



SAP



LUMIRA

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About the Tutorial

SAP Lumira is known as a visual intelligence tool that is used to visualize data and create stories to provide graphical details of the data.

Data is entered in Lumira as dataset and you can apply filters, hierarchies, and columns to prepare documents. You can choose various charts like Bar charts, Pie charts, etc. to visualize the data effectively. This basic tutorial explains how to use SAP Lumira.

Audience

SAP Lumira is meant for Business Analysts who can alter data structures and correlations in whatever way they want. They can create data visualizations and stories from multiple data sources. SAP Lumira helps to adapt data to organizational needs to create stories with visualizations.

Prerequisites

Before you start proceeding with this tutorial, we are assuming that you are already aware of the basics of SAP HANA. If you are not exposed to SAP HANA, then we will suggest you first to go through our short tutorial on SAP HANA.

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1. Lumira – Overview

SAP Lumira is known as a visual intelligence tool to create and visualize stories on dataset. It was earlier known as Visual Intelligence tool where you could visualize data and create stories to provide graphical details of the data.

Data is entered in Lumira as data set and you can apply filters, hierarchies, calculated columns to build documents on Lumira. You can choose various charts like Bar charts, Pie charts, etc. to visualize the data effectively.

Example

You can put multiple charts on a story page to create presentation and can add images and text fields in these pages.

These stories can be published to other platforms using the **publish** option in the application:

- SAP Business Object BI Platform
- SAP Business Object Explorer
- SAP Lumira Server
- SAP HANA
- SAP Community Network (SCN)

Features of Lumira

The key features of Lumira are as follows:

- It allows you to predict future outcomes and forecast as per the changing market situations.
- You can create data visualizations and stories from multiple data sources.
- It helps you to adapt data to organizational needs to create stories with visualizations.
- You can share the visualizations on different platforms like SAP HANA, BO Explorer, Business Objects BI Platform, etc.

Key Terms of SAP Lumira Data Set

Data is entered in Lumira as dataset and it contains **Attributes/Dimensions** and **Measures**.

- **Measure:** Measures are defined as numerical data types. **Example:** Quantity sold, Revenue, Unit Price, Average cost, etc.
- **Attributes/Dimensions:** Data containing details about the measures is called Attributes or Dimensions in dataset. This represents the object on which analysis is done. **Example:** Customer, Product, Order, Time, Region, etc.

Hierarchies: Hierarchies are used for drilling the data to sub levels and defines a parent-child relationship. **Example:** Time Hierarchy, Region hierarchy.

- **Custom Calculations:** You can create custom calculations in Lumira data Visualization, which are not available in data set or at database level. **Example:** You have a "Salary" column in the data set, you can add a new calculated column with name "Bonus" and can apply a calculation on Salary to get the value of this column.

The screenshot shows the SAP Lumira 'Prepare' tab. On the left, there are two sections: 'MEASURES' with 2 items (NETAMT and TAXAMT, each with a 'Sum' button) and 'DIMENSIONS' with 24 items (Gregorian_Hierarchy and YEAR). The main area displays a data table with columns 'CUSTID' and 'CUSTID_1', and rows C101 through C105. The table is currently empty of data, with only the column headers visible.

SAP Lumira – User Interface

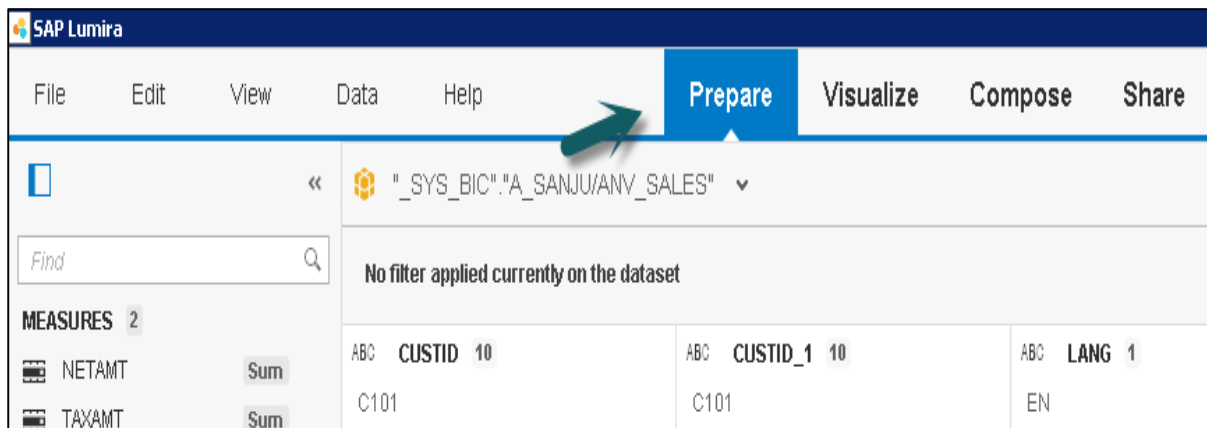
When you login to Lumira Data visualization tool, there are four tabs at the top:

Prepare

Prepare is used to import data set in SAP Lumira. Data is cleansed and converted into appropriate measures or attributes for the reports. You can add new custom calculations here.

Visualize

The **Visualize** tab is used to add graphs and charts on the data that has been imported and organized in **Prepare** tab. You can add different attributes and measures to the Label axis.



Compose

The **Compose** tab is used to create stories and presentations, including background colors, titles, pictures, and text.

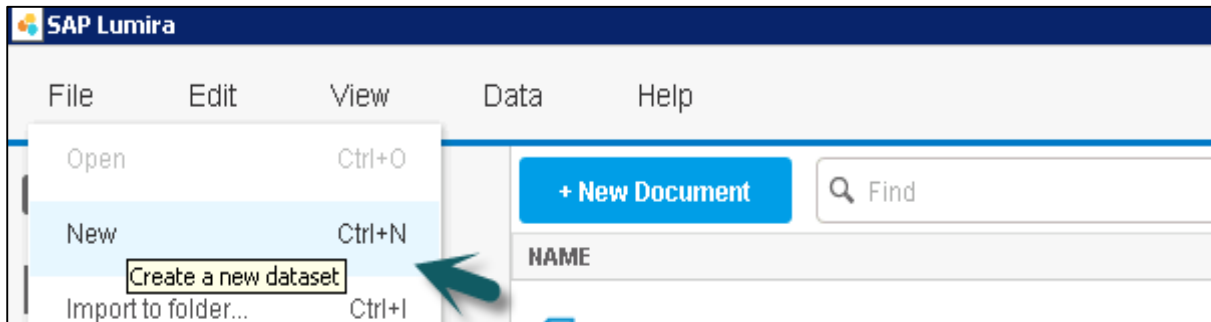
Share

The **Share** tab is used to publish your visualizations to different platforms or with different set of users in the BI Repository.

