Smarten
Advanced Data Discovery
Powered by ElegantJ BI

User Manual

Smart Visualization

Business Intelligence & Advanced Data Discovery

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Disclaimer

This document is intended to support administrators, technology managers or developers using and implementing Smarten. The business needs of each organization will vary and this document is expected to provide guidelines and not rules for making any decisions related to Smarten. The overall performance of Smarten depends on many factors, including but not limited to hardware configuration and network throughput.

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1 About this document

This manual explains the concepts required to use Smart Visualization features in Smarten Advanced Data Discovery Suite.

1.1 Scope and Organisation of Topic Areas

Chapter 1	Introducing ElegantJ BI - Smarten
Chapter 2	Introducing Smart Visualization
Chapter 3	Smart Visualization Process Overview
Chapter 4	Working with SmartenView
Chapter 5	Product and Support Information

1.2 Conventions used

This manual uses typographical conventions in the text to help you distinguish between the names of files, instructions, and other important notes that are relevant during installation. For example:

- Important notes are indicated in a different font color as shown in the example below.

> Note:
> Trend can be applied to a Bar chart, Line chart, Combined chart, and Area type of Visualization.

- References to documents are highlighted as below:

Reference: **ElegantJ BI Concept Manual > Analytic Functions > Data Operations**

2 Introducing ElegantJ BI - Smarten

ElegantJ BI is a full-stack Business Intelligence tool that employs the “Smarten” approach to Advanced Data Discovery. The solution comprises a comprehensive set of tools, including Self-Serve Data Preparation, Smart Visualisation, and Plug n’ Play Predictive Analytics. These tools are designed to democratize advanced analytics and transform business users into citizen data scientists.

Self-Serve Data Preparation
Self-Serve Data Preparation allows business users to perform data preparation on their own without the assistance of IT staff or data analysts. Users are not restricted by complex tools or forced to wait for IT to deliver crucial data. Guided by smart suggestions and auto recommendations, business users can prepare, blend, and transform data and create analysis-ready data quickly and accurately without assistance rather than waiting for central metadata prepared by IT.

Smart Data Visualization
Intuitive Smart Data Visualization tools suggest the best options for visualizing and plotting a particular set or type of data based on the nature, dimensions, and trend of data so that business users can easily select the appropriate method to clearly and quickly visualize data in a way that is meaningful to the task.

Plug n’ Play Predictive Analysis
Assisted Predictive Modelling allows business users to explore predictive algorithms and models

without the skill or knowledge of a data scientist or statistician. The solution considers the underlying data and use case, suggests the best-fit algorithm, and then displays output results and data visualization accompanied by an interpretation using simple human language.

3 Introducing Smart Visualization

Smart Data Visualization allows business users to analyze, share, and present information without waiting for assistance from visualization experts or programmers. With augmented data discovery tools, business users can cut through that mountain of data to find those elusive nuggets of information that have the most impact on business results.

Smarten View smart data visualization allows business users to view and analyze data to identify a problem, clarify a root cause, and make confident decisions. Business users can interact easily with data discovery tools and analytics software and build a view that will tell a story using guided visualization and recommended data presentation so that there is no need for assistance or delays. Guided recommendations are made based on data type, volume, dimensions, patterns, and nature of data.

By combining cutting-edge technology and machine learning on the backend, with an intuitive user experience on the front end, business users can easily leverage sophisticated tools with suggestions and recommendations on how to personalize data displays to create meaningful views and collaboration.

Machine learning provides guidance to determine the visualization technique that will be the best fit for the data business users want to analyze. It allows for better understanding of data, identifies unusual patterns in data, and achieves the best output and results.

Visual Analytics tools enable users to identify relationships, patterns, trends, and opportunities and to explore detailed data with simple drill down and drill through capabilities and make sense of data from all sources, with a guided approach that allows users to identify patterns and trends, and quickly complete analysis with clear results.

4 Smart Visualization Process Overview

The process of Smart Visualization starts with identifying the data that has to be visualized. Users can visualize data from Datasets as well as Cubes and create views by simply dragging and dropping the required Dimension and Measure columns belonging to the Dataset / Cube. With Smarten mode ON, the machine learning capabilities of the system come into play, and the user is automatically presented with the best suitable chart based on data type, volume, dimensions, patterns, and nature of data. If users want more control of visualization, they can work with Smarten mode OFF and have total control of various visualization properties, including color, shape, and size. Guided by auto-detection and auto-suggest features, users can leverage a variety of sophisticated tools to customize and personalize the visualizations as per their specific requirements. The visualizations are called SmartenView, and SmartenView objects can be viewed as stand-alone objects or be embedded within dashboards. Users can export SmartenView objects in JPG, PDF, and PNG formats.

