SAS® Visual Analytics 7.3 for SAS® Cloud: Onboarding Guide

Introduction

This onboarding guide covers tasks that account administrators need to perform to set up SAS Visual Statistics and SAS Visual Analytics for SAS Cloud. The tasks include adding users, preparing and loading data, and configuring SAS Mobile BI. Information about where to go for additional documentation and training is also provided.

Note: SAS Visual Statistics includes all of the features of SAS Visual Analytics, plus additional statistical features such as linear regression. The setup tasks are the same for both offerings. For more details, see About SAS Visual Statistics for SAS Cloud on page 17.

Note: This guide was formerly published with the title *SAS Visual Analytics 7.3 for SAS Cloud: Quick-Start Guide*.

Step 1: Log On to the SAS Cloud and SAS App Central

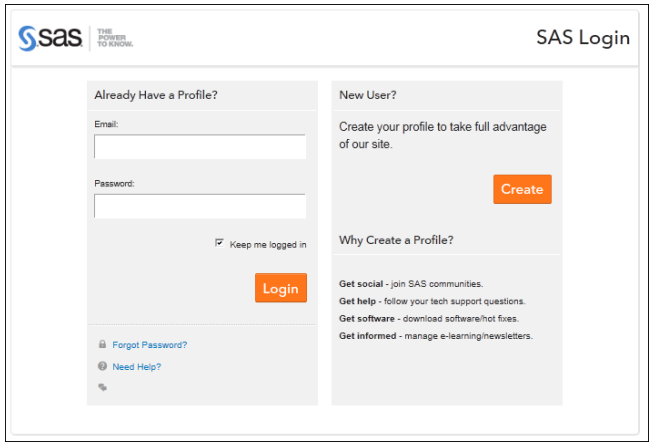
After your SAS environment has been prepared, the account administrator receives an email message from SAS with the title “Welcome to the SAS Cloud! Your account is ready.” The next step is to obtain a SAS Profile and log on to the SAS Cloud.

1 Use your browser to navigate to http://cloud.sas.com.

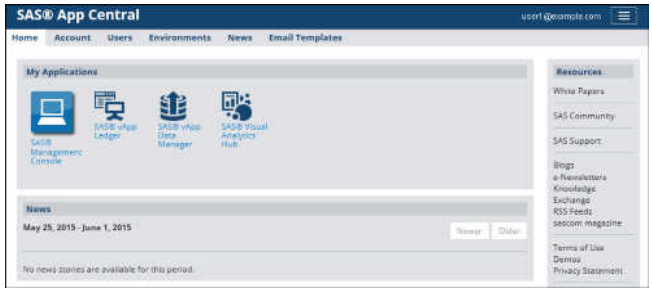
2 The SAS Login page is displayed. In the left panel, enter your SAS Profile credentials, and click **Login**.

If you do not yet have a SAS Profile, you can create one by clicking **Create** in the right panel.

Note: The email address that you use to log on must match the email address where you received the welcome message.



3 The SAS App Central home page is displayed.



Using SAS App Central, you can perform account administration functions, including adding users, assigning users to roles and to environments, and managing email templates.

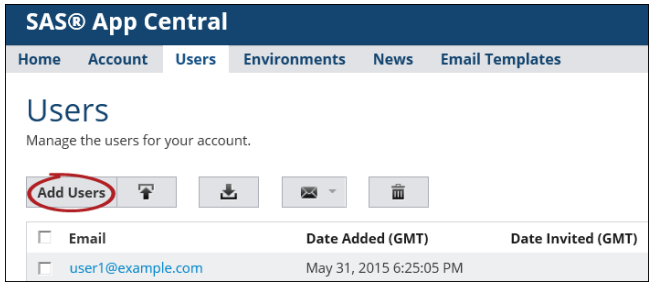
From the **Applications** section of the home page, you can access the following applications:

- **SAS Management Console**, which is used for administrative tasks such as organizing SAS content and granting permissions to SAS content. A copy of the executable that is especially designed for use with the SAS Cloud is downloaded to your desktop.
- **SAS vApp Ledger**, which provides a virtual machine-level view of your environment. As a best practice, use SAS vApp Ledger only when you are requested to do so by SAS Technical Support.
- **SAS vApp Data Manager**, which enables you to upload data to your secure storage area on the SAS Cloud.
- **SAS Visual Analytics Hub**, which provides access to the features of SAS Visual Analytics and SAS Visual Statistics, depending on your license.

Step 2: Add Users

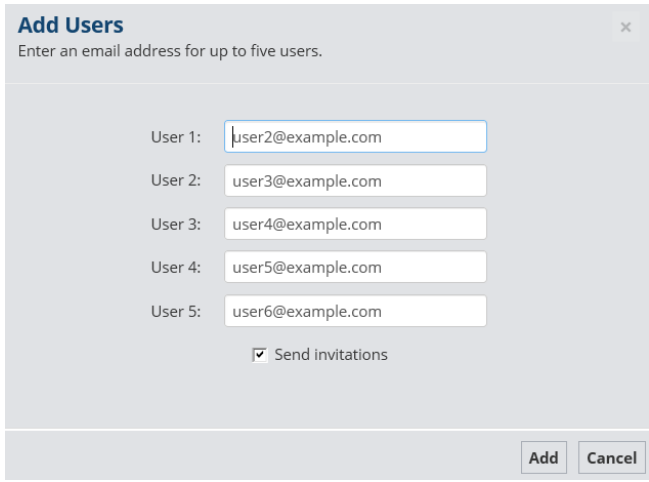
You might need to add users so that they can also access the software in your SAS Cloud environment. Complete these steps in SAS App Central:

1 On the **Users** tab, click **Add Users**.



2 In the Add Users window:

- Enter email addresses for up to five users.
- Select the **Send invitations** check box if you want invitation emails to be sent immediately. The emails have the subject line “Welcome to the SAS Cloud” and provide instructions for logging on.
- Click **Add**.



