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# Analytics Platform Setup Guide

Salesforce, Spring '21





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# ANALYTICS PLATFORM SETUP GUIDE

## Set Up the Einstein Tableau CRM Platform

Set up your organization to use the Salesforce Analytics Cloud< platform by enabling Tableau CRM and assigning basic permission sets or creating and assigning your own custom permission sets.

The information here describes how to set up your organization to use the Tableau CRM platform and Tableau CRM templated apps and Apps.

SEE ALSO:

[Set Up the Tableau CRM Platform with Licenses Purchased Before October 20, 2015](#)

[Migrating From Tableau CRM Licenses Purchased Before 10/20/2015 to New Tableau CRM Platform Licenses](#)

## Learn About Tableau CRM Platform Licenses and Permission Sets

Introduce yourself to Tableau CRM setup fundamentals, which apply to both basic and advanced setup procedures.

Each Einstein Einstein Analytics Growth and Einstein Analytics Plus license is a single-user license that provides access to the Salesforce Analytics Cloud Cloud. The license limits your instance of the Analytics Cloud Cloud to 1 billion rows of data. If you require more data, you can purchase Analytics Cloud - Additional Data Rows, which entitles you to 100 million rows more.

### Important:

- Analytics Cloud license data storage limits are contractual, not technical. Licensee agrees to strictly monitor its total number of data rows.
- If you purchased an Einstein Analytics Growth license before October 20, 2015 with Analytics Cloud Builder or Analytics Cloud Explorer permission set licenses: Read [Set up the Analytics Cloud Platform With Licenses Purchased Before October 20, 2015](#). If you're migrating users from Builder or Explorer licenses to the new Einstein Analytics Growth license: See [Migrating From Tableau CRM Licenses Purchased Before 10/20/2015 to New Tableau CRM Platform Licenses](#) before you start the setup process for those users.
- If you disable Analytics Cloud, user permissions are removed from each defined permission set. If you re-enable Analytics Cloud later, you must define the permission sets again.

## Tableau CRM Platform License Permission Sets

The Einstein Einstein Analytics Growth license includes two prebuilt permission sets:

- **Einstein Analytics Platform Admin** enables all permissions required to administer the Tableau CRM platform, including permissions to enable creating Tableau CRM templated apps and Apps.
- **Einstein Analytics Platform User** enables all permissions required to use the Tableau CRM platform and Tableau CRM templated apps and Apps

The Einstein Tableau CRM Plus license includes two prebuilt permission sets:

### EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available with Tableau CRM, which is available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer Edition**.

- **Einstein Analytics Plus Admin** enables all permissions required to administer the Tableau CRM platform and Einstein Discovery, including permissions to enable creating Tableau CRM templated apps and Apps.
- **Einstein Analytics Plus User** enables all permissions required to use the Tableau CRM platform, Einstein Discovery, and Tableau CRM templated apps and Apps

Basic setup involves choosing and assigning the prebuilt permission sets. To create your own custom Tableau CRM permission sets, use advanced setup.

When you assign any Tableau CRM permission set to users in your org, Salesforce *auto-assigns* the Einstein Analytics Growth permission set license to that user.

 **Note:** For efficiency, you can assign a permission set to groups of users. You can also assign multiple permission sets to a user.

You can assign a Tableau CRM permission set license along with any of the following Salesforce user licenses:

- Lightning Platform (app subscription)
- Lightning Platform (one app)
- Full CRM
- Salesforce Platform
- Salesforce Platform One

## Learn About Internal Analytics Users

Analytics uses internal users, Integration User and Security User, to access Salesforce data, preview data in Data Prep recipes, and enforce row-level security on datasets.

Analytics uses the permissions of the Integration User to extract data from Salesforce objects and fields when a dataflow or recipe job runs. Because the Integration User has View All Data access, consider restricting access to particular objects and fields that contain sensitive data. If the dataflow or recipe is configured to extract data from an object or field on which the Integration User does not have permission, the job fails. The Integration User permissions restrict the data extracted from Salesforce only—they don't affect access to the data in datasets. To restrict user access to data in datasets, set up row-level security.

To enable the interactive preview in recipes, Data Prep uses the Security User. When a user previews the results of a recipe, Data Prep shows only the results that the logged-in user has permission to access. The permissions of the Security User don't affect the data shown in the preview.

When you query a dataset that has row-level security based on the Salesforce User object, Analytics uses the permissions of the Security User to access the User object and its fields. The Security User must have at least read permission on each User object field included in a predicate. (A predicate is a filter condition that defines row-level security for a dataset.) By default, the Security User has read permission on all standard fields of the User object. If the predicate is based on a custom field, then grant the Security User read access on the field. If the Security User does not have read access on all User object fields included in a predicate expression, an error appears when you try to query the dataset using that predicate.

 **Important:** Because Analytics requires the Integration User and Security User to access Salesforce data and preview recipe changes to data, do not delete either of these users.

SEE ALSO:

[Control Access to Salesforce Objects and Fields](#)

[Set Up Dataset Security to Control Access to Rows](#)

## Basic Tableau CRM Platform Setup

Follow these few steps to give users in your organization access to Tableau CRM platform, templates, and apps quickly. Basic setup uses permission sets included with the Tableau CRM Platform license, which cover the majority of most organizations' analytics needs.

### Enable Analytics Cloud

1. Go to Salesforce Setup and enter *Analytics* in the **Quick Find / Search** field.
2. Select **Getting Started**.
3. Click **Enable Einstein Analytics**.

### Select and Assign Permission Sets

1. In Salesforce Setup, select **Users**.
2. Select **Permission Sets**.
3. Select one of the following prebuilt permission sets.
  - If you and users of your Salesforce org have Einstein Analytics Platform Licenses:
    - **Einstein Analytics Platform Admin** enables all permissions required to administer the Tableau CRM platform, including permissions to enable creating Tableau CRM templated apps and Apps.
    - **Einstein Analytics Platform User** enables all permissions required to use the Tableau CRM platform and Tableau CRM templated apps and Apps
  - If you and users of your Salesforce org have Einstein Analytics Plus Licenses:
    - **Einstein Analytics Plus Admin** enables all permissions required to administer the Tableau CRM platform and Einstein Discovery, including permissions to enable creating Tableau CRM templated apps and Apps.
    - **Einstein Analytics Plus User** enables all permissions required to use the Tableau CRM platform, Einstein Discovery, and Tableau CRM templated apps and Apps

That opens the page for the selected permission set.

4. Click **Manage Assignments**. The next page shows the users already assigned the selected permission set.
5. Click **Add Assignments** to see all the users in your org.
6. Select one or more users by checking the box next to their name in the left-hand column.
7. Click **Assign**.

You see a page that tells you if the permission set has been assigned. If permission set didn't succeed for one or more users, Salesforce tells you why. You can fix the problem and try again.

## Advanced Tableau CRM Platform Setup

Follow these steps to learn the details of Tableau CRM permissions and to create and assign your own custom permission sets.

 **Tip:** For best results, follow the steps in the order shown.

## Learn About Tableau CRM Permission Set Licenses and User Permissions

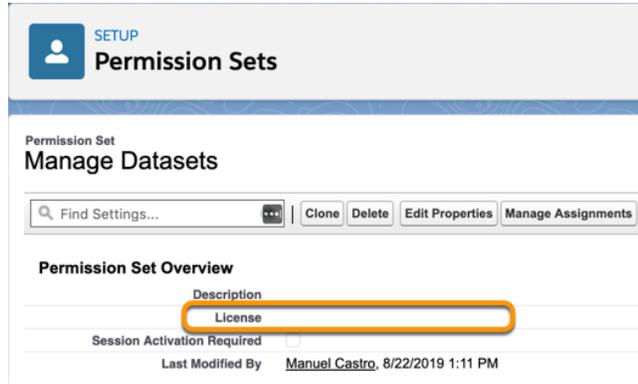
When you create your own Tableau CRM permission sets, you start by selecting the Einstein Analytics Growth permission set license instead of using the prebuilt permission sets. The permission set license includes the user permissions required to explore data with and manage the Salesforce Analytics Cloud platform.

