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Welcome

Getting Started

How Do I Use the App?
Check out the new features.

View the videos: SAS Visual Analytics App for Windows playlist on YouTube.

Use Narrator? Learn about accessibility features for the app.

Learn about security features of the app.

Common Tasks

View Reports
Add a Server Connection
Add a Report
“Search Reports”

What Else Can I Do?

Tasks available while adding a report
Tasks available while viewing a report
Managing My Reports
Managing favorite reports
Managing recent reports
Managing a collection of reports

Troubleshooting

Chapter 8, “Troubleshooting SAS Visual Analytics App,”
“URIs and Capabilities That Affect the Mobile App”
Chapter 10, “Getting Help,”

What’s New

What’s New in Release 8.40

SAS Visual Analytics App 8.40 for Windows 10 provides the following new features and enhancements.
Support for Saving Report State on Servers

When viewing reports located on servers running SAS Visual Analytics 8.3 or later, the state of your report is now saved when you close the report. If you use multiple devices (for example, a tablet and a desktop system) to view and update reports, the report state on the server reflects the most recent updates made before closing a report on any device.

For more information about this feature, see “Restoring the Report State”.

Improved Accessibility for the Back Button

The Back button has been moved to improve its accessibility.
- In Add Reports, it is now located on the application bar.
- In the report viewer, it is now located on the report title bar.

The Back button can be accessed using the Tab key.

Support for SAS Visual Analytics 8.4

The application now provides seamless support for SAS Visual Analytics 8.4, 8.3, 8.2, 8.1, 7.5, 7.4, and 7.3 servers.

What Is SAS Visual Analytics App?

SAS Visual Analytics App

SAS Visual Analytics App is a companion application to “SAS Visual Analytics”. It is a free mobile app that enables users to view the reports that are created in SAS Visual Analytics, and to share insights with anyone, anywhere.

Using SAS Visual Analytics App, you can view and share charts and reports on Apple, Android, or Windows devices. These include iPads, iPhones, Android tablets and smartphones, and Windows 10 tablets and personal computers. For device support information, see the SAS Visual Analytics App page in the applicable store:
- Apple App store
- Google Play
- Microsoft Windows store

With SAS Visual Analytics App you can do the following tasks:
- download charts and reports from your organization servers
view charts and reports in standard or expanded mode
view and make comments about charts and reports

TIP SAS Visual Analytics App runs on desktop systems and tablets that use Windows 10. Depending on your device, you can use touch gestures on the screen, or you can use other input devices, such as touchpads and mice.

For information about the advantages of using the mobile app, see “Use the Mobile App on Your Desktop System”.

SAS Visual Analytics App supports viewing reports even when your device is offline. See “Local Data Availability and Offline Reports”

Note: SAS also provides a free software development kit (SDK) that enables organizations to modify SAS Visual Analytics App to display a different logo and name. If your organization takes advantage of the SDK, you might see a name other than SAS Visual Analytics App when you access this application.

Throughout this Help, when you see the name SAS Visual Analytics, we are referring to the application in which the reports are created. When you see the generic term "the mobile app", we are referring to this companion app, in which you can view and share those reports.

SAS Visual Analytics

SAS Visual Analytics leverages SAS high-performance analytic technologies and empowers organizations to explore huge volumes of data quickly to identify patterns, trends, and opportunities for further analysis. The highly visual, drag-and-drop data interface of SAS Visual Analytics, combined with the high-speed analytical servers, accelerate analytic computations and enable organizations to derive value from massive amounts of data. This creates an unprecedented ability to solve difficult problems, improve business performance, predict future performance, and mitigate risk rapidly and confidently. Users can quickly create reports or dashboards, which can be viewed on a mobile device or on the web.

Use the Mobile App on Your Desktop System

If your desktop system runs Windows 10, you can use the mobile app on your desktop system to view SAS Visual Analytics reports. While SAS Report Viewer is also a good option for Windows 10 desktop systems, the app has the following advantages:

- The app provides better performance. The app uses application programming interfaces (APIs) provided by Windows 10 to render report graphics which means reports respond faster.
- The app provides better security. The app runs in Windows Sandbox. Doing so protects the data downloaded by the app from unexpected access.
The app is updated more frequently. You get updates and improvements more often.

The app is easily updated. The Microsoft Windows Store can automatically update the app.

How Do I Use the App?

1. Contact your SAS administrator for the following information:
   - the user ID and password to use
   - the server to use for the server connection
   - the port to specify for the server connection
   - whether the server is a secure connection
   - any instructions that your organization might have for using SAS Visual Analytics App

   **TIP** Sometimes an organization does not require security credentials. If your SAS administrator says you do not need a user ID, then you are accessing the server as a guest.

2. You can now add a connection to the server.

   **TIP** If you are accessing the server as a guest, be sure to select Log on as guest when you add the server connection.

3. After you add a server connection, you can add reports to My Reports.

4. After you have added a report, tap that report to open it.

   **TIP**
   - The report viewer provides many features, including the ability to annotate a screen capture and share your screen with others. To learn more, see Chapter 5, “Viewing Reports,” and Chapter 7, “Sharing Reports,”.
   - Depending on how a report is designed, a report can provide the same functionality that you use in SAS Visual Analytics. To learn more, see Chapter 6, “Navigating Report Features,”.
   - Use the sample reports to see what you can do with SAS Visual Analytics App. See “Viewing Sample Reports”.

How Do I Use the App?
Viewing Sample Reports

The app provides many sample reports. By viewing these sample reports, you can explore the features that SAS Visual Analytics reports can provide on your device. Additional sample reports are located on the SAS Demo Server. You must have internet access to download samples from this server.

View Sample Reports

When you first open the app, some sample reports are available in My Reports. Sample reports do not support some of the app’s features. For example, sample reports do not appear in Recent. For more information, see "Guest Connection to a Server".

Remove Sample Reports

You can remove sample reports from your device at any time. Removal can be useful when you need to free storage space on your device. See “Remove a Report”.

**TIP** You can always add sample reports from the SAS Demo Server again. See “Add a Report”.

Remove SAS Demo Server

You can remove the SAS Demo Server connection. Removing the connection removes all of its reports. See “Remove a Server Connection”.

Restore Sample Reports

If you removed the connection to the SAS Demo Server, you cannot access sample reports. To access sample reports again, restore the connection to the SAS Demo Server:

1. In My Reports, Recent, Favorites, or collections, tap in the navigation bar.
2. Tap General.
3. Tap Restore Sample Reports.
4 Tap Restore.

**TIP** You can tap anywhere outside the message window to close it without restoring the sample reports.

---

**What Does That Symbol Mean?**

The app uses symbols to quickly communicate states and other information.

- ✓ indicates that you have added the report.
- ✓ indicates that you have selected a report. See “Selecting Multiple Reports”.
- ★ indicates that the report is a favorite. See “Identifying Your Favorite Reports”.
- 🗓 indicates a secure server connection in the All Connections list.
- ✈️ indicates that the report uses remote data. See “Remote Data Availability and Report Security”.

---

**Where Is the Help?**

If you have located the SAS Visual Analytics App Help by using an internet search, know that you can also open the Help while in the app.

In My Reports, Recent, Favorites, or a collection:
   - Tap in the navigation bar and then tap Help.

In Add Reports:
   - Tap in the navigation bar and then tap Help.

In the report viewer:
   - Tap ⋮ and then tap Help.

The Help opens in your web browser.

---

**Can I Use Touch Gestures and Other Input Devices?**

SAS Visual Analytics App runs on desktop systems and tablets that use Windows 10. Depending on your device, you can use touch gestures on the screen, or you can use other input devices, such as touchpads and mice.
Right mouse click
  On a tablet, press and hold on the screen.

Click
  On a tablet, tap.

Scroll
  On a tablet, slide your finger across the screen.

For more information, see Touchpad gestures for Windows 10 at the Microsoft website.

Can I Add the App to My Start Screen?

As with other Windows applications, you can add (“pin”) SAS Visual Analytics App to your Start Screen to access the app quickly whenever you need it.

To add SAS Visual Analytics App to the Start Screen:

1. Tap the Windows logo on the taskbar.

2. In the list of applications, navigate to SAS Visual Analytics App.

3. Press and hold the SAS Visual Analytics App icon, and then tap Pin to Start.

You can remove (“unpin”) the app from the Start Screen at any time.

To remove the app from the Start Screen:

1. Tap the Windows logo on the taskbar.

2. On the Start Screen, press and hold the SAS Visual Analytics App tile, and then tap

   Note: Uninstalling the app also removes the icon from the Start Screen.

   Note: If you use a report frequently and want to access it quickly, you can pin that report to the Start Screen. For information, see “Add a Report to the Start Screen”.

Data Availability and Reports

Where Data Can Be Located

Data used by your reports can be in one of two locations:

- Local data is stored on your device.
Remote data is stored on the server and exists on your device only while the report is open and the device is connected to a Wi-Fi or cellular network.

Local Data Availability and Offline Reports

When you add a report, a set of files is downloaded to your device. Some of the files contain the report data. The amount of data that is downloaded depends on the complexity and volume of the data that is used in the report.

For example, if the report contains a hierarchy into which you can drill five levels, only three levels of data might be downloaded initially. How much data is initially downloaded is controlled by your SAS administrator.

Using the same example, you can drill down to a hierarchy level that requires data that is not yet downloaded. The app connects to the server to download the requested data. If your device is not connected to a network, the app cannot download more data from the server. The report is offline. Depending on how the report is designed, an offline report might continue to work as designed or some of its functionality might change because the report is offline. In the example of a hierarchy, you cannot view the data in the next level until the app has a network connection.

Network connection failures might happen for the following reasons:

- Your organization’s network is unavailable due to a technical issue.
- Your device cannot access a cellular, wi-fi, or other type of network.
- A security measure prevents your device from accessing the network or the server.

Note: For detailed information about offline functionality and settings that SAS administrators can use to adjust offline support, see the documentation on the SAS Visual Analytics App Product web page.

Remote Data Availability and Report Security

The Remote Data Option

Depending on the security setting assigned to your user ID, the data used by a report might not exist on your device. Instead, your device must be connected to the server in order to view data in the report. If there is a break in the connection, such as a cellular dead zone, the data becomes unavailable.

TIP If a report uses remote data, the report tile in My Reports displays the cloud icon.

If a report uses local data, this icon does not appear on the tile.
Why Reports Use Remote Data

Your organization requires that these reports have extra security.

Your SAS administrator sets this option for the user ID that you use to access the server. When this option is set, all reports on that server use remote data.

If you have any questions about this option, contact the SAS administrator for the affected server.

How Remote Data Works

Each time you open a report with remote data, the app connects to the server. The report opens when the data is available on the device. The data is available only while you view the report.

After you close the report, the data is removed from the device. The image no longer appears on the report tile in My Reports. If you are not connected to a network and you try to open the report, it does not open.

Note: You might see remote data called tethering or live connection.
Connecting to Servers

What Is a Server Connection?

An organization has one or more servers that contain SAS Visual Analytics reports. Most servers require that you provide security credentials before you can connect to them and access reports. In the mobile app, a server connection is saved information that includes the server address and your security credentials for a server. If your organization has more than one server, you can add connections to additional servers in the same way.

Note:

- Contact your network administrator about your organization’s requirements for mobile devices to access the network.
- Contact your SAS administrator for your user ID, password, and server information.

Your SAS administrator can also tell you if the server requires a passcode. See “What Are Passcodes?”
Guest Connection to a Server

A guest connection does not require security credentials. A guest connection allows you to download reports that an organization makes available to the public.

Note:

- SAS Demo Server, which provides sample reports in the app, is an example of a guest connection.
- The guest connection feature is not supported by servers running SAS Visual Analytics 8.1. The feature is supported on all other releases of SAS Visual Analytics.

Typically, guest connections do not support the following features:

- Recent
- comments
- alert subscriptions

If Favorites and Favorites setting are supported with guest connections, functionality is limited:

- When a report is viewed by way of a guest connection, no user can add that report to favorites.
- The favorites shown for the guest connection are shared by all users of that connection.
- You cannot remove these favorites.

Add a Server Connection

The following slideshow introduces how to add a server connection. A detailed procedure follows the slideshow.

View the slideshow in SAS Help Center.

Note:

Each organization’s network is unique. If you cannot access the SAS Visual Analytics server from your mobile device, contact the following people:

- your network administrator. Ask about your organization’s requirements that enable mobile devices to access the network.
- your SAS administrator. Ask whether your mobile device should be added to a whitelist. See “About the Whitelist”.

Complete these steps:

1. If you are not in My Reports, tap in the navigation bar.
2. Tap on the command bar.
3. Tap Connect to your organization’s content in the All Connections list.
TIP The All Connections list is the left-most list in the window.
- If the list is not on the screen, tap All Connections in the navigation path.
- If the navigation path is too long to fit on the screen, drag right to scroll.

4 In the Server field, enter the address of the new server.

5 In the Port field, enter the port number for the new server.

TIP A typical port number is 80.

6 Tap the Secure connection switch if the server requires a secure connection (SSL).

TIP 🗝 indicates a secure server connection in the All Connections list.

7 Tap Next to verify the connection.

TIP If the connection fails, a message is displayed to help you correct the problem.

8 If the server provides guest access, the Log on as guest switch appears. If you want to access the server without providing credentials, tap this switch and skip the next step.

TIP You might have to scroll the page up to view all of the fields.

9 If a server requires security credentials to access reports:
- In the User ID field, enter your user ID.
- In the Password field, enter your password.

10 (Optional) In the Description field, customize the description for the new connection.
    Note: If you delete the default description, you must enter a new description. The field cannot be left blank.

11 Tap Next to verify your access to the server.
    Note: If the verification fails, a message is displayed to help you correct the problem.

TIP If your server connection also allows you to enable Esri premium services, you can do so at this point. If Esri credentials are required, you are prompted to enter your user ID and password for Esri services. To learn more, see “What Are Geographic Mapping Services?”