Repeat these steps until you have added all of your users.

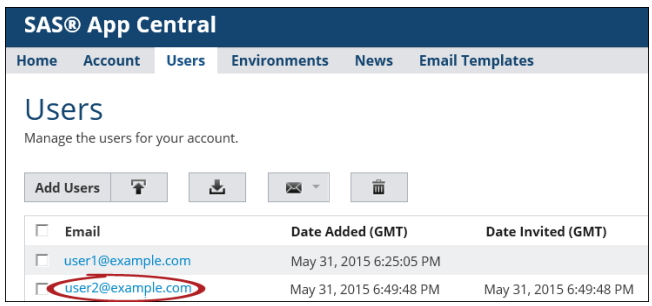
Note: If you have a large number of users, you might want to upload the information in a comma-separated values (CSV) file.

For more details, including upload instructions, see “Managing Users” in *SAS Cloud: Account Administrator's Guide*.

Step 3: Assign Users to Environments and Roles

Assign each user to a SAS Cloud environment and to the appropriate role in the environment. The number of users that you can assign depends on the service level for which you are licensed. Roles determine what each user can do within an environment. To assign users:

1 On the **Users** tab, click the user’s email address.

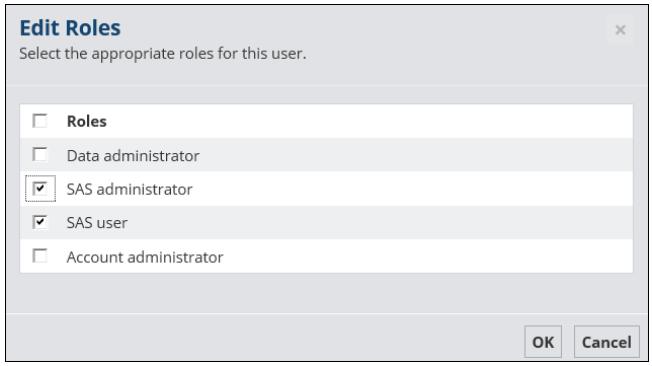


2 In the **Roles** section of the user's information page, click **Edit**.

3 In the Edit Roles window, select or clear the appropriate check boxes to specify one or more roles for the user:

- **SAS user** can access SAS Visual Analytics as a regular user. All users are assigned to this role by default.
- **SAS administrator** can access SAS Visual Analytics as an administrator to perform tasks such as loading data to the SAS LASR Analytic Server. This role can also perform administrative functions in SAS vApp Ledger and SAS Management Console.
- **Data administrator** can use SAS vApp Data Manager to upload data to your account's storage area on the SAS Cloud.
- **Account administrator** can manage users and environments for the SAS Cloud account.

Click **OK**.

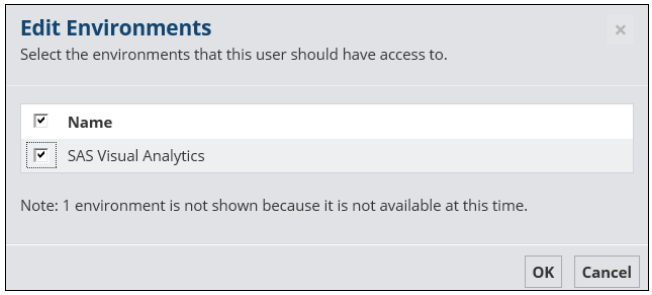


4 In the **Environments** section of the user's information page, click **Edit**.

5 In the Edit Environments window, select or clear the appropriate check boxes to specify environments for the user.

Click **OK**.

Note: Instead of assigning users to environments individually, you can use the **Environments** tab to assign multiple users to a particular environment.



Repeat these steps for each user.

Step 4: Upload and Import Data

All reporting and data exploration in SAS Visual Statistics and SAS Visual Analytics is performed against data that is in memory on a SAS LASR Analytic Server. Use the following procedures to load data to the SAS LASR Analytic Server in your SAS Cloud environment. For more information, see Obtain the Host Name for Your Connection on page 12.

Prepare Your Data

Any valid SAS data set that is compatible with UTF-8 encoding should readily load into the SAS LASR Analytic server. Make sure that your data sets meet the requirements specified in this table.

File Type	Requirements
Microsoft Excel spreadsheets and delimited text files	■ The uploaded file must have a valid SAS filename. ■ If you select the first row (line) of the file to provide column names during the data loading process, the first row must contain valid SAS column names. ■ Use encoding that is UTF-8 compatible. ■ The following requirements apply to CSV files: □ Columns (data items) must be separated by a comma. □ If two commas are used consecutively, a blank data item is assumed. □ Commas can be included within a field if the field is enclosed in double quotation marks.
SAS data sets	The rules for valid SAS column names and filenames are as follows: ■ Names can be up to 32 characters in length. ■ The first character must begin with an English letter or an underscore. Subsequent characters can be English letters, numeric digits, or underscores. ■ A name cannot contain blanks. ■ A name cannot contain any special characters other than the underscore.