- Each Tableau CRM platform user needs an Einstein Analytics Growth permission set license to use the Tableau CRM platform. Creating a permission set and assigning it to a user *auto-assigns* the Tableau CRM platform permission set license to that user. You can also manually assign permission set licenses to users.
- Experience Cloud site users need an Einstein Analytics for Communities permission set license to view Tableau CRM apps shared via dashboards embedded in sites or Visualforce pages.

The Einstein Analytics Growth permission set license enables the following permissions, except Manage Analytics Private Assets.

User Permission	What It Enables
Access Analytics SAQL Editor (Pilot Feature)	This user permission is no longer used and will be removed in a future release.
Add Analytics Remote Connections	Add connections to access data from external data sources.
Adoption Analytics Templates and Apps	Create and use apps based on the Adoption Analytics template.
Create Analytics Apps	Create, edit, delete, and share Analytics Cloud applications.
Create and Edit Analytics Dashboards	Create, edit, and delete Analytics Cloud dashboards.
Download Analytics Data	Download screenshots and data in tabular format through the Analytics Cloud user interface.
Edit Analytics Dataflows	Edit, delete, and use remote connections; add and remove connected objects; run and schedule data sync; create, edit, delete, run, schedule, and monitor dataflows and recipes. Use discretion when assigning this user permission because it enables access to all Salesforce object data to which the Integration User has access. See <a href="#">Salesforce Data Access in Tableau CRM</a> .
Edit Dataset Recipes	Create, edit, and run recipes to create datasets. Monitor dataflow and system jobs in the monitor. Doesn't enable editing security predicates in existing recipes, or running and scheduling recipes based on datasets that have security predicates.
Manage Analytics Private Assets	Delete datasets from another user's My Private App. See <a href="#">Delete a Dataset</a> .

 **Note:** This user permission isn't included in any of the packaged permission sets. You have to manually assign it to a permission set. To add this user permission to a permission set in a Sandbox org, the permission set can't have a license assigned to it.



If a license is assigned to the permission set, the Manage Analytics Private Assets user permission doesn't appear when adding user permissions to permission set.

Manage Analytics	Access all Analytics Cloud features. Provides Tableau CRM administrator-level capabilities.
Manage Analytics Custom Maps	Add, edit, and delete maps, and upload geoJSON files.
Manage Analytics Templated Apps	Create and manage apps based on Tableau CRM Templates. Edit Tableau CRM dataflows. Edit recipes. Monitor dataflow and system jobs in the monitor. Some templates require extra permissions. See the help for each template.
Trend Report Data in Analytics	Trend the data of a report with a Tableau CRM dataflow.
Upload External Data to Analytics	Upload external data to Analytics Cloud to create a dataset. Monitor dataflow and system jobs in the monitor.
Use Analytics	Open Tableau CRM; run Analytics Cloud apps to which you have access; view their datasets, lenses, and dashboards; and create and edit lenses.
Use Analytics Templated Apps	Use apps based on Tableau CRM Templates. Can also create, edit, and delete Analytics Cloud dashboards. Some templates require extra permissions. See the help for each template.

You create your own permission sets based on these permissions.

**Note:** When you create permission sets for Tableau CRM users, selecting any Analytics Cloud permission automatically enables the “Use Analytics Cloud” permission as well. Also, the type of access granted on an app controls the actions that can be performed on its datasets, lenses, and dashboards. For example, if a user has the “Use Analytics” permission, the user must also have Viewer access on an app to view its datasets, lenses, and dashboards.

The Einstein Analytics for Communities permission set license enables the “View Analytics on Communities pages” permission. That permission enables external users to view Tableau CRM dashboards embedded in their Experience Cloud sites. See [Enable Tableau CRM for Experience Cloud Sites](#) on page 9.

## Identify Analytics Cloud Platform User Types

Identifying types of Tableau CRM platform users helps assure that custom permission sets meet your team's analytics needs.

The Einstein Analytics Growth license includes the permissions that enable users in your organization to import, work with, and explore data using the Tableau CRM platform. The license also includes permissions that let administrators manage Tableau CRM. To set up Tableau CRM in the most useful way, think through the different ways people access Tableau CRM features and categorize them into user types. Here are a few examples.

Most people on your team fall into two basic categories:

- Users, who view Tableau CRM dashboards, lenses, and datasets and occasionally import data to Tableau CRM.
- Administrators or managers, who access to the full range of Tableau CRM functionality to create apps, dashboards, lenses, and datasets, edit data, and otherwise customize the Tableau CRM experience.

Accordingly, when you set up the Tableau CRM platform, creating two basic permission sets can meet the needs of most of your organization:

- A "view" permission set that contains the permissions needed by most basic-level users when they access Tableau CRM.
- A "manage" permission set that's reserved for a select few administrators and managers and contains permissions to use all Tableau CRM features

You can set up Tableau CRM however you want, defining other user types and permissions sets based on the needs of users in your organization. For example, you can create a "superuser" permission set for users who create and share apps and dashboards. Or, a "data wizard" permission set would enable other users to work closely with datasets.

We focus on two main types of people on your team -- users and administrators -- in the example permission sets we describe in our detailed setup instructions.

## Enable Analytics Cloud and Create Permission Sets

After identifying user types, be sure to enable Analytics Cloud in your org. Then select a permission set license and create your permission sets.

### Enable the Tableau CRM Platform

To use the Tableau CRM platform, first enable it for your organization.

1. In the Salesforce Setup menu, under Administer, click **Analytics | Getting Started**.
2. Click **Enable Einstein Analytics**.

### Create Permission Sets

The next step in the setup process is to create permission sets made up of Tableau CRM user permissions. We show you how to create two permission sets:

- *Manage Tableau CRM* permission set, for users who create and administer Tableau CRM.
- *View Tableau CRM* permission set, for users who explore app dashboards and datasets.

#### Note:

- Customers who purchased Tableau CRM before October 20, 2015: See [Set up the Analytics Cloud Platform With Licenses Purchased Before October 20, 2015](#) before following the instructions here.

#### EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available with Tableau CRM, which is available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer Edition**.

- The Manage Analytics Cloud permission set enables the equivalent functionality provided by the previous Analytics Builder license (purchased before October 20, 2015). If you have a Builder license or you're migrating to the current Analytics Cloud platform license, follow these steps to create a permission set with the same functionality.
- The View Analytics Cloud permission set enables the equivalent functionality provided by the previous Analytics Cloud Explorer license (purchased before October 20, 2015). If you have an Explorer license or you're migrating to the current Analytics Cloud platform license, follow these steps to create a permission set with the same functionality.

1. In the Setup menu, under administer, click **Manage Users | Permission Sets** and then click **New**.
2. Enter `Manage Tableau CRM` or `View Tableau CRM` in the Label field, as appropriate. This automatically creates the API name as well. You can change it if you like, but it can't include spaces, end with an underscore, or have two consecutive underscores.
3. For License, select the license to associate with this permission set. In this case, select the Einstein Analytics Growth permission set license.

**Enter permission set information** ! = Required Information

Label

API Name

Description

Session Activation Required

**Select the type of users who will use this permission set**

Who will use this permission set?

-Choose "--None--" if you plan to assign this permission set to multiple users with different user and permission set licenses.  
 -Choose a specific user license if you want users with only one license type to use this permission set.  
 -Choose a specific permission set license if you want this permission set license auto-assigned with the permission set.

Not sure what a permission set license is? [Learn more here.](#)

License

- None--
- User Licenses
- Analytics Cloud Integration User
- Chatter External
- Chatter Free
- Salesforce
- Permission Set Licenses
- Analytics Platform

When you select a specific permission set license, any user assigned to the permission set is *auto-assigned* the permission set license. If you select --None--, you must *manually* assign the permission set license to users before you can add them to the new permission set.

