SAS® Viya™ 3.1 Quick Start

Quick Start

Orientation

This software supports analytical data preparation, variable transformations, exploratory analysis, analytical modeling, integrated model comparison, and scoring. Here are the main components:

SAS Studio	The integrated programming environment.
SAS Cloud Analytic Services (CAS)	The analytic engine. CAS uses high-performance, multi-threaded analytic code to rapidly process requests against data of any size.
SAS Visual Data Mining and Machine Learning	CAS based procedures for: ■ analyzing complex data ■ building predictive models ■ advanced statistical operations

CAS based procedures run against data that is in CAS. For example, before you can use CAS to work with a SAS data set, you must load that data set into CAS. The following instructions demonstrate basic mechanics.

Demonstration: Load Personal Data

1 Sign in to SAS Studio.

   a Open SAS Studio from a URL with this format: http://*hostname*:*port*.

b Enter the credentials for your operating system account.

2 Start a CAS session.

a In the navigation pane, open the **Snippets** section.

b Select **Snippets** ⇨ **Cloud Analytic Services**.

c Right-click **New CAS Session** and select **Open**. The snippet opens in the code editor.

d In the toolbar, click to run the **New CAS Session** code.

3 Load a table.

a In the navigation pane, right-click **Load data to Caslib** and select **Open**.

b In the code editor, edit the SAS data set section so that it looks like this:

```
PROC CASUTIL;
    LOAD DATA=sashelp.cars OUTCASLIB="CASUSER"
    CASOUT="demoTable" PROMOTE;
RUN;
```

> **TIP** CASUSER is your personal caslib. It is available across your sessions, but it is always and intrinsically private to you. You cannot enable other users to access it.

c Select the preceding code. In the toolbar, click to run only the four lines of selected code.

4 Verify that you can access the loaded data.

a In the navigation pane, right-click **Generate SAS librefs for Caslibs** and select **Open**.

b In the toolbar, click to run the code.

c In the navigation pane, open the **Libraries** section.

d Select **My Libraries** ⇨ **CASUSER**.

e Double-click **demoTable** to open it.

Demonstration: Provide Shared Data

1 Sign in to SAS Studio and start a CAS session, if you have not already done so.

2 Create a container for shared CAS data.

a In the navigation pane, open the **Snippets** section.

b Select **Snippets** ⇨ **Cloud Analytic Services**.

c Right-click **New Caslib for Path** and select **Open**.

d In the code editor, edit the snippet so that it looks like this:

```
CASLIB demoCas PATH="/filePath/" DATASOURCE=(SRCTYPE="path") GLOBAL;
```

Note: Enter a path that is relative to and accessible from your CAS server. You can reference an empty directory.

e Click to run the code.

Note: If an error indicates that you do not have permission to create global caslibs, see "Adjust Caslib Management Privileges" in *SAS Viya Administration: SAS Cloud Analytic Services*. Initially, only administrators can add global caslibs. An administrator can enable non-administrators to add global caslibs.

3 Give all users Read access to the new caslib.

a In the banner, click , and select **CAS Administration**.

b In the sign-in window, enter your operating system credentials.

c In CAS Server Monitor, beneath the **SAS Cloud Analytic Services** banner, click .

d On the **Configuration** page, select **Access Controls**.

e In the **Caslibs** list, select the caslib.

f In the upper right, click **Edit**.

g In the **Edit Access Controls** window, adjust settings as follows:

- In the **Read Info** row for Authenticated Users, select the **Grant** radio button.
- Click **Add Row**. In the new row at the end of the page, select **Authenticated Users**, the **Grant** radio button, and the **Select** activity.

h Click **OK** to save your changes.

i Under **Access Controls**, review the results of your changes.

j At the right edge of the banner, click your user name, and select **Sign Out**.

4 Load data to the new caslib.

a In the navigation pane in SAS Studio, right-click the snippet **Load data to Caslib** and select **Open**.

b In the code editor, edit the SAS data set section so that it looks like this:

```
PROC CASUTIL;
    LOAD DATA=sashelp.cars OUTCASLIB="demoCas"
    CASOUT="demoTable" PROMOTE;
RUN;
```

c Select the preceding code. In the toolbar, click to run only the four lines of selected code.

5 Verify that other users can see the data. For example, ask them to complete these steps:

a Sign in to SAS Studio, start a CAS session, and run the **Generate SAS librefs for Caslibs** snippet.

b In the navigation pane, open the **Libraries** section.

c Select **My Libraries** ⇨ **demoCas**.

d Double-click **demoTable** to open it.

Tip: Automatically Connect and Generate Librefs

For convenience, you can configure SAS Studio to perform the following tasks each time you sign in:

- Start a CAS session.
- Generate SAS librefs for existing caslibs that have names that are no more than eight characters long.

Complete the following steps:

1. In the SAS Studio banner, click ☰, and select **Edit Autoexec File**.
2. On the **Autoexec.sas** tab of the Edit Autoexec File window, paste the following code:

```
cas casauto;
caslib _all_ assign;
```

3. Run the code.
4. Save the code.

Documentation: References by Task

Task	Refer to:
Do you need to migrate your data to UTF-8?	*Migrating Data to UTF-8 for SAS Viya*
Access your data	"Accessing Data" in *SAS Cloud Analytic Services: Accessing and Manipulating Data* "Common Tasks for Accessing and Manipulating Data" in *SAS Cloud Analytic Services: Accessing and Manipulating Data*
Manipulate your data	"DATA Step Basics" in *SAS Cloud Analytic Services: Accessing and Manipulating Data* "Common Tasks for Accessing and Manipulating Data" in *SAS Cloud Analytic Services: Accessing and Manipulating Data*
Prepare, Model, Assess	"MDSUMMARY" in *SAS Cloud Analytic Services: Language Reference*
	SAS Visual Data Mining and Machine Learning: Data Mining and Machine Learning Procedures *SAS Visual Data Mining and Machine Learning: Statistical Procedures*
Graph your output data	"Graphing Your CAS Output" in *SAS Cloud Analytic Services: Graphing Your Output*
Program with the Lua, Python, or CASL languages	*SAS Cloud Analytic Services: Getting Started with Lua*
	Getting Started with CASL
	SAS Cloud Analytic Services: Getting Started with Python