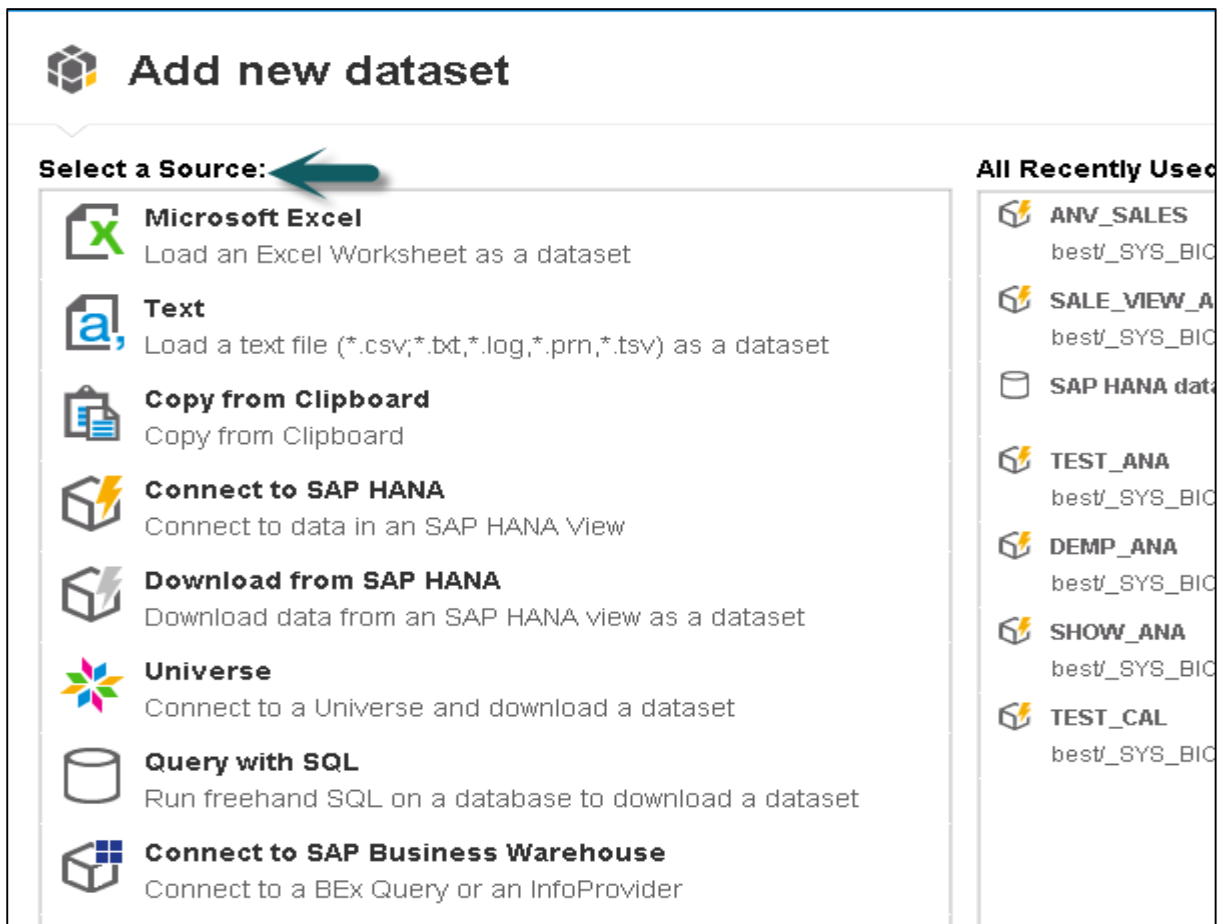
2. Lumira – Data Sources

You can use different data sources with SAP Lumira to create a data set. A data source can be an Excel file, text file, clipboard, HANA Information Models, Universe created in IDT/UDT, SQL query, connected to a BEx Query or an info provider.

Once you open SAP Lumira, go to **File -> New Data set**



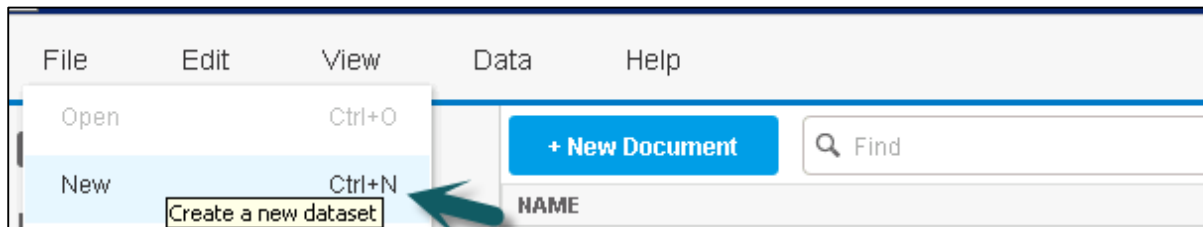
You can select from various Data sources to create a new data set.