4. Click **Save**. The Permission Set Overview page shows the new permission set. Now add user permissions to the set.
5. Click **System Permissions** to open the list of user permissions enabled by the Einstein Analytics Growth license. Then click **Edit**.
6. Do one of the following.
  - If you're creating the Manage Tableau CRM permission set, select "Manage Analytics" user permissions and click **Save**. You've successfully created a permission set that enables access to all Tableau CRM features. You don't have to select any of the other individual permissions. Assign this permission set sparingly because it provides access to all Tableau CRM features, many of which are inappropriate for most analytics users.
  - If you're creating the View Tableau CRM permission set, select "Use Analytics" and "Upload External Data to Analytics" user permissions and click **Save**. You've successfully created a permission set that enables a user to view the Tableau CRM datasets, lenses, and dashboards that they have permission to view, and to upload data files from outside Salesforce.

7. You can now assign your new permission set to users, which is covered in [Assign Permission Sets to Users](#).

Repeat these steps for every user in your organization who requires access to Tableau CRM.

## Assign Analytics Cloud Permission Sets to Users

Assign custom permission sets to one or more users—either one at a time, or in bulk—to give them access to Tableau CRM functionality.

1. In the Setup menu, under administer, click **Manage Users | Permission Sets**.
2. Click the permission set you want to assign to users. If you've followed the instructions in [Enable Analytics Cloud and Create Service Analytics Permission Sets](#) on page 6, select either the Manage Analytics Cloud or View Analytics Cloud permission sets.
3. Click **Manage Assignments** and click **Add Assignments**.
4. Select the users who need access to Tableau CRM, and click **Done**. When you assign the permission set to users, Salesforce *auto-assigns* the Tableau CRM Cloud - Analytics Cloud Platform *permission set license* to those users.

Assign the Manage Analytics Cloud permission set sparingly, since it provides access to all Tableau CRM features. Assign it only to users who administer or manage the Tableau CRM platform.

### USER PERMISSIONS

To assign a permission set to users:

- Assign Permission Sets

## Complete Setting up the Tableau CRM Platform

After assigning permission sets with either basic or advanced setup, follow these optional procedures to enhance the Tableau CRM experience and fine-tune Tableau CRM access to Salesforce data.

### Enable Preview Thumbnails for All Lenses and Dashboards

Make it easier for users to find their lenses and dashboards on the home page and on app pages. Replace the generic icons with preview thumbnails of the contents of all lenses and dashboards, including those assets that have row-level security restrictions.

If no security predicate is defined for a dataset, then preview thumbnails always appear. If a security predicate is defined, then preview thumbnails don't show unless this setting is enabled. With the setting enabled, preview thumbnails appear for all assets.

**⚠ Important:** Even if row-level security applies to the dataset used by a lens or dashboard, the preview thumbnail could expose data from restricted rows. Row-level security restrictions take effect only after you've clicked through to the lens or dashboard.

1. From Setup, enter *Analytics* in the **Quick Find** box, then select **Settings**.
2. Select **Show preview thumbnails for lenses and dashboards with row level-security enabled**.
3. Click **Save**.

### EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available with Tableau CRM, which is available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer Edition**.

### USER PERMISSIONS

To modify settings:

- Manage Analytics

## Enable Tableau CRM for Experience Cloud Sites

Securely share Tableau CRM apps with Experience Cloud site partner and customer users.

 **Note:** Only users with a Customer Community Plus, Partner Community, or Lightning External Apps Plus license can use this feature. This feature is supported in sites but not in portals.

To enable Tableau CRM for sharing in Experience Cloud sites, complete the following steps.

1. From Setup, enter *Analytics* in the *Quick Find* box, then select **Settings**. Select *Share Analytics with Communities*.
2. In Setup, assign your community members the Einstein Analytics for Communities permission set license.
3. In Setup, create a permission set that includes the View Analytics on Communities pages permission and assign it to your community members.
4. Continue setting up Einstein Analytics for Communities with Step 2 in [Share Tableau CRM in Experience Cloud Sites](#).

## Enable Conversational Exploration

Quickly query and visualize data in guided, natural language conversations.

To set up Tableau CRM to explore data using conversations, complete the following steps.

1. From Setup, enter *Analytics* in the *Quick Find* box, then select **Settings**.
2. Select *Enable Conversational Exploration*.
3. Click **Save**.

### EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise, Performance,** and **Unlimited** Editions. Also available in: **Developer Edition**

### USER PERMISSIONS

To modify settings:

- Manage Analytics

To view Tableau CRM dashboards and lenses:

- View Analytics on Communities pages

### EDITIONS

Available in: Salesforce Classic and Lightning Experience.

Available for an extra cost in: **Enterprise, Performance,** and **Unlimited** Editions. Also available in: **Developer Edition**

### USER PERMISSIONS

To view visualizations:

- Use Analytics

## Enable the Tableau CRM REST API

You can access Tableau CRM datasets and lenses programmatically using the Tableau CRM REST API. Selecting this option overrides the "APIEnabled" permission for individual users and gives all Tableau CRM users (including Experience Cloud sites users) access to the API.

1. From Setup, enter *Analytics* in the *Quick Find* box, then select **Settings**.
2. Select *Grant all users access to Wave API*.
3. Click **Save**.

For complete information about the API, see the [Tableau CRM REST API Developer Guide](#).

## Grant Users Access to the Dashboard Designer

To grant users access to dashboard designer, assign each of them the "Create and Edit Analytics Dashboards" user permission. For users to access the dashboard designer, the **Enable dashboard designer** setup option must also be enabled, which it is by default.

If dashboard designer is disabled, complete the following tasks to enable it.

1. From Setup, enter *Analytics* in the *Quick Find* box, then select **Settings**.
2. Select **Enable dashboard designer**, and then click **Save**.
3. For each user that builds dashboards, assign the "Create and Edit Analytics Dashboards" user permission to them.

### EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available with Tableau CRM, which is available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer Edition**.

### USER PERMISSIONS

To modify settings:

- Manage Analytics

### EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available with Tableau CRM, which is available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer Edition**.

### USER PERMISSIONS

To access the dashboard designer

- Create and Edit Analytics Dashboards

## Enable Dashboard Views

Enable this feature to allow each Tableau CRM user to create their own unique views of a dashboard. By default, this feature is enabled for your org. If the feature is disabled and you re-enable it, all previously created views are available.

1. From Setup, enter *Analytics* in the *Quick Find* box, then select **Settings**.
2. Select **Enable Wave dashboard saved views**, and then click **Save**.

### EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available with Tableau CRM, which is available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer Edition**.

## Enable Annotations on Dashboard Widgets

Annotate dashboard widgets with comments posted in the dashboard and in Chatter.

To enable annotations, complete the following steps.

1. From Setup, enter *Feed Tracking* in the *Quick Find* box, and then select **Feed Tracking** under Chatter.
2. Scroll down and select **Analytics Asset**.
3. Select **Enable Feed Tracking**.
4. Click **Save**.

### EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available with Tableau CRM, which is available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer Edition**.

### USER PERMISSIONS

To modify settings:

- **Manage Analytics**

## Enable Downloading Data from Tableau CRM

Enable users to download the results from lens explorations and dashboard widgets as Microsoft<sup>®</sup> Excel<sup>®</sup> (.xls) or comma-separated values (.csv) files. Enable users to subscribe to tables and receive email with the table data in attached .csv files.

To set up users to download data from Tableau CRM, complete the following steps.

1. From Setup, enter `Users` in the `Quick Find` box, and then select **Permission Sets**.
2. Select the Einstein Analytics permission set where you want to add the permission, and click **Edit**.
3. Select **System Permissions**.
4. Select `Download Analytics Data`.
5. Click **Save**.

 **Note:** To subscribe to tables, users also need the Use Subscription Emails user permission.

 **Note:** Complete dashboards can be downloaded only as images.

## Connected App for Tableau CRM on Mobile

Install the Tableau CRM App Package to allow your mobile clients to easily connect to your org. This package contains the Connected App component that gives you control over who's logging in and how your mobile clients share images and links.