12 Tap Done.

The connection is saved and the Add Connection window closes. Information about available reports is automatically downloaded and appears in Add Reports.
If the new connection is to a passcode-protected server, you are required to create a passcode.

---

**Change the Password for a Server Connection**

Complete these steps in Add Reports:

1. Tap **All Connections** in the navigation path.

   **TIP** If **All Connections** is not displayed because the navigation path is too long to fit on the screen, drag right to scroll the path.

2. Press and hold the server connection that you want to edit. A menu appears.

3. Tap **Edit**.

4. Tap the **Password** field and enter the new password.

5. Tap **Save** to save the update.

---

**Change the Description for a Server Connection**

Complete these steps in Add Reports:

1. Tap **All Connections** in the navigation path.

   **TIP** If **All Connections** is not displayed because the navigation path is too long to fit on the screen, drag right to scroll the path.

2. Press and hold the server connection that you want to edit. A menu appears.

3. Tap **Edit**.

4. Tap the **Description** field and enter the new description. The field cannot be blank.

   **Note:** You might have to scroll the page up to view all of this field.

5. Tap **Save** to save the update.

---

**Enable Esri Premium Services**

Complete these steps:

1. Tap 🔄 in the navigation bar.

2. Tap **Esri Premium Services**.
Servers that provide Esri premium services are displayed only if the Esri premium services capability is enabled for your user ID on the server. To enable the capability, contact your SAS Visual Analytics administrator.

3 Tap the switch for the server that you want to enable.
   If you are not prompted to enter your Esri credentials, the Esri services are turned on at this point.

4 If you are prompted for your Esri credentials, enter your user ID and password for the Esri premium services. These credentials might be different from those used for the server connection.
   Tap Logon.

### Disable Esri Premium Services

Complete these steps:

1 Tap in the navigation bar.

2 Tap Esri Premium Services.

3 Tap the switch for the server that you want to disable.

### Remove a Server Connection

When you remove a server connection, any reports that you added from the affected server are removed from your device.

Complete these steps in Add Reports:

1 Tap All Connections in the navigation path.

2 Press and hold the server connection that you want to edit. A menu appears.

3 Tap Remove.

4 Scroll to the bottom and tap Remove.
Securing Reports and Data

Locking the App with the Passcode Feature

What Are Passcodes?

SAS Visual Analytics App provides a passcode feature that locks the app after a period of inactivity. There are two types of passcodes:

required passcode

A required passcode is a passcode that is required by a server connection. When you connect to a secure server, it requires that you create a passcode. An organization uses a required passcode to secure its reports.

You are prompted to create or enter a required passcode at these times:

- when you connect to a passcode-secured server for the first time

  Note:
  
  The first time the Passcode window appears, you can close the window without creating a passcode. However, when you attempt to add a report from a secure server, a passcode is required at that time.

- when you are connected to a secure server and the app has been inactive for a length of time

  Note: When you create a required passcode but later remove the server connection that required the passcode, the passcode functionality still applies and locks the app after a period of inactivity. However, the passcode is now optional. You can remove an optional passcode.

optional passcode

An optional passcode is a passcode that you choose to use to lock the app. You can remove the passcode at any time.

You enter an optional passcode at these times:

- when you create the passcode
- when the app has been inactive for 5 minutes

How the Passcode Feature Locks the App

Whether required or optional passcodes are used, the app is locked after a period of inactivity or after a number of failed attempts to enter the passcode. Depending on the type of passcode in effect, the time of inactivity or number of passcode attempts you are permitted differs.

required passcode

- When the app is inactive for 15 minutes, the app is locked. The system administrator of the secure server can change this value.
- Permits a specific number of attempts. The system administrator of the secure server can change this value.
- When you exceed the number of attempts, the app is locked for 15 minutes. The system administrator of the secure server can change this value.

Optional passcode
- When the app is inactive for 5 minutes, the app is locked.
- Permits 10 attempts.
- When you exceed the number of attempts, the app is locked for 15 minutes. The system administrator of the affected server can change this value.

With either passcode type, you can enter your passcode again after the lock-out expires.

If you then exceed the allowed number of passcode attempts a second time, the app removes all SAS Visual Analytics App reports, data, and server connections from your device. The app is reset to its default settings.

If you forget your passcode, you must delete and re-install the app on your device.

Create a Required Passcode
When you create a connection to a passcode-secured server, you must create a passcode.

After you save the connection, the Create Passcode window appears.

1. Enter a four-digit passcode that you can remember.
2. Enter your passcode a second time.
   - If your first and second try do not match, the app displays a message and you can enter the passcode again.

When the passcode that you entered is verified, the passcode is saved. Tap OK to close the Create Passcode window.

If you close the window without creating a passcode, you can still navigate to the reports on the server. However, if you attempt to add a report, the app requires that you create a passcode first.

Create an Optional Passcode
Complete these steps:

1. Tap in the navigation bar.
2. Tap Application Security.
3. Tap Add.
   - The Create Passcode window appears.
4. Enter a four-digit passcode that you can remember.
5. Enter your passcode a second time.
   - If your first and second try do not match, the app displays a message and you can enter the passcode again.
When the passcode that you entered is verified, the passcode is saved. Tap OK to close the Create Passcode window.

Change a Passcode
Complete these steps:
1. Tap in the navigation bar.
2. Tap Application Security.
3. Tap Change.
   The Change Passcode window appears.
4. Enter your current passcode.
5. Enter a new four-digit passcode.
6. To verify the passcode, enter the new passcode a second time.

When the passcode that you entered is verified, the passcode is saved. To close the Change Password window, tap OK.

Remove an Optional Passcode
Complete these steps:
1. Tap in the navigation bar.
2. Tap Application Security.
3. Tap Remove.
   The Enter Passcode window appears.
4. Enter your current passcode to verify your identity and remove the passcode.
   The Passcode removed window appears. Tap OK.

You can create an optional passcode at any time. See “Create an Optional Passcode”.

Remove All Data and Reset the App
When you restore the app default settings, the following changes occur:
- All of the reports and data are removed from your device.
- All of the server connections are removed from the app.
- All of the app settings are restored to the default settings.

To restore the default settings:
1. In My Reports, Recent, Favorites, or collections, tap in the navigation bar.
2. Tap General.
3. Tap Restore Default Settings.
4 Tap Restore.

**TIP** You can tap anywhere outside the message window to close it without restoring the default settings.

---

**About the Whitelist**

SAS Visual Analytics App provides a whitelist feature that an organization can use to secure its servers. If your device ID is not on the whitelist, you cannot access the server.

When you connect to a secure server for the first time, a whitelist message appears if your device ID is not on the whitelist. A subsequent message provides the option to email an access request to your SAS administrator. The email contains information that your administrator requires to give you access to the server.

**Note:** You must know the email address of your administrator in order to send the email.
Adding and Updating Reports

Adding Reports

Open Add Reports

To open Add Reports:

1. If you are in the report viewer, tap ← to exit.
2. Tap ▪️ in the navigation bar.
3. Tap ↓.

Locate a Report on a Server Connection

Complete these steps in Add Reports:

1. Tap a server connection.

TIP □️ indicates a secure server connection in the All Connections list.
2 Tap a folder to view its contents.

**TIP** indicates that the report was already added.

3 Drag your finger left and right in the navigation bar to view your path. Tap any part of the path to view that folder.

**TIP** Tap All Connections to view the list of servers again.

4 To drill up, tap the folder name in the navigation path. The selected folder’s list scrolls onto the screen if it is not already displayed.

---

**Add a Report**

The following slideshow introduces how to add a report. A detailed procedure follows the slideshow.

View the slideshow in SAS Help Center.

Complete these steps in Add Reports:

1 Navigate to the report.
2 Tap the report to view its Details pane.
3 Tap Add to add the report to My Reports.

You can also add multiple reports at one time. See "Selecting Multiple Reports".

---

**Updating Reports Automatically**

**What Is Automatic Update?**

When a report that you added to My Reports is updated on the server, you can choose to have SAS Visual Analytics App automatically update that report on your device.

The setting must be turned on and the app must be active in order to check for updates. These checks occur at the following times:

- when you start or re-activate the app
- every 15 minutes after the app opens

**Note:** The app cannot control how the device prioritizes the updates.

By default, this setting is turned on.

**Note:**
Reports are updated only when the device is connected to a network.
Automatic update does not apply to reports that use remote data ( ).

Turn Off Automatic Update
To turn off automatic update:
1 If you are in the report viewer, tap ← to exit.
2 Tap ← in the navigation bar.
3 Tap Reports.
4 Tap the Automatic update switch.

Turn On Automatic Update
To turn on automatic update:
1 If you are in the report viewer, tap ← to exit.
2 Tap ← in the navigation bar.
3 Tap Reports.
4 Tap the Automatic update switch.

Updating Reports on Demand
You can update a report to make sure you have the latest changes and data.

Update a Closed Report
To update a report on demand:
1 In My Reports:
   ▪ If you are using a touchscreen, press and hold on the report tile.
   ▪ If you are using a mouse, right-click the report tile.

2 Select Update on the context menu.
Update the Report You Are Viewing

Complete these steps in an open report:

1. Tap 
2. Tap 

   - If the report has no updates, a message is displayed.
   
     Note: A message is not displayed for remote-data reports.
   
   - If there are updates, the report is downloaded.
# Reviewing Your Reports

- **Viewing My Reports**  
  - View My Reports  

- **Identifying Your Favorite Reports**  
  - Your Favorites on Every Device  
  - View Your Favorites  
  - Add a Report to Favorites  
  - Remove a Report from Favorites  

- **Tracking Recent Reports**  
  - Recent Reports on Every Device  
  - View Your Recent Reports  
  - Clear Recent  

- **View Collections**  
  - What Is a Collection?  
  - What Is Auto-Add?  
  - View a Collection  
  - Auto-add a Collection  
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- **Locate Details about a Report**  
  - Identify a Report’s Server and Path Information  
  - Determine When a Report Was Updated  
  - View the Table of Contents for a Report  
  - Identify Who Created a Report  

- **Remove a Report**  

- **Searching Reports**  
  - How Search Works  
  - Search Reports  
  - Filter Search Results  

- **Sorting Reports**  
  - Sort Reports  
  - Sort Search Results  

- **Selecting Multiple Reports**  
  - Select Multiple Reports in My Reports, Recent, Favorites, and Collections  
  - Select Multiple Reports in Add Reports  
  - Select Multiple Reports in Search Results
Viewing My Reports

In **My Reports**, you can manage the reports that are available to view on your device. You can also update reports with recent changes. All of the reports that you view are added from a server connection. See “What Is a Server Connection?”

View My Reports

**My Reports** is the default window in the app. It shows all of the reports that you have added on this mobile device.

If you are in **Recent**, **Favorites**, or a collection, tap and tap **My Reports**.

Your reports are grouped:

- **Frequently Viewed** shows the reports that you view most frequently on this device.

- **My Reports** shows the reports that you have added on this device.

  **Note:** Typically, added reports are downloaded to your device. However, some reports might require additional security and use remote data instead. See “Remote Data Availability and Report Security”.

- **Sample Reports** shows any sample reports that you have added on this device. See “Viewing Sample Reports”.

Identifying Your Favorite Reports

Your Favorites on Every Device

In the app, **Favorites** shows the reports that you have marked as favorites. Your favorites are tracked by the server on which the reports are located. When you add a report to your favorites, the server adds that report to your favorites on any other devices that you use to view reports, including SAS Visual Analytics on your desktop system. The same is true when you remove a report from your favorites. However, your favorites are not shown on every device automatically. On each device you must first define the server connection to the server on which your favorite reports are located.
View Your Favorites

To view your favorites, tap ★ in the navigation bar.

Favorites can contain one or more folders (also called groups). Tap a folder to display its reports. Folders can contain folders, too. Tap on the breadcrumb path to return to the previous level.

Add a Report to Favorites

You can add reports to your favorites while a report is open in the report viewer, or when a closed report appears in the following areas: My Reports, Recent, a collection, search results, or Add Reports.

Add an Open Report to Favorites

Complete these steps in the report viewer:

1. Tap ★★★.
2. Tap ★.

Add a Closed Report to Favorites

To add a closed report to your favorites:

1. Press and hold on the report tile.
2. Tap Add to favorites.

You can also add multiple reports at one time. See “Selecting Multiple Reports”.

Remove a Report from Favorites

You can remove reports from your favorites while a report is open in the report viewer, or when a closed report appears in the following areas: My Reports, Recent, Favorites, a collection, search results, or Add Reports.

Remove an Open Report from Favorites

Complete these steps in the report viewer:

1. Tap ★★★.
2. Tap ★.
Remove a Closed Report from Favorites

To remove a closed report from your favorites:

1. Press and hold on the report tile.
2. Tap **Remove from favorites**.

You can also remove multiple reports at one time. See “Selecting Multiple Reports”.

---

Tracking Recent Reports

**Recent** contains reports that you have recently viewed on one of your devices.

---

Recent Reports on Every Device

**Recent** shows the reports that you have recently viewed on one or more of your devices. Recent reports appear in the app only after you have specified the connection to the applicable server. The history of your recent report access is maintained by the server on which the report is located. Your history is shared with all of the devices that you use to view reports from that server, including SAS Visual Analytics on your desktop system.

You can clear the history of report access, which clears **Recent**. Doing so clears the history on the selected server connection and on the device. If you have viewed reports from multiple server connections, you must clear the history for each server connection. See “Clear Recent”.

---

View Your Recent Reports

To view your recent reports, tap in the navigation bar.

---

Clear Recent

To clear **Recent**:

1. Tap in the navigation bar.
2. Tap .

3. To view your connections, tap **All Connections** in the navigation path.

**TIP** If **All Connections** is not displayed because the navigation path is too long to fit on the screen, drag right to scroll the path.
4 Press and hold the server connection for which you want to clear the history. A menu appears.

5 Tap Edit. The connection opens.

6 Scroll to the bottom and tap Clear Recent Reports for Connection.

   Tap Clear recent reports.