Select a Data Loading Method

Use this table to determine which data loading method to use.

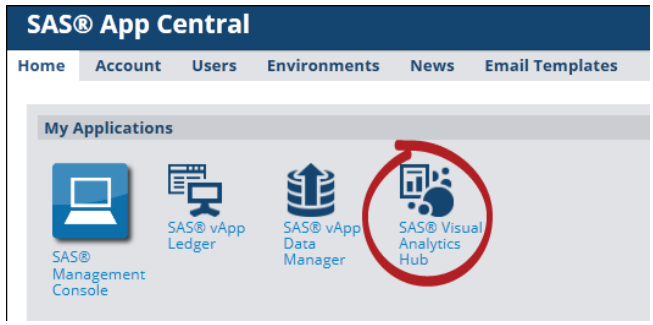
Method	Description
Local import	The local import method enables you to quickly upload Microsoft Excel spreadsheets, delimited text files, or SAS data sets of up to 4 GB from your desktop to the SAS LASR Analytic Server. (A 4 GB file can contain up to approximately 2 million records of data, with 12 to 15 columns each.) The following guidelines apply: ■ The size of files that you can upload might be limited by your browser version. A 64-bit browser is recommended for larger files within the 4 GB limit. ■ When you import a spreadsheet or a delimited text file, a corresponding SAS data set is created. ■ By default, the imported data sets are written to your **`My Folder`** location on the SAS LASR Analytic Server. During the import, you can choose a different location. ■ Locally imported data sets are also copied to the **`PublicDataProvider`** directory in your SAS Cloud storage area. You can view this directory by using SAS vApp Data Manager. ■ If the SAS LASR Analytic Server is stopped and restarted, the reload-on-start feature reloads data sets from the **`PublicDataProvider`** directory to the SAS LASR Analytic server. **Note:** If you delete a locally imported file from the SAS LASR Analytic Server, be sure to also delete the file from the **`PublicDataProvider`** directory by using SAS vApp Data Manager. Doing so prevents unwanted reloads. To use the local import method, follow the instructions in Import Local Data to SAS LASR Analytic Server on page 7.
Autoload from SAS Cloud storage area	The autoload feature automatically loads data from your SAS Cloud storage area to the SAS LASR Analytic Server. The following guidelines apply: ■ This method is recommended for data sets larger than 4 GB. ■ You must first upload the data to the **`public (auto loaded)`** directory in your SAS Cloud storage area. The data must be loaded to that directory, not to a subdirectory. Autoload scans the contents of the **`public (auto loaded)`** directory every five minutes and performs the following tasks: □ loads any data that is not already in memory. The data is written to **`Shared Data/SAS Visual Analytics/Public/LASR`**. For each delimited file and spreadsheet, a corresponding SAS data set is created. □ refreshes in-memory data with any data sets that are newer than their corresponding in-memory tables. □ unloads from memory any data sets that are in the **`public (auto loaded)/unload`** subdirectory. □ appends data that is in the **`public (auto loaded)/Append`** subdirectory if the data is newer than the corresponding in-memory tables. ■ Depending on the file size, the data should be available to your software within five minutes. ■ If the SAS LASR Analytic Server is restarted, data from the **`public (auto loaded)`** directory is automatically reloaded to the server. To use the autoload method, follow the instructions in Upload Data to the SAS Cloud for Autoload on page 8.

Method	Description
Manual import from SAS Cloud storage area	You can upload data to SAS Cloud storage and then manually import it by using SAS Visual Analytics. With this method, you can import data from custom directories that you create in SAS Cloud storage. In addition, you can load data to private folders (for example, **`My Folder`**) on the SAS LASR Analytic Server instead of to the shared location. **Note:** You can use this method only with SAS data sets. To use this method, follow the instructions in Manually Import Data from Your Cloud Storage Area on page 10 .
Social Media	You can import data from Facebook, Twitter, and Google Analytics. For details, see the topic about importing data from other sources in *SAS Visual Analytics User's Guide*.

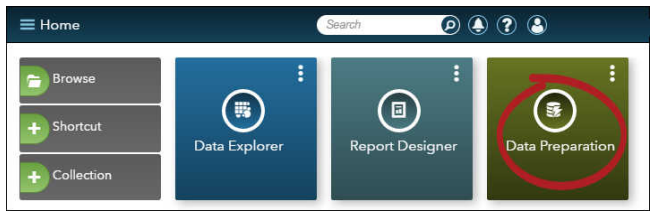
Import Local Data to SAS LASR Analytic Server

Follow these steps to quickly upload Microsoft Excel spreadsheets, delimited text files, or SAS data sets of up to 4 GB from your desktop to the SAS LASR Analytic Server.