Typical steps involved in creating a SmartenView are:

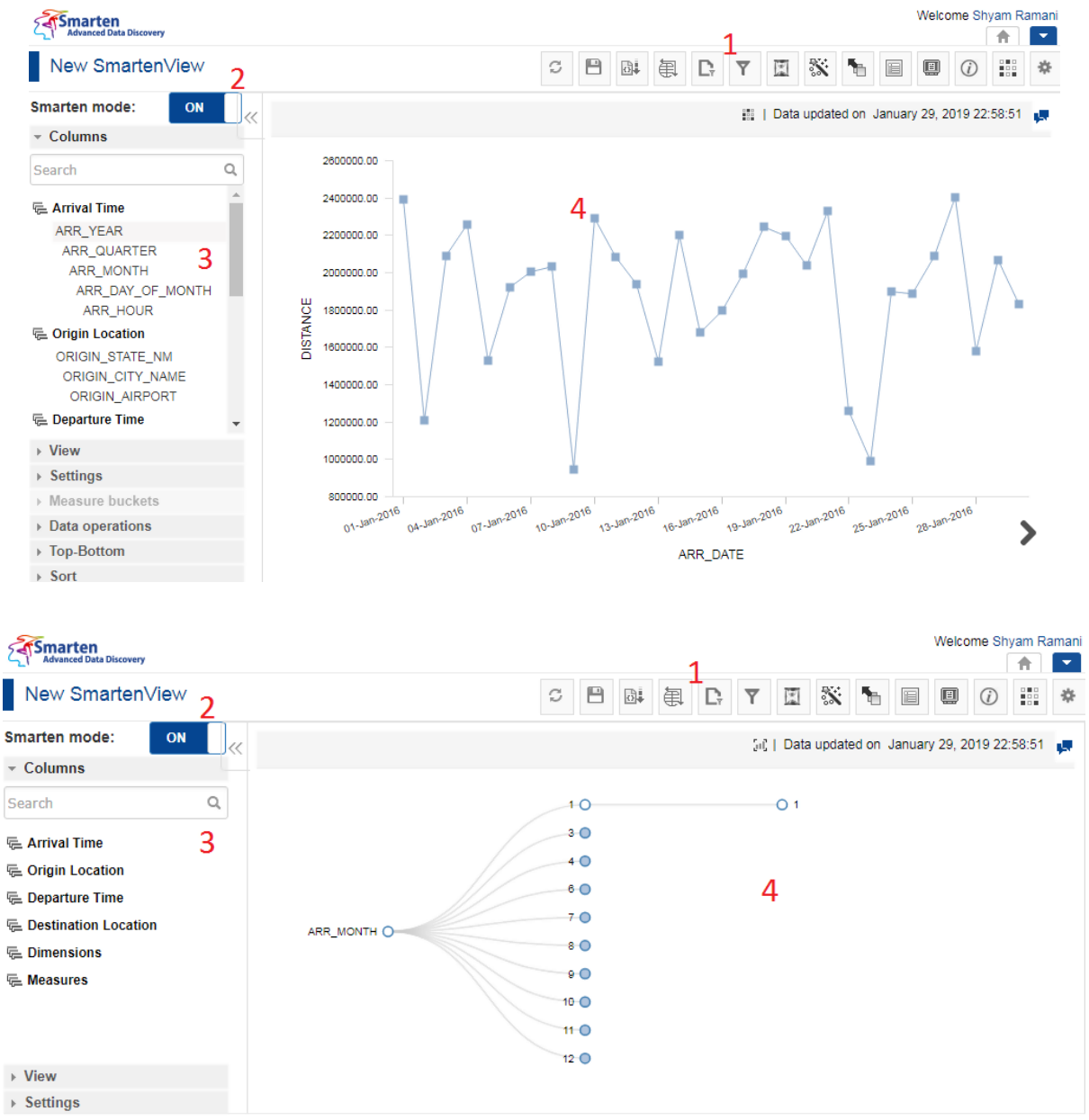
- Identify the Dataset / Cube
- Select the Dimension and Measure columns
- Work with Smarten mode ON or OFF
- Change the visualization type

- Personalize the visualization
- Apply sampling, outliers, data operations, filters, sorting, ranking, and other functions
- Use SmartenView as a stand-alone object or embed it within dashboards

5 Working with SmartenView

5.1 Becoming Familiar with SmartenView Menus and Toolbars

The following image depicts the various areas of the SmartenView screen:



SMARTENVIEW SCREEN—DIFFERENT AREAS OF THE SCREEN

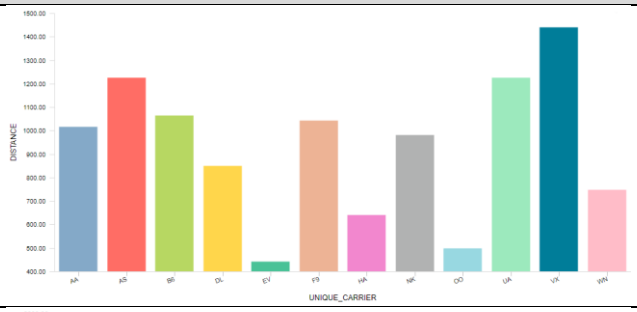
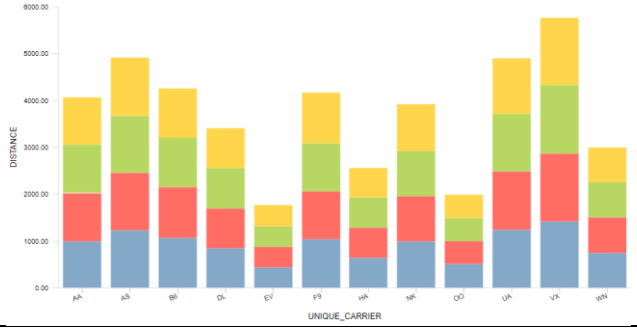
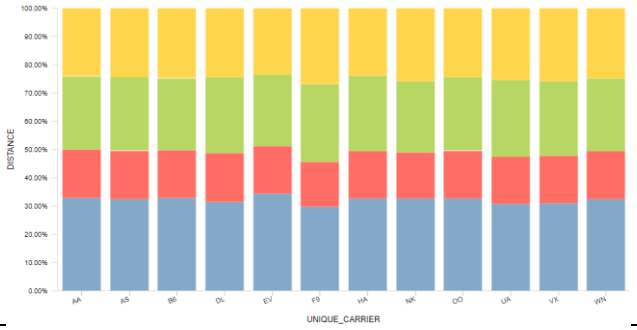
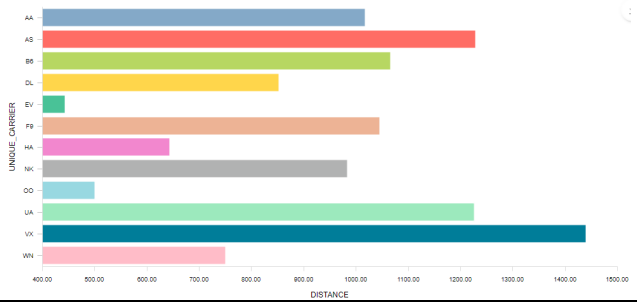
1. The toolbar provides options to perform various operations on the chart, such as sorting, grouping, filtering, sampling, and many more.
2. This option allows you to turn the Smarten mode on and off.
3. This option allows you to add columns, measures, dimensions, apply views, and change settings.

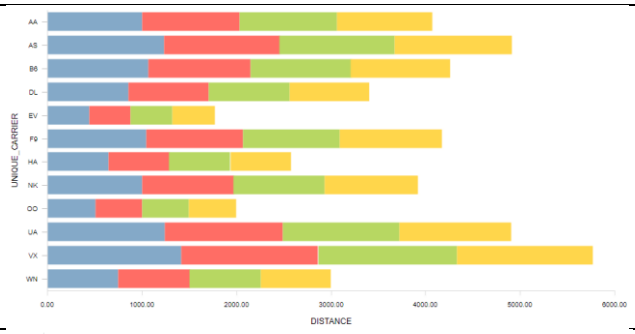
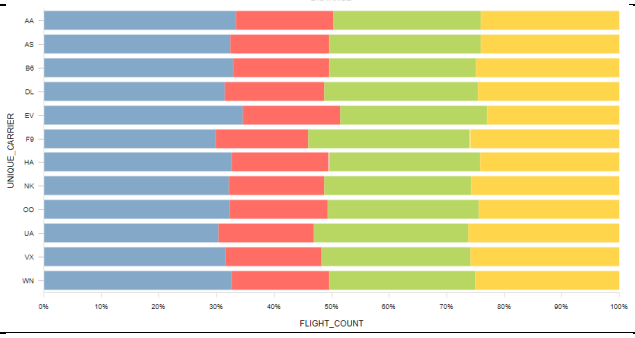
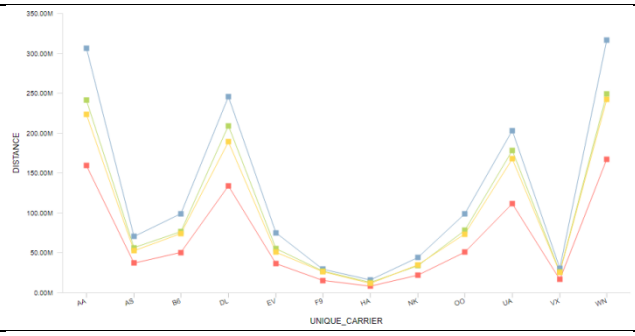
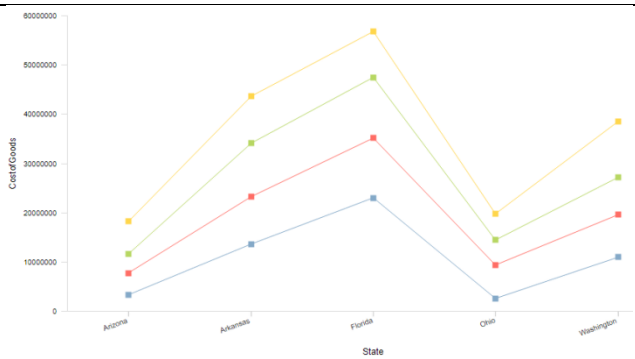
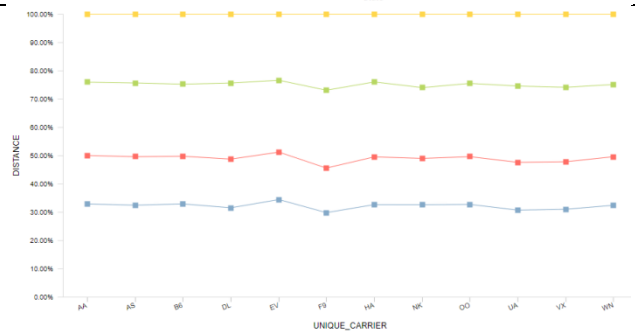
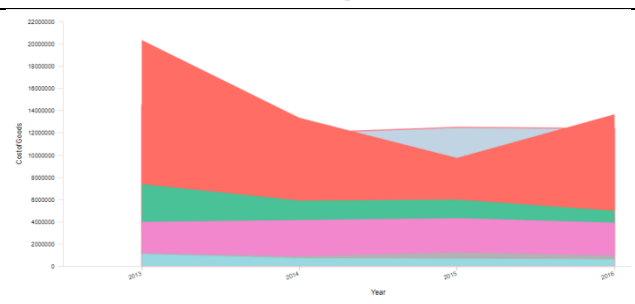
4. This area displays the chart based on the columns, dimensions, views, and other settings you have applied.