   **TIP** The button is disabled when the history has been cleared. If this button is disabled before you tap it, then there are no recent reports to clear.

7 Tap Cancel.

---

### View Collections

#### What Is a Collection?

A *collection* shows a group of reports that a collection owner has selected and made available to users. Each collection is a selection in the navigation pane.

A collection can also contain one or more folders (also called groups). Each folder can contain one or more reports or be empty. The reports contained in the folder are favorites that belong to the collection owner. By adding the folder to the collection, the owner has chosen to make the reports available to other users.

#### What Is Auto-Add?

*Auto-add* is a feature that automatically adds reports that are members of a collection. Auto-add works in the following ways:

- If you have not added any reports in the collection, selecting auto-add adds all of the reports to *My Reports*.
- If you have already added some of the reports in the collection, selecting auto-add adds the remaining reports to *My Reports*.
- If you have selected auto-add and new reports are added to the collection, the new reports are automatically added to *My Reports*.
- If you have selected auto-add and reports that you did not manually add are removed from the collection, those reports are automatically removed from *My Reports*.

When you remove auto-add, reports in the collection are no longer automatically added to *My Reports*.

**Note:** If you added some of the reports in the collection before selecting auto-add, they remain in *My Reports*.
View a Collection

To view a collection, tap \( \equiv \) and tap the name of a collection.

The collection opens to display its reports.

A collection can contain one or more folders (also called groups). Tap a folder to display its reports. Folders can contain folders, too. Tap on the breadcrumb path to return to the previous level.

Auto-add a Collection

To learn how auto-add works, see “What Is Auto-Add?”

In the collection, tap \( \checkmark \).

The button toggles to indicate the change: \( \checkmark \).

Remove Auto-add

To learn how auto-add works, see “What Is Auto-Add?”

In the collection, tap \( \checkmark \).

The button toggles to indicate the change: \( \checkmark \).

Locate Details about a Report

Identify a Report’s Server and Path Information

Overview

The following slideshow introduces how to find a report’s server and path information. Detailed procedures follow the slideshow.

View the slideshow in SAS Help Center.

Identify an Open Report’s Server and Path Information

In an open report, tap \( \equiv \).

The information appears in the Details window.
Identify a Closed Report’s Server and Path Information

Complete these steps in **My Reports**:

1. Press and hold on the report tile.
2. Tap **Details**.

In the **Favorites, Recent**, and collection views, and in the Add Reports window, tap a report tile to view its details.

---

Determine When a Report Was Updated

**Determine When an Open Report Was Updated**

In an open report, tap [ ].

The information appears in the Details window.

**Determine When a Closed Report Was Updated**

In **My Reports**, the date of the report’s last update appears on the report tile.

In the Add Reports window, tap a report tile to view its details.

---

View the Table of Contents for a Report

You cannot preview a report’s table of contents in the Add Reports window. For reports that use remote data ( ), the table of contents is not available until you open the report and the data is downloaded. See “Remote Data Availability and Report Security”.

**View the Table of Contents for an Open Report**

Complete these steps in an open report:

1. Tap [ ].
2. Tap a page tile to go to that page.

**TIP** If the report is large, scroll down to view more page tiles.

**View the Table of Contents for a Closed Report**

In **My Reports**, complete these steps:

1. Press and hold on the report tile.
2 Tap Details.
3 Scroll down to view the page tiles.

**TIP** Tap a page tile to open the report to that page.

**Note:** You cannot preview a report’s table of contents in the Add Reports window. For reports that use remote data (🔗), the table of contents is not available until you open the report and the data is downloaded. See “Remote Data Availability and Report Security”.

### Identify Who Created a Report

#### Identify Who Created an Open Report

In an open report, tap 📄.

The information appears in the Details window.

#### Identify Who Created a Closed Report

In **My Reports**, complete these steps:

1 Press and hold the report tile.
2 Tap Details.

In the **Favorites**, **Recent**, and collection views, and in the Add Reports window, tap a report tile to view its details.

### Remove a Report

To remove a report:

1 In the My Reports view, press and hold on the report tile.
2 Tap **Remove**.
3 Tap **Remove** in the confirmation window.

You can also remove multiple reports at one time. See “Selecting Multiple Reports”.
Searching Reports

The search feature is available anywhere that you see ▼ in the app.

How Search Works

What Can I Search?

You can search reports that are located in My Reports and on all of your connected servers. Both locations are searched at the same time.

**TIP**
- The search is not case sensitive.
- If you do not have a network connection, search is disabled.

During a search, the following content is reviewed for the search string:
- the report name
- report descriptions
- keywords
- the report source file

Because the report source file is also searched, some reports can appear in the search results because of a data set or object that is used in the report. For example, if a report uses a data set called Cars, that report will be in the search results for “cars.” If a report contains a bar chart, that report will be in the search results for “bar chart.”

Can I Narrow My Search?

You can narrow your search by using quotation marks ("), and the plus sign (+) and minus sign (−) operators.
- To specify some or all of a report title, enclose the title in quotation marks—for example, “accessibility in SAS Visual Analytics App”. The search is not case sensitive.
- To require a term, prepend the term with the plus sign—for example, +sample.
- To exclude a term, prepend the term with the minus sign—for example, −sample.

You can also append a wildcard (*) operator to single- and multiple-word searches. For example, if you search for the word “sample,” then it is converted to sample*. You get different results than if you entered "sample", +sample, or "sample".
How Many Results Can I Receive?

You can receive up to 100 results for each connection that you include in your search. The search results can also include an unlimited number of results from reports in My Reports.

Search Reports

Complete these steps from My Reports or Add Reports:

1. Tap the Search for reports field. The keyboard appears.
2. Enter all or part of a search string.

   **TIP** To narrow the search, use search operators.

3. Tap on the keyboard.

   The reports that include the search string appear in a results list. The results list is categorized by the location of the reports.

   You can filter the results.

   You can sort the results.

4. (Optional) To add a report in the search results, tap that report, and then tap Add.

5. If you already added the report, you can open it. Tap the report and then tap Open.

6. To clear the search results, tap in the search field.

7. To dismiss search, tap .

Filter Search Results

To filter search results:

1. Tap Filter by in the upper left corner.

2. Select one or more filter options:
   - the location, such as My Reports or the server connection
   - the report author’s name
     
       **Note:** This option is available only after the search is completed.

   - the date on which the report was last updated on the server

Filter options are applied as you select them.
Sorting Reports

You can sort reports wherever you see the Sort by list.

Sort Reports

To sort reports, tap the Sort by list and make a selection.

Note: Available sort selections vary depending on the view.

- **Name**
  - sorts the reports by name and then by the date of the last successful update of the report on the server.

- **Connection**
  - sorts the reports by their associated server connection, then by their name, and then by the date of the last successful update of the report on the server.

- **Date added**
  - sorts the reports by the date when they were added and then by their name.

- **Last updated**
  - sorts the reports by the date of their last successful update of the report on the server, and then by their name.

- **Most recently viewed**
  - In My Reports, this selection sorts the reports by the date of their last access on this device and then by their name.
  - In the Recent view, this selection sorts the reports by their associated connection, then by the most recently viewed date across all devices.

Sort Search Results

You can sort search results. To learn about search, see “Searching Reports”.

To sort the results, tap the Sort by list and make a selection:

- **Name**
  - sorts the reports by name and then by the last successful update of the report on the server.

- **Last updated**
  - sorts the reports by the date of their last successful update of the report on the server, and then by their name.

- **Relevance**
  - sorts the reports by relevance that is determined by the associated server connection.
Selecting Multiple Reports

You can use Selection mode to work with multiple reports at one time. Depending on the location in the app, you can use Selection mode to add or remove reports from My Reports, share, or add or remove reports from Favorites.

Select Multiple Reports in My Reports, Recent, Favorites, and Collections

Complete these steps in any of the views:

1. Tap \( \equiv \).
2. Tap one or more reports.
   \( \checkmark \) indicates that a report is selected.

   **TIP** Tap \( \equiv \) in the upper left corner of the view to select all of the reports in the folder.

3. Tap the action that you want to complete.
4. If you decide not to act on the reports, tap Cancel to dismiss Selection mode.

Select Multiple Reports in Add Reports

In order to work with multiple reports at once while in Add Reports, the reports must all be located in the same folder.

1. Navigate to the folder that contains the reports.
2. Tap \( \equiv \).
3. Tap \( \checkmark \) next to each report that you want to select.
   \( \checkmark \) indicates that a report is selected. Tap this button again if you want to clear the selection.

   **TIP** Tap \( \equiv \) in the upper left corner of the view to select all of the reports in the folder.

4. Tap the action that you want to complete.
5. If you decide not to act on the reports, tap Cancel to dismiss Selection mode.
Select Multiple Reports in Search Results

To select multiple reports:

1. Tap ✅.

2. Tap one or more reports.
   
   ✅ indicates that a report is selected.

   **TIP** Tap ☑ in the upper left corner of the view to select all of the reports in the folder.

3. Tap the action that you want to complete.
Viewing Reports

Viewing Reports and Objects

Open a Report from My Reports
Tap any report tile.

Open a Report from Recent, Favorites, or a Collection
To view a report:
1 Tap the report tile to open the Details window.
2 If the report has already been added to your device, tap Open.
   Otherwise, tap Add to download the report.
When the report is available, tap the report tile to open the Details window, and then tap Open.
Open a Report from the Start Screen

On the Windows Start Screen, tap any report tile.

Add a Report to the Start Screen

If you have reports that you use frequently and want to access quickly, you can add (or "pin") them to the Start Screen. Tapping a report tile on the Start Screen opens SAS Visual Analytics App (if it is not already open) and displays the report.

To add a report to the Start Screen:

1. Open the Details pane:
   - In the report viewer, tap \[\text{Details}\].
   - In My Reports, touch and hold the report tile, and then tap Details.

2. Tap \[\text{Add to Start Screen}\].

   A confirmation message appears.

3. Tap Yes.

   A report tile is added to the Start Screen. The tile displays the report’s thumbnail image, if one is available. If the report does not have a thumbnail image, the SAS Visual Analytics App logo appears.

You can remove (or “unpin”) a report from the Start Screen at any time.

To remove a report from the Start Screen:

1. Open the Details pane:
   - In the report viewer, tap \[\text{Details}\].
   - In My Reports, touch and hold the report tile, and then tap Details.

2. Tap \[\text{Remove from Start Screen}\].

   The report tile is removed from the Start Screen.

Note: Removing a report from My Reports also removes its tile from the Start Screen.

Note: You can also add the SAS Visual Analytics App app to the Start Screen. See “Can I Add the App to My Start Screen?”.

Page through a Report

Reports can include more than one page.

You can flick left or right on the device screen to view the pages in sequence.

To see and select from all the pages:
1. Tap \( \text{Page} \).
2. Scroll up to view all of the pages.
3. Tap the page that you want to view.
4. To dismiss the view without selecting a page, tap \( \text{Page} \).

**View an Object Using the Full Screen**

To maximize an object:

1. Tap the object to highlight it.
2. Tap \( \text{Page} \) to maximize the object to use the full screen.

To restore the object size:

1. Tap the object to highlight it.
2. Tap \( \text{Page} \) to restore the object size.

**View a Report Summary**

Report designers can create report summaries that are available for viewing in the SAS Visual Analytics app. When you open a report that has a summary, you can view a textual report summary and play a recording of the summary that includes playback controls.

If available, you can access the summary from the following locations:

- a report tile in *My Reports*
- the More menu in the report’s command bar

To display the summary, tap **Show summary** on the context menu.

The Summary window displays the report summary text. Controls in the window enable you to play and pause the recording. You can also advance or rewind the recording in 10-second increments.

**Note:** This feature uses Text-to-Speech (TTS) functionality that is provided with Microsoft Windows 10. In the Speech settings that are available in Windows Settings, you can choose the speech language and set TTS options, such as the default voice. If you need to install a new language for this feature, refer to the documentation that is provided by Microsoft.
Viewing Reports with the Windows Magnifier

You can use the Windows Magnifier tool while you work with reports in the SAS Visual Analytics App app. This feature enables you to temporarily enlarge any report or report item in order to see the items more clearly.

The Magnifier tool provides three different views that you can use with the app: full screen, lens, and docked. For complete details about how to use the Magnifier tool, refer to your Windows documentation or online Help.

It is helpful to be aware of the following tips while you use the Magnifier in the report viewer:

- To turn on the Magnifier tool, tap on the command bar, and then tap Magnify. In the Ease of Access Window that appears, tap the Magnifier switch.
- To change the default full screen view, use the Magnifier toolbar that initially appears in the upper left region of the report. In this toolbar, you can tap Views to choose lens or docked mode, tap the Plus Sign or Minus Sign buttons to zoom the display in or out, and tap Options to access additional magnification settings.
- To expose the Magnifier toolbar when it is hidden from view, tap the Windows magnifying glass icon in the upper left region of the report.
- To exit magnification, tap in the Magnifier toolbar or hold down the Windows key and press the Escape key.

Overriding Report Themes

What Is a Theme?

A report is designed to use specific colors and fonts. These are called a theme. You can override that theme when you view the report in SAS Visual Analytics App.

The following alternative themes are available:

- High Contrast
- Light (Marine)

To learn more about this feature, view the following slideshow.

Override the Theme

You can override the current theme to change to an alternate theme:

1. If you are in the report viewer, tap
2. Tap in the navigation bar.
3. Tap Accessibility, and then tap the theme that you want to use.
Learning More about an Object

What Information Is Available about Objects?

Each page of a report can contain one or more objects. You can review information about a report, the current page, and the objects on that page in the Information view. When you access this view, an object selection list appears below the Information label. The name of the currently selected item (the report, the current page, or one of the objects) is displayed. Tap \( \checkmark \) to expand the list. The report, current page, and the objects on the current page are presented in a hierarchy.

The Information view displays the following information about the report, current page, and objects. However, the information shown varies depending on how the report is designed. See your report designer for more information.