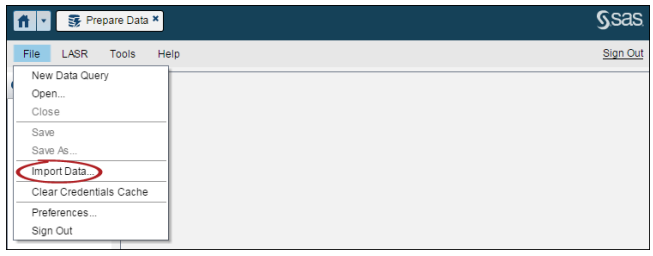
1 In the **My Applications** section of the SAS App Central home page, click **SAS Visual Analytics Hub**.



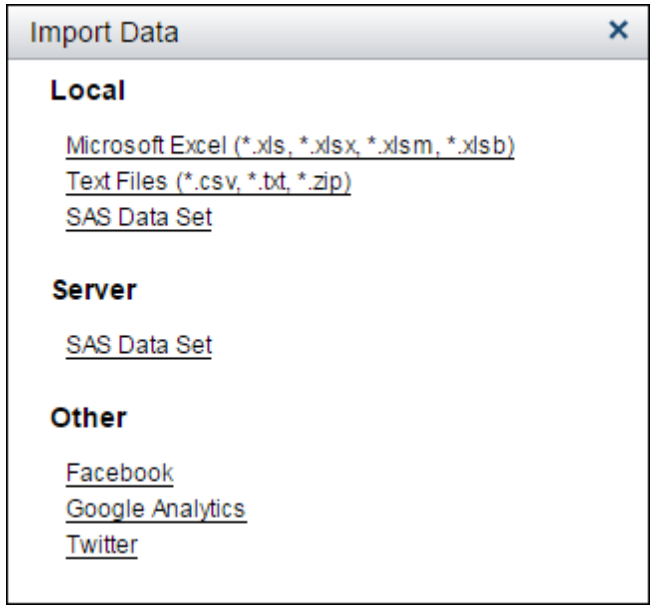
2 On the SAS Visual Analytics home page, click **Data Preparation**.



3 On the Prepare Data page, select **File** ⇨ **Import Data**.



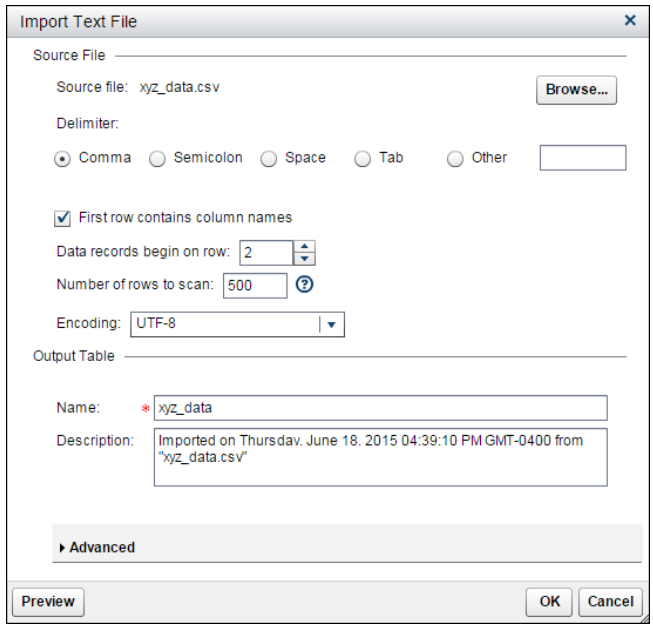
4 In the **Local** section of the Import Data window, select the type of file you are importing.



5 In the next window (which is Import Text File, Import Microsoft Excel File, or Import SAS Data Set), specify any required delimiter, row, or encoding information. This example shows the Import Text File window.

By default, data is imported to your private **`My Folder`** location. If you want the data to be accessible by other users, click **Advanced** and specify a location within the **`Shared Data`** folder.

Click **OK** to complete the import.



For more information, see the topic about importing local data files in *SAS Visual Analytics User's Guide*.

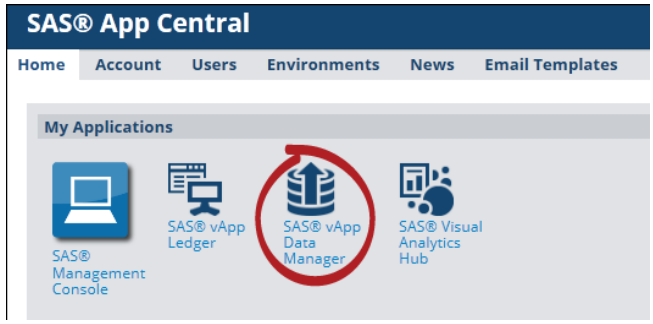
Upload Data to the SAS Cloud for Autoload

Follow these steps to upload data to the **`public (auto loaded)`** directory in your SAS Cloud storage area. The autoload process then automatically loads the data to the SAS LASR Analytic Server.