1. While logged in as an admin, navigate to:

**Production**

<https://login.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000cHCH>

**Sandbox**

<https://test.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000cHCH>

2. Select **Install for All Users**.  
If you install the Connected App only for certain roles, then only those clients are subject to your policies.
3. After clicking **Done**, click the Salesforce Analytics App Package and then **View Components**.
4. Select iOS or Android. To configure policies and other settings, click **Edit**. When you're finished, save your changes.

For more information about Connected App settings, see [Edit a Connected App](#).

5. If you want to disable sharing options for mobile users, click **New** in the Custom Attributes section.

All sharing options are enabled by default. To disable an option, add its attribute key and enter "false" for the attribute value. See the table for the supported attribute keys.

Attribute Key	Mobile clients can	Mobile Device
CACHE_QUERY_RESULTS	Store query cache results to disk	iOS

### EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available with Tableau CRM, which is available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer Edition**.

### USER PERMISSIONS

To modify settings:

- Manage Analytics

### EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available with Tableau CRM, which is available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer Edition**.

### USER PERMISSIONS

To install and configure Connected App:

- Manage Analytics

Attribute Key	Mobile clients can	Mobile Device
OFFLINE_BETA	Store data for offline access	iOS
SHARE_IMAGE_AIRDROP	Share images via AirDrop	iOS
SHARE_IMAGE_CAMERAROLL	Share images to Camera Roll	iOS
SHARE_IMAGE_OPEN	Share images to other apps and activities	iOS
SHARE_IMAGE_S1	Share images to Salesforce	iOS
SHARE_IMAGE_EMAIL	Share images via email	iOS
SHARE_LINK_NFC	Share links via Near Field Communication (NFC)	Android
SHARE_LINK_BLUETOOTH	Share links via Bluetooth	Android
SHARE_LINK_AIRDROP	Share links via AirDrop	iOS
SHARE_LINK_CLIPBOARD	Share links to Clipboard	iOS and Android
SHARE_LINK_S1	Share links to Salesforce	iOS and Android
SHARE_LINK_EMAIL	Share links via email	iOS and Android
SPOTLIGHT_SEARCH	See Tableau CRM assets in Spotlight search results	iOS

 **Note:** To apply custom attributes to connected users, you can revoke them and ask them to reconnect.

- To view and control how mobile clients connect to your Tableau CRM-enabled org, from Setup, enter *Connected Apps* in the **Quick Find** box, then select **Connect Apps OAuth Usage**.

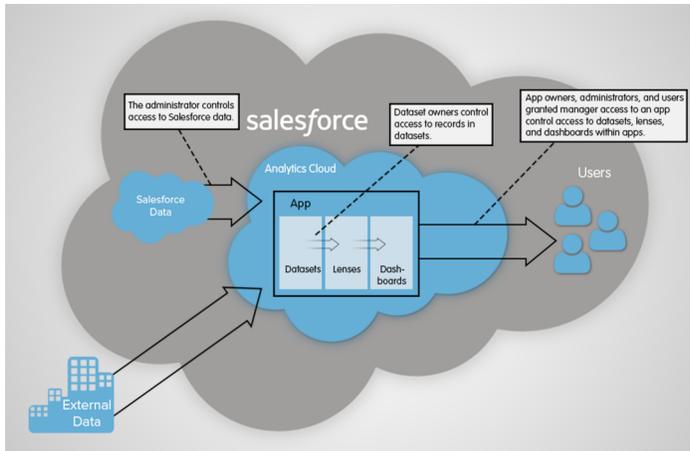
You can block user sessions, revoke individual users, and drill in to user details. For more information, see [Monitoring Usage for a Connected App](#).

 **Note:** For certificate-based authentication, users must set their desktop browsers to allow cookies.

For extra security, use Mobile Device Management (MDM) with the option to show only authorized hosts. The "OnlyShowAuthorizedHosts" key allows you to hide the "Add New Account" plus sign in the mobile app. For more information, see [Using MDM with Salesforce Mobile SDK Apps](#).

## Analytics Cloud Security Implementation Guide

Analytics Cloud has different levels of security that your organization can implement to ensure that the right user has access to the right data.



- The administrator can implement object-level and field-level security to control access to Salesforce data. For example, the administrator can restrict access to prevent the dataflow from loading sensitive Salesforce data into datasets. This document describes how Analytics Cloud uses object-level and field-level security on Salesforce data and how to configure permissions on Salesforce objects and fields.
  - Dataset owners can implement row-level security on each dataset that they create to restrict access to its records. If a dataset does not have row-level security, users who have access to the dataset can view all records. This document describes how to configure row-level security on datasets and provides some sample implementations based on datasets created from Salesforce data and external data.
  - App owners, administrators, and users granted manager access to an app control access to datasets, lenses, and dashboards within apps. This document describes the different levels of access for apps and how to share datasets, lenses, dashboards in an app with other users.
-  **Note:** Analytics Cloud supports security predicates, a robust row-level security feature that enables you to model many different types of access controls on datasets. Also, Analytics Cloud supports sharing inheritance, to synchronize with sharing that's configured in Salesforce, subject to certain limitations. If you use sharing inheritance, you must also set a security predicate to take over in situations when sharing settings can't be honored.

For complete information about implementing Analytics Cloud security, see [Analytics Cloud Security Implementation Guide](#).

## Salesforce Data Access in Tableau CRM

Tableau CRM requires access to Salesforce data when extracting the data and also when the data is used as part of row-level security. Tableau CRM gains access to Salesforce data based on permissions of two internal Tableau CRM users: Integration User and Security User.

Tableau CRM uses the permissions of the Integration User to extract data from Salesforce objects and fields when a dataflow job runs. Because the Integration User has View All Data access, consider restricting access to particular objects and fields that contain sensitive data. If the dataflow is configured to extract data from an object or field on which the Integration User does not have permission, the dataflow job fails.

When you query a dataset that has row-level security based on the User object, Tableau CRM uses the permissions of the Security User to access the User object and its fields. The Security User must have at least read permission on each User object field included in a predicate. A predicate is a filter condition that defines row-level security for a dataset. By default, the Security User has read permission on all standard fields of the User object. If the predicate is based on a custom field, then grant the Security User read access on the field. If the Security User does not have read access on all User object fields included in a predicate expression, an error appears when you try to query the dataset using that predicate.

**Important:** Because Tableau CRM requires the Integration User and Security User to access Salesforce data, do not delete either of these users.

## Control Access to Salesforce Objects and Fields

Analytics Cloud requires access to Salesforce data when extracting the data and also when the data is used as part of row-level security. Configure the permissions of the Integration User on Salesforce objects and fields to control the dataflow's access to Salesforce data. Configure the permissions of the Security User to enable row-level security based on custom fields of the User object.

When configuring permissions for the Integration User or Security User, make changes to a cloned version of the user profile.

1. From Setup, enter *Profiles* in the **Quick Find** box, then select **Profiles**, and then select the user profile.  
For the Integration User, select the Analytics Cloud Integration User profile. For the Security User, select the Analytics Cloud Security User profile.
2. Click **Clone** to clone the user profile.
3. Name and save the cloned user profile.
4. Click **Object Settings**.
5. Click the name of the Salesforce object.
6. Click **Edit**.
  - a. To enable permission on the object, select **Read** in the Object Permissions section.
  - b. To enable permission on a field of the object, select **Read** for the field in the Field Permissions section.

 **Note:** You can't change the permissions on standard fields of the User object.
7. Save the object settings.
8. Assign the cloned user profile to the Integration User or Security User.
  - a. From Setup, enter *Users* in the **Quick Find** box, then select **Users**.
  - b. Select the user to which you want to assign the user profile.
  - c. Click **Edit**.
  - d. In the Profile field, select the user profile.
  - e. Click **Save**.
9. Verify that the Integration User or Security User has the right permissions on fields of the objects.