- a description of the object
- display rules, if applicable
- filters, if applicable
- rank, if applicable
- alerts, if applicable

Note: The Alerts feature is not supported by servers running SAS Visual Analytics 8.1. The feature is supported by all other releases.

- the Comments feature

View Information about an Object

Note: The Information view displays information about the selected object. If you select a link that takes you to a hidden page, the Information view is refreshed to provide detailed information about the objects that are on the hidden page or about the hidden page itself.

Complete these steps in the report viewer:

1. Tap an object to highlight it.
2. Tap \( \checkmark \) to open the Information view.
   
   See “What Information Is Available about Objects?”

3. To view information about another object on the page, expand the object selection list at the top of the Information view. The currently selected item is highlighted in the list. Tap another object. Alternatively, you can tap an object in the report viewer.

   Note: Objects in a stack container are listed as individual items in the hierarchy. The container is not listed. If the selected object is a composite object, when the object is maximized its sub-elements are listed beneath it in the hierarchy.

   The Information view shows the information for the highlighted object.
To view information about the current page or about the report as a whole, tap the appropriate entry in the object selection list.

4 Tap ☑ to close the Information view.

---

Restoring the Report State

Report State

When viewing reports located on servers running SAS Visual Analytics 8.3 or later, the state of your report is saved when you close the report.

The report state can include selections that you have made in charts and graphs, interactions between objects, navigation into a hierarchy or Esri map, and much more.

If you use multiple devices (for example, a tablet and a desktop system) to view and update reports, the report state on the server reflects the most recent updates made before closing the report on any device.

Note: Large reports might require additional time to close because the app is saving many selections.

---

Restore the Default Report State

This action affects only the selected report.

To restore an open report to its default state, tap ⋯ and then tap Restore default report state.

To restore a closed report to its default state, complete the following steps:

1 Locate the report’s tile in My Reports.
2 Press and hold on the report tile.

If you are using a mouse, right-click the report tile.

3 Tap Restore default report state.
Receiving Alerts about Data Criteria

What Is an Alert?

An alert specifies criteria to monitor. When data in the report meets the criteria, an email or text message is sent to users that have subscribed to the alert. A report can have one or more alerts settings.

When you view the report in SAS Visual Analytics App, you can view the alerts that are set for that report. You can also see whether you are subscribed to an alert. If you are subscribed to an alert, when the alert criteria is met an email is sent to you.

Note:

- Alert criteria and subscriptions are set using SAS Visual Analytics. For more information, see SAS Visual Analytics documentation.
- The Alerts feature is not supported for reports located on servers running SAS Visual Analytics 8.1. It is supported by all other releases.

View Alert Subscriptions

Complete these steps in the report viewer:

1. Tap 📢 to open the Information view.
2. Tap Alerts.
   
   **TIP** You might have to scroll down to locate the button.
3. Alerts are grouped by object. Scroll the Alerts view to view all alerts.
4. Tap ✗ to return to the Information view.
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Viewing Data

View Data Details

Objects in a report can display details about a data point.

To view the data details, tap on a location in an object.

A context menu appears. If data details are available, they are displayed in the menu by default.

View Data Details in a Table

You can view underlying report data while viewing an object. In previous releases this was referred to as explore mode.

Complete these steps:

1. Tap ✅ to view the object in full-screen mode.

2. Tap •••, and then tap Show details.

   Data details appear in a table beneath the object.

3. Tap a row in the table to highlight the associated item in the object.

   You can also tap in the report to locate the corresponding row in the table.

   **TIP** You can scroll the table up and down to view all of the rows.

4. Tap ••• and then tap Hide details to close the table.

Sort Column Data in Tables

By default, table columns support sorting. You can sort the values in an individual column. You can also set up primary and secondary sorts. If no columns sort, see Columns Do Not Sort in a Table.

To sort data in a column, tap the column heading. The column sorts the data from low value to high value. Tap the heading again to sort from high value to low value.
For additional sort options, press and hold the column heading, tap Sort, and then tap one of the following options:

**Ascending**
- sorts the data from low value to high value (A to Z or from 0 to 9).

**Descending**
- sorts the data from high value to low value (Z to A or from 9 to 0).

**Secondary**
- displays secondary sorting options that you can apply to additional columns.

For each additional column that you want to sort, press and hold the column heading, tap Sort, and then Secondary. Then select Ascending or Descending.

**Note:** After you apply a secondary sort, creating or modifying the primary sort clears all previously applied secondary sorts.

**Reset**
- returns the data to its original sort order.

**Note:** A check mark indicates the current sort order of the data.

---

**Sort Data in Charts and Graphs**

Charts and graphs have a predefined sort order that is determined by the report author.

In charts and graphs in which the report author has turned on X- and Y-axis labels, you can change the default sort order of either the X axis or Y axis or both.

To change the default sort order for a single measure (X axis, Y axis, or both) in a chart or graph:

1. Press and hold the X-axis label, tap Sort, and tap one of the following options:
   - **Ascending**
     - sorts the data from low value to high value (A to Z or from 0 to 9).
   - **Descending**
     - sorts the data from high value to low value (Z to A or from 9 to 0).
   - **Reset**
     - returns the data to its original sort order.

   **Note:** A check mark indicates the current sort order of the data.

2. Press and hold the Y-axis label. Tap Sort. Tap Ascending, Descending, or Reset.

When multiple measures exist on a single axis, you can choose the measure upon which to sort.

For example, assume that the X-axis label presents two measures, one for East Coast and one for West Coast. In this case, press and hold the X-axis label, and then tap Sort. Tap East Coast or West Coast, and then tap the sort option that you want.
Filtering Data

About Data Filters, Filter Controls, and Data Highlighting

Data Filters

SAS Visual Analytics App displays interactive reports. Depending on how a report is designed, you can select areas in a report to dynamically filter data.

**TIP** Be sure to ask your report designer to describe any filter controls that are available in the report and explain how to use them.

Report designers can use the following types of data filters in reports:

Object-level filters
- filters data in one or more objects. A report can include one or more of these filters.

Interactive filters
- an object provides interactive selections that filter one or more other objects on the same page.
  
  For example, you have a report page that contains two objects: a pie chart and a bar chart. When you tap a slice in the pie chart, the value of that slice filters the data in the bar chart.
  
  A report can include one or more of these filters.

Report-level filters
- filters data in the report as a whole. A report can include one or more of these filters.

Page-level filters
- filters data in the page as a whole. A report can include one or more of these filters.

Page-link filters
- a link that opens another page in a report. Depending on the selection made in the source page, the link filters all of the objects in the target page. On the source page, page-link filters are located in an object’s context menu. On the target page, the applied filter value is located in the filter control bar.

Report-link filters
- a link that opens another report. Depending on the selection made in the source report, the link filters all of the objects in the target report. In the source report, report-link filters are located in an object’s context menu. In the target report, the applied filter value is located in the filter control bar.
Incoming filters
filters data by one or more values that are passed in from another report or object. For example, when chart A interacts with chart B, the value selected in chart A is the incoming filter for chart B.

See also “Filter Controls” and “Filter Control Bars”.

Filter Controls

Filter controls provide a way for you to control how data is filtered in a report. For example, if data is filtered by month, a filter control enables you to specify a month. Report designers can select from a variety of controls when they create data filters in reports. Some filter controls are familiar, such as buttons, lists, text fields, check boxes, radio buttons, single sliders, and range sliders. Your report designer might customize the behavior of some of these controls, but the controls all work in a familiar way.

Other filter controls are less obvious, such as parameters, links, interactions, and highlighting. For example, your report designer can specify whether one-way filters appear in the filter control bar. Unless your report designer tells you that specific controls are present, you might not realize they are in the report.

TIP Be sure to ask your report designer to describe any filter controls that are available in the report and explain how to use them.

Filter Control Bars

When a report contains report-level, page-level, or interactive data filters, the filter controls are located on the applicable filter control bar.

Report-Level Control Bar
Report-level filters affect data in the report as a whole. The following examples are report-level filters:

- A filter control in the report that filters the report data as a whole.
- A link from a source report that opens a target report and filters its data

The filters are located in a control bar that is below the report title bar. The filter control bar is anchored to the report title bar so that you can use these filters on any page of the report.

Page-Level Control Bar
Page-level filters affect data on the current page only. The following examples are page-level filters:

- A filter control for a page that simultaneously filters all of the objects on that page.
- A link from one page in the report that opens another page and filters that page’s data.

The filter controls are located in a bar that is across the top of the page.

Interactive-Filter Control Bar
Interactive filters affect objects on the current page. This control bar appears across the top of the page. If page-level filters exist, the interactive-filter control bar appears under the page-level control bar.
The interactive-filter control bar displays one-way filters and two-way filters that you select on the current page. One-way and two-way filters behave as follows:

- **One-way filters**: A selection in object A filters all objects on the page. A selection in object B filters all objects on the page, except object A.
- **Two-way filters**: A selection in object A filters all objects on the page. A selection in object B filters all objects on the page, including object A.

### Data Highlighting

Reports can be designed to enable the *highlighting* of data. As with filtering, you select a filter value. However, instead of displaying only the data that is filtered, the affected data is highlighted.

**Note**: Highlighting is also called *brushing* or *linked selection*. Highlighting is not the same as report-link filters or page-link filters.

Depending on how an object is designed, you can highlight data in the following ways:

- make a selection from a filter control.
- tap a value in a chart or graph.
- tap a value in a table or crosstab.

The data is highlighted in one or more objects in the report page.

### View Values of Interactive Filters

The following slideshow introduces how to use interactive filters to automatically filter data in multiple objects. Additional information follows the slideshow.

**View the slideshow in SAS Help Center.**

The interactive filter control bar displays one-way filters and two-way filters that you select on the current page. If no selections are made on the page, *No Selections* appears next to the **Filters** label at the beginning of the control bar.

When you select a value in an object that has an interactive filter, a filter control appears in the control bar. The control indicates the selected value. If you select a different value in the filter, the text in the filter control is updated to reflect the new selection.

You can clear one or more filters:

- Tap ✗ to clear a filter and remove the control from the control bar.
- Tap **Clear All** to clear all the filters and to remove their filter controls from the control bar.

**Note**: If an object (such as a control prompt) requires a filter, the clear button does not appear in the filter control.

If you can select multiple values in an object, the filter control displays the appropriate category or column name followed by the number of selected values. Tap ‹ to see a list of the selected values. To remove a value from the list and clear its selection in the filter, tap ✗.
If multiple one-way filters are selected, a separator (>) appears between their controls on the bar. The separators indicate that the selection in one filter affects the other filters. Separators are not displayed when multiple two-way filters are selected.

Note: If you clear a one-way filter or change the selected value for a one-way filter, subsequent filters on the control bar are cleared. Their filter controls are removed from the control bar. Changing the selected value for a two-way filter or clearing its filter control has no effect on other filter controls on the control bar.

### Toggle the Filter Control Bars

The filter control bars toggle:

- You can display the filter control bars to view filter values.
- You can hide the filter control bars so that the report has more screen space.

To toggle the filter control bars, tap in the report title bar.

See also "Filter Controls" and "Filter Control Bars".

### View Filters That Run Off the Screen

If the control bar has more filters than it can display, the bar scrolls horizontally. Drag left and right to view the filters.

### View the Filter Value on a Slider Control

When a report uses a slider control, you can press and hold your finger on the slider bar or the slider indicator to see the filter value.

### Animate an Object

In animated objects, the data points are animated across a range of time.

1. Tap the object.
   - The Play button (▶) appears in the lower left corner.
2. Tap ▶ to start the animation.
   - A progress indicator for the time range appears briefly.
   - The value on the left is the current time point in the animation time range.
   - The value on the right is the final time point in the animation time range.
3. To view different time points in the animation, drag the progress indicator along the time range.
4  Tap to pause the animation and display the progress indicator.

Linking to Other Data or Information

What Are Links?

If an object provides links, they are available in that object’s context menu.

Depending on how a report is designed, objects can include the following types of links:

Page links
  links from one page in a report to another page in the same report.
  The link can also include a filter value. In the target page, the Information view provides the filter value. See “View Information about an Object”.

Report links
  links from one report to another report.
  The link can also include a filter value. In the target page, the Information view provides the filter value. See “View Information about an Object”.

External links
  links from the report to an external location, such as a web page.

Hidden page links
  links from an object to a page that appears only when the link is tapped. A link can be attached to an object, image, or text. The hidden page opens on top of the current report page. A hidden page can contain one or more objects. The link can also include a filter value.

Note: This link type was formerly called Info window.

Link to Another Page or Report

Complete these steps in a report:

1  Tap on a data point in an object.

2  On the context menu, tap .
  The linking options appear.

3  Tap your selection.
  The linked location opens.

4  (Optional) If a link applied a filter to the data in the target report or page, you can view the applied filter and its value.
  Tap to open the Information view.
Return to a Prior Link Location

When you have linked across multiple pages or reports, you can review the trail of your navigation and return to a prior link location.

To go back one step, tap ←.

To review the trail of your navigation and select a prior link:

1. Tap the arrow button to the right of the report name.
2. Tap a selection in the trail to return to that location.

To exit the report viewer and close all reports, tap Close All Reports.

Link to an External Location

To link to an external location:

1. Tap on a data point in an object.
2. On the context menu, tap ☐.

The linking options appear.

3. Tap the external link.

The linked location opens in a new window.

4. To return to your previous location, tap the applicable icon in the Windows taskbar.

Drilling Into Data Hierarchies

What Is a Hierarchy?

A hierarchy is an arrangement of category columns that is based on parent-child relationships. The levels of a hierarchy are arranged with more general information at the top and more specific information at the bottom. For example, a hierarchy of date-time columns contains Year as the top level, Month as the next level, and Day as the bottom level.