1 In the **My Applications** section of the SAS App Central home page, click **SAS vApp Data Manager**.

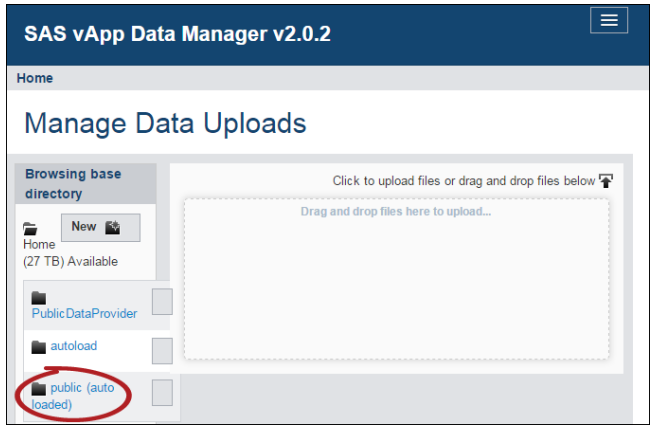
Note: To get the best experience when you use SAS vApp Data Manager, use Google Chrome, Mozilla Firefox, or Microsoft Internet Explorer 10 or later.

Note: Customers in the United States can also use SFTP to perform the upload. For details, see *SAS Cloud: Account Administrator's Guide*.

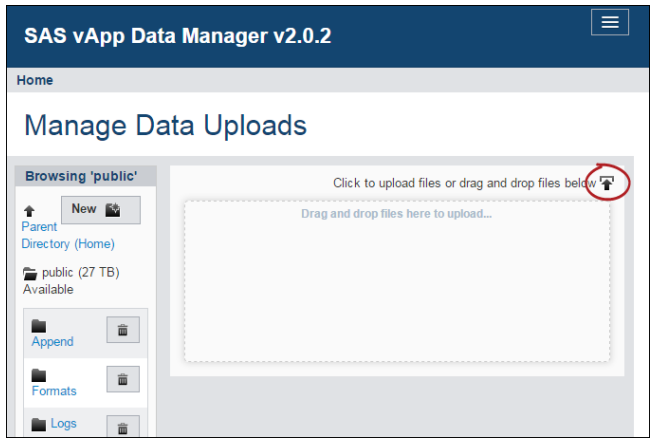


2 In the left pane of SAS vApp Data Manager, navigate to the `public (auto loaded)` directory.

Note: You can click **New** to create a new subdirectory within `public (auto loaded)` to store your data. However, the autoload feature does not load data from subdirectories that you create.



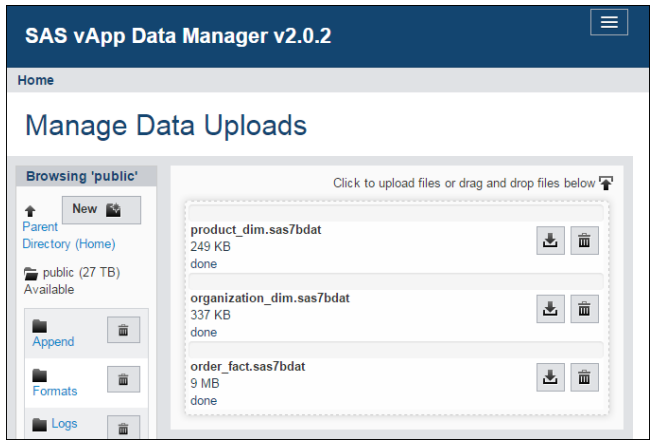
3 Click the Upload icon at the top of the right pane.



4 In Windows File Manager, navigate to the files that you want to upload. Select the files, and click **Open**.

5 The files are uploaded to the SAS Cloud. The filenames and sizes are displayed in the right pane.

You can manage these files by using the Download and Delete icons.



6 Within approximately five minutes (depending on the size of your data), the autoload process loads the data sets to the following location on the SAS LASR Analytic Server: **`Shared Data/SAS Visual Analytics/Public/LASR`**. You can then use the data in SAS Visual Statistics and SAS Visual Analytics.

Manually Import Data from Your Cloud Storage Area

You can upload data to SAS Cloud storage and then manually import it using SAS Visual Analytics. With this method, you can import data from custom directories that you create in SAS Cloud storage. In addition, you can load data to private folders (for example, **`My Folder`**) on the SAS LASR Analytic Server instead of to the shared location. Follow these steps.

Note: You can use this method only with SAS data sets.

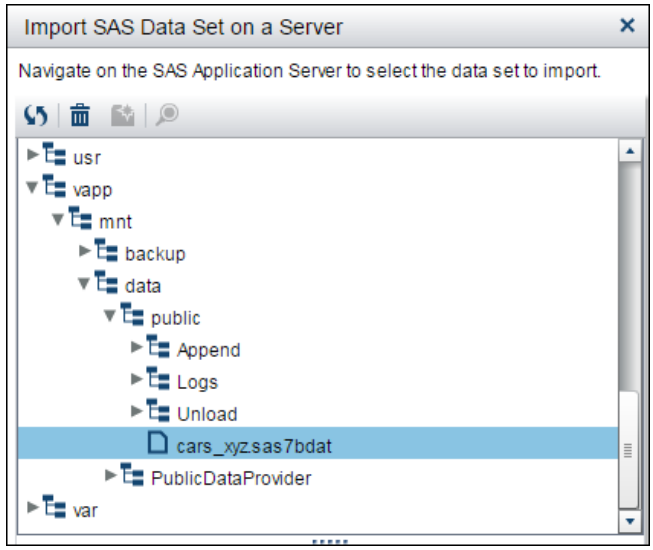
1 Upload the SAS data sets to the SAS Cloud by completing the steps in Upload Data to the SAS Cloud for Autoload on page 8..You can load them to **`public (auto loaded)`** or to a subdirectory that you create within that directory.

