

These classes and interfaces are new or have changed.

[ConnectApi \(Chatter in Apex\): New and Changed Classes](#)

Create custom experiences in Salesforce using Chatter in Apex. Get mission activity progress for a user and do more with social posts.

## SEE ALSO:

[Apex: New Features](#)

## Apex: New and Changed Classes and Interfaces

These classes and interfaces are new or have changed.

## IN THIS SECTION:

[New Apex Classes](#)

These classes were introduced in this release.

[Changed Apex Classes](#)

These existing classes have new or changed methods or constants.

[New Apex Enums](#)

These enumerations were introduced in this release.

[Changed Apex Enum](#)

This enumeration was updated in this release.

[New Apex Interface](#)

This interface was introduced in this release.

## New Apex Classes

These classes were introduced in this release.

### Classes in the System Namespace

#### Security Class (Pilot)

The new `System.Security` class contains methods to securely implement Apex applications. Use the methods to remove inaccessible fields before a DML operation without causing an exception and to strip fields that aren't visible from query results. This pilot feature is available automatically in sandbox, developer, and scratch organizations as a pilot program.

#### **stripInaccessible(accessCheckType, sourceRecords, enforceRootObjectCRUD)**

Creates a list of sObjects from the source records, which are stripped of fields that fail the field-level security checks for the current user. The method also provides an option to enforce an object-level access check.

#### SObjectAccessDecision Class

The new `System.SObjectAccessDecision` class is the return type of the `Security.stripInaccessible` method. Based on the specified operation (create, update, or read), this class provides methods to return a list of sObjects that contain only those fields that are accessible to the current user in that context.

#### **getModifiedIndexes()**

Returns the indexes of sObjects that are modified by the `stripInaccessible` method.

**getRecords ()**

Returns a list of new sObjects that are identical to the source records, except that they are stripped of fields that fail the field-level security check for the current user.

**getRemovedFields ()**

Returns a map of sObject types to their corresponding inaccessible fields. The map key is a string representation of the sObject type. The map value is a set of strings, which denote the fields names that are inaccessible.

## Changed Apex Classes

These existing classes have new or changed methods or constants.

### **Auth.SessionManagement Class**

#### **New Methods**

**getLightningLoginEligibility (userId)**

Returns the eligibility status for a user who's logging in with Lightning Login when you set up your org with My Domain and use the Login Discovery page type. Use this method to redirect the user to a custom login flow. For example, use after a login attempt to redirect the user to password flow if the user is ineligible for Lightning Login.

### **EventBus.TriggerContext Class**

#### **New Methods**

**getResumeCheckpoint ()**

Returns the replay ID that was set by `setResumeCheckpoint ()`. The returned value is the replay ID of the event message after which trigger processing resumes in a new trigger invocation.

**setResumeCheckpoint (resumeReplayId)**

Sets a checkpoint in the event stream where the platform event trigger resumes execution in a new invocation. Use this method to recover from limit and uncaught exceptions, or to control the number of events processed in one trigger execution. When calling this method, pass in the replay ID of the last successfully processed event message. When the trigger stops execution before all events in `Trigger.New` are processed, either because of an uncaught exception or intentionally, the trigger is invoked again. The new execution starts with the event message in the stream after the one with the checkpointed Replay ID.

### **Schema.FieldSetMember Class**

#### **New Methods**

**getObjectField ()**

Returns the token for this field.

### **Schema.ObjectField Class**

#### **New Methods**

**getDescribe (options)**

Returns the describe field result for this field. This method also provides an option to get all the describe field results for an object.

### **System.EventBus Class**

#### **New Methods**

**getOperationId (result)**

Returns the ID of the asynchronous event publishing operation based on the passed-in `SaveResult`. Use this ID to correlate the asynchronous publishing result sent on the `/event/AsyncOperationEvent` channel.

**System.Test Class****New Methods****enableChangeDataCapture ()**

Use this method in an Apex test so that change event notifications are generated for all supported Change Data Capture entities. Call this method at the beginning of your test before performing DML operations and calling `Test.getEventBus().deliver();`

**System.UserManagement Class****New Methods****initPasswordlessLogin (userId, method)**

Invokes a verification challenge for passwordless login when creating custom (Visualforce) Login and Verify pages for external users.

**verifyPasswordlessLogin (userId, method, identifier, code, startUrl)**

Completes a verification challenge when creating a custom (Visualforce) Verify page for passwordless login. If the user who is trying to login enters the verification code successfully, the user is logged in.

**New Apex Enums**

These enumerations were introduced in this release.

**AccessType Enum**

Specifies the access check type for the fields of an sObject.

**LightningLoginEligibility Enum**

Contains a Lightning Login eligibility value used by the `Auth.SessionManagement.getLightningLoginEligibility` method.

**Changed Apex Enum**

This enumeration was updated in this release.

**LoginDiscoveryMethod Enum**

Contains methods used to verify the user's identity when the My Domain login process uses Login Discovery.

This enum has a new value, `LIGHTNING_LOGIN`. Verify identity by Lightning Login.

**New Apex Interface**

This interface was introduced in this release.

**TxnSecurity.EventCondition Interface (Beta)**

Allows an implementing class to specify whether to take action when certain events occur based on a transaction security policy. This interface is only used for Apex policies created in Real-Time Event Monitoring (Beta).

**evaluate (event)**

Evaluates an event against a transaction security policy created in Real-Time Event Monitoring (Beta). If the event triggers the policy, the method returns `true`.

**ConnectApi (Chatter in Apex): New and Changed Classes**

Create custom experiences in Salesforce using Chatter in Apex. Get mission activity progress for a user and do more with social posts.

Many Chatter REST API resource actions are exposed as static methods on Apex classes in the `ConnectApi` namespace. These methods use other `ConnectApi` classes to input and return information. The `ConnectApi` namespace is referred to as *Chatter in Apex*.

In Apex, you can access some Chatter data using SOQL queries and objects. However, it's simpler to expose Chatter data in `ConnectApi` classes, and data is localized and structured for display. For example, instead of making several calls to access and assemble a feed, you can do it with a single call.

 **Note:** To integrate mobile apps, intranet sites, and third-party web applications with Chatter and Communities, use [Chatter REST API](#).

#### IN THIS SECTION:

##### [New Chatter in Apex Classes](#)

These classes are new.

##### [New and Changed Chatter in Apex Input Classes](#)

These input classes are new or have changes.

##### [New and Changed Chatter in Apex Output Classes](#)

These output classes are new or have changes.

## New Chatter in Apex Classes

These classes are new.

### Missions

This new method is in the `ConnectApi.Missions` class.

#### Get mission activity progress for a user

- `getUserMissionsProgress (communityId, userId)`

### Social Engagement

These new methods are in the `ConnectApi.SocialEngagement` class.

#### Approve or reject the publishing of up to 200 of social posts

- `massApprove (massApproval)`

#### Delete a social post from its social network

 **Note:** Deleting a social post from its social network doesn't delete the record from Salesforce.

- `deleteSocialPost (socialPostId, socialAccountId)`

#### Like a social post

- `likeSocialPost (socialPostId, socialAccountId)`

#### Unlike a social post

- `unlikeSocialPost (socialPostId, socialAccountId)`

#### Hide a social post

- `hideSocialPost (socialPostId, socialAccountId)`

**Unhide a social post**

- `unhideSocialPost(socialPostId, socialAccountId)`

**Recall an approval request to publish a social post**

- `recallApproval(socialPostId)`

**Get the follow relationship between a managed social account and a social persona**

- `getRelationship(id, socialPersonaId)`

**New and Changed Chatter in Apex Input Classes**

These input classes are new or have changes.

## Next Best Actions

**ConnectApi.RecommendationReactionInput**

This input class has this new property.

- `externalId`—External ID of the recommendation. This ID doesn't need to be a Salesforce 18-character ID. For example, it can be a product number from an external system.

## Social Engagement

**ConnectApi.SocialPostMassApprovalInput**

This new input class has these properties.

- `isApproved`—Specifies whether to approve (`true`) or reject (`false`) publishing the social posts.
- `socialPostIdList`—A list of up to 200 social post IDs.

**New and Changed Chatter in Apex Output Classes**

These output classes are new or have changes.

## Communities

**ConnectApi.Community**

This output class has this new property.

- `templateName`—Name of the community's template.

## Files

**ConnectApi.File**

This output class has this new property.

- `isFileAsset`—Specifies whether the file is an asset.

## Missions

**ConnectApi.AbstractUserMissionActivity**

This new output class is a superclass of `ConnectApi.UserMission` and `ConnectApi.UserMissionActivity`. It has these properties.

- `activityCount`—Number of mission activities of the specified type for the user.
- `activityType`—Type of mission activity for a user. Values are:
  - `FeedItemAnswerAQuestion`—User answered a question.
  - `FeedItemLikeSomething`—User liked a post or comment.
  - `FeedItemMarkAnswerAsBest`—User marked an answer as the best answer.
  - `FeedItemPostQuestion`—User posted a question.
  - `FeedItemReceiveAComment`—User received a comment on a post.
  - `FeedItemReceiveALike`—User received a like on a post or comment.
  - `FeedItemReceiveAnAnswer`—User received an answer to a question.
  - `FeedItemWriteAComment`—User commented on a post.
  - `FeedItemWriteAPost`—User made a post.
  - `FeedItemYourAnswerMarkedBest`—User's answer was marked as the best answer.

**ConnectApi.UserMission**

This new output class is a subclass of `ConnectApi.AbstractUserMissionActivity` and has these properties.

- `missionName`—Name of the mission.
- `missionThreshold`—Threshold of the mission. When a user reaches this activity count, the mission is achieved.

## Next Best Actions

**ConnectApi.NBARecommendation**

This output class has this new property.

- `externalId`—External ID of the recommendation. This ID doesn't need to be a Salesforce 18-character ID. For example, it can be a product number from an external system.

**ConnectApi.Recommendation**

This output class has this new property.

- `externalId`—External ID of the recommendation. This ID doesn't need to be a Salesforce 18-character ID. For example, it can be a product number from an external system.

**ConnectApi.RecommendationReaction**

This output class has this new property.

- `externalId`—External target ID of the recommendation reacted on. This ID doesn't need to be a Salesforce 18-character ID. For example, it can be a product number from an external system.

## Social Engagement

**ConnectApi.DeleteSocialPostIntent**

This new output class has these properties.

- `socialAccountId`—ID of the social account that deletes the social post.
- `socialPostId`—ID of the social post to delete.

**ConnectApi.LikeSocialPostIntent**

This new output class has these properties.

- `socialAccountId`—ID of the social account that likes the social post.
- `socialPostId`—ID of the social post to like.

**ConnectApi.SocialAccountRelationship**

This new output class has these properties.

- `isFollowed`—Specifies whether the social account is followed by the social persona.
- `isFollowing`—Specifies whether the social account is following the social persona.
- `socialAccountId`—ID of the social account.
- `socialPersonaId`—ID of the social persona.

**ConnectApi.SocialPostMassApprovalOutput**

This new output class has this property.

- `isApproved`—Specifies whether the social posts were approved (`true`) or rejected (`false`) for publishing.

## API: New and Changed Items

Access more metadata types and data objects in API version 46.0. More settings are available in Metadata API.

### IN THIS SECTION:

#### [New and Changed Objects](#)

Access more data through these new and changed standard objects.

#### [SOQL](#)

Salesforce Object Query Language (SOQL) includes updates to SOQL Polymorphism.

#### [REST API](#)

REST API includes new, changed, and deprecated calls.

#### [SOAP API](#)

SOAP API includes changed calls.

#### [Chatter REST API](#)

Integrate mobile apps, intranet sites, and third-party web applications with Salesforce using Chatter REST API. Create and publish communities, get mission activity progress for a user, and do more with social posts.

#### [Reports and Dashboards REST API](#)

Reports and Dashboards REST API enhancements include new URL parameters, objects, and properties that describe row-level formulas, dashboard sorting, and conditional report subscriptions.

#### [User Interface API](#)

Work with new objects and build mobile apps that display Lightning communities.

#### [Tooling API](#)

Tooling API includes new and changed objects.

#### [Metadata API](#)

Metadata API includes new and changed types and fields.

#### [Settings Exposed in Metadata API](#)

We exposed some settings in Metadata API as Boolean fields on metadata types.

### [Lightning Console JavaScript API](#)

The Lightning Console JavaScript API now provides information on whether a utility item is popped out.

SEE ALSO:

[API](#)

## New and Changed Objects

Access more data through these new and changed standard objects.

### Salesforce Overall

#### **Create in-app guidance prompts to deliver news, training, tips, and more to users**

Use the new `Prompt`, `PromptAction`, `PromptActionShare`, `PromptActionOwnerSharingRule`, `PromptVersion` objects.