### USER PERMISSIONS

#### To clone a user profile:

- Manage Profiles and Permission Sets

#### To edit object permissions:

- Manage Profiles and Permission Sets  
AND  
Customize Application

## Set Up an Allowlist of Trusted Sites for Embedded Tableau CRM Dashboards

Specify your trusted sites in the Tableau CRM allowlist, you can include embedded Tableau CRM dashboards in websites and apps outside of Salesforce servers.

To set up an Analytics allowlist, complete the following steps.

1. From Setup, enter *Allowlist* in the **Quick Find** box, then select **Allowlist** under Analytics.
2. On the Allowlist for Embedding Dashboards page, click **New**.
3. On the Allowed Site Edit page, enter the information for the site you want to add to the Tableau CRM allowlist.
4. Click **Save**.

## Tableau CRM Encryption

The Tableau CRM Encryption solution enhances security for Salesforce customers by extending encryption capabilities to the data at rest that is stored on the Salesforce file system.

If digital data is in transit, currently being processed, or stored in memory, that data is considered to be in use. By contrast, digital data is considered at rest if it is stored physically in persistent storage but is not currently in use. Tableau CRM Encryption is for encrypting registered datasets in Tableau CRM. To encrypt data at rest and preserve functionality, Tableau CRM Encryption services are built natively into the Tableau CRM platform. The solution applies strong, probabilistic encryption on data stored at rest. Platform encryption is based on the Advanced Encryption Standard (AES) with 256-bit keys using CTR mode for every write.

All operations, including sort and group-by, function the same as without encryption (except for key management functions, as noted in this topic).

### How Tableau CRM Encryption Works

As a prerequisite to Tableau CRM Encryption, you must be approved by the Tableau CRM Encryption Product Manager. Your org must have a Shield Platform Encryption tenant secret. (Tableau CRM Encryption uses PE key management, so it's not necessary to encrypt objects and fields in core Salesforce.)

When using Tableau CRM with your encryption-enabled instance, data read from and written to disk is automatically encrypted with the unique key for your account. For more information about the encryption technology, refer to the [Shield Platform Encryption Architecture](#) white paper. To verify that encryption is enabled, go to the Analytics Settings page in the Setup UI.

### EDITIONS

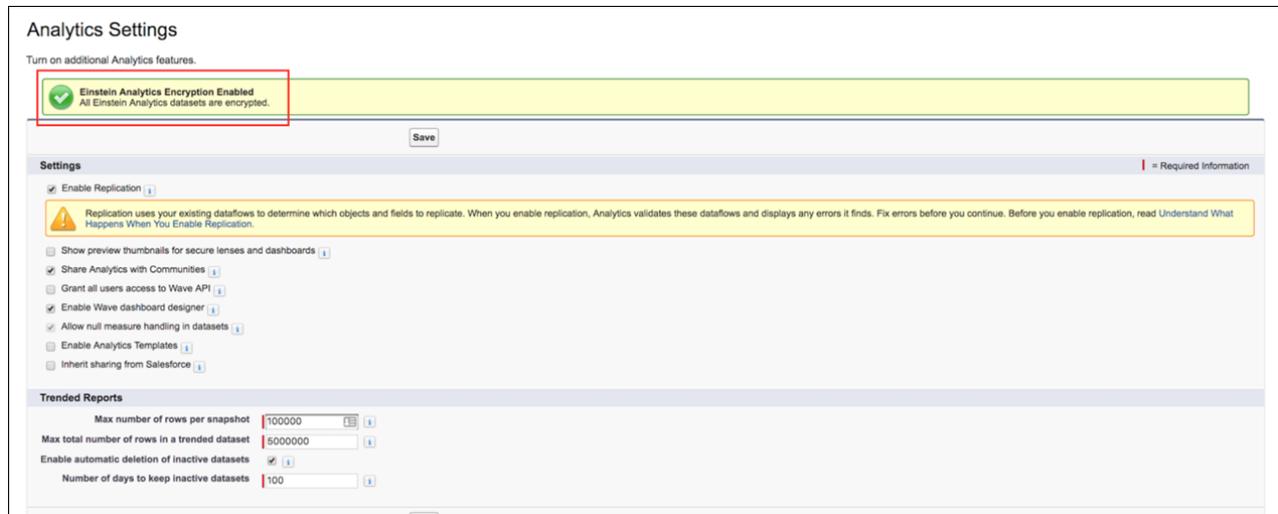
Available in Salesforce Classic and Lightning Experience.

Available with Tableau CRM, which is available for an extra cost in **Enterprise, Performance, and Unlimited** Editions. Also available in **Developer Edition**.

### USER PERMISSIONS

To modify settings:

- [Manage Analytics](#)



## Features

Key export, Bring Your Own Key, key rotation, key revocation, and key import are available.

All Tableau CRM features are supported, with the following exceptions:

- Pre-existing data is not encrypted.
- Data that was in Tableau CRM before encryption was enabled is not encrypted.
- If pre-existing data is imported from Salesforce objects through the dataflow, the data becomes encrypted on the next dataflow run.
- Other pre-existing data (such as CSV data) must be reimported to become encrypted.
- Although pre-existing data is not encrypted, it is still accessible and fully functional in its unencrypted state when encryption is enabled.

## Frequently Asked Questions

**Is data encrypted in transit?** Yes. However, encryption in transit is different from encryption at rest. This feature covers encryption at rest.

**Can Tableau CRM bring in data encrypted with Shield Platform Encryption?** Yes. Tableau CRM reads platform encrypted data in the same way that any user reads platform encrypted data. The data is then written and encrypted in Tableau CRM. It is not required that data be encrypted with Shield Platform Encryption to be encrypted in Tableau CRM. It is only required that a Tenant Secret exist for the org.

**Can I mask my data?** No. Masking data is not currently available and it does not fall under the Tableau CRM scope.

**Are the keys different for Shield Platform Encryption and Tableau CRM Encryption?** Yes, although Shield and Tableau CRM use the same key management technology, they use different keys.

**Do mobile dashboards still work with encryption?** Yes. All Tableau CRM functionality, including support for mobile devices, works with encryption enabled. All data stored on mobile (mainly JSON code and thumbnails) is AES 256 encrypted.

**Is there any impact on application performance?** The Tableau CRM Encryption solution is designed to have at most a minimal performance impact on your Tableau CRM application experience.

## Set Up the Tableau CRM Platform with Licenses Purchased Before October 20, 2015

If you purchased an Analytics Cloud Builder or Analytics Cloud Explorer license before October 20, 2015, you can continue to use your licenses to set up the Tableau CRM platform for users in your organization or you can migrate to the new single-user Einstein Analytics Growth license.

 **Note:** This information applies only to customers who purchased Tableau CRM licenses before October 20, 2015, and continue to use the Analytics Cloud Builder or Analytics Cloud Explorer licenses after that without migrating to the new Einstein Analytics Growth license. If you purchased Tableau CRM on or after October 20, 2015, go to [Set Up the Einstein Tableau CRM Platform](#).

 **Important:** If you're migrating from the previous Analytics Cloud Builder or Analytics Cloud Explorer platform licenses to the single-user Sales Analytics Apps license, read [Migrating From Analytics Licenses Purchased Before 10/20/2015 to New Analytics Platform Licenses](#).

### The Einstein Analytics Growth License

A Tableau CRM license purchased before October 20, 2015, enables you to turn on Analytics Cloud for your organization. Each previous Einstein Analytics Growth license is contractually limited to a maximum of 400 users. If you need more than 400 users, you can purchase additional Analytics Cloud licenses.

Each previous Analytics Cloud license enables you to:

- Store up to 250 million rows in your final registered datasets.
- Run up to 50 concurrent queries in Analytics Cloud.

### The Analytics Cloud Permission Set License

Each user needs one of two Analytics permission set licenses to use the product. The permission set license defines what user permissions can be assigned to the user. The administrator assigns permission set licenses to users.