2 Begin the import process by completing steps 1 through 3 in Import Local Data to SAS LASR Analytic Server on page 7.

In the Import Data window, click **SAS Data Set** under the **Server** heading.

3 In the Import SAS Data Set on a Server window, navigate to the following path: **`vapp/mnt/data/public`**.

Select your data, and click **OK**.



4 In the Import SAS SAS Data Set on a Server window, click **Advanced** if you want to specify a location other than your private **`My Folder`**. For example, you might want to specify a location within the **`Shared Data`** folder.

Click **OK** to complete the import.

A Note About Data Storage in the SAS Cloud

All of the data loading methods use a secured data storage area on the SAS Cloud that belongs exclusively to your account. If you have more than one SAS environment, each environment has its own separate storage area. An environment's data can be accessed only by users that your account administrator has added to that environment. The type of access depends on the user's role assignment:

- Users in the data administrator role can upload data to and download data from the environment's SAS Cloud storage area.
- Users in the SAS administrator role can use SAS Visual Analytics to import data from the environment's SAS Cloud storage area to the environment's SAS LASR Analytic Server.
- Users in the SAS user role can use SAS Visual Analytics to access and analyze data that has been auto loaded or imported to the SAS LASR Analytic Server. Access can be restricted through the use of private folders or folder permissions on the server.

Using the Sample Data

The **`PublicDataProvider`** folder in your SAS Cloud storage area initially includes several sample data sets. These data sets are on your environment's SAS LASR Analytic server in the location **`Shared Data/SAS Visual Analytics/Public/LASR`**. You can use this data to try out the features of SAS Visual Statistics and SAS Visual Analytics.

If the SAS LASR Analytic Server is stopped and restarted, the reload-on-start feature reloads the sample data sets. If you no longer need these data sets and you delete them from the SAS LASR Analytic Server, be sure to also delete them from the **`PublicDataProvider`** folder using SAS vApp Data Manager. Doing so prevents unwanted reloads.

Step 5: Set Up Mobile Access

About SAS Mobile BI

The SAS Mobile BI app enables you to view SAS Visual Statistics and SAS Visual Analytics reports on mobile devices including Apple iPads, Apple iPhones, and Android-based tablets and smartphones. SAS Mobile BI is available for download at no additional cost. Use the following procedures to set up the app to access reports from your SAS Cloud environment.

Note: SAS Mobile BI is only for report viewing. You cannot use it to load additional data or to create or modify reports.

Obtain the Host Name for Your Connection

When you set up SAS Mobile BI, you need to provide the host name for your SAS Cloud environment. To obtain the host name, open SAS vApp Data Manager from the SAS App Central home page. In the browser's address bar, the host name appears directly after https:// in the format sasv*999999*.apps*99*.sas.com. Make a note of the host name for use in the setup tasks.

Note: The host name will be different in your environment.

Set Up SAS Mobile BI on an Apple iPad or iPhone

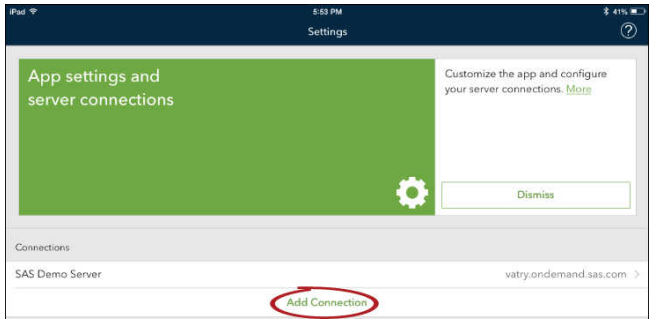
To set up SAS Mobile BI on an Apple iPad or iPhone to access reports from the SAS Cloud:

1. On your device, navigate to the Apple App Store. In the store, search for **SAS Mobile BI**. Follow the prompts to download and install the app.

2. On your device's home screen, tap the SAS BI icon .

3. In the bar at the bottom of the app, tap the Settings icon .

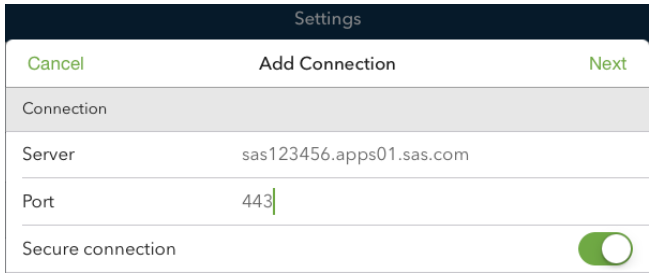
4 In Settings, tap **Add Connection**.



5 In the **Server** field of the Add Connection window, enter the host name for your SAS Cloud environment. See Obtain the Host Name for Your Connection on page 12.

In the **Port** field, enter `443`.