#### **See an event's due date time**

Use the new `ActivityDateTime` field on the `LookedUpFromActivity`, `OpenActivity`, and `ActivityHistory` objects.

### Sales Processes

#### **Give feedback about call quality in Lightning Dialer**

Use the new `VoiceCallQualityFeedback` and `VoiceCallQualityFeedbackShare` objects.

#### **Customize product schedules**

The `OpportunityLineItemSchedule` object now supports custom fields, validation rules, and Apex triggers. Deleting a schedule now also invokes delete triggers. If customizable product schedules are enabled, you can use custom fields in default schedules and customize their layout. But if you've applied validation rules or Apex triggers, they're bypassed when they're first inserted.

#### **Partner relationships are creatable and deletable**

The View All Data permission requirement was removed from the `AccountPartner`, `OpportunityPartner`, and `Partner` objects. These objects are now creatable and deletable according to a user's Write and Delete permissions on the `Opportunity` and `Account` objects.

#### **Set the primary contact at the same time the opportunity is created**

Use the `ContactID` field, set as the primary contact, on the existing `Opportunity` object.

### Assets

#### **The Asset object supports primary key (PK) chunking for bulk query jobs**

PK chunking helps you efficiently process a large volume of records. For more information, see [PK Chunking Header](#) and [Walk Through a Bulk Query Sample Using PK Chunking](#).

### AppExchange

#### **Request usage data on your managed packages (Pilot)**

Use the new `AppAnalyticsQueryRequest` object to request App Analytics data on managed packages.

### Approval Processes

#### **Disable email notifications from approval processes where the user is an approver**

Use the new `UserPreferencesReceiveNoNotificationsAsApprover` field on the existing `User` object.

#### **Enable email notifications from approval processes where the user is a delegated approver**

Use the new `UserPreferencesReceiveNotificationsAsDelegatedApprover` field on the existing `User` object.

## Authentication and Identity

### Give a connected app permission to access external resources

Use the new `OAuthCustomScope` object, which represents a permission that defines the protected resources that a connected app can access from an external entity.

### See the number of failed login attempts on a user account

Use the new `NumberOfFailedLogins` field on the existing `User` object.

### View the operating system version running on a device

Use the new `PlatformVersion` field on the existing `UserDevice` object.

### See if a user attempted to access a list view

Use the new `Listview` picklist option for the `Activity` field of the `VerificationHistory` object.

### View streaming logout event data in any org with API access

The `LogoutEventStream` object is now available in any org with the `API Enabled` permission.

### See more data about user login events

- Use the `CountryIso` field on the `LoginEvent` object to see the country code where a user logged in to Salesforce.
- Use the `HttpMethod` field on the `LoginEvent` object to identify the HTTP method of the login request.

### Enable callouts to resources in Amazon Web Services over HTTP using the Signature Version 4 signing process

Use the new `AwsAccessKey`, `AwsService`, `AwsRegion`, and `AwsAccessSecret` fields on the existing `NamedCredential` object.

### Build token-based named credentials for easier external connections

Use the new `AuthTokenEndpointUrl`, `JwtAudience`, `JwtFormulaSubject`, `JwtIssuer`, `JwtSigningCertificate`, `JwtTextSubject`, and `JwtValidityPeriodSeconds` fields on the existing `NamedCredential` object.

## Data Protection and Privacy

### Manage the version and lifespan of an authorization form

Use the new `AuthorizationForm` object.

### Store your customers' consent to an authorization form

Use the new `AuthorizationFormConsent` object.

### Get info on the changes to values in the fields of an authorization form consent record

Use the new `AuthorizationFormConsentHistory` object.

### Indicate the data use purpose associated with an authorization form

Use the new `AuthorizationFormDataUse` object.

### Get info on the changes to values in the fields of an authorization form data use record

Use the new `AuthorizationFormDataUseHistory` object.

### Get info on rules for sharing an authorization form data use object with users other than the owner

Use the new `AuthorizationFormDataUseOwnerSharingRule` object.

### Get info on the list of access levels to an authorization form data use

Use the new `AuthorizationFormDataUseShare` object.

### Get info on the changes to values in the fields of an authorization form record

Use the new `AuthorizationFormHistory` object.

### Get info on rules for sharing an authorization form object with users other than the owner

Use the new `AuthorizationFormOwnerSharingRule`.

**Get info on the list of access levels to an authorization form**

Use the new `AuthorizationFormShare` object.

**Specify the text and language of an authorization form**

Use the new `AuthorizationFormText` object.

**Get info on the changes to values in the fields of an authorization form text record**

Use the new `AuthorizationFormTextHistory` object.

**Get info about data sensitivity values in the SecurityClassification picklist**

Use the new `FieldSecurityClassification` object.

**Track customers' consent preferences for being contacted via mailing, social, and web**

Use the new `mailing`, `social`, and `web` values on the `action` parameter on the existing `Consent` object.

**Get customers' consent preferences for a specific timestamp**

Use the new `datetime` parameter on the existing `Consent` object.

**Get customers' consent preferences for being contacted for a specific reason**

Use the new `purpose` parameter on the existing `Consent` object.

**BEHAVIOR CHANGE: The Consent object includes more objects when aggregating customers' consent settings**

The `Consent` object consults fields on the `DataUsePurpose` and `ContactPointTypeConsent` objects.

**New fields added**

The individual object now has three new fields: `InfluencerRating`, `ConsumerCreditScore`, and `ConsumerCreditScoreProvider`.

**Einstein Analytics****DEPRECATED: Use EPT instead of UI\_RENDER\_TIME in Einstein Analytics.**

`UI_RENDER_TIME` is deprecated in Summer '19 with API version 46.0. Use the wave performance event type `EPT` field instead.

**Einstein Platform****Get notifications when an Einstein feature has written prediction results back to AI prediction fields**

Use the new `AIPredictionEvent` standard platform event. Subscribe to this event using processes, flows, Apex triggers, and Streaming API.

**Email****EmailMessage**

The fields `MessageIdentifier` and `ThreadIdentifier` now include the `idLookup` property.

**EmailTemplate**

Use the new `EnhancedLetterheadId` field to determine which enhanced letterhead is associated with the email template.

Use the new read-only `DeliveryRate`, `TotalDelivered`, `TotalSoftBounced`, `TotalHardBounced`, `TotalOpens`, and `TotalSent` fields to understand engagement activity related to a template.

**EnhancedLetterhead**

Use the new object for the enhanced letterhead feature.

## Field Service Lightning

### Create work type-based scheduling limits to control how many hours your team spends on specific types of jobs

Use the new `WorkCapacityLimit`, `WorkCapacityUsage`, and `ServiceAppointmentCapacityUsage` objects. To learn more, see [Set Scheduling Limits for Different Types of Work](#).

### Choose whether service appointment notifications are sent on assignment or on dispatch

Use the new `IsAssignmentNotification` and `IsDispatchNotification` fields on the `FieldServiceMobileSettings` object.

### ~~IsUseSalesforceMobileActions~~ field reserved for future use

This field remains in the API for a future release.

### Start populating data into the Shift standard object

The new `Shift` object will be used to schedule service resources in a future release.

### Get info on shift statuses

Use the new `ShiftStatus` object.

### Get info on rules for sharing a shift object with users other than the owner

Use the new `ShiftOwnerSharingRule` object.

### Get info on the list of access levels to a shift

Use the new `ShiftShare` object.

### Get info on the changes to values in the fields of a shift record

Use the new `ShiftHistory` object.

## Flow

### Filter or sort flow interviews by whether or not they were paused from a screen

Use the new `WasPausedFromScreen` field on the existing `FlowInterview` object.

### Get metadata about a flow definition

Use the new `FlowDefinitionView` object.

### Get metadata about a flow version

Use the new `FlowVersionView` object.

### Get metadata about a flow variable

Use the new `FlowVariableView` object.

## Omni-Channel

### Get the ID of the queue that the work assignment was originally routed to

Use the new `OriginalGroupId` field on the `AgentWork` object.

### Get the ID of the preferred user to handle the work.

Use the new `PreferredUserId` field on the `AgentWork` and `PendingServiceRouting` objects.

### Get the ID of the Omni-Channel queue

Use the new `GroupId` field on the `PendingServiceRouting` object.

### Set the number of seconds to wait before a skill marked as Additional Skill is dropped from Omni-Channel routing. The case is then routed to the best-matched agent even if they don't have all the skills.

Use the new `DropAdditionalSkillsTimeout` field on the `QueueRoutingConfig` object.

**Set a skill to Additional Skill. After a designated timeout period, a skill marked as additional is dropped from Omni-Channel routing. The case is then routed to the best-matched agent even if they don't have all the skills.**

Use the new `IsAdditionalSkill` field on the `SkillRequirement` object.

## Packaging

### Deprecate a package version

Use the new `IsDeprecated` field on the `MetadataPackageVersion` object.

## Permission Set Groups

### MutingPermissionSet (Pilot)

Represents a set of disabled permissions and is used in conjunction with `PermissionSetGroup` (Pilot). This object is available in API version 46.0 and later.

## Sharing

### Get info about the visibility attributes that determine a record's read access

Use the new `RecordVisibility` (pilot) object.

## Social Customer Service

### Specify the type of the first attachment on the social post

Use the new supported values `APPLICATION`, `AUDIO`, and `TEXT` in the existing `AttachmentType` field on the `SocialPost` object.

### Retrieve the user's social network avatar

Use the new `AvatarURL` field on the existing `SocialPersona` object.

## Case Management

### Add logic that controls the execution of macro instructions

Use the new `IF`, `ELSEIF`, `ELSE`, and `ENDIF` values in the `Operation` field of a `MacroInstruction` object.

### Specify an expression that controls the execution of macro instructions

Use the new `ExpressionFilter` object when defining a conditional statement in a `MacroInstruction` object.

### Define a condition used in an expression for a conditional macro

Use the `ExpressionFilterCriteria` object to define a condition that's used in an `ExpressionFilter` object.

### Show quick actions in the Actions & Recommendations component

Use the new value `QuickAction` in the existing `ActionType` field on the `RecordAction` object.

### View the history of quick actions that started from the Actions & Recommendations component

Look for the new value `QuickAction` in the existing `ActionType` field on the `RecordActionHistory` object.

### Newly documented fields for case milestones

Introduced in a previous API version, the fields `TimeSinceTargetInDays`, `TimeSinceTargetInHours`, `TimeRemainingInDays`, and `TimeRemainingInHours` have been documented for the `CaseMilestone` object. As of API version 46.0, these fields are available in Lightning Experience.

## Enterprise Territory Management

### Edit the Object Territory Assignment Rule page layout in Object Manager

The `describeLayout()` property on the `ObjectTerritory2AssignmentRule` object makes Object Territory Assignment Rule available in Object Manager.

## Event Monitoring

### Filter outlier values to improve event log data in reports and dashboards

In the Lightning Page View event type, outlier values in the `EFFECTIVE_PAGE_TIME` field of over 60 seconds are now filtered out of the event logs.

### Changed data type for fields in Apex Unexpected Exception event type

In the Apex Unexpected Exception event type of `EventLogFile`, the data type of `EXCEPTION_MESSAGE` and `STACK_TRACE` fields has changed from String to Text.

## Lightning Communities

### AppMenuItem

When using this object to retrieve apps for use in your mobile apps, the `mobileStartUrl` now returns a fully qualified domain name for a Lightning community.

### ChannelProgramMemberHistory

The new `channelProgramMemberHistory`, lets users track the history of changes to a partner who is a member of a channel program.

### NetworkMember

The new `PreferencesDisableBestAnswerEmail`, when false, lets users receive email when someone marks their answer to a post as best.

## Salesforce Surveys

### Store the complete user input for a question label

Use the new `QuestionName` field on the existing `SurveyQuestion` object.

### Store the complete participant response for a survey question

Use the new `ResponseValue` field on the existing `SurveyQuestionResponse` object.

### BEHAVIOR CHANGE: Store up to 250 characters of user's input for a question label

Use the existing `Name` field on the `SurveyQuestion` object. This field previously stored the complete question label.

### BEHAVIOR CHANGE: Store up to 250 characters of a participant's response for a question

Use the existing `ResponseShortText` field on the `SurveyQuestionResponse` object. This field previously stored the complete participant response for a question.

## Real-Time Event Monitoring (Beta)

 **Note:** As a beta feature, Real-Time Event Monitoring is a preview and isn't part of the "Services" under your master subscription agreement with Salesforce. Use this feature at your sole discretion, and make your purchase decisions only on the basis of generally available products and features. Salesforce doesn't guarantee general availability of this feature within any particular time frame or at all, and we can discontinue it at any time. This feature is for evaluation purposes only, not for production use. It's offered as is and isn't supported, and Salesforce has no liability for any harm or damage arising out of or in connection with it. All restrictions, Salesforce reservation of rights, obligations concerning the Services, and terms for related Non-Salesforce Applications and Content apply equally to your use of this feature. For information on enabling this feature in your org, contact Salesforce.