For Analytics Cloud licenses sold before October 20, 2015, Salesforce provided the following permission set licenses:

- Analytics Cloud Builder permission set license enables users to access all Analytics Cloud features.
- Analytics Cloud Explorer permission set license enables users to upload external data to Analytics Cloud and explore data.

Here are Analytics Cloud user permissions included with each permission set license.

User Permission	Included in Explorer or Builder Permission Set License?	What It Enables
"Create and Edit Analytics Dashboards"	Builder only	Creating and editing Tableau CRM dashboards.
"Create Analytics Apps"	Builder only	Creating and sharing Tableau CRM applications.
"Edit Analytics Dataflows"	Builder only	Downloading, uploading, starting, stopping, and rescheduling the dataflow. Viewing dataflow and system jobs in the data monitor.

User Permission	Included in Explorer or Builder Permission Set License?	What It Enables
"Manage Analytics"	Builder only	Accessing all Tableau CRM features. Provides Tableau CRM administrator-level capabilities.
"Upload External Data to Analytics"	Builder and Explorer	Uploading external data to Tableau CRM to create a dataset. Viewing dataflow and system jobs in the data monitor.
"Use Analytics"	Builder and Explorer	Using Tableau CRM, and viewing the datasets, lenses, and dashboards that the user has permission to view. Automatically enabled when you select any other Tableau CRM permission.

 **Note:** When you create permission sets for Tableau CRM users, selecting any of the other Analytics Cloud permissions automatically enables the "Use Analytics" permission.

You can assign previous Analytics Cloud permission set licenses along with any of the following Salesforce user licenses:

- Lightning Platform (app subscription)
- Lightning Platform (one app)
- Full CRM
- Salesforce Platform
- Salesforce Platform One

SEE ALSO:

[Migrating From Tableau CRM Licenses Purchased Before 10/20/2015 to New Tableau CRM Platform Licenses](#)

## Migrating From Tableau CRM Licenses Purchased Before 10/20/2015 to New Tableau CRM Platform Licenses

To complete migration from previous Analytics Cloud Builder and Analytics Cloud Explorer licenses purchased before October 20, 2015, to the new Einstein Analytics Growth license, you may need to set up Tableau CRM users in your organization with new permission sets.

When Salesforce provisions your organization with the new Einstein Analytics Growth license, you may have to set up some users with the new license.

- **Analytics Cloud Builder license users.** Users who access Tableau CRM with the Analytics Cloud Builder license should be able to continue to use the Tableau CRM platform without any additional setup. The Builder license is simply renamed *Einstein Analytics Growth*, and you'll see that permission set license in Salesforce Setup.
- **Analytics Cloud Explorer license users.** During the new license provisioning process, Salesforce may remove the Analytics Cloud Explorer license from your org. If that's the case, you'll see the new Einstein Analytics Growth license instead of the Explorer license and you

### EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available with Tableau CRM, which is available for an extra cost in **Enterprise**, **Performance**, and **Unlimited Editions**. Also available in **Developer Edition**.

have to set up users with that license. If the Explorer permission set license is still visible, you do not have to repeat the setup process for Explorer users.

If users in your organization require you to set them up with the new Einstein Analytics Growth license—even if they used Tableau CRM with a previous license—follow the steps in [Tableau CRM Platform Setup](#) on page 1. You need to assign them the new permission set license, create one or more new permission sets, and assign the permission sets to users.

## Tableau CRM Limits

This section describes Tableau CRM limits.

### API Call Limits

These limits apply to all supported editions.

Limit	Value
Maximum concurrent Analytics Cloud API calls per org	100
Maximum Analytics Cloud API calls per user per hour	10,000

 **Note:** Tableau CRM uses the bulk API, but does **not** count towards Salesforce bulk API limits. The dataflow submits a separate bulk API call to extract data from each Salesforce object. The dataflow uses a batch size of 100,000–250,000, depending on whether the dataflow or the bulk API chunks the data. As a result, to extract 1 million rows from an object, the dataflow creates 4–10 batches.

### Dataset Row Storage Allocations

Your Salesforce org's total row storage limit for all registered datasets combined depends on your org's license combination. Each license allocates a set number of rows.

 **Note:** The data limits shown in the following table apply *only* to Analytics Cloud - Analytics Platform and Analytics Cloud - Sales Analytics and Service Analytics licenses purchased on or after October 20, 2015.

License	Allocated Rows
Einstein Analytics Plus license baseline row allocation	10 billion
Einstein Analytics Growth license baseline row allocation	100 million
Sales Analytics license baseline row allocation	25 million
Service Analytics license baseline row allocation	25 million
Event Monitoring Analytics license baseline row allocation	50 million
B2B Marketing Analytics license baseline row allocation	25 million
Tableau CRM for Financial Services Cloud license baseline row allocation	25 million
Tableau CRM for Health Cloud license baseline row allocation	25 million
Extra Data Rows license	100 million

Your org’s total row storage limit is a combination of your org’s active licenses. For example:

**Einstein Analytics Plus License**

- If your org has an Einstein Analytics Plus license and adds the Event Monitoring license, your total row limit becomes 10.05 billion. (10 billion *plus* 50 million)
- If your org has an Einstein Analytics Plus license and adds the Additional Data Rows license, your total row limit becomes 10.1 billion. (10 billion *plus* 100 million)
- If your org has an Einstein Analytics Plus license and adds two more Data Rows licenses, your total row limit becomes 10.2 billion. (10 billion *plus* (2 X 100 million))

**Einstein Analytics Growth License**

- If your org has an Einstein Analytics Growth license and then obtains an extra license for Services Analytics, your limit increases to 125 million. (100 million *plus* 25 million)
- If your org has an Einstein Analytics Growth license and adds the Event Monitoring license, your total row limit becomes 150 million. (100 million *plus* 50 million)

 **Note:** The Einstein Analytics Plus license already includes a Sales Analytics and Service Analytics license, so your total row allocation remains 10 billion. Similarly, the Einstein Analytics Growth license already includes a Sales Analytics and Service Analytics license, so your total row allocation remains 100 million. In these situations, if your org obtains another Sales Analytics or Services Analytics license, your org row limit increases by 25 million for each app obtained.

**Dataset Row Limits**

Each dataset supports up to 2 billion rows. If your Salesforce org has less than 2 billion allocated rows, then each dataset supports up to your org’s allocated rows.

**Dataset Field Limits**

Limit	Value
Maximum number of fields in a dataset	5,000 (including up to 1,000 date fields)
Maximum number of decimal places for each value in a numeric field in a dataset (overflow limit)	<p>17 decimal places</p> <p>When a value exceeds the maximum number of decimal places, it <i>overflows</i>. Both 100,000,000,000,000,000 and 10,000,000,000,000,000.0 overflow because they use more than 17 decimal places. A number also overflows if it’s greater (or less) than the maximum (or minimum) supported value. 36,028,797,018,963,968 overflows because its value is greater than 36,028,797,018,963,967. -36,028,797,018,963,968 overflows because it is less than -36,028,797,018,963,967.</p> <p>When a number overflows, the resulting behavior in Tableau CRM is unpredictable. Sometimes Tableau CRM throws an error. Sometimes it replaces a numeric value with a null value. And sometimes mathematical calculations, such as sums or averages, return incorrect results. Occasionally, Tableau CRM handles numbers up to 19 digits without overflowing because they are within the maximum value for a 64-bit signed integer (<math>2^{63} - 1</math>). But numbers of these lengths are not guaranteed to process.</p> <p>As a best practice, stick with numbers that are 17 decimal places or fewer. If numbers that would overflow are necessary, setting</p>

Limit	Value
	lower precision and scale on the dataset containing the large numbers sometimes prevents overflow.
	 <b>Note:</b> If your org hasn't enabled <a href="#">Handle Null Numeric Values</a> , then the maximum number of decimal places for each value in a numeric field in a dataset is 16. All orgs created after Spring '17 have Null Measure Handling enabled.
Maximum value for each numeric field in a dataset, including decimal places	36,028,797,018,963,967 For example, if three decimal places are used, the maximum value is 36,028,797,018,963.967
Minimum value for each numeric field in a dataset, including decimal places	-36,028,797,018,963,968 For example, if five decimal places are used, the minimum value is -36,028,797,018,9.63968
Maximum number of characters in a field	32,000

### Data Sync Limits

If you currently extract more than 100 objects in your dataflows, contact Salesforce Customer Support before you enable data sync.