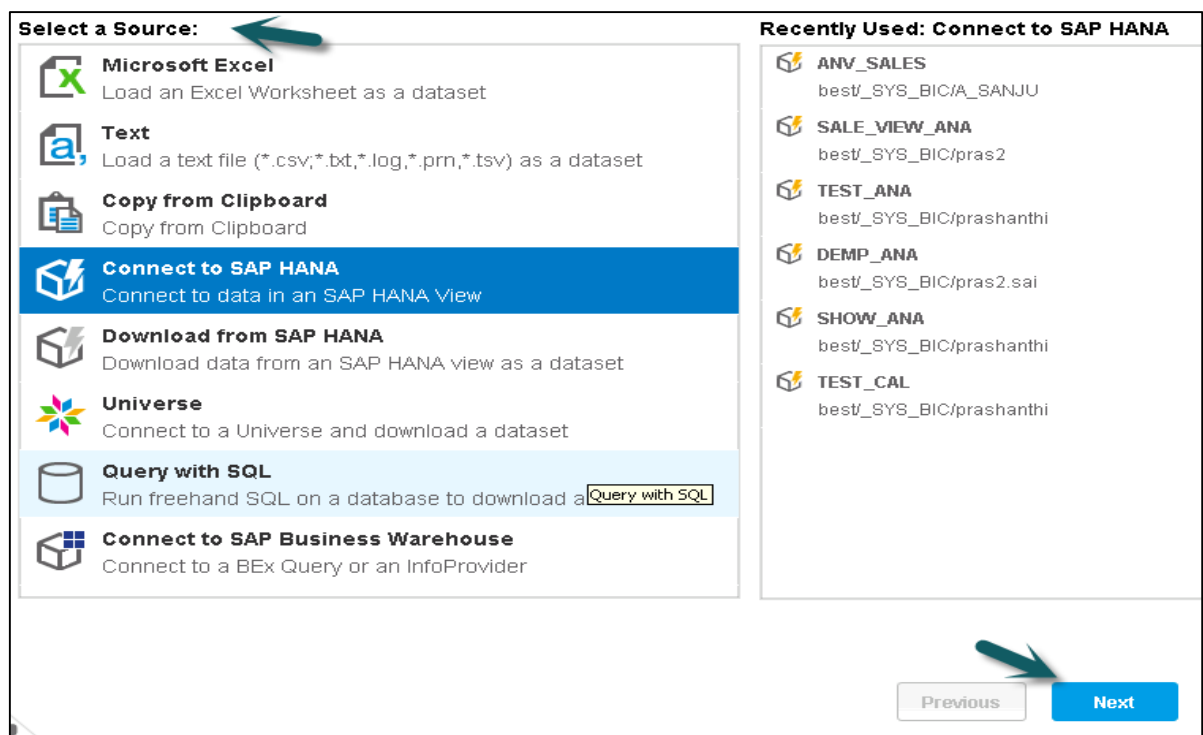
3. Lumira – Data Acquisition

The key steps in **Data acquisition** are as follows:

- For data acquisition in SAP Lumira, create a new document that will contain the data and visualization of acquired data.
- Next is to connect to a data source, which contains data for visualization.
- Acquire the data to create a data set.
- Data acquisition can be done from multiple compatible data sources to use in a single visualization or data analysis.
- Once data is acquired, it comes under the **Prepare** tab.




- Select a Data Source. Enter the system details from where the data is to be acquired and click **Next**.



Add new dataset

Connect to SAP HANA

Server: 


Instance/Port:

Authenticate by Operating System (SSO)

User:

Password:

Save Password



- Select a Data source like SAP HANA **View** and click **Next**.

Select a SAP HANA View

Find

Dataset Name:

Available Views (342)

- 010 (2)
 - AN_DISC
 - AN_TRANS
- 111SAL (3)
 - ANA_TEST1
 - ANA_TEST2**
 - CAL_CE_SALES
- AA_BGE (1)
 - CE_PLAN_ACTUAL_BGE
- ANILA (2)
 - SALES
 - ZSALES
- AT_Region (1)
 - AV_SALES
- A_SANJU (5)
 - ANV_DISC

- Select **Dimensions and Measures** and click **Create**.

The screenshot shows the SAP Lumira selection interface. On the left, under 'Measures (1)', the 'BONUS' measure is selected with a 'Sum' aggregation function. On the right, under 'Dimensions (3)', three dimensions are selected: 'DEPTNAME', 'EMPID', and 'EMPNAME'. Each dimension has a 'Values Preview' link. At the bottom right, the 'Create' button is highlighted in blue, with a green arrow pointing to it.

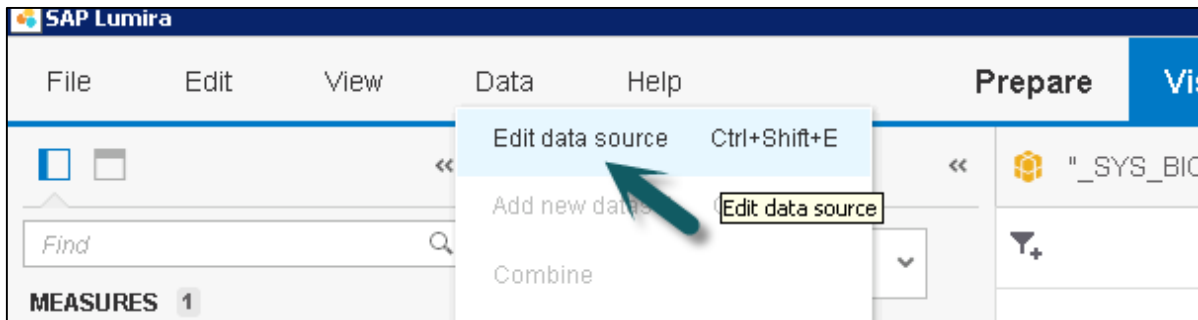
The screenshot shows the SAP Lumira main interface. The 'Prepare' button is highlighted in blue. Below it, the dataset path is shown as '"_SYS_BIC"."111SAL/ANA_TEST2"'. A green arrow points to the dataset name. Below the dataset name, it says 'No filter applied currently on the dataset'. The data preview table is shown below:

ABC	DEPTNAME	3	ABC	EMPID	3
	NS2			A1	
	SAP			B1	
	SAPAG			C1	

4. Lumira – Editing Acquired Data

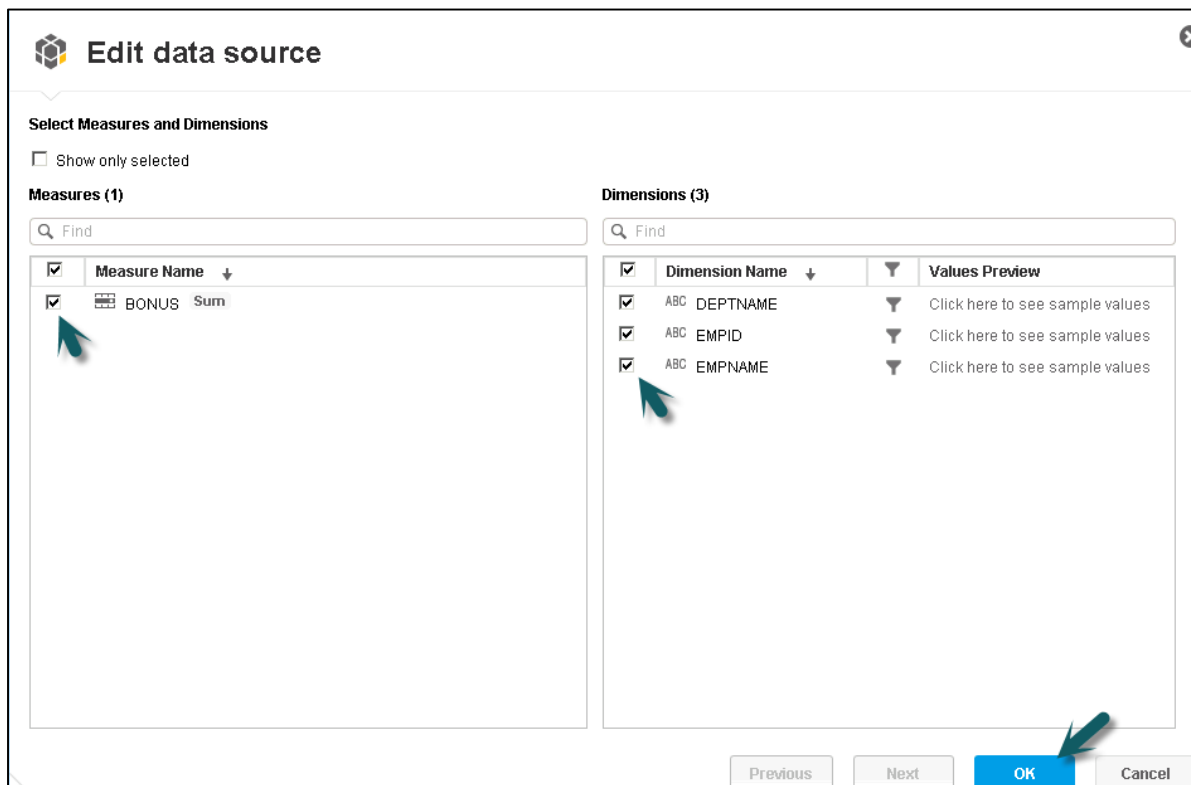
Let us learn how to edit the acquired Data. Follow the steps given below.