### Stream and store real-time events in your org

An EventStream object represents an instance of a real-time, streaming event that occurs in your org. You can subscribe to EventStream objects, create transaction security policies to take actions when events occur, and more. The following EventStream objects are included as part of Real-Time Event Monitoring (beta).

- AdminSetupEventStream—Tracks when an admin makes changes to encryption keys in your org.
- ApiEventStream—Tracks user API queries in your org.
- LightningUriEventStream—Tracks when a user creates, accesses, updates, or deletes a record in Lightning Experience.
- ListViewEventStream—Tracks when a user accesses data with list views.
- LoginAsEventStream—Tracks when an admin logs in to your org as another user.
- LoginEventStream—Tracks when a user logs in to your org.
- LogoutEventStream—Tracks when a user clicks **Log Out** in the Salesforce UI. This object is enabled in all orgs with API access.
- ReportEventStream—Tracks when a user accesses or exports report data.
- UriEventStream—Tracks when a user creates, accesses, updates, or deletes a record in Salesforce Classic.

You can opt to store information about streaming events to an Event object, which is a big object that acts as a log for streaming events. The following Event objects are included as part of Real-Time Event Monitoring (beta).

- AdminSetupEvent—Stores AdminSetupEventStream objects.
- ApiEvent—Stores ApiEventStream objects
- LightningUriEvent—Stores LightningUriEventStream objects
- ListViewEvent—Stores ListViewEventStream objects
- LoginAsEvent (GA)—Stores LoginAsEventStream objects
- LogoutEvent—Stores LogoutEventStream objects
- ReportEvent—Stores ReportEventStream objects
- UriEvent—Stores UriEventStream objects

## SOQL

Salesforce Object Query Language (SOQL) includes updates to SOQL Polymorphism.

### SOQL Polymorphism

#### TYPEOF

The `TYPEOF` keyword is now generally available.

Customers who are using the Developer Preview version and do not upgrade to the generally available version can continue to use `TYPEOF`. Their experience now matches that of customers who use the generally available version or later.

## REST API

REST API includes new, changed, and deprecated calls.

### Lightning Knowledge

#### Get a list of article URLs in sites and communities

Make a GET request to

```
/services/data/v46.0/knowledgeManagement/articles/siteListForOnlineArticle?articleId=articleId&language=xx_XX
```

to retrieve a list of article URLs in sites and communities.

 **Note:** Whether URLs from sites, communities, or both are returned depends on your org's configuration and the article's visibility settings.

## Lightning Scheduler

### BEHAVIOR CHANGE: Use `workType` to get appointment timeslots.

Use `/services/data/v46.0/scheduling/getAppointmentSlots` to get timeslots for an appointment, using either `workTypeGroupId` or `workType`. You can use `workTypeID`, `duration`, or the skill requirements for a granular selection.

 **Note:** If asset scheduling is enabled, you can provide an asset based service resource in `requiredResourceIds` to retrieve available timeslots or candidates for the asset resource.

### BEHAVIOR CHANGE: Use `workType` to get appointment candidates.

Use `/services/data/v46.0/scheduling/getAppointmentCandidates` to get available candidates for an appointment, using either `workTypeGroupId` or `workType`. You can use `workTypeID`, `duration`, or the skill requirements for a granular selection.

 **Note:** If asset scheduling is enabled, the response also includes asset-based candidates.

## Sales Processes

### BEHAVIOR CHANGE: Enable or disable customizable product schedules for `OpportunityLineItemSchedules`

When enabled by a new field on the `OpportunitySettings` type in Metadata API, `customizableProductSchedulesEnabled`, the `OpportunityLineItemSchedules` resource now supports custom fields, validation rules, and Apex triggers.

## Standard Actions

### View new `category` field for standard actions in flows.

The `/services/data/v46.0/actions/standard/{action}` method now returns a `category` field. This is a read-only field, used to categorize actions in Flow Builder.

## Upsert Operations

### BEHAVIOR CHANGE: Process the result of upsert operations the same way in both REST and SOAP APIs.

In REST API, the behavior of upsert operations that use external IDs now matches that of SOAP API.

Use Case: upsert uses an external ID for which there are ...	API Version 45.0 and Earlier	API Version 46.0 and Later
no existing records	Response Body: <b>SaveResult</b>	Response Body: <b>UpsertResult</b>
1 existing record	Response Status: <b>204 No Content</b> Response Body: <b>(none)</b>	Response Status: <b>200 OK</b> Response Body: <b>UpsertResult</b>
2 or more existing records	Response Status: 300 Multiple Choices Response Body: list of URL fragments	(no change)

**BEHAVIOR CHANGE: Upsert operations are now supported for sObject collections.**

In REST API, upsert operations are now supported for `/v46.0/composite/subjects`.

**New, Changed, and Deprecated Calls****Invocable Actions**

Invocable Actions represent the actions that can be accomplished on Salesforce with APIs.

Invocable actions are available through the REST API. The following action has been added:

**customNotificationAction**

Sends a custom notification to recipients via desktop or mobile channels.

For more information on invocable actions, see the [Actions Developer's Guide](#).

**SOAP API**

SOAP API includes changedcalls.

**EDITIONS**

Available in: Salesforce Classic

Available in: **Professional, Enterprise, Performance, Unlimited, and Developer** Editions

**Changed Calls**

Identify Global Actions in Request Bodies

**BEHAVIOR CHANGE: For describeQuickActions () and performQuickActions () calls, in API version 46.0 and later the apiName for a global quick action can include the prefix Global . in a request body.**

The `Global .` prefix differentiates between global and standard actions. The request body for these calls also accepts global quick action API names without the prefix.

Changed Object Types in WSDLs

**Polymorphic Fields Are now of type sObject**

In the Tooling API and Enterprise WSDLs, the object types of all polymorphic fields have changed from `Name` to `sObject`.

For example, this:

```
<complexType name="Task">
  <complexContent>
    <extension base="ens:sObject">
      <sequence>
        ...
        <element name="Owner" nillable="true" minOccurs="0" type="ens:Name"/>
        ...
      </sequence>
    </extension>
  </complexContent>
</complexType>
```

has changed to this:

```
<complexType name="Task">
  <complexContent>
    <extension base="ens:sObject">
      <sequence>
```

```

...
<element name="Owner" nillable="true" minOccurs="0" type="ens:sObject"/>
...
</sequence>
</extension>
</complexContent>
</complexType>

```

This affects Java code generated from these WSDLs. For example, in `Task.java`, the `Owner` field is now defined as:

```
private com.sforce.soap.enterprise.subject.SObject Owner;
```

For more information about generating Java code from WSDL files, see [Setting Up Your Java Developer Environment](#).

## Chatter REST API

Integrate mobile apps, intranet sites, and third-party web applications with Salesforce using Chatter REST API. Create and publish communities, get mission activity progress for a user, and do more with social posts.

 **Note:** To create custom Chatter and communities experiences in Salesforce, use [ConnectApi \(Chatter in Apex\): New and Changed Classes](#).

### IN THIS SECTION:

[New and Changed Chatter REST API Resources](#)

These resources are new or have changes.

[New and Changed Chatter REST API Request Bodies](#)

These request bodies are new or have changes.

[New and Changed Chatter REST API Response Bodies](#)

These response bodies are new or have changes.

## New and Changed Chatter REST API Resources

These resources are new or have changes.

### Communities

#### Create a community

Make a POST request to the existing `/connect/communities` resource with the new Community Input request body.

#### Publish a community

Make a POST request to the new `/connect/communities/communityId/publish` resource.

 **Note:** POST takes no request parameters nor a request body.

#### Get the community templates available to the context user

Make a GET request to the new `/connect/communities/templates` resource.

## Files

**Set the master label and developer name when creating an asset file**

Make a POST request to the existing `/connect/files/fileId/asset` resource with the new optional `assetLabel` and `developerName` parameters.

## Missions

**Get mission activity progress for a user**

Make a GET request to the new `/connect/communities/communityId/missions/users/userId/progress` resource.

## Social Engagement

**Approve or reject the publishing of up to 200 of social posts**

Make a PATCH request to the new `/connect/social-engagement/social-posts/intents/approvals` resource with the new Social Post Mass Approval Input request body.

**Delete a social post from its social network**

**Note:** Deleting a social post from its social network doesn't delete the record from Salesforce.

Make a PUT request to the new

`/connect/social-engagement/social-posts/socialPostId/intents/deletes/socialAccountId` resource.

**Like a social post**

Make a PUT request to the new

`/connect/social-engagement/social-posts/socialPostId/intents/likes/socialAccountId` resource.

**Unlike a social post**

Make a DELETE request to the new

`/connect/social-engagement/social-posts/socialPostId/intents/likes/socialAccountId` resource.

**Hide a social post**

Make a PUT request to the new

`/connect/social-engagement/social-posts/socialPostId/intents/hide/socialAccountId` resource.

**Unhide a social post**

Make a DELETE request to the new

`/connect/social-engagement/social-posts/socialPostId/intents/hide/socialAccountId` resource.

**Recall an approval request to publish a social post**

Make a DELETE request to the new

`/connect/social-engagement/social-posts/socialPostId/intents/approval` resource.

**Get the follow relationship between a managed social account and a social persona**

Make a GET request to the new

`/connect/social-engagement/managed-social-accounts/id/relationships/socialPersonaId` resource.

## New and Changed Chatter REST API Request Bodies

These request bodies are new or have changes.

### Communities

#### Community Input

This new request body has these properties.

- `description`—Description of the community.
- `name`—Name of the community.
- `templateName`—Name of the template for the community.
- `urlPathPrefix`—URL prefix for the community.

### Next Best Actions

#### Recommendation Reaction Input

This request body has this new property.

- `externalId`—External ID of the recommendation. This ID doesn't need to be a Salesforce 18-character ID. For example, it can be a product number from an external system.

### Social Engagement

#### Social Post Mass Approval Input

This new request body has these properties.

- `isApproved`—Specifies whether to approve (`true`) or reject (`false`) publishing the social posts.
- `socialPostIdList`—A list of up to 200 social post IDs.

## New and Changed Chatter REST API Response Bodies

These response bodies are new or have changes.

### Communities

#### Community

This response body has this new property.

- `templateName`—Name of the community's template.

#### Community Create

This new response body has these properties.

- `message`—Message saying that create is in progress.
- `name`—Name of the community.

#### Community Publish

This new response body has these properties.

- `id`—ID of the community.
- `message`—Message describing the result of publishing the community.
- `name`—Name of the community.
- `url`—URL to the community.

**Community Template**

This new response body has these properties.

- `publisher`—Name of the publisher of the community's template.
- `templateName`—Name of the community's template.

**Community Template Collection**

This new response body has these properties.

- `templates`—List of community templates.
- `total`—Total count of community templates.

## Files

**File Detail**

This response body has this new property.

- `isFileAsset`—Specifies whether the file is an asset.

**File Summary**

This response body has this new property.

- `isFileAsset`—Specifies whether the file is an asset.

## Missions

**User Mission**

This new response body has these properties.

- `activityCount`—Number of mission activities of the specified type for the user.
- `activityType`—Type of mission activity for a user. Values are:
  - `FeedItemAnswerAQuestion`—User answered a question.
  - `FeedItemLikeSomething`—User liked a post or comment.
  - `FeedItemMarkAnswerAsBest`—User marked an answer as the best answer.
  - `FeedItemPostQuestion`—User posted a question.
  - `FeedItemReceiveAComment`—User received a comment on a post.
  - `FeedItemReceiveALike`—User received a like on a post or comment.
  - `FeedItemReceiveAnAnswer`—User received an answer to a question.
  - `FeedItemWriteAComment`—User commented on a post.
  - `FeedItemWriteAPost`—User made a post.
  - `FeedItemYourAnswerMarkedBest`—User's answer was marked as the best answer.
- `missionName`—Name of the mission.
- `missionThreshold`—Threshold of the mission. When a user reaches this activity count, the mission is achieved.

## Next Best Actions

**Next Best Action Recommendation**

This response body has this new property.

- `externalId`—External ID of the recommendation. This ID doesn't need to be a Salesforce 18-character ID. For example, it can be a product number from an external system.

### Recommendation Object

This response body has this new property.

- `externalId`—External ID of the recommendation. This ID doesn't need to be a Salesforce 18-character ID. For example, it can be a product number from an external system.

### Recommendation Reaction

This response body has this new property.