Hierarchies enable you to drill down in charts, graphs, and crosstabs (also known as crosstabulation tables). An object can be designed with one or two data hierarchies. For example, an object might have a date-time hierarchy and a geographic hierarchy.
Ways to Navigate Hierarchies

If an object provides data drilling options, they are available in the context menu. In a crosstab, data-drilling options are also provided as links in the table itself. Depending on how an object is designed, you can navigate hierarchies in the following ways:

- drill down in a hierarchy to a subset of data and detailed information
- drill up in the hierarchy to a broader data view and general information
- expand or collapse the data hierarchy in a crosstab
- navigate one or two hierarchies

Navigate a Data Hierarchy

To drill down or up:

1. Tap on a data point in an object.
2. On the context menu, tap \( \downarrow \). The data-drilling options appear.

   **Note:** If an object contains two hierarchies, an indicator (\( \bullet \bullet \)) appears at the bottom of the context menu. Flick left and right to alternate between the hierarchies.

3. Tap your selection. The new data view appears in the object.

4. To view another level of the data hierarchy, repeat steps 1 through 3.

   **TIP** To navigate upward in the data hierarchy, tap \( \uparrow \) in the upper left corner of the object.

5. To view the available selections in a level in one or more hierarchies, or to change a selection:
   
   a. Tap \( \bigtriangledown \) in the upper left corner of the object. The drill options window appears.
      
      **Note:** If the object contains two hierarchies and you have drilled into both, you can view the levels in both hierarchies.
   
   b. To view another level, tap that level. The object draws the new data view.
   
   c. To change the selection for a level, tap \( \triangledown \) for that level to view a list, and then tap your new selection. The object draws the new data view.
View Warnings about an Object

If you drill down to a level of the object that does not have data, a warning appears in the lower right corner of the affected object: 

To view more information about the warning, tap 

Expanding Crosstab Hierarchies

Why Expand a Crosstab Hierarchy?

You can expand a crosstab hierarchy. Expansion enables you to view multiple levels of data at a time.

For example, in a crosstab that summarizes data for several years, you can expand one or more of the years. The expansion enables you to see the data at the year level and, for the years that you expanded, the data at the month level as well.

Alternatively, you can expand all the children of a hierarchy level. For example, given the same report, you can expand all the years at the same time to review their monthly data.

Note:

- When the ranking option is applied to a crosstab, expand and collapse are disabled.
  Instead, you can drill up and drill down in the hierarchy.
- You can view the rank applied to the crosstab in the Information view.

Expand the Hierarchy in a Crosstab

To expand a single item in a crosstab (for example, to expand the year 2017), tap 

To expand all of the children for a level in a crosstab (for example, to expand the months for all of the years):

1. Press and hold a column heading or row heading.
2. Tap Expand Hierarchy Name.

The crosstab expands to display the data that is the next level down in the hierarchy.

To collapse a single item in a crosstab (for example, to collapse the year 2017), tap 

To collapse all of the children for a level in a crosstab (for example, to collapse the months for all of the years):

1. Press and hold a column heading or row heading.
Exploring Data By Using Geographic Mapping Services

What Are Geographic Mapping Services?

A report can contain an object that uses maps as a background for data. SAS Visual Analytics uses maps provided by the Esri and OpenStreetMap geographic mapping services to display data points. SAS Visual Analytics retrieves map tiles and location information from these services and then overlays your organization’s data onto the maps.

Depending on how the report is designed, your data can appear on the map as map coordinates, bubbles plotted onto the map, or regions on the map.

You can use the following options:

Search
Search the map for street addresses or points of interest (for example, restaurants).

Distance
Identify data points on a bubble or coordinate map that are within a specified radial distance from a selected point. The map zooms in and highlights the affected area. Data points outside of the affected area remain on the map but are not selected.

Drive distance
(Premium) Identify data points on the map that are within a specified driving distance from a selected point. The map zooms in and highlights the affected area. Data points outside of the affected area remain on the map but are not selected.

Drive time
(Premium) Identify data points on the map that are within a specified driving time from a selected point. The map zooms in and highlights the affected area. Data points outside of the affected area remain on the map but are not selected.

Demographic data
(Premium) Select and view up to ten items of demographic data associated with your selected area on a map.

Remember the following considerations about premium services:

- Premium services are supported only on servers running SAS Visual Analytics 8.1 or later.
- **Drive Distance** and **Drive Time** are premium features provided by Esri. Demographic data provided by the Esri GeoEnrichment service is an Esri premium feature also. Your organization uses Esri credits to pay for using these features.
To use these features, you must provide login credentials for the mapping service on at least one of your devices.

You might need additional capabilities assigned to your user ID. Contact your SAS administrator.

You can disable and enable the premium services. See "Enable Esri Premium Services" and “Disable Esri Premium Services”.

What Is a Break?

You can select additional distances to highlight on the map. Each distance is identified by a break. You can select additional distances when using the Drive Time and Drive Distance selections.

For example, you want to identify customers that are within 5 miles and 10 miles of a location. When you select Drive Distance, you set the distance for 5 miles. Then, you add a break and select a distance of 10 miles. The mapping service calculates both distances and highlights the affected areas on the map. The area within 5 miles is a shade of gray. The area within 5 to 10 miles is another shade of gray.

**TIP** This option is a premium feature provided by the mapping service. When you specify more than one distance, the calculation costs more and takes longer to process. The app supports up to three distances or time spans in a calculation.

View Map Data Details

To view data about a data point, tap that data point in the map. A content menu appears.

Tap 📊 to display the data details if the details are not already displayed.

Pan and Zoom the Map

You can pan and zoom the map to scroll and view different areas of the map.

Pan the Map

Pan the map to view areas of the map that are outside the portion of the map that is currently in view.

To pan the map, you can use the following methods:

- On a touchscreen, tap and hold your finger, and then drag it to scroll the map.
- If using a mouse, click and hold, and then drag the cursor to scroll the map.

To turn on Pan mode (if it is not currently on), tap 🔄 to maximize the map. The object toolbar displays the Pan icon 🔄 to indicate that Pan mode is in effect by default.
Like other selection modes, Pan mode stays in effect until you tap a different selection mode.

To restore the initial view, double-tap the map. The initial view is also restored when you reopen the report.

Zoom the Map

To zoom the map, you can use the following methods:

- On a touchscreen, pinch or spread your fingers on the map to zoom the display in or out.
- If using a mouse, scroll the mouse wheel to zoom in or zoom out at the location of the cursor.

You can also use **Zoom to rectangle** to create a rectangular zoom selection:

1. On the object toolbar, tap 📡.
2. Tap the current selection mode. For example, tap 📡, 📡, or 📡.
3. On the context menu, tap 📡.
4. To zoom in to a specific area on the map:
   - On a touchscreen, tap and drag to draw a rectangle that specifies the area to zoom.
   - If using a mouse, click, and drag to draw a rectangle that specifies the area to zoom.

On the map, tap and draw the rectangular area. The app zooms the selected area.

Like other selection modes, Zoom to rectangle mode stays in effect until you tap a different selection mode.

To restore the initial view, double-tap the map. The initial view is also restored when you reopen the report.

---

Identify Data Points by Distance

The following slideshow introduces how to identify data points by distance. A detailed procedure follows the slideshow.

**View the slideshow in SAS Help Center.**

To identify data points that are located within a specified distance:

1. Tap the data point to use for the center of the distance calculation, and then tap 📡 on the context menu.
2. Tap **Distance** on the context menu.
3. Tap **Miles** or **Kilometers** to use your preferred unit of measure.
4. Enter the distance.
5. Tap **Apply**.
The app zooms into the map and highlights the data points that are located within the specified distance.

Identify Data Points by Drive Time

Note: For information about premium services, see “What Are Geographic Mapping Services?”

The following slideshow introduces how to identify data points by drive time. A detailed procedure follows the slideshow.

View the slideshow in SAS Help Center.

To identify data points that are located within a specified drive time:

1 Tap the data point to use for the center of the distance calculation, and then tap \[\text{\(\)}\] on the context menu.

2 Tap Drive Time on the menu.

3 Enter the drive time duration.

4 (Optional) To identify more than one set of data points, tap Add break and enter an additional data point.

See “What Is a Break?”

5 Tap Apply.

The map highlights the data points that are located within the specified drive time.

Identify Data Points By Drive Distance

Note: For information about premium services, see “What Are Geographic Mapping Services?”

The following slideshow introduces how to identify data points by drive distance. A step-by-step procedure follows the slideshow.

View the slideshow in SAS Help Center.

To identify data points that are located within a specified drive distance:

1 Tap the data point to use for the center of the distance calculation, and then tap \[\text{\(\)}\] on the context menu.

2 Tap Drive Distance on the menu.

3 Tap Miles or Kilometers to use your preferred measure.

4 Enter the drive distance.

5 (Optional) To identify more than one set of data points, tap Add break and enter an additional data point.

See “What Is a Break?”
6 Tap **Apply**.

The map highlights the data points that are located within the specified drive distance.

---

**Select Demographic Data**

After you create a geographic selection using the distance, drive distance, or drive time option, the app displays a map pin on the selected data point. The context menu for the pin and the geographic area includes the **Show demographics** option. Use this option to select up to ten items of demographic data to view for the geographic selection.

**Note:** This feature is available only for bubble and coordinate maps.

---

**View Map Data in a Table**

You can view the underlying data while working with a map.

Complete these steps:

1 Tap to view the map in full-screen mode.

2 Tap ..., and then tap **Show details**.

   Data details appear in a table below the map.

3 Tap a row in the table to highlight the associated item in the map.

   You can also tap in the map to locate the corresponding row in the table.

   **TIP** You can scroll the table up and down to view all of the rows.

4 Tap ..., and then tap **Hide details** to close the table.

---

**Highlight Map Data**

You can select areas on the map and the associated table data is highlighted.

Complete these steps:

1 Tap to view the map in full-screen mode.

2 Tap ..., and then tap **Show details**.

   **TIP** You can still navigate and interact with the map when the table is open.

3 Tap 📍
4 Tap a selection shape: [□] or [○].
   Note: The shapes that are available depend on how the report is designed.

5 Tap and drag on the map to select an area of the map.
   The associated data for this area is highlighted in the table.

6 To highlight other table data, tap inside the selection shape and drag to the new area.
   The movement is reflected in the table.

7 To dismiss the selection, tap outside the selection shape.

Select Map Data to Interact with Other Objects

You can select areas on the map to identify data for interaction with other objects.

Because you must view the map in full-screen mode to view a supplemental data table, you cannot see the interactions when they occur. You must restore the map to its initial size and review the other objects for interactions.

**TIP** Ask your report designer if the map has any interactions with other objects.

Complete these steps:

1 Tap [ ] to view the map in full-screen mode.

2 Tap . . . , and then tap **Show details**.
   Data details appear in a table below the map.

3 Tap [ ]

4 Tap a selection shape: [□] or [○].
   Note: The shapes that are available depend on how the report is designed.

5 Tap and drag on the map to select an area of the map.

6 Tap [ ] to restore the map to its initial size.

   **TIP** Be careful not to tap the map and dismiss the selected area.

7 Review the objects on this page for interactions based on the data selected.

Create Search Pins

You can search a geo map for a keyword or address, such as “coffee” or “Main Street,” and automatically place search pins at up to 20 locations that match the search string.
Complete the following steps:

1. Tap 📡 to view the map in full-screen mode, and then tap 🗺.
2. Tap 🔍, and enter search criteria in the Search map field.
3. Tap 🔄 or press Enter.
   - The app places a search pin at each location, and assigns a numeric value to each pin. The pin number matches its result.
   - When available, the search results also provide the name and street address of each location.
4. Tap a result in the list to highlight its pin on the map.

If you want search results outside of the current visual bounds, drag or zoom the map to view the area in which you want to receive new search results, and tap 🔄 again.

Note: The numeric value indicates that a pin is the result of a search. Search pins are visible only for the current search, and are not saved when you close the report.

---

Working with Location Pins

Create a New Location Pin

A location pin enables you to mark a location on a map and to perform other actions based on that location.

Note: Location pins are not saved as part of your report.

To create a new location pin:

1. Tap 📡 to view the map in full-screen mode.
2. Tap 🔍, and then tap 🗺.
3. On the map, tap the spot where you want to create the location pin.
   - The app displays a pop-up window for the tentative map location.
4. In the Add Pin window, tap 📡 to accept the address and to pin the location.
   - The pin appears on the map and in Pin Options pane. The symbol 📍 indicates that the pin is a location pin. (By contrast, the symbol for a search pin is a numeric value.)
   - In Pin Options pane, you can name the pin, create a route, or delete the pin.
5. Tap ← to return to the Search and Pin panes. The pane lists the newly created location pin.

Note: The app does not save location pins as part of your report.
You can now add additional location pins, place search pins, or calculate a route from one location pin to another. For information, see “Calculate a Route Between Location Pins” on page 65.

Delete a Location Pin
To delete a location pin:

1 Tap ▼ to display the pin list, if it is not already displayed.
2 In the list, tap the location pin that you want to remove, and then tap ▼.
3 In the Pin Options pane, tap ..., and then tap Delete pin.

To delete all pins, tap ▼, if necessary, to display the pin list, tap ..., and then tap Delete all pins.

Calculate a Route Between Location Pins
You can calculate the direct distance from a location pin to a target location.

In addition, with Esri premium services, you can calculate minimum travel time distances that are based on different modes of transportation.

Note: Esri premium services is required for all transportation modes except Direct. If allowed by your organization, you can enable Esri premium services in the application settings. For more information about premium services, see "What Are Geographic Mapping Services?"

To calculate a route between two location pins:

1 On the geo map, tap ●, and create a location pin or tap an existing location pin.

   **TIP** To display the Pin Options pane for an existing location pin, tap the pin in the list, and then tap ▼.

2 In the Pin Options pane, tap ▼.
3 In the Route Options pane, select the Travel mode:

   **Direct** calculates a straight line between a location pin and a target location. (This travel mode is the only non-premium option.)

   **Driving time** or **Driving distance** (Premium) calculates the minimum driving time or distance by using the road map.

   **Walking time** or **Walking distance** (Premium) calculates the minimum walking time or distance by using walking trails and sidewalks where available.