1. To edit data in **SAP Lumira**, go to the **Data** tab and click **Edit Data Source** from the menu.



2. It will take you to Edit Data Source window, where you can again select **Measures and Dimension**.

3. You can check or uncheck any of the attributes and measures to add to data set and click the **OK** button.

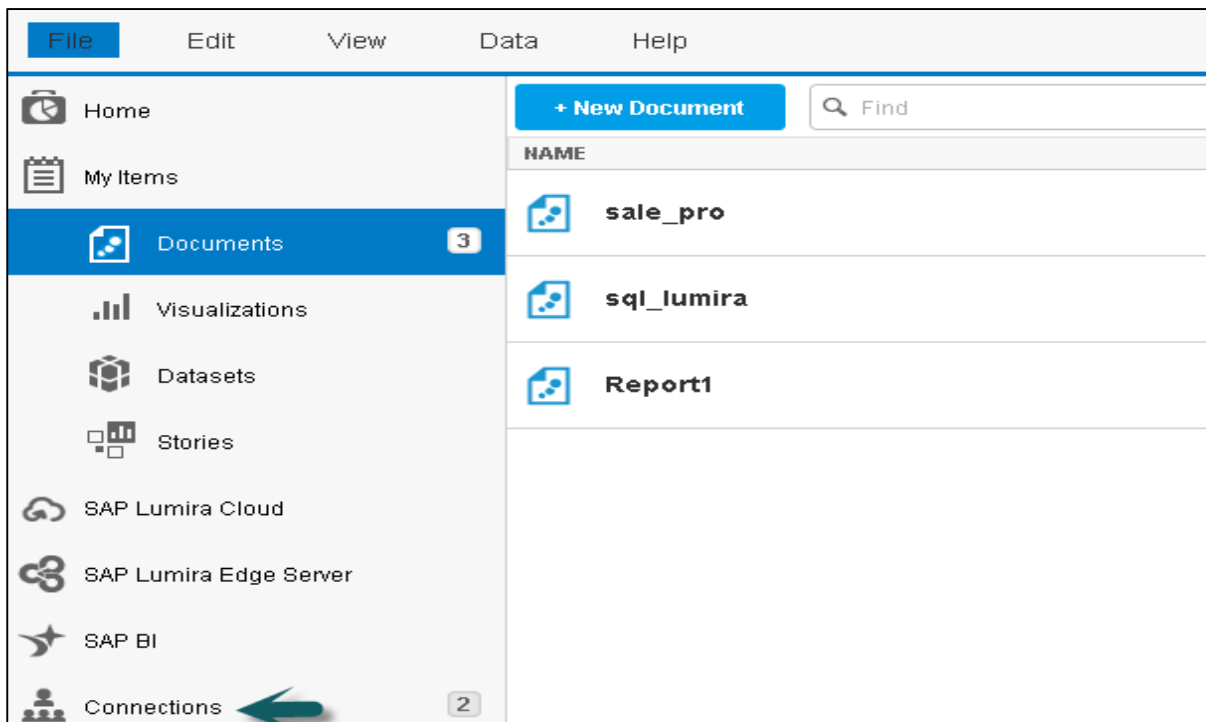


5. Lumira – Viewing Connections

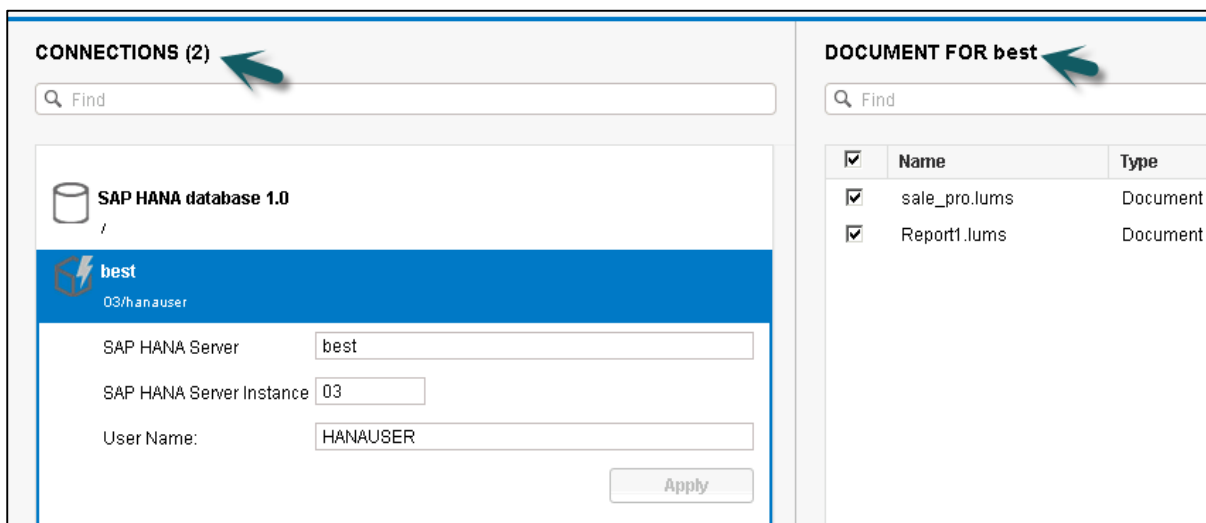
In SAP Lumira, you can check all the connections for an existing application and document associated with each connection and you can change the data source for an existing connection.

To view existing connections, close all the data set.

1. Click **New** and close the **Add new data set** window. In the left pane, it will show you the **Connections** option.



2. A new window will open with a list of all the existing connections and associated documents. Click a connection and you can change the target data source.