- `externalId`—External target ID of the recommendation reacted on. This ID doesn't need to be a Salesforce 18-character ID. For example, it can be a product number from an external system.

## Social Engagement

### Delete Social Post Intent

This new response body has these properties.

- `socialAccountId`—ID of the social account that deletes the social post.
- `socialPostId`—ID of the social post to delete.

### Like Social Post Intent

This new response body has these properties.

- `socialAccountId`—ID of the social account that likes the social post.
- `socialPostId`—ID of the social post to like.

### Social Account Relationship

This new response body has these properties.

- `isFollowed`—Specifies whether the social account is followed by the social persona.
- `isFollowing`—Specifies whether the social account is following the social persona.
- `socialAccountId`—ID of the social account.
- `socialPersonaId`—ID of the social persona.

### Social Post Mass Approval

This new response body has this property.

- `isApproved`—Specifies whether the social posts were approved (`true`) or rejected (`false`) for publishing.

## Reports and Dashboards REST API

Reports and Dashboards REST API enhancements include new URL parameters, objects, and properties that describe row-level formulas, dashboard sorting, and conditional report subscriptions.

For more information, see the [Reports and Dashboards REST API Developer Guide](#).

### New URL Parameter: `?ownerId={ownerid}`

A new URL parameter for `notifications/` resources lets admins manage other user's subscriptions via the API.

Resource URI	Supported HTTP Methods	Description
/analytics/notifications?source=lightningReportSubscribe&ownerId={ownerId}	GET	Allows users with Manage Analytics Notifications permission to get notifications for another user with the specified ownerId.

### Changed Resources: **reports/**, **dashboards/**, **notifications/**

The **reports/**, **dashboards/**, and **notifications/** resources have new properties that describe row-level formulas, dashboard sorting, and report subscriptions.

#### Reports (/services/data/v46.0/analytics/reports)

The **reportTypeMetadata** and **reportMetadata** objects have new objects and properties that describe row-level formulas. In the API, row-level formulas are called custom detail formulas.

#### reportTypeMetadata

The **categories** object now returns all row-level formulas in a report as an object identical to the other categories objects. Because row-level formulas are beta, some of their functionality is limited. For row-level formulas, these properties are always false:

- **allowedInCustomDetailFormula**
- **Bucketable**
- **Filterable**
- **isCustom**
- **isLookup**

For row-level formulas, these properties are always null:

- **filterValues**
- **inactiveFilterValues**

#### reportMetadata

Property	Type	Description
<b>allowedInCustomDetailFormula</b>	Boolean	Specifies whether a field can be referenced in a row-level formula (true) or not (false).
<b>customDetailFormula</b>	customDetailFormula[]	An array of objects that describes row-level formulas.

Each object in the **customDetailFormula** array contains the following new properties.

Property	Type	Description
<b>decimalPlaces</b>	Integer	Formats the value returned by the row-level formula. It is required for numeric return values, invalid for non-numeric return values.
<b>description</b>	String	User-defined description of the row-level formula.

Property	Type	Description
<code>formula</code>	String	Specifies the formula expression to be evaluated. All report type fields, except bucketed fields, custom summary formula fields, and historical tracking fields can be referenced.
<code>formulaType</code>	String	Specifies the return type of the formula. Valid values include: <ul style="list-style-type: none"> <li>• <code>Date</code></li> <li>• <code>Datetime</code></li> <li>• <code>Number</code></li> <li>• <code>Text</code></li> </ul>
<code>label</code>	String	Specifies a name for the row-level formula.

### Dashboards (/services/data/v46.0/analytics/dashboards)

In line with enhanced dashboard component sorting behavior, we've introduced new sorting properties under `groupings` in the Dashboard REST API. The new properties allow you to fine-tune how dashboard components sort data.

Property	Type	Description
<code>inheritedReportSort</code>	String	When specified, Sorts data in the dashboard component the same way that it's sorted in the report. Possible values: <ul style="list-style-type: none"> <li>• <code>reportGrouping</code> - Matches source report sort order. In the UI, this setting is analogous to "Report Grouping" sorted ascending.</li> <li>• <code>invertReportGrouping</code> - Reverses source report sort order. In the UI, this setting is analogous to "Report Grouping" sorted descending.</li> <li>• <code>null</code> - This property isn't used. Instead, the "sortOrder" property is used.</li> </ul> <p> <b>Important:</b> In API v46.0 and later, keep the default value of <code>null</code> and use <code>sortOrder</code> instead of this property. Other settings may cause an API error.</p>
<code>sortAggregate</code>	String	Name of the aggregate by which the dashboard component sorts. If <code>null</code> , the dashboard component sorts by label or matches/inverts the report's sort order.
<code>sortOrder</code>	String	Specifies whether the dashboard component sorts in ascending ( <code>Asc</code> ) or descending ( <code>Desc</code> ) order. Possible values are <code>Asc</code> and <code>Desc</code> .
<code>sort</code>		Used in previous releases. In this release (v46.0), assign the value <code>null</code> , except for the following instances: <ul style="list-style-type: none"> <li>• The component is an ungrouped lightning table</li> <li>• The source report has a row-limit filter</li> </ul>

Property	Type	Description
		In these two cases, <code>sort</code> matches the following object:
		<pre>"sort" : {   "column" : "TYPE",   "sortOrder" : "asc",   "type" : "label" },</pre>

### Notifications (`/services/data/v46.0/analytics/notifications`)

`/analytics/notifications?source=lightningReportSubscribe`

Property	Type	Description
<code>summaryOnly</code>	Boolean	Applies when <code>threshold type</code> is <code>condition</code> and <code>source=LightningReportSubscribe</code> . If <code>true</code> , emails the notification summary without the report table. If <code>false</code> , emails the summary and report table. If <code>null</code> , updates the table but doesn't send an email.

`/analytics/notifications?source=lightningReportSubscribe&ownerId=ownerid`

Property	Type	Description
<code>ownerId</code>	String	The user id of the person who started a subscription.

## User Interface API

Work with new objects and build mobile apps that display Lightning communities.

### New supported objects

User Interface API supports all custom objects and many standard objects. We've added support for these objects.

- AccountContactRelation
- AccountPartner
- EntityArchivingSetup
- Image
- OpportunityPartner
- OrderSummary
- Partner
- RetailVisitKpi
- RetailVisitWorkTask
- Shift
- SurveyInvitation
- SurveyResponse

- SurveySubject
- Visit

List views and most recently used (MRU) list views resources now support these objects.

- Image
- OrderSummary
- RetailVisitKpi
- RetailVisitWorkTask
- Shift
- SurveyInvitation
- SurveyResponse
- SurveySubject
- Visit

### Build mobile apps that display a user's Lightning communities

Previously, the `formFactor` query parameter returned communities only if it was set to `Medium` for tablet apps, or `Large` for desktop apps. Now it also returns communities when it's set to `Small`. These resources support the `formFactor` parameter:

- GET `/ui-api/apps`
- GET `/ui-api/apps/{appId}`
- PATCH `/ui-api/apps/{appId}`
- GET `/ui-api/apps/selected`
- GET `/ui-api/apps/{appId}/user-nav-items`
- GET `/ui-api/nav-items`

The `mobileStartUrl` response property contains the app's location where users are directed after they've authenticated. For communities only, `mobileStartUrl` returns a fully qualified domain name. For other apps, it returns a relative URL.

### Distinguish between global and standard actions in response bodies

For platform actions in API version 46.0 and later, the prefix `Global.` is prepended to `apiName` for global actions in response bodies. This prefix makes it possible to distinguish between global and standard actions.

SEE ALSO:

[User Interface API Developer Guide: Apps Resources](#)

## Tooling API

Tooling API includes new and changed objects.

## Salesforce Overall

**BEHAVIOR CHANGE: You can use Tooling API to query for User object fields in guest user mode in API version 44.0 and earlier. In API version 45.0 and later, use SOAP API to get this data in guest user mode**

User fields are exposed in SOAP API version 45.0 and later. User is still exposed in Tooling API to user profiles with the View Setup permission.

## Sales

### Store criteria for determining when an animation is displayed to Path users

Use the new `AnimationRule` object.

## Flow

### Store information about custom notification types.

Use the new `CustomNotificationType` object.

### REMOVED: Access to the `EventSubscription` and `EventDelivery` objects is no longer available

When you activate a process that is triggered by a platform event, an `EventSubscription` and an `EventDelivery` record are created automatically. See [Remove EventSubscription and EventDelivery from Existing Packages](#).

### BEHAVIOR CHANGE: Improved validation and error messages for flow Assignment elements

We improved how we check Assignment elements for errors when you save, deploy, or install a flow. We also updated our error messages for assignments. If you've written code that checks for specific error strings, you might need to update that code. See [Improved Validation and Error Messages for Flow Assignment Elements](#).

## Case Management

### Create an Actions & Recommendations deployment that can show flows and quick actions

Use the new `hasGuidedActions` field in a `RecordActionDeployment`.

### Create an Actions & Recommendations deployment that can show Next Best Action recommendations

Use the new `hasRecommendations` field in a `RecordActionDeployment`.

### Specify how to display Next Best Action recommendations

Use the new `recommendation` field in a `RecordActionDeployment`. This field is only visible in the metadata for a record.

### Specify objects in an Actions & Recommendations deployment to use as context for quick actions and Next Best Action strategies

Use the new `deploymentContexts` field in a `RecordActionDeployment`. This field is only visible in the metadata for a record.

### Configure quick actions as channel defaults or actions that users can add in an Actions & Recommendations deployment

Use the new value `QuickAction` in the existing `channelConfigurations` or `selectableItems` fields in a `RecordActionDeployment`. This field is only visible in the metadata for a record.

## Field Service

### Expose time sheet template metadata using the REST interface

The `TimeSheetTemplate` object represents a template for creating time sheets in Field Service Lightning.

## Attribute-Based Routing Using Omni-Channel

### Store a set of `WorkSkillRoutingAttribute` objects used to route a work item to an agent who has the skills necessary to take the work

Use the new `WorkSkillRouting` object.

### Store metadata related to the routing assignments between object attributes and skills

Use the new `WorkSkillRoutingAttribute` object.

## Packaging

### Deprecate a package version

Use the `IsDeprecated` field on the `MetadataPackageVersion` object

### Choose whether to recompile all Apex in your org, or only the Apex in the package, during package install or upgrade

Use the `ApexCompileType` field on the `PackageInstallRequest` object. This field is available only for unlocked packages.

### During package upgrade, you can now choose to delete metadata types that are marked for removal in the new package version

Select `delete-only` on the `UpgradeType` field on the `PackageInstallRequest` object. This field is only available for unlocked packages.

## User Permissions and Access

### BEHAVIOR CHANGE: In API version 45.0 and later, several Tooling API objects require users to have the View Setup and Configuration permission to access the objects

The Tooling API objects that now require the View Setup and Configuration permission are `ColorDefinition`, `FormulaFunction`, `FormulaFunctionCategory`, `FormulaOperator`, `IconDefinition`, and `TabDefinition`.

### Return dependencies for a specified permission

Use the `PermissionDependency` object. For example, return all child dependencies for View All Data permission.

### Organize permissions based on job functions or tasks

Use the `PermissionSetGroup` (Pilot) object. Available in API version 45.0 and later, this object was added to the *Tooling API Reference and Developer Guide*.

### Use a junction object that relates the PermissionSetGroup and PermissionSet objects via their respective IDs

Use the `PermissionSetGroupComponent` (Pilot) object. Available in API version 45.0 and later, this object was added to the *Tooling API Reference and Developer Guide*.

## Metadata API

Metadata API includes new and changed types and fields.

## Salesforce Overall

### Create in-app guidance prompts to deliver news, training, tips, and more to users

Use the new `Prompt` metadata type.

## Attribute-Based Routing Using Omni-Channel

### Set the time-out to drop additional skills from an Omni-Channel routing configuration

Use the new `dropAdditionalSkillsTimeout` field on the `QueueRoutingConfig` object.

### Enable the routing configuration to use attribute-based routing

Use the new `isAttributeBased` field on the `QueueRoutingConfig` object.

### Create a group of mappings between object field values and agent skills

Use the new `WorkSkillRouting` metadata type.

### Map object field values to agent skills so that work items can be routed to an agent with the skills necessary to take the work

The new `WorkSkillRoutingAttribute` metadata type represents a setup object that stores metadata related to the routing assignments between object attributes and skills. Attributes are used to route a work item to an agent who has the skills necessary to take the work.

## Authentication and Identity

### Give a connected app permission to access external resources

Use the new `OauthCustomScope` type, which represents a permission that defines the protected resources that a connected app can access from an external entity.