Limit	Value
Maximum number of concurrent data sync runs	3
Maximum number of objects that can be enabled for data sync	100
Maximum amount of time each data sync can run for local objects	48 hours
Maximum amount of time each data sync can run for remote objects	12 hours

 **Note:** Each connector's help describes its row count and volume data sync limit. Data sync can extract remote data up to the connector's maximum row count or volume limit, or up to 12 hours, whichever comes first.

### Dataflow and Recipe Limits

Limit	Value
Maximum number of dataflows definitions (with data sync enabled)	100
Maximum number of dataflow and recipe runs in a rolling 24-hour period	60
	 <b>Note:</b> Dataflow and recipe runs that take less than 2 minutes (and data sync) don't count toward this 24-hour run limit. However, if you reach the 24-hour run limit, you

Limit	Value
	can't run any dataflow, recipe, or data sync job, regardless of size. This maximum can be increased by contacting Salesforce Customer Support.
Maximum number of concurrent dataflow runs	2 for production orgs with the Einstein Analytics Plus platform license 1 for production orgs with the Einstein Analytics Growth platform license or sandbox orgs
Maximum number of Data Prep previews per hour per user	4,000
Timeout for data load jobs (dataflows, CSV uploads, recipes, and data sync) that have been scheduled but not executed	5 minutes

### Trending Data Limits

Trended datasets count toward the overall Analytics platform limits, including total number of rows.

Limit	Value
Maximum number of trended datasets per user	5
Maximum number of rows per snapshot	100,000
Maximum number of rows in the report to be trended	500,000 for admins, 100,000 for non-admins
Maximum total number of rows in a trended dataset	5,000,000
Maximum monthly number of rows for all snapshots per org	40 million

### External Data Limits

Limit	Value
Maximum file size per external data upload	40 GB
Maximum file size for all external data uploads in a rolling 24-hour period	50 GB
Maximum number of external data jobs per dataset that can be run in a rolling 24-hour period	50
Maximum number of characters in a field	32,000
Maximum number of fields in a record	5,000 (including up to 1,000 date fields)
Maximum number of characters for all fields in a record	400,000

 **Note:** Each connector’s help describes each its row count and volume data sync limit. These limits apply when using the external data API.

**Story Creation and Prediction Limits**

For limits on story creation and predictions, see [Einstein Discovery Limits](#).

**Sales Analytics and Service Analytics App Limits**

Sales Analytics and Service Analytics app limits custom object support to no more than 10 custom objects and one dataflow for each org that implements the app. These limits are contractual, not technical.

**Security Predicate Limit**

This limit applies to all supported editions.

Limit	Value
Maximum number of characters in a security predicate	5,000

**Query Limits**

Limit	Value
Maximum concurrent queries per organization	50 per platform
Maximum concurrent queries per user	10
Maximum number of rows returned per query 10,000 is the default value. To set a different value, use the SAQL <code>limit</code> statement	10,000*
Query timeout	2 minutes

\*The maximum results returned by a query vary based on the query’s type and whether it’s executed from a desktop or the mobile app.

Query Type	Desktop Default Limit	Mobile Default Limit
<code>aggregateflex</code>	2,000	500
<code>grain</code> (for values tables only)	100	100
<code>saql</code>	2,000	2,000
<code>soql</code>	See <i>SOQL and SOSL Reference</i> .	See <i>SOQL and SOSL Reference</i>
<code>staticflex</code>	n/a	n/a

 **Tip:** To see the `limit` for a given query, click  in the explorer. If it’s not set, Tableau CRM returns up to 10,000 results. To change the limit, edit the SAQL or SOQL query. The higher you increase the limit, the longer the query runs. For more information about SAQL queries, see the [Analytics Cloud SAQL Reference](#). For information about SOQL queries, see [Salesforce Object Query Reference](#).

The limit only affects the number of records returned for display; it doesn't affect calculations across all dataset records. For instance, say that a query groups by account name and the dataset contain 1 million account names. With a limit of 20, Tableau CRM only returns 20 results for display, but the summary row adds up all 1 million records.

### Tableau CRM Direct Data for Snowflake Query Limits

Limit	Value
Maximum concurrent queries per organization	25
Maximum concurrent queries per user	5
Maximum number of rows returned per query	5,000
Query timeout	2 minutes

### Tableau CRM Developer Edition Limits

Tableau CRM is built on the Lightning Platform and is subject to the Lightning Platform limits. For example, the SOQL query limit (100,000 characters) controls the number of fields from which the sfdcDigest transformation can extract data. If you exceed a Lightning Platform limit, an error occurs. See [Lightning Platform limits](#).

Limit	Value
Maximum number of data rows	250,000
Maximum number of concurrent queries	5

### Developer Edition Limits

Limit	Value
Maximum number of data rows	250,000
Maximum concurrent queries	5



**Note:** These limits apply to the Wave-enabled Developer Edition.

### Lens and Dashboard Limits

These limits apply to the creation and use of lenses and dashboards.

Limit	Value
Maximum JSON file size per dashboard	4 MB
Character limit for description fields	1000
Default number of rows in a compare table	2000 (To set a different value, use the SAQL <code>limit</code> statement)
Default number of rows in a values table	100 (To set a different value, use the SAQL <code>limit</code> statement)
Maximum file size for <code>geojson</code>	10 MB
Maximum number of notifications per user	10

Limit	Value
Maximum number of recipients per notification email	500
Maximum number of data columns that can be downloaded in Excel format from a lens or widget	16383

## Tableau CRM Limitations

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Analytics Cloud differs from other Salesforce features in some ways.

### Update Schedule

All customers receive Tableau CRM updates on the same schedule, regardless of instance.

### Localization and Internationalization

Analytics Cloud has been localized with the following exceptions.

- We do not support right-to-left languages, such as Arabic and Hebrew.
- A subset of error messages is available only in English.
- The mobile iOS app includes only English versions of sample datasets and dashboards.

Analytics Cloud provides internationalization support with the following limitations.

- You must set both locale and language to see translated labels.
- Data within datasets is not modified for localization or internationalization.
- Each dataset can have a single locale specified in the metadata. The metadata locale is not overridden by individual user locale settings. All users see the same date, time, and number formats, and dimension names, regardless of their own locale and language settings.
- Search in filters is not case-sensitive.
- Multicurrency is not supported. When Tableau CRM extracts your organization's default currency, it uses the currency for monetary values and doesn't convert to another currency.

### Field-Level Security

Field-level security isn't available for external data that is uploaded via files. Field-level security that was implemented in the original database or Salesforce object isn't preserved when the data is loaded into a Tableau CRM dataset. For more information, see the [Analytics Cloud Security Implementation Guide](#).

Set [Salesforce field-level security](#) to enable the Tableau CRM Integration User to see all fields used in your app—default fields and those selected in the configuration wizard. Integration users run the dataflow, and if they don't have proper field-level security permissions, the dataflow fails.

### SAQL Query Limitations

The timeseries function requires a Tableau CRM Platform license.

## Explorer Limitations

You can't filter or group by the hour, minute, or second components of a date field.

You can't filter on values containing HTMLEncoded text.

## Embedded Tableau CRM Dashboards

Limitations for embedded Tableau CRM dashboards are covered in [Embed Dashboards Everywhere](#).

## Tableau CRM in Experience Cloud Sites

Limitations for Tableau CRM within Experience Cloud are covered in [Share Tableau CRM in Experience Cloud Sites](#).

## Tableau CRM on Mobile Devices

To view Tableau CRM on a mobile device, connect to your org using the native Tableau CRM mobile app for Android or iOS. For limitations of the Tableau CRM mobile apps, refer to the See Also links at the end of this page.