   **Trucking time** or **Trucking distance** (Premium) calculates the minimum trucking time or distance using the roads on which trucks are allowed.

4 Select the Unit of measure: **Miles** or **Kilometers**.
5 Tap the destination point on the map.
The app draws and calculates the route between the two location pins, based on the selected travel mode.

**Note:** To indicate the route origin, the app displays the location pin as (a green pin with an arrow that points from the pin). The destination location is represented by (a target symbol).

You can now perform any of the following actions:

- To reverse the route, tap **Reverse Route** in the Route Options pane. On the map, the symbol of the route origin pin changes from (to (a red pin with an arrow that points to the route origin).

  Note that if you select a premium travel mode (which is any mode other than **Direct**), the **Draw Route** button is enabled. Tap **Draw Route** to confirm the Esri premium option and complete the reverse route action.

- To temporarily hide the route path, tap a spot on the map. To restore the route path, tap the route origin pin.

- To modify other route parameters, in the Pin Options pane, tap **in the Edit route** command bar.

- To clear the route, in the Route Options or Pin Options pane, tap . . . , and then tap **Clear route**.

---

**Working with Network Analysis Objects**

**About Network Analysis Objects**

Report designers can include network analysis objects in their reports. Network analysis objects display a series of linked nodes that represent the relationships between data item values.

In an ungrouped network analysis, report designers create a node for each value of the source data item. From each node, they create a link that corresponds to the value of the target data item.

In a hierarchical network analysis, data items represent the levels within the hierarchy structure, and the nodes provide drill-down functionality into each level.

**Options for a Network Analysis Object**

**Note:** The options for a network analysis that is overlaid on a map might differ from those described below.

You can perform the following activities when you view a network analysis in a report:
display the overview
- pan and zoom the network analysis within the report container
- arrange nodes in the layout of the network analysis
- select the shortest path between nodes
- display supplemental data, such as detail tables, about the network analysis

You can also view any data roles that the report designer has assigned to the network analysis. Typical data roles for a network analysis include the node size, node colors, and link widths.

Display the Overview

You can display an overview pane in the top right corner of a network analysis. It shows you how the network analysis appears as a whole. For large networks, the overview enables you to locate and select the portions of the network analysis with which you want to work.

**Note:** Overviews are not available for network analysis objects on a map background.

To display the overview pane, tap the report, tap , and then tap *Show overview*. You can adjust the position of the network analysis in the overview pane, and use the pane handles to resize the view if some items extend beyond the container boundaries.

To reset the view to its default size, double-tap the overview pane. The overview also resets to its default size when you close the report.

To hide the overview at any time, tap , and then tap *Hide overview*.

Pan and Zoom the Network Analysis Object

**Note:** Pan and zoom controls are different for network analysis objects on a map background. For information, see “Pan and Zoom the Network Analysis Object” on page 67.

You can pan and zoom a network analysis by using controls on the object toolbar.

To display the object toolbar, tap the report.

To expand the toolbar, tap to maximize the report.

From the expanded toolbar, you can access the following controls:

**Pan**
- enables you to tap and drag the network analysis. Pan mode is enabled by default. If Pan mode is not enabled, tap , and then tap .

**Zoom**
- enables you to zoom in or out of the network analysis view. To zoom in or out, tap ., tap *Zoom*, and then tap or .

For ease of use, you can display the Zoom toolbar beneath the object toolbar. To do so, from the *Zoom* menu, tap *Show controls*. 
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To hide the Zoom toolbar at any time, tap \..., tap Zoom, and then tap Hide controls.

To return to the default zoom level, from the Zoom menu, tap Reset zoom.

Arrange Nodes in a Network Analysis Object

**Note:** If your network analysis displays a map background, you cannot alter the node layout.

To move a node in the network analysis:

1. Tap the report to display the object toolbar, and then tap \[

2. Tap [ and then tap ].

3. Double-tap the node that you want to move, and drag it to the new location.

To move multiple nodes simultaneously, you can use either of the following methods:

- Hold down the Ctrl key, tap the nodes that you want to move, and drag the selected nodes as a group to a new location.

- Maximize the report, and if selection mode is not enabled, tap \[


Identify the Shortest Path Between Two Nodes

To identify and select the shortest path between two nodes:

1. Hold the Ctrl key, and tap the two nodes for which you want the shortest path.

2. Tap \..., and then tap Select shortest path.

The app refreshes the display, and selects the nodes and links to the shortest path.

Display Supplemental Data

At the bottom of a network analysis object, you can display a table that provides additional data and details about the network analysis. For example, the table can show you the ID of each node and link, as well as the target and source of each node, if applicable.

To display supplemental data, tap \[

to maximize the network, tap \..., and then tap Show supplemental data.

To hide the table at any time, tap \..., and then tap Hide supplemental data.
# Sharing Reports

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Sending Reports to Others

How Can I Send a Report?

The app generates a report link that enables you to send a report. A report link is a link that opens the report. You can email the link.

**TIP**
- You can share a report without adding it to My Reports.
- You can share multiple reports at once. See “Selecting Multiple Reports”.

Email a Report

To email a report:

1. Open the Details pane:
   - In the report viewer, tap
   - In My Reports, press and hold on the report tile.
   - In Add Reports, tap a report.
2. Tap
3. If your device has multiple apps for sharing, an app selection window opens. Tap the app that you want to use.
   A window appears with the report information.
4. Tap the To field and enter the contact information for the recipient.
5. (Optional) Tap the message area to enter text.
6. Complete the action to return to SAS Visual Analytics App. For example, in an email app, tap Send.

You can also send multiple reports at one time. See “Selecting Multiple Reports”.

Including Report Content in Microsoft Office Software

You can include reports or objects content in Microsoft PowerPoint, Outlook, Teams, Word, and OneNote. You can copy an image of the report or object and paste it into your file. See “Copy a Report Image”.

You can also annotate the image before pasting it into another file. See “Annotating a Report Page”.

In specific situations, you can export data from an object and import the file into Excel. See “Exporting Data”.

Note: SAS Add-in for Microsoft Office enables you to open SAS Visual Analytics reports in Excel, Outlook, PowerPoint, and Word. Contact your SAS administrator to see if the add-in is available for your organization. For more information, see the SAS Add-in for Microsoft Office product page.

Copying, Saving, and Sharing Reports with Others

How Can I Share Report Images?

You can copy, save, and share reports and objects as image files in the following ways:

- Copy a report image to your device clipboard, and paste the image into another app
- Save a report image to your device as a Portable Network Graphics file (PNG)

Copy a Report Image

To copy a report image to your device clipboard:

1. View the page that displays the information you want to copy.
2. Do one of the following:
   - To copy the entire page, tap anywhere in the report, and then tap · · ·.
   - To copy an individual object, press and hold the object.
3 Tap **Copy** on the menu.
4 Paste the image from the clipboard into any application that supports images.

---

**Save a Report Image**

To save a report image as a file to your device:

1 View the page that displays the information you want to save.
2 Do one of the following:
   - To save the entire page, tap anywhere in the report, and then tap ...
   - To save an individual object, press and hold the object.
3 Tap **Save image** on the menu.

SAS Visual Analytics App saves the image as a PNG file to a folder named SAS Visual Analytics App in your Pictures folder.

---

**Using the Touch Indicator for Presentations**

**What Is a Touch Indicator?**

A *touch indicator* is a small circle that indicates where your finger is touching the screen. When your device is connected to a display device, either by cable or wirelessly, you can use the touch indicator setting. The touch indicator enables your audience and yourself to see what you are touching on the display. When this setting is turned on, SAS Visual Analytics can display the touch indicator.

By default, this setting is turned on.

**Turn On the Touch Indicator**

To turn on the touch indicator:

1 Tap the Windows logo on the taskbar.
2 Tap the **Settings** icon.
3 In the Windows Settings window, tap **Ease of Access**.
4 Tap **Other options**.
5 In the Touch Feedback section, tap the Show visual feedback when I touch the screen switch.

6 For optimal presentation performance, tap the Use darker, larger visual feedback switch.

---

### Turn Off the Touch Indicator

To turn off the touch indicator:

1 Tap the Windows logo on the taskbar.

2 Tap the Settings icon.

3 In the Windows Settings window, tap Ease of Access.

4 Tap Other options.

5 In the Touch Feedback section, tap the Show visual feedback when I touch the screen switch.

6 Tap the Use darker, larger visual feedback switch.

---

### Annotating a Report Page

#### What Is Annotation?

When you use the Windows Ink feature, the app creates a screen capture of the current page that you are viewing in the report. You can draw and write your observations on the image.

When you are finished, you can share the annotated image with others.

Note: The Windows Ink feature requires that you have Windows 10 Anniversary Update 1607 installed on your device.

#### Annotate a Report Page

The following slideshow introduces how to annotate a report page. A detailed procedure follows the slideshow.

View the slideshow in SAS Help Center.

To annotate a copy of a report page:

1 Display the report page that you want to annotate.
2 On the Windows system tray, tap 🖼.

**TIP** If 🖼 is not displayed, press and hold any location in the Windows taskbar, and then tap **Show Windows Ink Workspace Button**.

3 In the workspace area, tap **Screen sketch**. An image of the page that you are viewing appears.

The following tools are available:

- 🖌️ Tap the pen to write or draw on the image. You can change the color and width of the output.
- ✖️ Tap the pencil to write or draw on the image. You can change the color and width of the output.
- ✨ Tap the highlighter to draw translucent color on the image. You can change the color and width of the output.
- ❁ Tap the **Erase All Ink** button to clear all of the annotation.
- 🟠 Tap the **Ruler** button to draw straight lines anywhere on the image.
- ✍️ Tap the **Touch Writing** button to toggle the touch writing feature on or off.
- 🔧 Tap the **Undo** button for each action that you want to undo.
- 🔧 Tap the **Redo** button for each action that you want to redo.
- 🔧 Tap the **Crop** button to crop or cut out parts of the image.
- 🗑️ Tap **Clear All** to clear all annotations.

---

### Share the Annotated Page

You can share the annotated image in the following ways:

- **Share an image of the annotated page using email or text messages.**
- Copy an image of the annotated page to your device clipboard and paste the image into another app.
- **Save an image of the annotated page on your device.**

---

### Save the Annotated Page

Save your annotated page before you exit Screen Sketch. Tap ✒️ and then specify a name and location on your device.

**Note:** If you do not save, your annotated page is discarded.
Exit the Annotate Window

To exit Screen Sketch, tap the Close button.

Note: If you have not saved the annotated page, it is discarded.

Copy the Annotated Page

You can copy an image of your annotated page to your device clipboard, and then paste the copy into an app that accepts images.

1 Tap 📧.

2 Open another app that can accept images.

3 In the applicable location in the other app, press your finger on the screen and then release.
   An action palette appears.

4 Tap Paste.
   The image of the annotated page appears in the other app.

Printing Reports

Print a Report or an Object While Viewing It

To print a report or an object in a report:

1 Tap . . .

2 Tap Print or Print object in the context menu.
   A progress indicator appears. The server connection generates a PDF of the report. The PDF is downloaded to your device.

   TIP To cancel the process, tap Cancel on the progress indicator.

3 The How do you want to open this file? window appears.
   Tap an app and tap OK to open and print the PDF.
Print a Report from Add Reports

You can print reports whether or not you have added them to My Reports:

1. Tap the report.
2. Tap ![printer icon](image)

A progress indicator appears. The server connection generates a PDF of the report. The PDF is downloaded to your device.

**TIP** To cancel the process, tap **Cancel** on the progress indicator.

3. The How do you want to open this file? window appears.
   Tap an app and tap **OK** to open and print the PDF.

Print a Report from Search Results

You can print reports whether or not you have added them to My Reports:

1. Press and hold on the report tile.
2. Tap **Print** or **Print object** in the context menu.

A progress indicator appears. The server connection generates a PDF of the report. The PDF is downloaded to your device.

**TIP** To cancel the process, tap **Cancel** on the progress indicator.

3. The How do you want to open this file? window appears.
   Tap an app and tap **OK** to open and print the PDF.

Print a Report While in My Reports, Recent, Favorites, or Collection Views

You can print reports whether or not you have added them to My Reports:

1. Press and hold on the report tile.
2. Tap **Print** or **Print object** in the context menu.

A progress indicator appears. The server connection generates a PDF of the report. The PDF is downloaded to your device.

**TIP** To cancel the process, tap **Cancel** on the progress indicator.
3 The How do you want to open this file? window appears.
   Tap an app and tap OK to open and print the PDF.

Exporting Data

What Can I Export?

You can export data for an object.

The following conditions must be true in order for the Export data feature to be available for an object:

- the SAS Visual Analytics server is running version 8.1 or later, or version 7.4 or later
- the server supports the Export data capability, and the capability is assigned to your user ID
- the selected object is a table, crosstab table, graph, or gauge

Depending on the type of object that you select, you can export data in any of the following formats:

- Microsoft Excel workbook (XLSX)
- comma-separated values data file (CSV)
- tab-separated values data file (TSV)

Here are some key points about exporting:

- When you export a graph or chart, you are exporting the data for that object, not the image.
- The information that can be exported for an object depends on how the report author set up the report.
- Some objects do not support all of the options in the Export Data window. For example, when you export a crosstab table, the Detailed data option is sometimes not available.
- When the exported file type is Excel workbook, the spreadsheet generally includes one tab, labeled Results. When you export an Advanced Visual Analytics element with the non-detailed data option, Excel workbook is the only format option available, and data is exported to a spreadsheet with multiple tabs.

About the Export Data Window

The following figure shows a sample pie chart.
The following figure shows a sample Export Data window for the pie chart.

By default, the entries that you see for Rows and Columns in the Export Data window represent data items in the object that you select in the report. In this example, the range in the Rows field (1–6) represents the number of regions in the pie chart.

If you select the Detailed data option, the columns change to represent the data items in the table that are used to create the object. Any data item that is not marked as hidden in the table appears in the Export Data window. Note that the range displayed for Rows also changes when you select the Detailed data option.