### Define permissions for connected apps

Use the new `isAdminApproved`, `permissionSetName`, `pluginExecutionUser`, and `profileName` fields on the existing `ConnectedApp` type.

### Enhance security with increased password complexity

Use the new `Any3UpperLowerCaseNumericSpecialCharacters` value in the existing `complexity` field on the existing `SecuritySettings` type.

### Enable callouts to resources in Amazon Web Services over HTTP using the Signature Version 4 signing process

Use the new `awsAccessKey`, `awsService`, `awsRegion`, and `awsAccessSecret` fields on the existing `NamedCredential` type.

### Build token-based named credentials for easier external connections

Use the new `authTokenEndpointUrl`, `jwtAudience`, `jwtFormulaSubject`, `jwtIssuer`, `jwtSigningCertificate`, `jwtTextSubject`, and `jwtValidityPeriodSeconds` fields on the existing `NamedCredential` type.

### Give named credentials more authentication protocol options

Use the new `AwsSig4`, `Jwt`, or `JwtExchange` values in the existing `protocol` field on the existing `NamedCredential` type.

## Case Management

### Create an Actions & Recommendations deployment that can show flows and quick actions

Use the new `hasGuidedActions` field on the existing `RecordActionDeployment` metadata type.

### Create an Actions & Recommendations deployment that can show Next Best Action recommendations

Use the new `hasRecommendations` field on the existing `RecordActionDeployment` metadata type.

### Specify how to display Next Best Action recommendations

Use the new `recordActionRecommendation` field on the existing `RecordActionDeployment` metadata type.

### Specify objects in an Actions & Recommendations deployment to use as context for quick actions and Next Best Action strategies

Use the new `recordActionDeploymentContext` field on the existing `RecordActionDeployment` metadata type.

### Configure quick actions as channel defaults or actions that users can add in an Actions & Recommendations deployment

Use the new value `QuickAction` in the existing `channelConfigurations` or `selectableItems` fields on the `RecordActionDeployment` metadata type.

## Communities

### Migrate and deploy communities programmatically in plain text (Developer Beta)

Use the new `ExperienceBundle` type to deploy or migrate communities individually or in batches using JSON and human-readable code. Available only in Developer orgs.

### Control whether guest users can view Lightning features in Sites

Use the new `enableAuraRequests` field on the existing `CustomSite` type.

## Custom Tabs

### **REMOVED: The deprecated field `mobileReady` has been removed from the `CustomTab` object**

The `mobileReady` field is left over from the deprecated Salesforce Classic Mobile app. This field indicated whether a Visualforce page appeared in the Salesforce Classic Mobile app.

## Data Protection and Privacy

### **Indicate the business owner group associated with a field**

Use the generally available `businessOwnerGroup` field on the existing `CustomField` type.

### **Indicate the business owner associated with a field**

Use the generally available `businessOwnerUser` field on the existing `CustomField` type.

### **Indicate whether a field is in use**

Use the generally available `businessStatus` field on the existing `CustomField` type.

### **Indicate the sensitivity of the data contained in a field**

Use the generally available `securityClassification` field on the existing `CustomField` type.

### **DEPRECATED: The `dataStewardGroup` field on the `CustomObject` type was deprecated**

The `dataStewardGroup` field will be removed in a future release.

### **DEPRECATED: The `dataStewardUser` field on the `CustomObject` type was deprecated**

The `dataStewardUser` field will be removed in a future release.

### **Enable or disable the storage and retrieval of customer consent for the use of content, such as in a marketing campaign**

Use the new `ConsentManagementEnabled` value in the `preferences` field on `OrgPreferenceSettings`.

## Einstein Next Best Action

### **Get dynamic recommendations from Salesforce objects or external data sources**

Use the new `invocableAction` field on the existing `RecommendationStrategy` metadata type. See [Dynamically Deliver and Enhance Next Best Action Recommendations from Salesforce Objects or External Data Sources](#)

### **Use formulas to create new fields and modify existing fields without having to use Apex code**

Use the new `map` field on the existing `RecommendationStrategy` metadata type. See [Use the Map Element to Add Simple Enhancements or Map Recommendation Fields to Flow Input Variables](#)

## Enterprise Messaging: Platform Events and Change Data Capture

### **Choose when platform event messages are published: after the transaction commits or immediately**

Use the new `publishBehavior` field on the existing `CustomObject` type.

### **REMOVED: The `enableChangeDataCapture` field has been removed from the `CustomObject` type**

The `enableChangeDataCapture` field is no longer in use.

## Event Monitoring

### **Create transaction security policies declaratively using Condition Builder (beta) instead of Apex**

Use the new `flow` field on the `TransactionSecurityPolicy` type.

### **BEHAVIOR CHANGE: Some fields on the `TransactionSecurityPolicy` type are now optional**

If you create a transaction security policy using the Enhanced Transaction Security (beta) feature, these fields on the `TransactionSecurityPolicy` type are optional:

- `apexClass`

- `eventType`
- `resourceName`



**Note:** These fields are required if you create transaction security policies using the legacy Transaction Security feature.

## Sales

### Display an animation to Path users

Use the new `AnimationRule` object to store criteria for determining when an animation is displayed to Path users.

### Enable customizable product schedules

Use a new field on the `OpportunitySettings` type, `customizableProductSchedulesEnabled`, to enable customization of product schedules using the `OpportunityLineItemSchedules` resource in REST API and in the Object Manager and Setup in Lightning Experience.

## Field Service

### Manage your time sheet templates for Field Service Lightning

The new `TimeSheetTemplate` type represents a template for creating time sheets.

## Flow

### Delete Knowledge articles in flows

Use the new `deleteKnowledgeArticle` value in the `actionType` field on Flow to delete drafts of Knowledge articles or entire archived articles. You can't delete a specific version of an archived article.

### Submit Knowledge articles for translation in flows

Use the new `submitKnowledgeArticleForTranslation` value in the `actionType` field on Flow to submit Knowledge articles for translation.

### Work with Quip in flows

Use the new Quip-related values of the `actionType` field on Flow to work with Quip documents and chat rooms. There are eleven new values that correspond to actions such as creating Quip documents, adding chat messages to a chat room, and more. For example, use `attachQuipDocumentToRecord` to attach a Quip document to a record.

### BEHAVIOR CHANGE: Misconfigured values in flow assignments result in errors

Previously, some misconfigured values in Assignment elements didn't result in errors. Now they display errors when you save, deploy, or install a flow. See [Misconfigured Values in Flow Assignments Now Result in Errors](#).

### BEHAVIOR CHANGE: Improved validation and error messages for flow Assignment elements

We improved how we check Assignment elements for errors when you save, deploy, or install a flow. We also updated our error messages for assignments. If you've written code that checks for specific error strings, you might need to update that code. See [Improved Validation and Error Messages for Flow Assignment Elements](#).

### REMOVED: The EventSubscription and EventDelivery types are removed

Access to `EventSubscription` and `EventDelivery` Metadata is no longer needed. When you activate a process that is triggered by a platform event, an `EventSubscription` and an `EventDelivery` record are created automatically. See [Remove EventSubscription and EventDelivery from Existing Packages](#).

### Indicate the Apex class for an Apex-defined data type

Use the new `apexClass` field on the existing `FlowVariable` subtype. See [Manipulate Complex Internet Data in Flows Without Code Using Apex-Defined Data Types](#).

**Specify the data type of an Apex-defined variable**

Use the new supported `Apex` value in the existing `dataType` field on the `FlowVariable` subtype. See [Manipulate Complex Internet Data in Flows Without Code Using Apex-Defined Data Types](#).

**Create a notification type**

Use the new `CustomNotificationType` metadata type to create a desktop or mobile notification type for building a custom notification.

**Send a custom notification**

Use the new `customNotificationAction` value in the `actionType` field on `Flow` to send a custom notification. See [Keep Users in the Know with Notification Builder](#).

**IoT Orchestrations****List, describe, retrieve, and insert orchestration contexts**

Introduced in API version 41.0, the `OrchestrationContext` metadata type is now documented in the *Metadata API Developer Guide*.

**List, describe, retrieve, and insert orchestration context events**

Introduced in API version 41.0, the `OrchestrationContextEvents` metadata type is now documented in the *Metadata API Developer Guide*.

**Permission Set Groups (Pilot)****Mute permissions in permission set groups**

Use the `mutingPermissionSets` field on the existing `PermissionSetGroup` (pilot) metadata type.

**Reports and Dashboards****Enable display of subtotals in Dashboards**

A new field in the `DashboardTableColumn` object, `showSubTotal`, determines whether subtotals are displayed for summarizable dashboard table columns.

A new field in the `DashboardComponentColumn` object, `showSubTotal`, determines whether subtotals are displayed for summarizable dashboard component columns.

**Sales****Display an animation to Path users**

Use the new `AnimationRule` type to store criteria for determining when an animation is displayed to Path users.

**Salesforce Einstein Bots****Specify a username on behalf of actions performed by a bot**

Use the new `botUser` field on the existing `Bot` type.

**See whether or not Einstein is turned on to train an intent model for a dialog intent**

Use the new `mlIntentTrainingEnabled` field on the existing `BotDialog` subtype on the `BotVersion` type.

**View system messages for a bot, such as transferring to an agent or ending a chat**

Use the new `ConversationSystemMessage` field on the existing `BotStep` subtype on the `BotVersion` type.

**Specify the SObjectType of the ID stored in a bot variable.**

Use the new `SObjectType` field on the existing `ConversationVariable` subtype, as well as the `SObjectType` field on the existing `ConversationContextVariable` subtype, both on the `BotVersion` type.

## Settings Exposed in Metadata API

We exposed some settings in Metadata API as Boolean fields on metadata types.

### Salesforce Einstein

#### Turn on Einstein Bots for your organization

Use the new `BotSettings` metadata type.

### Sales

#### Enable or disable the tracking of field history for contacts

Use the new `enableContactHistoryTracking` field on the `AccountSettings` type.

#### Enable or disable Google Docs, Google Talk, or Gmail buttons and links

Use the new `GoogleAppsSettings` metadata type.

#### Enable customizable product schedules

Use a new field on the `OpportunitySettings` type, `customizableProductSchedulesEnabled`, to enable customization of product schedules using the `OpportunityLineItemSchedules` resource in REST API.

### Service

#### Enable or disable a customer success portal or mass-management of self-service users

Use the new `OrgSettings` metadata type.

### Mobile

#### Enable or disable maps and location services and enable auto-complete on address fields

Use the new `MapAndLocationSettings` type.

#### Enable or disable notifications and mobile push notifications

Use the new `NotificationSettings` type.

### Customization

#### Enable or disable user management options.

Use the new `UserManagementSettings` metadata type.

#### Enable or disable case hovers, inline editing in a list view, or Quick Create (creating records from the home pages for leads, accounts, contacts, and opportunities)

Use the new `UserInterfaceSettings` metadata type.

#### Show the advanced search options in Salesforce Classic

Use the new `enableAdvancedSearchInAlohaSidebar` field on the `SearchSettings` type.

## Lightning Console JavaScript API

The Lightning Console JavaScript API now provides information on whether a utility item is popped out.

The following methods are new or have changed in API version 46.0.

### Utilities

#### `isUtilityPoppedOut()`

Determines whether a utility item is popped out into its own window.

**getUtilityInfo()**

Added `utilityPoppedOut` to the `utilityInfo` object.

**getAllUtilityInfo()**

Added `utilityPoppedOut` to the `utilityInfo` object.

## Salesforce CLI: New and Changed Commands

We release changes to Salesforce CLI regularly. Read the weekly release notes to learn about recent updates for [v45 of the core CLI plug-ins](#). For more information about the pre-release version, see [v46 of the Salesforce CLI Command Reference](#).

### IN THIS SECTION:

[Install a Previous Version of Salesforce CLI](#)

By default, the latest version of the `salesforcedx` plug-in is installed when you install or update Salesforce CLI. If you need to install previous versions of Salesforce CLI and the `salesforcedx` plug-in, make sure that your `sfdx-cli` version and your `salesforcedx` version are compatible. Salesforce CLI v7 is required for `salesforcedx` plug-in version 45.8.0 or later. Salesforce CLI v6 is required for `salesforcedx` plug-in version 45.5.0 or earlier.

[Install the Pre-Release Version of Salesforce CLI](#)

Install the pre-release version to use new commands and parameters available in `salesforcedx` v46.

[Discover New and Changed Salesforce CLI Commands](#)

Discover Salesforce CLI changes from the official v45 release through v46 pre-release. Salesforce CLI v46 officially releases on June 15, 2019.