Outside of the native Tableau CRM mobile app, for mobile devices the only supported access to Tableau CRM is via Lightning app pages viewed in the Salesforce mobile app. Embedded Tableau CRM dashboards accessed via mobile browsers aren't supported.

Limitations for the Wave Dashboard component in a Lightning app page in the Salesforce mobile app are covered in [View Embedded Dashboards on Mobile Devices](#).

## Tableau CRM Smart Dashboard and App Templates

Use of the SAQL timeseries feature in the Time Series smart dashboard template requires a Tableau CRM Platform license.

Limitations for most Tableau CRM app templates are covered in the Help topic for each template. See below for Adoption Analytics, Sales Analytics, and Service Analytics app limitations.

## Sales Analytics Limitations

These limitations apply to Sales Analytics.

### Sales Analytics Data Requirements

Sales Cloud data must meet the following requirements for Sales Analytics dashboards to function correctly:

- Use standard sales objects.
- Have at least one event and one task connected with an opportunity.
- Enable history tracking for Amount, Stage, and CloseDate fields on the Opportunities object.
- Cases must be connected to Accounts if you choose to import Cases data to Sales Analytics using the configuration wizard.
- There are two requirements if you choose to import Leads data to Sales Analytics using the configuration wizard.
  1. At least one lead must be converted to an opportunity.
  2. The lead must be connected to an account.
- There are two requirements if you choose to import Campaigns data to Sales Analytics using the configuration wizard.
  1. At least one opportunity must be connected to a campaign.
  2. At least one campaign member must be connected to a campaign.

- There are two requirements if you choose to import opportunity record types to Sales Analytics using the configuration wizard.
  1. At least one opportunity record type must be defined.
  2. The opportunity record type must be connected to at least one opportunity.

**Sales Analytics Support for Salesforce Objects and Fields**

Sales Analytics supports all Salesforce standard and custom objects and data. To add custom objects or additional fields not included when you first create the app, you need to update the Sales Analytics dataflow. For details see [Design Datasets with Dataflows and the Dataset Builder](#).

When you first create the app it includes only a predefined set of objects and fields. Sales Analytics creates a dataflow that exposes selected fields from the following standard Salesforce objects:

- Accounts
- Users
- Roles
- Opportunities
- Products (Opportunities line item)
- Tasks
- Events

The fields provided are determined by the answers you provide when you create the app using the built-in configuration wizard.

Sales Analytics supports standard and custom fields on **standard Sales Cloud objects**. The fields provided are determined by the answers you provide when you create the app using the built-in configuration wizard.

**Sales Analytics Support for Non-Salesforce Data**

Sales Analytics does not support external data sources [except a CSV file](#) that contains quota data at the user level. Importing other external data requires an extra license. See your Salesforce representative for details.

To include data about quotas in Sales Analytics, you must upload a CSV file with the details. Sales Cloud Einstein customers who use Sales Analytics must use Collaborative Forecasts to see quota data. They can't edit the quota data set. For more information, see [Collaborative Forecasting and Quotas Data in Sales Analytics](#).

**Other Contractual Sales Analytics Limitations**

The Sales Analytics Apps license does not support use of Tableau CRM platform bulk actions or Apex steps functionality. This limitation is contractual, not technical. Licensee agrees to strictly monitor its use of Tableau CRM platform features.

**Sales Analytics Limitations for Sales Cloud Einstein and Tableau CRM Growth or Plus (Platform) Customers**

Salesforce makes Sales Analytics available through three stock-keeping units (SKUs). Consult this chart to see limitations for each.

	<b>Standalone</b>	<b>Sales Cloud Einstein</b>	<b>Einstein Analytics Growth or Plus</b>
<b>Data sources</b>	Salesforce data and CSV file for quotas data (see Sales Analytics Support for Non-Salesforce Data, above)	Salesforce data	Salesforce and external data
<b>Object support</b>	Standard and custom objects	Standard objects	Standard and custom objects
<b>Data volume</b>	25 million rows	25 million rows	<ul style="list-style-type: none"> <li>• Einstein Analytics Plus: 10 billion rows</li> </ul>

	<b>Standalone</b>	<b>Sales Cloud Einstein</b>	<b>Einstein Analytics Growth or Plus</b>
			<ul style="list-style-type: none"> <li>Einstein Analytics Growth: 100 million rows</li> </ul>
<b>Can customize existing dashboards?</b>	Yes	Yes	Yes
<b>Can create dashboards?</b>	Yes	No	Yes
<b>Can customize existing datasets?</b>	Yes	No	Yes
<b>Can create datasets?</b>	Yes (using standard Salesforce objects and up to 10 custom objects)	No	Yes
<b>Can create custom Tableau CRM apps?</b>	No	No	Yes
<b>Supports Einstein Discovery and Experience Cloud integration?</b>	No	No	Yes
<b>Supports bulk actions and APEX steps?</b>	No	No	Yes
<b>Supports Sales Cloud Einstein artificial intelligence?</b>	No	Yes	No
<b>Supports Salesforce Inbox?</b>	No	Yes	No

## Service Analytics Limitations

The following limitations apply to Service Analytics.

### Service Analytics Data Requirements

Service Cloud data must include at least one each of the following for Service Analytics dashboards to function correctly: Events, tasks, closed cases, or published articles attached to a case or an opportunity. It also requires that your org have at least one contact ID associated with a case.

Custom formula fields on the Cases object must exist or be created for the SLA missed (text) and FCR (Boolean) fields.

### Service Analytics Support for Salesforce Objects and Fields

Service Analytics supports all Salesforce standard and custom objects and data. When you first create the app by default it includes only a predefined set of objects and fields. The app creates a dataflow that exposes selected fields from the following Salesforce objects:

- Account
- Cases
- Contact
- User

- UserRole
- Task

Service Analytics also uses fields from the following options depending on the answers you select in the configuration wizard:

- Customer satisfaction (CSAT)
- Knowledge
- Business hours
- Case history
- Case record types
- Queues
- Opportunities
- Opportunity record types
- Events
- Telephony
- Chat
- Omni-Channel

Service Analytics supports standard and custom fields on standard Salesforce objects. The fields provided are determined by the answers you provide when you create the app using the built-in configuration wizard.

Service Analytics limits custom objects support to no more than 10 custom objects for each org that implements Service Analytics. This limitation is contractual, not technical.

To add custom objects or extra fields not included when you first create the app, you must update the Service Analytics dataflow. For details, see [Design Datasets with Dataflows and the Dataset Builder](#).

### More Service Analytics Limitations

Service Analytics does not support external data sources or registering new datasets from the app-generated dataflow.

Including CSAT score in dashboards/dataflow is optional. The app configuration wizard lets you associate CSAT from a custom case field or Custom Object associated to the Cases object.

You must manually add any security predicates or other dataset filters to the app dataflow.

The app does not support multi-hierarchy (team/manager) when you create it. You must manually add that functionality.

The Knowledge Usage dashboard currently reports on a single Article Type, which you select when you use the configuration wizard.

## Adoption Analytics Limitations

These limitations apply to Adoption Analytics.

- Datasets created for the app count against row limits for your Tableau CRM license.
- Includes only Tableau CRM logs. For any Salesforce logs, use Event Monitoring.
- The first time you use Adoption Analytics, it may take 24 hours for data to collect in event logs before it can be registered in the app's datasets and dashboard.
- Salesforce stores event log data for 30 days.
- Tableau CRM stores event log data in a dataset for up to 365 days, which counts against your license's row limit.

## Client Segmentation Analytics Limitations

Use of the Client Segmentation Analytics app is covered by a restricted use license created for Financial Services Cloud customers. Usage of Client Segmentation Analytics is limited to the following:

- Salesforce data only.
- Standard and custom objects.
- 10 million rows of data.

For access to additional Tableau CRM capabilities, purchase an Einstein Analytics Growth, Einstein Analytics Plus, or Einstein Predictions license.