Under Columns, select the check boxes for the columns that you want to export.
In the **Rows** field, indicate the range of rows that you want to export. Continuing with the pie chart example, you could choose to export rows 3–5. The maximum number of rows that you can export at one time is determined by a server setting. The default value is 100,000. For information about the setting on your server, contact your SAS administrator.

**Note:** The server limit indicates only the maximum number of rows that you can export at one time. In other words, if the server limit is 100,000, you can include row numbers that are above 100,000 in your export. For example, if the object has 150,000 rows, you can enter 100,001–150,000 in the **Rows** field.

The range that appears in the **Rows** field when you open the Export Data window varies, as follows:

- By default, the app displays the total number of rows in the object (if the server can detect that number).
- If the server cannot determine the number of rows in the object, the field displays a default entry of 1–100,000.

If you select **Formatted data** under Options, the exported data includes formatting information, such as currency symbols.

### Exporting Objects with Multiple Parts

A report might include an object that contains more than one part. The following figure shows an advanced analytic object that has three parts.

Note the following when exporting an object with multiple parts:
By default, the Export Data window does not display the **Rows** and **Columns** fields. In addition, the **Formatted data** option is selected, and Excel workbook is the only available file type. When you open the exported file in Microsoft Excel, you see a separate worksheet tab for each part of the object.

If you select the **Detailed data** option, the Export Data window displays the columns and rows that make up the table that underlies the entire object. All three file types become available. If you export using the Export workbook file type, the resulting file includes a single tab, labeled **Results**, with the data for the entire object.

---

### Export Data

To export data:

1. Select the object with data that you want to export.
2. Maximize the object, and then tap ➤.
3. Determine whether you want the data for the object as it appears in the report, or the data in the table used to create the object. To include the data in the underlying table, under **Options**, select **Detailed data**.
4. In **Rows**, enter the range of rows to export.
5. Under **Columns**, select the columns to export.
6. To export formatting information with the data, under **Options**, select **Formatted data**.
7. In the **File Type** list, select the type of export file to create.
8. Tap **OK**.
9. In the How do you want to open this file? window, select the appropriate application, and then tap **OK**. The file opens in the selected application.

**Note:** Microsoft Excel is usually the default application for opening XLSX and CSV files. Notepad is usually the default application for opening TSV files. SAS recommends using Wordpad for TSV files.
Troubleshooting SAS Visual Analytics App

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Problems in My Reports, Recent, Favorites, or Collections

A Report Is Missing

Problem: A report that was previously in My Reports, Recent, Favorites, or a collection, is no longer there.

Explanation 1: When a report is removed from the server, the report is removed from your device the next time it connects to the server.

Resolution 1: Contact the author of the report.

Explanation 2: If the report is in a collection, when the owner of the collection removes a report from the collection, the report is removed from your device the next time it connects to the server where the collection is located.

Resolution 2: Contact the owner of the collection.

Favorites Is Empty

Problem: You added one or more reports to Favorites, but Favorites is empty.

Explanation: The ability to view reports from a particular server in Favorites (and in the Favorites folder in the Add Reports window), is controlled by an administrative setting.

Resolution: Contact the SAS administrator for the affected server.

- (SAS Visual Analytics 8.1 or later) The required URI is /folders/folders/@myFavorites.
- (SAS Visual Analytics 7.3, 7.4, and 7.5) The required capability is Personalization.

For more information, see “URIs and Capabilities That Affect the Mobile App” on page 96.

Cannot Add a Report to Favorites

Problem: You can view a report, but you cannot add the report to favorites.

Explanation 1: You are accessing the report using a guest connection to the server.

In this situation, the Favorites setting is not enabled or only the SAS administrator can add and remove reports from Favorites. See “Guest Connection to a Server”

Resolution 1: Contact the system administrator for the affected server.
Explanation 2: The ability to add a report to **Favorites** is controlled by an administrative setting.

Resolution 2: Contact the SAS administrator for the affected server.

- (SAS Visual Analytics 8.1 or later) The required URI is `/folders/folders/@myFavorites`
- (SAS Visual Analytics 7.3, 7.4, and 7.5) The required capability is Personalization.

For more information, see “URIs and Capabilities That Affect the Mobile App” on page 96.

---

## Cannot Remove a Report from Favorites

**Problem:** You cannot remove a report from **Favorites**.

**Explanation 1:** You are accessing the report using a guest connection to the server.

In this situation, the Favorites setting is not enabled or only the SAS administrator can add and remove reports from Favorites. See “Guest Connection to a Server”

**Resolution 1:** Contact the SAS administrator for the affected server.

**Explanation 2:** The ability to remove a report from **Favorites** is controlled by an administrative setting.

**Resolution 2:** Contact the SAS administrator for the affected server.

- (SAS Visual Analytics 8.1 or later) The required URI is `/folders/folders/@myFavorites`
- (SAS Visual Analytics 7.3, 7.4, and 7.5) The required capability is Personalization.

For more information, see “URIs and Capabilities That Affect the Mobile App” on page 96.

---

## A Report Tile Does Not Display an Image

**Problem:** When you are in **My Reports, Recent, Favorites**, or a collection, or in search results, one or more report tiles do not display an image.

**Explanation:** When possible, an image from the report is auto-generated for the report tile. If an image cannot be generated, the report tile displays a default image.

**Resolution:** The report tile is working as designed.

**TIP** The default image differs from , which indicates a report that uses remote data. See “Remote Data Availability and Report Security”.
Recent Is Empty

Problem: You have viewed reports, but Recent is empty.

Explanation: Recent can be empty because of the following reasons:

- You downloaded and viewed the report using a guest connection to the server. Reports viewed using a guest connection are not included in the history of recently viewed reports.
- You cleared the recently viewed reports history for the connection.
- The server on which the affected reports are located might have reset your history.
- The ability to view the content of Recent is controlled by an administrative setting.

Resolution: Contact the SAS administrator for the affected server. If the issue is a missing administrative setting, the administrator uses one of the following settings:

- (SAS Visual Analytics 8.1 or later) The required URI is /folders/folders/@myHistory.
- (SAS Visual Analytics 7.3, 7.4, and 7.5) The required capability is Personalization.

For more information, see “URIs and Capabilities That Affect the Mobile App” on page 96.

Cannot Delete Reports in My Reports

Problem: You cannot delete a report in My Reports.

Explanation: Some of the reports in My Reports are part of a collection that you have auto-added. You cannot delete auto-added reports.

Resolution: To remove the reports, clear the auto-add option for the affected collection. See “Remove Auto-add”.

Problems in Add Reports or Search

Cannot Add a Report

Problem: You attempt to add a report, but it fails.

Explanation: The ability to add reports and view reports is controlled by an administrative setting.

Resolution: Contact the SAS administrator for the affected server.
Search Fails to Return Results

Problem: The app does not return any search results for a server connection.

Explanation: The device is not connected to a network. The app requires a network connection to search a connected server. When there is no network connection, search results include only reports located on the device.

Resolution: Make sure the device is connected to a network and that Airplane mode is turned off.

Note: If search continues to fail, contact your SAS administrator.

You Do Not Know the Report Location

Problem: You do not know the server name or the path in which the report is located.

Resolution: The following slideshow shows you how to find a report’s server and path information.

View the slideshow in SAS Help Center.

For detailed steps, see “Identify an Open Report’s Server and Path Information” and “Identify a Closed Report’s Server and Path Information”.

Problems in the Report Viewer

The Export Data Option Is Not Available

Problem: You have maximized an object, but the Export Data option is not available.

Explanation 1: The ability to export report data is controlled by an administrative setting.

Resolution 1: Contact the SAS administrator for the affected server.

- (SAS Visual Analytics 8.1 or later) The required URI is /reportData_capabilities/exportData.
- (SAS Visual Analytics 7.3, 7.4, and 7.5) The required capability is Export Data.
For more information, see “URIs and Capabilities That Affect the Mobile App” on page 96.

Explanation 2: The type of selected object does not support the export data capability. The object must be one of the following types: table, crosstab table, graph, or gauge.

For information about other data export requirements, see “What Can I Export?”

Resolution 2: Select a valid type of object.

The Detailed Data Option Is Not Available in the Export Data Window

Problem: The Detailed Data option does not appear in the Export Data window.

Explanation: The ability to access this option is controlled by an administrative setting.

Resolution: Contact the SAS administrator for the affected server. The required URI is /reportData_capabilities/exportDetailData.

For more information, see “URIs and Capabilities That Affect the Mobile App” on page 96.

Note: This capability is not available in SAS Visual Analytics 7.3, 7.4, or 7.5.

Report Data Is Missing or Incomplete

Problem: The report either partially opens or the app displays the following message:

A server data request was not fulfilled. The object data might be missing or incomplete. Make sure that a network connection is available such as a cellular, Wi-Fi, or other network.

Explanation: This problem occurs when the device is not connected to a network. The report uses data conditions that force SAS Visual Analytics App to retain a live connection with the report server. This connection enables the app to download additional data in response to interactions. This live connection is lost when the device is not connected to a network.

Resolution:

- Make sure that the Airplane mode setting is turned off. Tap the Network icon on the taskbar to locate this setting.
- Make sure that you currently have a wireless or other network connection.

Report Is Missing Web Content

Problem: You see a blank space in a report where web content should appear.
Explanation: Report designers can include a link to web content (such as an external page or YouTube video) in a report. The content to which the link points appears in the report.

The content might be missing because of the following reasons:

- there is no internet connection.
- there was an error in how the link was added to the report.
- the link might no longer be valid.

Resolution:

- Make sure that you currently have a Wi-Fi or other internet connection.
- Contact the report designer.

---

**Columns Do Not Sort in a Table**

Problem: You tap a column heading in a table and the column data does not sort.

Explanation: When the column data does not sort, it might be because of one or more factors:

- Some reports might use a type of data that the app cannot dynamically sort.
- Sorting might be disabled for some objects.

Resolution: Contact your report designer about the design of the report.

---

**Drive Time and Drive Distance Are Missing on an Esri Map**

Problem: A report includes an object that is an Esri map. However, only the **Distance** selection is available. The **Drive time** and **Drive distance** selections are missing.

One or more of the following situations might be the cause:

- Explanation 1: The affected report is located on a server running SAS Visual Analytics 7.5 or earlier. Drive time and drive distance functionality are provided by release 8.1 and later.
  
  Resolution 1: The server must be running SAS Visual Analytics 8.1 or later. Contact your SAS administrator.

- Explanation 2: You require an additional Esri setting assigned to your user ID.
  
  Resolution 2: Contact your SAS administrator. Your user ID in SAS Visual Analytics must be assigned the URI /webDataAccess/esri/user/token.
  
  For more information, see "URIs and Capabilities That Affect the Mobile App" on page 96.

- Explanation 3: The server does not have your Esri credentials.
  
  Resolution 3: You must enter your Esri credentials for the applicable server connection in SAS Visual Analytics App.
Note: Depending on your organization, Esri credentials and the server connection credentials can differ. Contact your SAS administrator about your Esri credentials.

---

## Cannot View Comments

**Problem:** You cannot view comments associated with a report or its contents.

**Explanation:** The ability to view comments is controlled by an administrative setting.

**Resolution:** Contact the SAS administrator for the affected server.

- (SAS Visual Analytics 8.1 or later) The required URI is /comments/comments.
- (SAS Visual Analytics 7.3, 7.4, and 7.5) The required capability is Add and View Comments.

For more information, see "URIs and Capabilities That Affect the Mobile App" on page 96.

---

## Cannot Add Comments

**Problem:** You cannot add a comment to a report or its contents.

**Explanation:** The ability to add comments to a report or its contents is controlled by an administrative setting.

**Resolution:** Contact the SAS administrator for the affected server.

- (SAS Visual Analytics 8.1 or later) The required URI is /comments/comments.
- (SAS Visual Analytics 7.3, 7.4, and 7.5) The required capability is Add and View Comments.

For more information, see "URIs and Capabilities That Affect the Mobile App" on page 96.

---

## Comment Topic Titles Are Not Displayed

**Problem:** You are no longer prompted to enter a topic title when creating new comments. Topic titles that were created for existing comments do not appear in the app.

**Explanation:** The comment feature was modified, and support for the topic title field was removed. The app does not display topic titles that were created for existing comments.

---

## Cannot Add an Avatar to Comments

**Problem:** Your avatar does not appear in comments or replies.
Explanation: You must use SAS Visual Analytics to add a picture to your user profile.

Resolution: In SAS Visual Analytics, access the **Choose Picture** option under **General** settings to assign or change your avatar. The assigned picture appears when you view your comments and replies in the **Comments** view of SAS Visual Analytics App. For details, see the SAS Visual Analytics user documentation.

### Cannot Subscribe to Alerts

**Problem:** You cannot access the **Alerts** view in the report viewer and subscribe to alerts.

The ability to subscribe to alerts is controlled by an administrative setting.

**Resolution:** Contact the SAS administrator for the affected server.

- (SAS Visual Analytics 8.2 or later) The required URI is /reportAlerts/*.
  
  **Note:** The Alerts feature is not supported by SAS Visual Analytics 8.1.

- (SAS Visual Analytics 7.3, 7.4, and 7.5) The required capability is Personalization.

For more information, see “URIs and Capabilities That Affect the Mobile App” on page 96.

### Alerts Do Not Work

**Problem:** Alerts do not work for a report.

**Explanation:** The Alerts feature is not supported on servers running SAS Visual Analytics 8.1. It is supported on all other releases.

**Resolution:** Contact your SAS administrator about the version of SAS Visual Analytics.

### My Device Cannot Connect to Any Servers

**Issue:** The mobile device was disconnected from a server, and now all the connections and reports are gone.

**Explanation:** The device might have been added to a blacklist. A blacklist is used to prevent specific devices from having access to server connections and reports. A network administrator might add a device to the blacklist when the employee who uses it leaves the company, or if the device is lost or stolen. Adding a device to the blacklist removes all server connections and reports from that device.