### SEE ALSO:

[Salesforce CLI: Faster Load Times, Expanded Project Scaffolding](#)

## Install a Previous Version of Salesforce CLI

By default, the latest version of the `salesforcedx` plug-in is installed when you install or update Salesforce CLI. If you need to install previous versions of Salesforce CLI and the `salesforcedx` plug-in, make sure that your `sfdx-cli` version and your `salesforcedx` version are compatible. Salesforce CLI v7 is required for `salesforcedx` plug-in version 45.8.0 or later. Salesforce CLI v6 is required for `salesforcedx` plug-in version 45.5.0 or earlier.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions.

**How:** To install Salesforce CLI v6 using npm:

```
npm install sfdx-cli@6 --global
```

To install Salesforce CLI v6 using a v6 installer:

- [Darwin \(Linux\)](#)
- [Linux 64 bit](#)
- [Linux 32 bit](#)
- [Linux ARM](#)
- [Windows 64 bit](#)
- [Windows 32 bit](#)

To install a specific version of the `salesforcedx` plug-in (in this example, v45.5.0):

```
sfdx plugins:install salesforcedx@45.5.0
```

To resume using the latest versions of Salesforce CLI and the `salesforcedx` plug-in:

```
sfdx plugins:uninstall salesforcedx  
sfdx update
```

## Install the Pre-Release Version of Salesforce CLI

Install the pre-release version to use new commands and parameters available in `salesforcedx` v46.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in all editions.

**When:** The `salesforcedx` v46 plug-in releases on June 15, 2019. A pre-release version of v46 is available now.

### How:

1. Install the pre-release version.

```
sfdx plugins:install salesforcedx@pre-release
```

2. To check your version information, run:

```
sfdx plugins --core
```

3. In the output, look for the `salesforcedx` plug-in version. If the pre-release version installed successfully, the version number begins with `46.0.x`.

```
salesforcedx 46.0.1-xx
```

After we officially release v46 in June 2019, uninstall the pre-release version. Then run the `update` command to ensure that you're on the released version of the plug-in.

```
sfdx plugins:uninstall salesforcedx  
sfdx update
```

## Discover New and Changed Salesforce CLI Commands

Discover Salesforce CLI changes from the official v45 release through v46 pre-release. Salesforce CLI v46 officially releases on June 15, 2019.

### New Commands

These commands are new in `salesforcedx` v46.

#### **force:package:hammertest:list (Pilot)**

Lists the statuses of running and completed ISV Hammer tests.

#### **force:package:hammertest:report (Pilot)**

Returns the status of a running ISV Hammer test or the results of a completed hammer test.

#### **force:package:hammertest:run (Pilot)**

Runs ISV Hammer for the specified package version and subscriber orgs.

**force:org:clone (Beta)**

Clones a sandbox org using values specified in a configuration file or key=value pairs that you specify on the command line. Values specified on the command line override values in the configuration file.

**force:org:status (Beta)**

Reports sandbox org creation status. If the org is ready, authenticates to the org.

These commands were added in weekly releases of `salesforcedx v45` (v45.3.0 or later).

**force:auth:list**

Lists the usernames you've authorized. Unlike `force:org:list`, this command doesn't check whether an org is valid. So the new command runs much more quickly than `force:org:list`.

**force:mdapi:describemetadata**

Displays details about metadata types enabled for your org. Use this information to identify the syntax needed for a `<name>` element in `package.xml`. The most recent API version is the default, or you can specify an older version. This command is similar to the Metadata API utility call `describeMetadata()`.

**force:mdapi:listmetadata**

Displays properties of metadata components of a specified type. This call is useful when you want to identify individual components in your manifest file or want a high-level view of particular components in your org. This command is similar to the Metadata API utility call `listMetadata()`.

## Changed Commands

The functionality for this command changed in a weekly release of `salesforcedx v45` (v45.8.1).

**force:auth:sfdxurl:store**

We recently updated the default connected app. This change sometimes affects how this command works during continuous integration (CI) jobs. If you see an error about an expired access or a refresh token, regenerate the SFDX auth URL.

**force:org:delete**

Now the delete command works on sandboxes that have been created or cloned using the CLI (excluding sandboxes authenticated into using `force:auth:web:login` or `force:auth:jwt:grant`).

**force:org:display**

Provides information about sandboxes that were created or cloned using the CLI. The information includes the production org ID of the org creating the sandbox and the sandbox license type.

**force:org:list**

The output now lists the sandboxes that were created or cloned using the CLI along with the scratch orgs.

## New Parameters

These parameters are new in `salesforcedx v46`.

**force:org:create --type | -t**

The type of org to create. If a parameter isn't provided, the default is a scratch org. Use `sandbox` to create a sandbox org (available as a beta release). Provide sandbox properties (see the [SandboxInfo object](#)) as key=value pairs or in a sandbox org definition file. This command references a definition file.

```
sfdx force:org:create -t sandbox -f config/mysbxconfig.json
```

Here's what the sandbox org definition JSON file `mysbxconfig.json` looks like.

```
{
  "SandboxName": "MySandbox",
```

```
"LicenseType": "Developer"
}
```

**force:org:create --targetusername | -u**

A username for the production org to receive the sandbox request (available as a beta release). If a parameter isn't provided, the *defaultusername* value is used.

**force:package:install --apexcompile | -a**

For unlocked packages only, specifies whether to compile all Apex in the org and package (`--apexcompile all`), or only the Apex in the package (`--apexcompile package`).

**force:source:deploy**

We added several parameters to make this command consistent with `mdapi:deploy`.

Parameter	Description
<code>--checkonly   -c</code>	Validates the deployed metadata and runs all Apex tests, but prevents the deployment from being saved to the org.
<code>--ignoreerrors   -o</code>	Ignores the deploy errors, and continues with the deploy operation. The default is <code>false</code> . Keep this parameter set to <code>false</code> when deploying to a production org. If set to <code>true</code> , components without errors are deployed, and components with errors are skipped.
<code>--ignorewarnings   -g</code>	If a warning occurs and <code>--ignorewarnings</code> is set to <code>true</code> , the <code>success</code> field in <code>DeployMessage</code> is <code>true</code> . When <code>--ignorewarnings</code> is set to <code>false</code> , <code>success</code> is set to <code>false</code> , and the warning is treated like an error.
<code>--runtests   -r RUNTESTS</code>	Lists the Apex classes containing the deployment tests to run. Use this parameter when you set <code>--testlevel</code> to <code>RunSpecifiedTests</code> .
<code>--testlevel   -l TESTLEVEL</code>	Specifies which level of deployment tests to run. Valid values are <code>NoTestRun</code> , <code>RunSpecifiedTests</code> , <code>RunLocalTests</code> , and <code>RunAllTestsInOrg</code> .
<code>--validatedeployrequestid   -q REQUESTID</code>	Deploys a recently validated set of metadata without the need to rerun the tests.
<code>--verbose</code>	Indicates that you want verbose output from the deploy operation.

**force:source:retrieve**

We added several parameters to make this command consistent with `mdapi:retrieve`.

Parameter	Description
<code>--apiversion   -a APIVERSION</code>	Use to override the default, which is the latest version supported by your CLI plug-in.

Parameter	Description
<code>--packagenames   -n PACKAGENAMES</code>	A comma-separated list of package names to retrieve. You can use this parameter with other parameters to determine the complete set of metadata to retrieve. You can specify <code>--packagenames</code> as the only scoping parameter, or you can specify both <code>--packagenames</code> and one of the other scoping parameters: <code>--metadata</code> , <code>--sourcepath</code> , or <code>--manifest</code> .
<code>--verbose</code>	Indicates that you want verbose output from the retrieve operation.

This parameter was added in a weekly release of `salesforcedx v45` (v45.3.0 or later).

#### **force:project:create --template | -t (empty or standard)**

Takes the guesswork out of the Salesforce DX project structure. For Spring '19 (v45), the default is `empty`, which provides a minimal amount of scaffolding (maintaining the command's previous behavior). In Summer '19 (v46), the default is `standard`, which provides extended scaffolding to facilitate moving source to and from your orgs (especially helpful if you use Salesforce Extensions for VS Code).

## Changed Parameters

This parameter has changed in `salesforcedx v46`.

#### **force:package:install --upgradetype | -t**

This parameter has a new permissible value: `Delete`.

For package upgrades, this parameter specifies whether to mark all removed components as deprecated (`--upgradetype DeprecateOnly`), to delete removed components that can be safely deleted and deprecate the others (`--upgradetype Mixed`), or to delete all removed components, except for custom objects and custom fields, that don't have dependencies (`--upgradetype Delete`).

These parameters have changed in weekly releases of `salesforcedx v45` (v45.3.0 or later).

#### **(all commands) --help | -h**

The output has a new look but contains the same information.

#### **(all commands) --json**

The output is color-coded. If you see a parsing error on stdout, set this environment variable to turn it off:

```
FORCE_COLOR=0
```

#### **force:data:tree:import --contenttype | -c**

We hid this parameter because we support only one file type, JSON, so the parameter had no effect. If you happen to reference this parameter in a script, your script will continue to work. However, we suggest that you update your scripts to remove the hidden parameter, because we might remove it in the future.

#### **force:doc:commands:display --json**

The output for this command changed in Salesforce CLI (`sfdx-cli`) v7. If you're processing the output for this command, compare the v6 output and update your code to reflect the new v7 JSON output.

## Deprecated Parameters

These parameters, which were previously marked as deprecated, were removed in `salesforcedx` v46.

Command	Deprecated Parameters
<code>force:mdapi:deploy</code>	<ul style="list-style-type: none"> <li><code>--jobid</code>   <code>-i</code> (use <code>sfdx force:mdapi:deploy:report -i <b>jobId</b></code> instead)</li> <li><code>--rollbackonerror</code>   <code>-e</code> (use <code>--ignoreerrors</code>   <code>-o</code> instead)</li> </ul>

SEE ALSO:

[Test Your Package Versions with ISV Hammer \(Pilot\)](#)

## Marketing: Einstein Next Best Action Connector for Interaction Studio and Distributed Marketing Quick Send for Email

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Marketing Cloud is the premier platform for delighting customers with 1:1 customer journeys. It enables you to build a single view of your customer, leveraging data from any source. Plan and optimize unique customer journeys based on your business objectives. Deliver personalized content across every channel and device at precisely the right time. Measure the impact of each interaction on your business so that you can optimize your approach in real time and deliver better results.

Learn about our latest features and enhancements in Marketing Cloud Release Notes.

- [August 2019 Release](#)
- [June 2019 Release](#)
- [April 2019 Release](#)
- [January 2019 Release](#)
- [October 2018 Release](#)
- [August 2018 Release](#)
- [June 2018 Release](#)
- [April 2018 Release](#)

SEE ALSO:

[Marketing Cloud Overview](#)

[Marketing Cloud: Earlier Release Notes](#)

[Salesforce Marketing Cloud Facebook Page](#)

## B2B Commerce: Create Self-Service Storefronts for Business Buyers

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Quickly build self-service ecommerce storefronts that enable retailers, wholesalers, or distributors to purchase goods or services from your brand. B2B Commerce is a managed package that simplifies online buying with features designed for business-to-business use cases. Deliver custom catalogs, complex product configurations, account hierarchies, contract pricing, reorders, and more. Easily create a unique branded storefront user experience with responsive page templates.

Check out the B2B Commerce Release Notes for information about new features and other improvements in each new version of the B2B Commerce managed package.

- [B2B Commerce Spring '19 \(version 4.10\)](#)

SEE ALSO:

[Salesforce Help B2B Commerce](#)

[B2B Commerce wiki B2B Commerce Documentation](#)

## Critical Updates

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This release includes new critical updates for Lightning Experience, External Profiles, Aura Components, and HTTPS Connections. Also check out the previously released and enforced critical updates sections.

To ensure a smooth transition, each critical update has an opt-in period, which ends on the auto-activation date that's displayed on the Critical Updates page in Setup. During this period, you can manually activate and deactivate the update as often as you need to evaluate the impact on your org and modify affected customizations. After the opt-in period has passed, the update is activated. For more details, see [Respond to Critical Updates](#).

## New Critical Updates

These critical updates are new in Summer '19.

### **Disable the API Enabled User Permission Defaults for External Profiles (Critical Update)**

Salesforce is disabling the API enabled permission on all standard and cloned external profiles. The API enabled permission allows external applications or connectors, such as Workbench, Dataloader.io, Jitterbit, Excel Connector, Salesforce Mobile App, Mobile SDK Apps, Salesforce IoT, or Connected Apps to use the API to authenticate or access Salesforce data.

### **Prevent Creation of Function Expressions in Dynamically Created Aura Components (Critical Update)**

To improve security and stability, this update prevents attribute values passed to `$A.createComponent()` or `$A.createComponents()` from being interpreted as Aura function expressions.