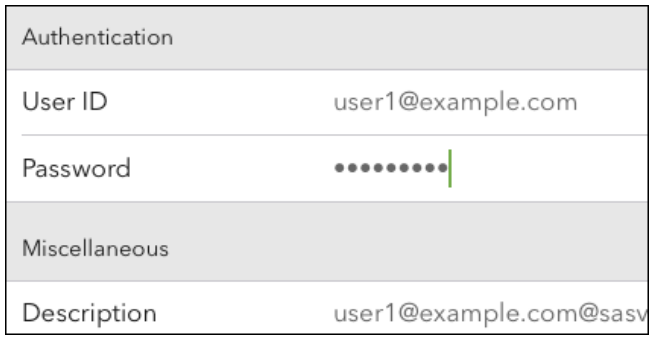
Tap the **Secure connection** switch to activate a secure (SSL) connection, and then tap **Next**.



6 When the Authentication prompts appear, enter the same user ID and password that you use to log on to the SAS Cloud. You can also edit the description.

Tap **Next**.

If the connection information is correct, a success message is displayed. If the connection fails, contact your site administrator or SAS Technical Support for assistance.



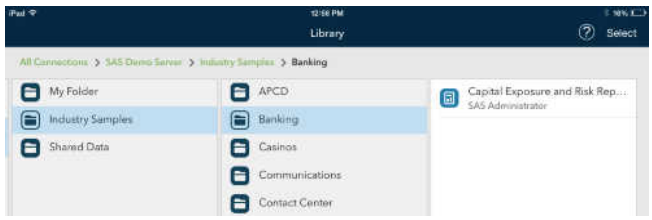
7 To view reports, tap the Library icon in the bar at the bottom of the app.

8 In the library, tap a server connection. To view sample reports, select the SAS Demo Server. To view your reports, select your connection to the SAS Cloud.

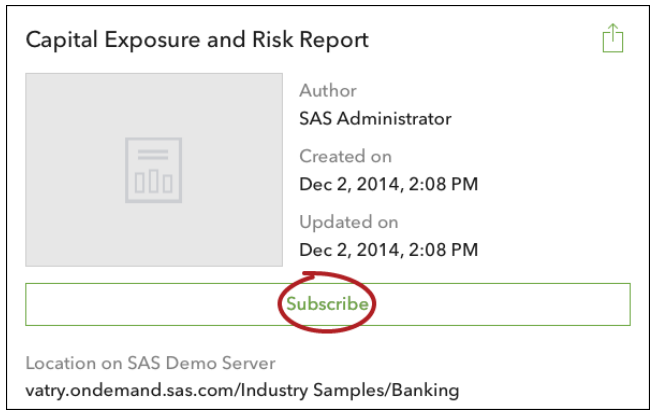
A list of available folders is displayed.

Tap a folder to view its contents. (By default, reports that you create are saved to `My Folder`.)

Tap the report of interest.

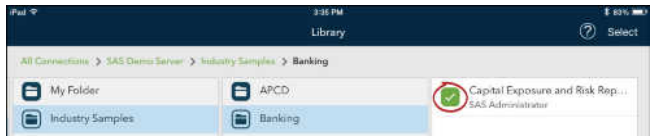


9 When the report details are displayed, tap **Subscribe** to add the report to your portfolio. The download time depends on your connection speed and the report size.



10 When the download is complete, a green checkmark appears next to the report.

Tap the report to view it. You can also select it from the portfolio.



For more instructions, tap in the banner of the app. Tutorial videos are available from within the Help and on the web at support.sas.com/documentation/onlinedoc/mobile_bi.

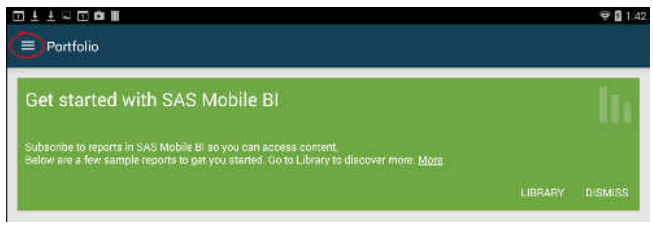
Set Up SAS Mobile BI on Android-Based Tablets and Smartphones

To set up SAS Mobile BI on an Android-based tablet or smartphone to access reports from the SAS Cloud:

1 On your device, navigate to Google Play. In the store, search for **`SAS Mobile BI`**. Follow the prompts to download and install the app.

2 On your device, open **Apps**, and then locate and tap the SAS BI icon .

3 Tap to open the navigation drawer, and then tap **Settings**.

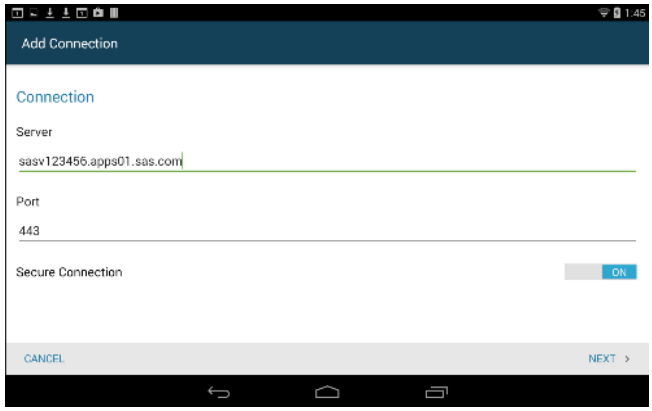


4 Scroll to the **Connections** section of Settings, and tap **Add Connection**.

5 In the **Server** field of the Add Connection window, enter the host name for your SAS Cloud environment. See Obtain the Host Name for Your Connection on page 12. Tap **Next**

Enter `443` in the **Port** field, and then tap **Next**.