**Resolution:** Contact your network administrator. They can remove the device from the blacklist if that is the issue.
Note: After the device is removed from the blacklist, you will have to add the server connections and reports back.

A Page Tile Does Not Display an Image

Problem: When you view the table of contents for a report, one or more page tiles do not display an image.

Explanation: Some types of objects do not provide an image for a page tile. For example, tables, crosstabs, and gauges do not provide images.

Resolution: The page tile is working as designed.

Cannot Email or Share Reports

Problem: You cannot email or share reports in any way.

Explanation: The ability to share a report is controlled by an administrative setting.

Resolution: Contact the SAS administrator for the affected server.

- (SAS Visual Analytics 8.1 or later) The required URI is /SASVisualAnalyticsCommon_capabilities/shareReport.
- (SAS Visual Analytics 7.3, 7.4, and 7.5) The required capability is Email.

For more information, see “URIs and Capabilities That Affect the Mobile App” on page 96.

App Fails to Respond or Displays Unexpected Behavior

Problem: The app does not respond or the app displays unexpected behavior.

Resolution: Stop the app and, in some cases, re-install the app. Do so in the following order:

   a. Press and hold the taskbar. A context menu appears.
   b. Tap Task Manager.
d Tap End task.

2 Restart the app to determine whether the problem is resolved.

3 If the problem persists, stop the app again using the procedure in step 1.

4 Delete the app.

**CAUTION!** Deleting an app also deletes the reports and data from your device. Any server connections, user IDs, and passwords are also deleted.

   a Tap the Windows button.

   b Tap All apps.

   c Locate SAS Visual Analytics Mobile.

   d Press and hold SAS Visual Analytics Mobile.

   e Tap Uninstall.

   f Tap Uninstall again.

5 Download and install SAS Visual Analytics App: Microsoft Windows store.

6 Start the app to determine whether the problem is resolved.

7 If the problem persists, contact your technical support staff.
Technical Information

Security Features of the App

To secure reports and data on your devices, use the following features provided by SAS Visual Analytics, SAS Visual Analytics App, and other SAS software.

Default Security Features in SAS Software

The following features are provided by the software installation:

- Users must authenticate in order to establish a connection to the server.

  Note: Depending on your installation, authentication can be against the metadata server’s authentication provider or the web application server’s authentication provider.

- SAS metadata security is enforced on all reports.

Security Options Available for SAS Administrators

SAS administrators can control how a mobile device running SAS Visual Analytics App can access reports and data located on a SAS Visual Analytics server. You can
use features, capabilities, and properties (alone or in combination) to control access to the server data and reports from the app.

**TIP** For SAS Visual Analytics 8.1 or later, be sure to select your version of SAS Viya from the **Version** list at the top of the topic.

- Functionality in SAS Visual Analytics App can be limited per user. You can control whether a user can add and view reports, share links to reports by using email, add or view comments, see and use the Favorites or Recent views, and more.

<table>
<thead>
<tr>
<th>SAS Visual Analytics server version</th>
<th>Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1 or later</td>
<td>SAS Viya Administration: Mobile Search for &quot;limit functionality&quot;.</td>
</tr>
<tr>
<td>7.5, 7.4, or 7.3</td>
<td>Capabilities for End Users</td>
</tr>
</tbody>
</table>

- You can encrypt connections between mobile devices and SAS servers using Transport Layer Security (TLS).

<table>
<thead>
<tr>
<th>SAS Visual Analytics server version</th>
<th>Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1 or later</td>
<td>Update Apache HTTP Server TLS Certificates and Cryptography</td>
</tr>
<tr>
<td>7.5, 7.4, or 7.3</td>
<td>Support for TLS with Client Certificate Authentication</td>
</tr>
</tbody>
</table>

- Use whitelists and blacklists to enable or prevent access to the server.

<table>
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<tbody>
<tr>
<td>8.1 or later</td>
<td>SAS Viya Administration: Mobile Search for &quot;whitelist&quot; and &quot;blacklist&quot;.</td>
</tr>
<tr>
<td>7.5, 7.4, or 7.3</td>
<td>Enable or Prevent Access by Using the Whitelist and Blacklist</td>
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</tbody>
</table>

For whitelist information for app users, see "About the Whitelist".

- Require SAS Visual Analytics App users to lock the app with a passcode.

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<tbody>
<tr>
<td>8.1 or later</td>
<td>SAS Viya Administration: Mobile Search for &quot;passcode&quot;.</td>
</tr>
<tr>
<td>7.5, 7.4, or 7.3</td>
<td>Lock SAS Visual Analytics App with a Passcode</td>
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</tbody>
</table>
To minimize access by users with revoked credentials, require server credentials after a user has not logged on for a specified period of time.

<table>
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<tbody>
<tr>
<td>8.1 or later</td>
<td>SAS Viya Administration: Mobile</td>
</tr>
<tr>
<td></td>
<td>Search for “time-out”.</td>
</tr>
<tr>
<td>7.5, 7.4, or 7.3</td>
<td>Use the Time-out Setting to Prevent Access</td>
</tr>
</tbody>
</table>

To minimize persistence of mobile data, specify that a user must maintain a network connection to the server while viewing a report in SAS Visual Analytics App.

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<tbody>
<tr>
<td>8.1 or later</td>
<td>SAS Viya Administration: Mobile</td>
</tr>
<tr>
<td></td>
<td>Search for “cache report data”.</td>
</tr>
<tr>
<td>7.5, 7.4, or 7.3</td>
<td>Prevent Report Data from Being Cached on the Device</td>
</tr>
</tbody>
</table>

For app user information, see “Remote Data Availability and Report Security”.

Incorporate your organization’s security into a custom app created by using SAS SDK. For documentation and download information, see the SAS SDK Product web page.

Security Features Provided by the App or Mobile Devices

SAS Visual Analytics App and the mobile devices on which it runs provide these additional security features:

- The apps store passwords by using native application programming interfaces (APIs). See “Password Storage on Devices”.
- Encrypt reports and data.
  - The operating system on the mobile device encrypts the content on the device. SAS Visual Analytics reports and data are encrypted with the rest of the contents on the device.
- Some mobile devices provide face recognition (Face ID), fingerprint recognition (Touch ID), or other biometric technology.
- Device passcodes
More Security Options

Your IT department can require the use of the following technologies to increase mobile device security:
- Secure Sockets Layer (SSL)
- Virtual Private Network (VPN)
- Mobile Device Management (MDM) technology such as Mobile Iron

Use the Mobile App on Your Desktop System

If your desktop system runs Windows 10, you can use the mobile app on your desktop system to view SAS Visual Analytics reports. While SAS Report Viewer is also a good option for Windows 10 desktop systems, the app has the following advantages:
- The app provides better performance. The app uses application programming interfaces (APIs) provided by Windows 10 to render report graphics which means reports respond faster.
- The app provides better security. The app runs in Windows Sandbox. Doing so protects the data downloaded by the app from unexpected access.
- The app is updated more frequently. You get updates and improvements more often.
- The app is easily updated. The Microsoft Windows Store can automatically update the app.

URIs and Capabilities That Affect the Mobile App

Overview

SAS administrators can control access to certain features in SAS Visual Analytics App. The control method differs depending on the release of SAS Visual Analytics to which the mobile app connects.
- For release 8.1 or later, access is controlled by adjusting rules applied to a user or group of users. Rules are identified by URIs (Uniform Resource Identifiers).
For release 7.3, 7.4, and 7.5, access is controlled by assigning capabilities to a role. Then, a user or group of users are given membership to that role.

URIs and capabilities can be set on a per user per server basis. This means, for example, that a user ID might be enabled to add comments on one server, but not on another.

If a user is having trouble accessing a feature in the mobile app, their user ID might not have the necessary URI or capability. If a user is having trouble accessing a feature, verify the URI or capabilities that have been assigned to their user ID for the applicable server.

## URIs Used for SAS Visual Analytics 8.1 and Later

The following URIs control access to features in SAS Visual Analytics App when the app connects to SAS Visual Analytics 8.1 and later.

- `/SASMobileBI/**`
- `/SASMobileBI_capabilities/allowWebContent`
  - **Note:** This URI is supported on servers running SAS Visual Analytics 8.3 and later.
- `/SASMobileBI_capabilities/cacheMobileReportData`
- `/SASMobileBI_capabilities/exemptFromOfflineTimeLimit`
- `/SASMobileBI_capabilities/exemptFromPasscodeRequirements`
- `/SASVisualAnalyticsCommon_capabilities/shareReport`
- `/comments/comments`
- `/folders/folders/@myHistory`
- `/folders/folders/@myFavorites`
- `/reportAlerts/*`
  - **Note:** The Alerts feature is not supported on servers running SAS Visual Analytics 8.1.
- `/reportData_capabilities/exportData`
- `/reportData_capabilities/exportDetailData`
- `/reports/reports/*/*/states`
  - **Note:** This feature and its URI is supported on servers running SAS Visual Analytics 8.3 and later.
- `/reportViewerNaturalLanguageUnderstanding/interpretations`
  - **Note:** This feature and its URI is supported on servers running SAS Visual Analytics 8.3 and later.
- `/webDataAccess/esri/user/token`

For more information, see [SAS Viya Administration](#) and search on the name of the URI.
Capabilities Used for SAS Visual Analytics 7.3, 7.4, and 7.5

The following capabilities control access to features in SAS Visual Analytics App when the app connects to SAS Visual Analytics 7.3, 7.4, and 7.5.

- View Report and Stored Process
- Add and View Comments
- Email
- Export Data
- Export or Print as PDF
- Personalization
- Purge Mobile Report Data
- Limit Duration of Offline Access
- Require Passcode on Mobile Devices

For more information, see the applicable Administration Guide and search on the name of the capability:

- SAS Visual Analytics 7.3 documentation page and view the Administration Guide PDF.

Password Storage on Devices

SAS Visual Analytics App accesses servers on which reports are located. Typically, these servers are configured to require a user ID and password before permitting access. SAS Visual Analytics App stores the user ID and password on the mobile device.

The app uses application programming interfaces (APIs) provided by the mobile device’s operating system to store and retrieve this information:

- Android uses the AccountManager API.
- iOS uses the Apple Keychain APIs.
- Windows uses the Microsoft Credentials Locker.
Ways to Get More Help

If you have problems with a report, contact the report designer or your SAS administrator.

For more help:
- view the videos about SAS Visual Analytics App at SAS Visual Analytics App Documentation web page.
- see the documentation and videos about SAS Visual Analytics at SAS Visual Analytics web page.
- participate in the SAS Visual Analytics section of the SAS Community web site.
- contact SAS Technical Support.

Give Feedback

If you have feedback about SAS Visual Analytics App, contact SAS.

If you have feedback about the Help, submit your comments using the feedback form. In the Feedback category list, select Documentation.
Get Information about SAS Products

For more information about SAS Visual Analytics and SAS Visual Analytics App:

See the SAS Visual Analytics App page at this address:
http://www.sas.com/mobile

Email for information:
mobileapps@sas.com

For information about SAS SDK, a free developer’s toolkit for creating custom mobile apps for SAS Visual Analytics reports, see developer.sas.com. SAS SDK is available for iOS and Android operating systems.

View the Video Tutorials on YouTube

SAS Visual Analytics App provides video tutorials that show how to use features in the app. These videos are available at SAS Visual Analytics App for Windows playlist on YouTube.

**TIP**

- You must have either Wi-Fi or cellular network access to view the videos.
- The playlist includes videos that are not tutorials. The titles for video tutorials include (Tutorial) in them.
- To view the video in the highest quality resolution, make sure HQ is selected.

User Interface Help

My Reports

Shows all of the reports that you have added on this mobile device.

Common Tasks

View a Report: Tap the report tile.
Add a New Report to My Reports
"Update a Closed Report"
Add a Report to Favorites
Print a Report

**TIP** You can print reports whether or not you have added them to your device.

More Tasks
View Your Favorite Reports
Review Your Recent Report Access from All Devices
View Collections of Reports
“Email a Report”
“Remove a Report”
Troubleshooting Problems in My Reports

Add Reports Window
Shows your server connections and the reports that they contain.

Common Tasks
"Add a Report"
"Add a Server Connection"
"Locate a Report on a Server Connection"
"Search Reports"
Print a report

**TIP** You can print reports whether or not you have added them to your device.

More Tasks
View Report Details: Tap the report tile.
“Change the Password for a Server Connection”
“Clear Recent”
“Email a Report”
Troubleshooting Problems in Add Reports or Search

Report Viewer
View your reports. Explore your data. Share your screen.
Common Tasks
Use Features Designed into the Report
View Reports and Objects
“View Information about an Object”
“View an Object Using the Full Screen”
Print a Report

More Tasks
Annotate a Page from a Report
“Email a Report”
Troubleshooting Problems in the Report Viewer

Favorites
Reports added to your favorites on this or another device. See “Your Favorites on Every Device”.

Common Tasks
Add a Report: Press and hold on the report tile, and then tap Add.
View a Report
“Update a Closed Report”
Print a Report

**TIP** You can print reports whether or not you have added them to your device.

More Tasks
Remove a Report from Favorites
“Email a Report”
Troubleshooting Problems in the Favorites View

Recent
Reports that you have recently viewed on this or another device.

Common Tasks
Add a Report: Press and hold on the report tile, and then tap Add.
View a Report
“Update a Closed Report”
Print a Report

TIP You can print reports whether or not you have added them to your device.

More Tasks
“Clear Recent”
Add a Report to Favorites
“Email a Report”
Troubleshooting Problems in the Recent View

Collections

Shows a group of reports that a collection owner has selected and made available to you.

Common Tasks
“Auto-add a Collection”
View a Report
“Update a Closed Report”
Print a Report

TIP You can print reports whether or not you have added them to your device.

More Tasks
“Remove Auto-add”
Add a Report to Favorites
“Email a Report”
Troubleshooting Problems in a Collection