### **Require TLS 1.2 for HTTPS Connections (Critical Update)**

To maintain the highest security standards and promote the safety of your data, Salesforce is disabling the older Transport Layer Security (TLS) 1.1 encryption protocol. Starting in October 2019, all inbound connections to or outbound connections from your Salesforce org must use TLS 1.2. Verify that your browser access, API integrations, and other Salesforce features are compliant with TLS 1.2.

### **Require TLS 1.2 for HTTPS Connections in Communities and Sites (Critical Update)**

To maintain the highest security standards and promote the safety of your data, Salesforce is disabling the older Transport Layer Security (TLS) 1.1 encryption protocol. Starting in October 2019, all inbound connections to or outbound connections from your Salesforce communities, sites, and portals must use TLS 1.2. Verify that your browser access, API integrations, and other Salesforce features are compliant with TLS 1.2.

### **Use the BR() Function in Flows and Processes Correctly (Critical Update)**

This critical update ensures that `BR()` functions in flows and processes result in a line break. Previously, a `BR()` in a formula resource resolved to `__BR_ENCODED__` and not to a line break.

### **Evaluate Criteria Based on Original Record Values in Process Builder (Critical Update)**

This critical update ensures that a process with multiple criteria and a record update evaluates the *original* value of the field that began the process with a value of null.

**Improve Security by Requiring User Access to Apex Classes Invoked by Flow (Critical Update)**

This critical update requires a user running a flow to have access to all Apex classes invoked by that flow. If a flow invokes Apex, the running user must have the corresponding Apex class assignment in their profile or permission set.

**Require Customize Application Permission for Direct Read Access to Custom Settings (Critical Update)**

Currently users without Customize Application permission can read custom settings using different APIs that are provided by Salesforce. Following the “secure by default” approach, read access for users without Customize Application permission will be revoked with this update. This change affects Visualforce pages and Lightning components that directly reference custom settings.

## Previously Released Critical Updates

These critical updates were announced in a previous release and are still available.

**Turn On Lightning Experience (Previously Released Critical Update) Delayed Until January 2020**

Previously, we announced that this critical update would activate with Winter '20. Out of an abundance of caution, we have decided to delay auto-activation of this update. It will now activate for your org within 72 hours of January 7, 2020.

**Enable Manual Account Sharing in Enterprise Territory Management (Previously Released Critical Update)**

This update changes the `TerritoryManual` reason code in AccountShare records to `Territory2AssociationManual` and is required to let users share accounts manually with territory groups. After you activate the update in production, it can take up to two weeks before you see the changes.

**Disable Access to Non-global Apex Controller Methods in Managed Packages (Previously Released Critical Update)**

As mentioned in the Spring '19 release notes, this critical update corrects access controls on Apex controller methods in managed packages. When this update is enabled, only methods marked with the `global` access modifier are accessible by Aura components from outside the package namespace. These access controls prevent you from using unsupported API methods that the package author didn't intend for global access.

**Block Certain Fields in the User Record for Orgs with Communities and Portals (Critical Update)**

Salesforce is giving customers the option to enable a user setting that allows the hiding of certain personal information fields on the user records in orgs with communities or portals. The fields are hidden from view when external users are accessing user records. External users can still see their own user records.

**API Only Users Can Access Only Salesforce APIs (Previously Released Critical Update)**

If a user has the API Only User permission, they can access Salesforce only via APIs, regardless of their other permissions. This critical update was created in the Spring '19 release, but we neglected to mention it in the Spring '19 release notes.

**Improve Email Security with Redesigned DKIM Keys (Previously Released Critical Update)**

As announced in Winter '19, to address potential security vulnerabilities with DomainKeys Identified Mail (DKIM) keys, we improved the way they're created. You no longer have to work with public and private keys. Instead, Salesforce publishes the TXT record containing your public key to DNS. We also added automatic key rotation to reduce the risk of your keys becoming compromised by a third party. After you enable this critical update, keys generated via the old method continue to work, but in Winter '20, you must generate any new keys using the more secure method. And, because sharing keys can introduce security vulnerabilities, we removed the ability to import DKIM keys.

**Restrict Use of Salesforce Classic HTML-Based Email Templates to Secure Browsers (Previously Released Critical Update)**

As announced in Summer '18, this critical update prevents using HTML-based email templates, such as custom, Visualforce, or standard HTML templates, from Microsoft Internet Explorer. Internet Explorer doesn't support the Salesforce Content Security Policy (CSP), so it can't provide the required browser protection. We recommend that you use a browser with CSP support, such as Microsoft Edge, Google Chrome, or Mozilla Firefox.

## Enforced Critical Updates

These critical updates were announced in a previous release and are now enforced.

**Enable External Org-Wide Defaults in Orgs with Communities or Portals (Critical Update, Enforced)**

Enabling external org-wide defaults in orgs with communities or portals was a critical update in Spring '19 and is enforced for the Summer '19 release. This update enables the External Sharing Model and helps you secure your data. You can set more restrictive levels of access for external users instead of giving internal and external users the same default access.

**Add a Namespace Prefix to pageReference.state Properties and Query Parameters (Critical Update, Enforced)**

Add a Namespace Prefix to Query Parameters and pageReference.state Properties was a critical update in Winter '19 and is enforced for the Summer '19 release. This critical update resolves naming conflicts for query parameters between package components. Starting on May 17, 2019, this update begins to auto-activate on a rolling basis. The actual date it auto-activates for your org depends on when you update to the Summer '19 release. All orgs will be updated by June 17, 2019. As with all critical updates, you can activate the update manually before Salesforce auto-activates it.

## Postponed Critical Updates

These critical updates were announced in a previous release and the auto-activation date was postponed.

**Use without sharing for @AuraEnabled Apex Controllers with Implicit Sharing (Critical Update, Postponed)**

This critical update, released in Spring '18, was scheduled for auto-activation in Summer '19, but has been postponed to Winter '20.

**Remove Instance Names from URLs for Visualforce, Community Builder, Site.com Studio, and Content Files (Critical Update, Postponed)**

This critical update, released in Spring '18, was scheduled for auto-activation in Winter '20, but has been postponed to Summer '20.

**Stabilize the Hostname for My Domain URLs in Sandboxes (Critical Update, Postponed)**

This critical update, released in Summer '18, was scheduled for auto-activation in Winter '20, but has been postponed to Summer '20.

**Open Hyperlinks in Formula Fields Correctly (Critical Update, Postponed)**

This critical update, released in Winter '19, was scheduled for auto-activation in Summer '19, but has been postponed to Spring '20.

**“Check for Null Record Variables or Null Values of Lookup Relationship Fields in Process and Flow Formulas” (Critical Update, Postponed)**

This critical update, released in Spring '19, was scheduled for auto-activation in Summer '19, but has been postponed to Spring '20. The critical update was previously called "Return Null Values in Process and Flow Formulas."

## Help and Training

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We added lots of great new content, including new guides; Trailhead modules, trails, and projects; and instructional videos. We also updated our trust and compliance documentation.

### IN THIS SECTION:

[Access Salesforce Extensions for VS Code Documentation on a New Site](#)

The documentation for Salesforce Extensions for Visual Studio Code has its own dedicated doc site. In February, we moved the content from the extensions' Visual Studio Marketplace pages and the project's GitHub wiki. Now you can conveniently read and search our VS Code documentation all in one place.

[Integrate Salesforce and Other Apps Using Updates to the Integration Patterns and Practices Guide](#)

We added new patterns and updates to the *Integration Patterns and Practices* guide. The changes use the latest Salesforce features designed to make integrations efficient and robust. Use the updated selection matrix and the new and updated patterns to determine what works best for your integration scenario.

### [Pardot Documentation: Improved Resources for Login Security, Engagement Studio, and Engagement History](#)

We make updates to our content with each release. This time around, you get a new guide on securing your user accounts, as well as significant refreshes in our Engagement Studio and Engagement History resources.

### [Introducing the Outlook Integration Implementation Guide](#)

This guide provides the setup steps that Salesforce admins, Microsoft Exchange admins, and sales reps complete to implement the Outlook integration. It includes the Exchange server settings, Salesforce setup instructions, and a short client-side procedure.

### [Introducing the Email Integration Security Guide](#)

The new Email Integration Security Guides details technical aspects of the Salesforce base Outlook integration and premium Outlook and Gmail integrations.

### [Explore Features with Trailhead](#)

Get familiar with Salesforce or discover a new feature with Trailhead, a fun, guided, and interactive tool. You can follow guided learning paths for admins or developers, or choose your own adventure with self-paced modules.

### [Watch Videos \(English Only\)](#)

We created and updated instructional videos to help your users learn about new and improved Salesforce features.

### [Review Trust and Compliance Documentation and Acceptable Use and External-Facing Services Policy](#)

We made seasonal updates to the Salesforce trust and compliance documents and acceptable use policy.

## Access Salesforce Extensions for VS Code Documentation on a New Site

The documentation for Salesforce Extensions for Visual Studio Code has its own dedicated doc site. In February, we moved the content from the extensions' Visual Studio Marketplace pages and the project's GitHub wiki. Now you can conveniently read and search our VS Code documentation all in one place.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Enterprise, Performance, Unlimited, and Developer editions.

**How:** Visit the Salesforce Extensions for VS Code documentation site at <https://forcedotcom.github.io/salesforcedx-vscode>.

## Integrate Salesforce and Other Apps Using Updates to the Integration Patterns and Practices Guide

We added new patterns and updates to the *Integration Patterns and Practices* guide. The changes use the latest Salesforce features designed to make integrations efficient and robust. Use the updated selection matrix and the new and updated patterns to determine what works best for your integration scenario.

**Where:** This change applies to Lightning Experience, Salesforce Classic, and all versions of the Salesforce app in Professional, Performance, Enterprise, Developer, and Unlimited editions.

**Why:** Updates to the *Integration Patterns and Practices* include:

- Updated pattern selection matrix
- Updates to remote process invocation patterns
- Updates to the batch data synchronization pattern
- Updates to the remote call-in pattern

- A new pattern on data virtualization

SEE ALSO:

[Integration Patterns and Practices](#)

## Pardot Documentation: Improved Resources for Login Security, Engagement Studio, and Engagement History

We make updates to our content with each release. This time around, you get a new guide on securing your user accounts, as well as significant refreshes in our Engagement Studio and Engagement History resources.

**Why:** The latest and greatest helps you do your best work! Plus, new content in Salesforce Help is more easily searched, shared, and translated into supported languages.

- [Login Security Implementation Guide](#): This handy new guide walks you through using Pardot and Salesforce security features together to help keep user accounts secure.
- [Engagement Studio Implementation Guide](#): We're retiring the *Engagement Studio User Guide*. All the information was moved into Salesforce Help and repackaged into a guide for easier access and language support.
- [Salesforce Help: Engagement History](#): We moved and reorganized our Engagement History resources to better reflect all the ways you can implement this valuable data in your account and records.

## Introducing the Outlook Integration Implementation Guide

This guide provides the setup steps that Salesforce admins, Microsoft Exchange admins, and sales reps complete to implement the Outlook integration. It includes the Exchange server settings, Salesforce setup instructions, and a short client-side procedure.

**Where:** This change applies to Salesforce Inbox on desktop, available for an extra cost in Essentials, Group, Professional, Enterprise, Performance, Unlimited, and Developer editions.

SEE ALSO:

[Outlook Integration Implementation Guide](#)

## Introducing the Email Integration Security Guide

The new Email Integration Security Guides details technical aspects of the Salesforce base Outlook integration and premium Outlook and Gmail integrations.

**Where:** This change applies to Lightning Experience in Enterprise, Performance, and Unlimited editions. This change also applies to the Salesforce Inbox mobile app, which is available for an extra cost in Essentials, Professional, Enterprise, Performance, and Unlimited editions.

SEE ALSO:

[Outlook Integration Implementation Guide](#)

## Explore Features with Trailhead

Get familiar with Salesforce or discover a new feature with Trailhead, a fun, guided, and interactive tool. You can follow guided learning paths for admins or developers, or choose your own adventure with self-paced modules.

Check out Trailhead at <https://trailhead.salesforce.com>, and find the right trail for you. Here are the latest modules, trails, and projects.

## Modules

### Connected App Basics

Learn how connected apps integrate external applications with Salesforce.

### High Velocity Sales for Sales Reps

Accelerate your inside sales process with a high-productivity workspace.

### High Velocity Sales for Sales Managers

Help reps sell faster with sales cadences.

### Industry Blueprints for Partners

Understand how blueprints help you build industry solutions and meet customer needs.

### Contact Builder Implementation

Create a data model that gives businesses a single view of their customers.

### Identity for Mobile-Centric Customers

Create a login experience designed for mobile interaction.

### Action Plans in Financial Services Cloud

Learn how to deliver consistent and compliant client engagement experiences.