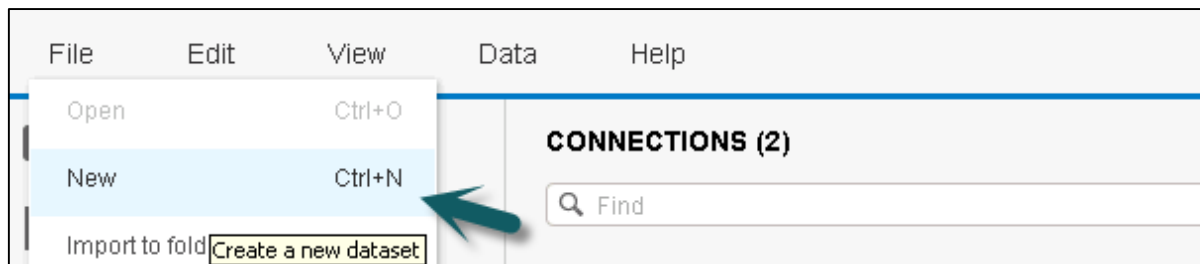


6. Lumira – Excel File as a Data Source

You can use an **Excel file** to create data set in **SAP Lumira**.

Follow the steps given below.

1. Go to **File -> New** (Create a data set).



2. **Select a Source:** Load an Excel worksheet as a dataset and click the **Next** icon at the bottom.



3. Browse the path of **.xls** file. You have an option to choose the first row as column names. You can hide a particular column from **.xls** by selecting the **Select All** option.

4. You can click the **Advance** option to select a custom range. You can also include hidden rows and columns. Once correct options are selected, click the **create** button at the bottom.

Add new dataset

Dataset Name:

File(s): Add Files

Sheet: Append all sheets Set first row as column names

Table Header Type:

Select All 3 / 3 columns - 5 rows

<input checked="" type="checkbox"/> Emp ID	<input checked="" type="checkbox"/> EMP NAME	<input checked="" type="checkbox"/> SALARY
1	John	3456
2	Anna	2500
3	Sally	4500
4	Jason	5000

Advanced Options ▾

Range Selection: Example: B3:N18 Apply

Column: Row:

Show hidden columns

Show hidden rows

Detect merged cells

Previous Next Create Cancel

5. All the data with integer values appear under **Measures** and all the columns appear under **Dimensions**. This data will come under the **Prepare** tab.

SAP Lumira
File Edit View Data Help **Prepare** Visualize

⏪ New Microsoft Office Excel Worksheet.xlsx...

Find

MEASURES 2

- Emp ID Sum
- SALARY Sum

DIMENSIONS 3

- Emp ID
- ABC EMP NAME
- 123 SALARY

No filter applied currently on the dataset

Emp ID	EMP NAME	SALARY
123	ABC	123
4	Jason	5000
5	Jim	2400
3	Sally	4500
1	John	3456
2	Anna	2500

6. Go to the **Visualize** tab at the top to create the visualization on top of the data set.

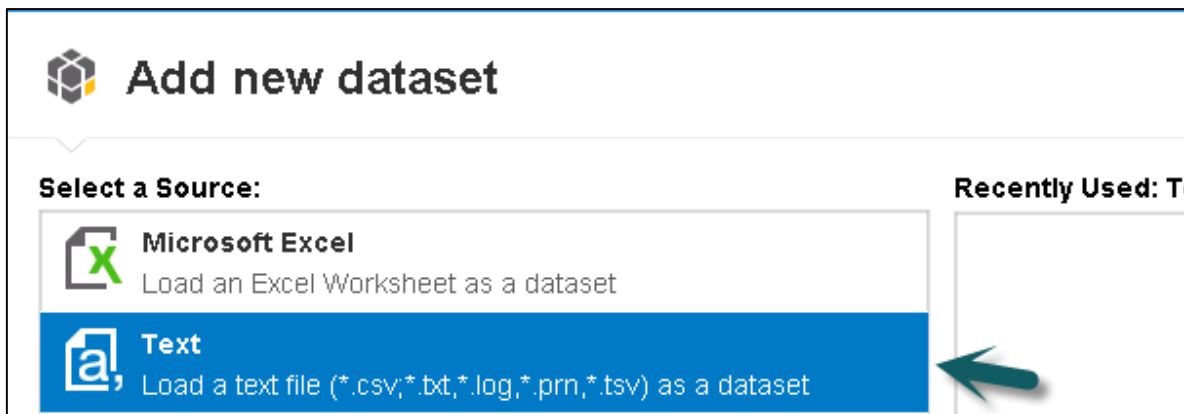


7. Lumira – Working with CSV Files

You can use a Text file as a data set like **.csv file**, **.txt file**, **.log file**, **.prn file**, **.tsv file**.