Tap the **Secure connection** switch to activate a secure (SSL) connection, and then tap **Next**.



6 When the credential prompts appear, enter the same user ID and password that you use to log on to the SAS Cloud. You can also edit the description.

Tap **Next**.

If the connection information is correct, a success message is displayed. If the connection fails, contact your site administrator or SAS Technical Support for assistance.

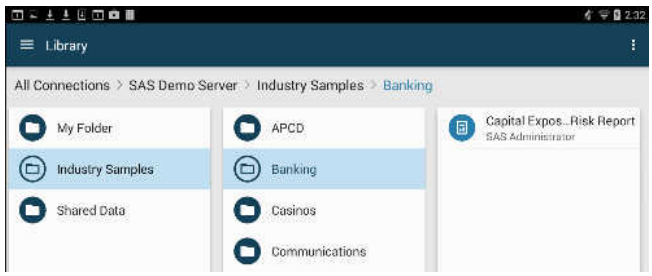
7 To view reports, tap ☰ to open the navigation drawer, and then tap **Library**.

8 In the library, tap a server connection. To view sample reports, select the SAS Demo Server. To view your reports, select your connection to the SAS Cloud.

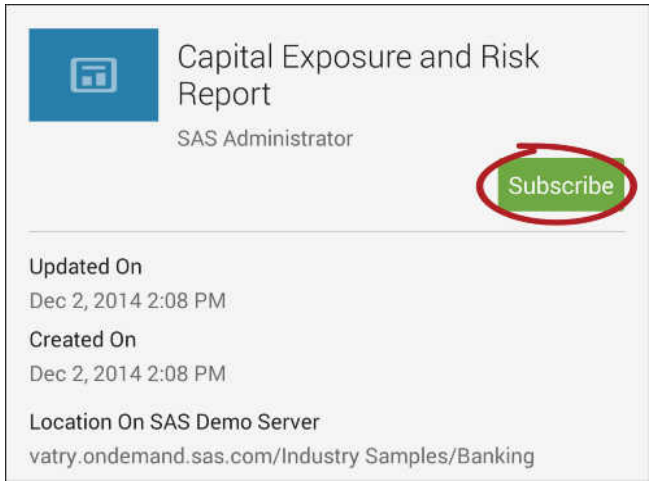
A list of available folders is displayed.

Tap a folder to view its contents. (By default, reports that you create are saved to `My Folder`.)

Tap the report of interest.



9 When the report details are displayed, tap **Subscribe** to add the report to your portfolio. The download time depends on your connection speed and the report size.



10 When the download is complete, a green checkmark appears next to the report.

Tap the report to view it. You can also select it from the portfolio.

For more instructions, tap ☰ to open the navigation drawer, and then tap **Help**. Tutorial videos are available from within the Help, and on the web at support.sas.com/documentation/onlinedoc/mobile_bi.

Using SAS Visual Statistics and SAS Visual Analytics for SAS Cloud

Use the following resources to get started with using your software.

SAS Customer Support Site

The following web pages on the SAS Customer Support site provide access to helpful information:

- SAS Cloud: http://support.sas.com/documentation/onlinedoc/cloudgen/
- SAS Visual Analytics: http://support.sas.com/software/products/va/. Click the following tabs for details: **Overview**, **Getting Started**, **Documentation**, **Training**, **Samples and Tips**, and **Conversations**.

Note: The following features that are described in the SAS Visual Analytics documentation are not included in the SAS Cloud version of the software:

- key actions auditing
- agent-collected metrics (ACM)
- relationship reporting

Training

SAS Education offers the following courses for SAS Visual Analytics:

- a one-day Getting Started course, which is provided online via the SAS Live Web Classroom
- a four-day Fast Track course, which provides in-person comprehensive training, including a case study

For more information, go to http://support.sas.com/software/products/va/ and select **Training**, or send a message to training@sas.com.

Technical Support

If you are unable to resolve a problem by using the resources that are listed here, contact SAS Technical Support as described at http://support.sas.com/techsup/contact/. Customers in Europe should click **find your local office contact information** on this page. Customers in North America can call 919-677-8008.

Express Services

SAS Technical Support will assist you in the preparation and loading of up to three data sets (up to 5 GB each) as part of the base package. Contact SAS Technical Support for details.

Note: These services are not available if you are using the software on a trial basis.

About SAS Visual Statistics for SAS Cloud

SAS Visual Statistics for SAS Cloud includes all of the features of SAS Visual Analytics for SAS Cloud, plus the following features. If you are licensed to use SAS Visual Statistics, then you can access these additional features in the explorer interface of SAS Visual Analytics:

- an enhanced decision tree visualization, which includes interactive training and model assessment information.
- a linear regression visualization, which creates predictive models for measure variables.
- a logistic regression visualization, which creates predictive models for category variables. A generalized linear model visualization, which creates predictive models for measure variables.
- a cluster visualization, which segments the input data into clusters.
- model comparison, which compares two or more predictive models.
- interaction effects, which are used when the contribution of one variable to a model changes as another variable changes.

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