### Lightning Scheduler

Learn how to schedule customer appointments for your business.

### Client Management with Financial Services Cloud

Understand households, manage accounts, and track interactions with your customers.

## Trails

### Accelerate Your Sales Team with High Velocity Sales

Leverage work queues and sales cadences to improve your sales outreach.

### Determine Which Application Lifecycle Management Model Is Right for You

Learn about application lifecycle management models and choose the best one to manage change in your org.

## Projects

### Create a Customer Account Portal with a Self-Registration Flow

Check out the newly revamped Create a Customer Account Portal with a Self-Registration Flow project, which now includes an unmanaged package you can install, rather than creating a flow from scratch.

## Watch Videos (English Only)

We created and updated instructional videos to help your users learn about new and improved Salesforce features.

- The new  [Accelerate Your Sales Process with High Velocity Sales](#) video shows you what sales reps need to know about using High Velocity Sales. With the work queue, Lightning Dialer, call scripts, and email templates, reps can communicate confidently with prospects in a fraction of the time it took before.
- The new  [Build Sales Flows with High Velocity Sales](#) video explains what sales managers need to know about creating sales cadences. With sales cadences, sales teams know exactly what action to take with each prospect and when.

- Check out the new video [Open Up Access to Your Community or Portal with the Guest User Profile](#) to understand how the guest user profile works in communities.
- Watch the video [A Mobile-First World Requires Mobile-First Identity](#) to learn how to create a login process where customers can sign up and log in with their mobile number or email address.

## Review Trust and Compliance Documentation and Acceptable Use and External-Facing Services Policy

We made seasonal updates to the Salesforce trust and compliance documents and acceptable use policy.

### Infrastructure and Sub-Processors

These changes have been made in the **Infrastructure and Sub-Processors Documentation**.

#### Audience Studio

- **General:** Changed “Salesforce DMP” and “Salesforce Data Studio” to “Audience Studio” and “Data Studio” respectively, to reflect new branding.
- **Infrastructure - Customer Data Storage:** Revised definition of Customer Data to align with Master Subscription Agreement.
- **Sub-processors - Customer Data Storage** and **Sub-processors - Customer Data Processing:** Updated section headings.

**Sales Cloud, Service Cloud, Community Cloud, Chatter, Force.com, IoT Explorer (including IoT Plus), Site.com, Database.com, Einstein Analytics (including Einstein Discovery), Work.com, Messaging, Financial Services Cloud, Health Cloud, Salesforce CPQ and Salesforce Billing**

- **Sub-processors - Customer Data Storage** and **Sub-processors - Customer Data Processing:** Updated section headings.
- Replaced “Force.com” with “Lightning Platform (including Force.com)” throughout the documentation to reflect the current product name.
- **Infrastructure - Customer Data Storage:** Revised definition of Customer Data to align with Master Subscription Agreement.
- **Sub-Processors - Customer Data Storage:** Revised wording to align with new version of Trust website.
- **Sub-Processors - Customer Data Storage:** Clarified data storage for Einstein Analytics.
- **Binding Corporate Rules (BCR) for Processors:** Updated the scope of services covered.

#### B2B Commerce

- **Sub-processors - Customer Data Storage** and **Sub-processors - Customer Data Processing:** Updated section headings.
- **Sub-processors - Customer Data Storage:** Revised definition of Customer Data to align with Master Subscription Agreement.

#### Commerce Cloud

- **General:** Updated to reflect new branding.
- **Sub-processors - Customer Data Storage** and **Sub-processors - Customer Data Processing:** Updated section headings and revised definition of Customer Data to align with Master Subscription Agreement.
- **Sub-processors - Customer Data Storage:** Clarified data storage locations.

#### Data.com

- **Sub-processors - Customer Data Storage** and **Sub-processors - Customer Data Processing:** Updated section headings.

#### Einstein Discovery Classic

- **Sub-processors - Customer Data Storage** and **Sub-processors - Customer Data Processing:** Updated section headings.

#### Einstein Platform

- **Sub-processors - Customer Data Storage** and **Sub-processors - Customer Data Processing**: Updated section headings.
- **Scope**: Added Einstein Vision for Social Studios, High Velocity Sales

#### Heroku

- **Sub-processors - Customer Data Storage** and **Sub-processors - Customer Data Processing**: Updated section headings.

#### Desk.com, Einstein Discovery, LiveMessage, Quip, and SalesforceIQ CRM Services

- **Sub-processors - Customer Data Storage** and **Sub-processors - Customer Data Processing**: Updated section headings and revised definition of Customer Data to align with Master Subscription Agreement.

#### IoT Cloud

- **Sub-processors - Customer Data Storage** and **Sub-processors - Customer Data Processing**: Updated section headings.

#### Marketing Cloud

- **Infrastructure - Customer Data Storage**: Revised definition of Customer Data to align with Master Subscription Agreement.
- **Sub-processors - Customer Data Storage** and **Sub-processors - Customer Data Processing**: Updated section headings. Moved certain sub-processors from the Storage to Processing sections.

#### MuleSoft

- **Scope**: Added definition of MuleSoft Cloud Offerings.
- **Sub-processors - Customer Data Storage** and **Sub-processors - Customer Data Processing**: Updated section headings.
- **Sub-processors - Customer Data Storage**: Replaced Europe with Germany.
- **Content Delivery Networks**: Clarified applicability to the Cloud Offerings.

#### Pardot

- **Sub-processors - Customer Data Storage** and **Sub-processors - Customer Data Processing**: Updated section headings.

## Security, Privacy, and Architecture

These changes have been made in the **Security, Privacy, and Architecture Documentation**.

#### Audience Studio

- **General**: Changed "Salesforce DMP" and "Salesforce Data Studio" to "Audience Studio" and "Data Studio" respectively, to reflect new branding.
- **Salesforce's Corporate Trust Commitment**: Revised definition of Customer Data to align with Master Subscription Agreement.

#### Sales Cloud, Service Cloud, Community Cloud, Chatter, Force.com, IoT Explorer (including IoT Plus), Site.com, Database.com, Einstein Analytics (including Einstein Discovery), Work.com, Messaging, Financial Services Cloud, Health Cloud, Salesforce CPQ and Salesforce Billing

- **Salesforce's Corporate Trust Commitment**: Revised definition of Customer Data to align with Master Subscription Agreement.
- Replaced "Force.com" with "Lightning Platform (including Force.com)" throughout the documentation to reflect the current product name.
- **Services Covered**: Defined the term "Salesforce Services."
- **Services Covered**: Clarified the sections that are not applicable to Scratch Orgs.

#### B2B Commerce

- **Salesforce's Corporate Trust Commitment**: Revised definition of Customer Data to align with Master Subscription Agreement.

#### Commerce Cloud

- **General**: Updated to reflect new branding.

- **Salesforce's Corporate Trust Commitment:** Revised definition of Customer Data to align with Master Subscription Agreement.
- **Services Covered:** Clarified the sections not applicable to certain environments.
- **Sensitive Data:** Updated based on related changes in the Services Covered section.

#### **"Einstein" (Sales Cloud Einstein, Pardot Einstein, Salesforce Inbox, Einstein Engagement Scoring, Einstein Vision and Language, Einstein Bots, Service Cloud Einstein, Einstein Prediction Builder, and Einstein Vision for Social Studios)**

- **Scope:** Added Einstein Vision for Social Studios, High Velocity Sales.

#### **Heroku**

- **Salesforce's Corporate Trust Commitment:** Revised definition of Customer Data to align with Master Subscription Agreement.
- **Return of Customer Data:** Added a link to the documentation on Git Cloning Existing Heroku Applications.

#### **IoT Cloud**

- **Salesforce's Corporate Trust Commitment:** Revised definition of Customer Data to align with Master Subscription Agreement.

#### **Desk.com, Einstein Discovery Classic, LiveMessage, Quip, and SalesforceIQ CRM Services**

- **Salesforce's Corporate Trust Commitment:** Revised definition of Customer Data to align with Master Subscription Agreement.

#### **Marketing Cloud**

- **Services Covered:** Updated to reflect current branding. Added Einstein Engagement Frequency.
- **Salesforce's Corporate Trust Commitment:** Revised definition of Customer Data to align with Master Subscription Agreement.

#### **MuleSoft**

- **Salesforce's Corporate Trust Commitment:** Revised definition of Customer Data to align with Master Subscription Agreement.
- **Services Covered:** Added definition of MuleSoft Cloud Offerings.
- **Security Logs:** Clarified applicability to the Cloud Offerings.
- **Data Encryption:** Added Transport Layer Encryption (TLS) is required for all management MuleSoft Services.

## Notices and Licenses

These changes have been made in the **Notices and Licenses Documentation**.

#### **Audience Studio**

- **General:** Changed "Salesforce DMP" and "Salesforce Data Studio" to "Audience Studio" and "Data Studio" respectively, to reflect new branding.
- **Customer Data:** Revised definition of Customer Data to align with Master Subscription Agreement.
- **Restricted Uses of Information and Compliance with Self-Regulatory Programs:** Revised subsection b. to clarify applicability and scope of relevant regulatory codes.

#### **Salesforce**

- **Customer Data:** Revised definition of Customer Data to align with Master Subscription Agreement.
- Replaced "Force.com" with "Lightning Platform (including Force.com)" throughout the documentation to reflect the current product name.
- Added a section for Lightning Object Creator.

#### **B2B Commerce**

- **Customer Data:** Revised definition of Customer Data to align with Master Subscription Agreement.

#### **Commerce Cloud**

- **General:** Updated to reflect new branding.

- **Customer Data:** Revised definition of Customer Data to align with Master Subscription Agreement.

**“Einstein” (Sales Cloud Einstein, Pardot Einstein, Salesforce Inbox, Einstein Engagement Scoring, Einstein Vision and Language, Einstein Bots, Service Cloud Einstein, Einstein Prediction Builder, and Einstein Vision for Social Studios)**

- **Scope:** Added Einstein Vision for Social Studios, High Velocity Sales.

#### Heroku

- **Customer Data:** Revised definition of Customer Data to align with Master Subscription Agreement.

#### IoT Cloud

- **Customer Data:** Revised definition of Customer Data to align with Master Subscription Agreement.

#### Marketing Cloud

- Updated Table of Contents
- **ExactTarget, Advertising Studio and Interaction Studio:**
  - **Customer Data:** Revised definition of Customer Data to align with Master Subscription Agreement.
  - **Services Covered:** Updated to reflect current branding, to clarify services covered, and to change “ET Services” to “Covered Services” throughout.
    - Added Einstein Engagement Frequency to Services Covered.
  - **Advertising Studio:** Removed duplicate section from “Social Studio” and updated list of third party terms.
- **Datorama:**
  - **Customer Data:** Revised definition of Customer Data to align with Master Subscription Agreement.
  - **Restricted Uses of Information:** Updated language related to sending messages.
  - **Third Party Platforms:** Updated to clarify SFDC’s deletion obligations with respect to Third-Party Platforms and to clarify Customer’s obligations with respect to third party terms that are applicable to Third-Party Platforms.
- **Predictive Intelligence:**
  - **Customer Data:** Revised definition of Customer Data to align with Master Subscription Agreement.
- **Social Studio:**
  - **Customer Data:** Revised definition of Customer Data to align with Master Subscription Agreement.
  - **Third Party Notices:** Updated to reflect the fact that as of March 1, 2019, customers can no longer publish or view new Google+ content via Social Studio.

#### Messaging and LiveMessage

- **Customer Data:** Revised definition of Customer Data to align with Master Subscription Agreement.

#### MuleSoft

- **Services Covered:** Added definition of MuleSoft Cloud Offerings.
- **Salesforce’s Corporate Trust Commitment:** Revised definition of Customer Data to align with Master Subscription Agreement.
- Removed reference to MuleSoft Dev Center.

#### Quip

- **Customer Data:** Revised definition of Customer Data to align with Master Subscription Agreement.
- **Third Party Platforms:** Added Unsplash as a new third party platform.

## Acceptable Use and External-Facing Services Policy

These changes have been made in the **Acceptable Use and External-Facing Services Policy**.

### Section 6 Prohibited Actions

- Additional prohibitions added with respect to (i) the use of certain Einstein features and products to make certain predictions or decisions, (ii) the submission of certain data to the Einstein Voice product to create or analyze biometric identifiers, and (iii) use of the Services to transact online sales certain types of firearms and/or related accessories.

## Other Salesforce Products and Services

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### Heroku

Heroku is a cloud-based application platform for building and deploying web apps.

For information on new features, go to the [Heroku Changelog](#).

### Success Cloud

The certified experts, consultants, and innovative tools of Salesforce Success Cloud are here to help with professional services, prescriptive advice, and expertise at every stage of your journey.