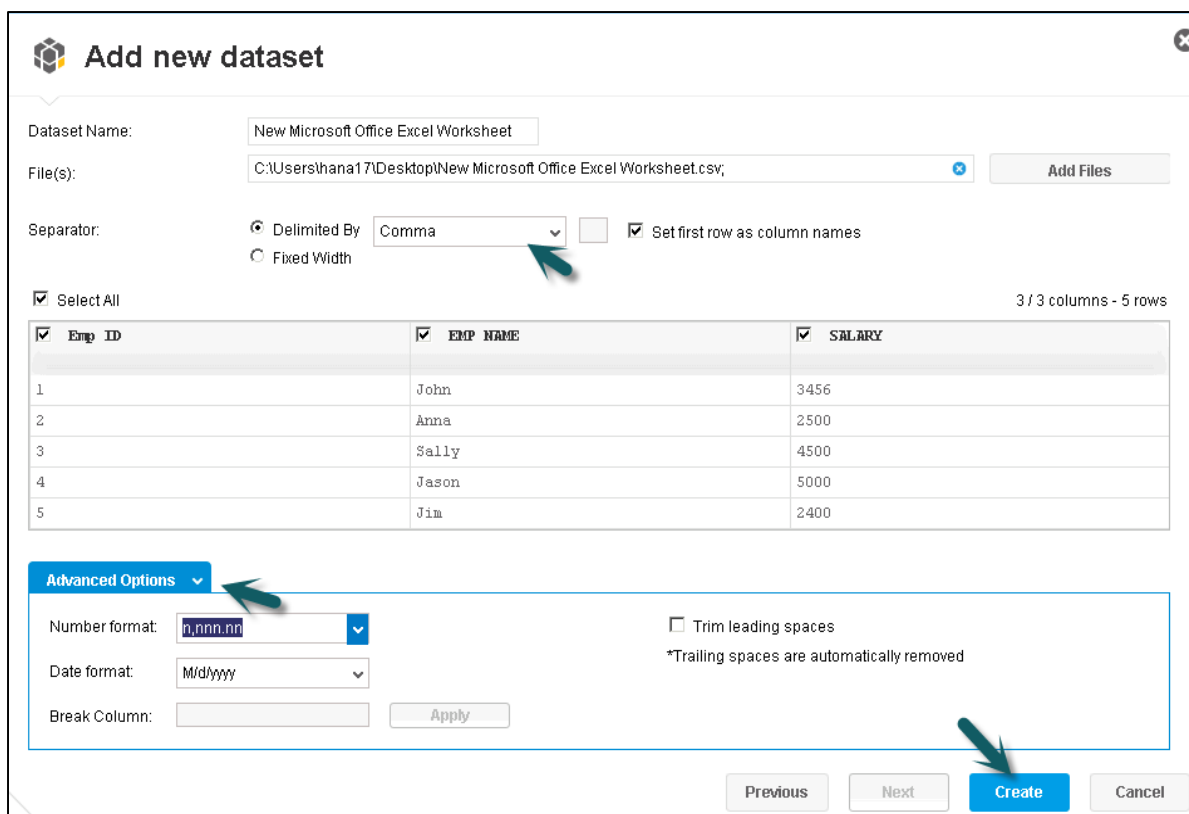
The following steps explain how to use a text file as a data set.

1. Go to **File -> New -> Add New Dataset -> Next**.



2. Select the path of csv file, for example an Excel file. You can set the first row as column names. Select the separator as comma, tab, etc.

The **Advance** option can be used to select the **Number** and **Date format**. Click the Create button to enter the data in the **Prepare** tab.



The screenshot shows the SAP Lumira interface with the following components:

- Menu Bar:** File, Edit, View, Data, Help, **Prepare** (highlighted with a green arrow), Visualize.
- File Name:** New Microsoft Office Excel Worksheet.csv
- Status:** No filter applied currently on the dataset
- MEASURES (2):**
 - Emp ID (Sum)
 - SALARY (Sum)
- DIMENSIONS (3):**
 - Emp ID
 - ABC EMP NAME
 - 123 SALARY
- Data Table:**

Emp ID	EMP NAME	SALARY
123	ABC	123
4	Jason	5000
5	Jim	2400
3	Sally	4500
1	John	3456
2	Anna	2500

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