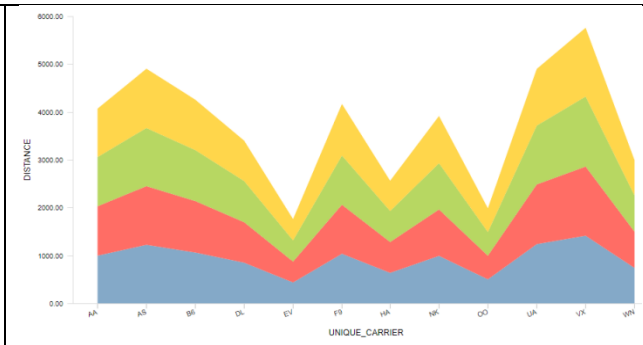
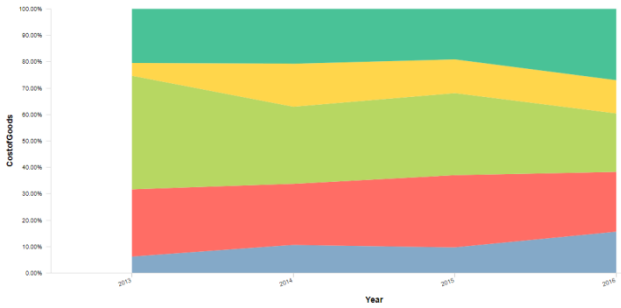
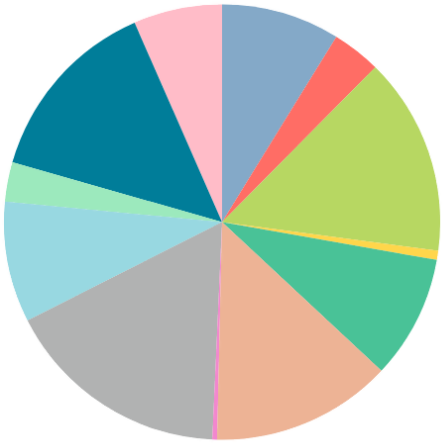
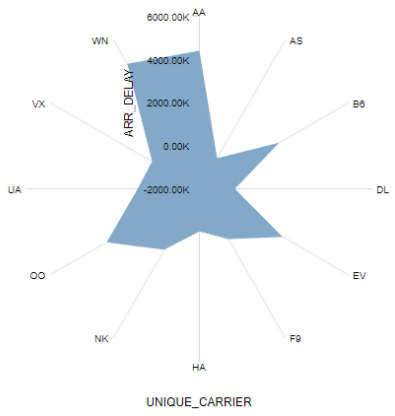
5.2 Understanding Smart Visualization Types

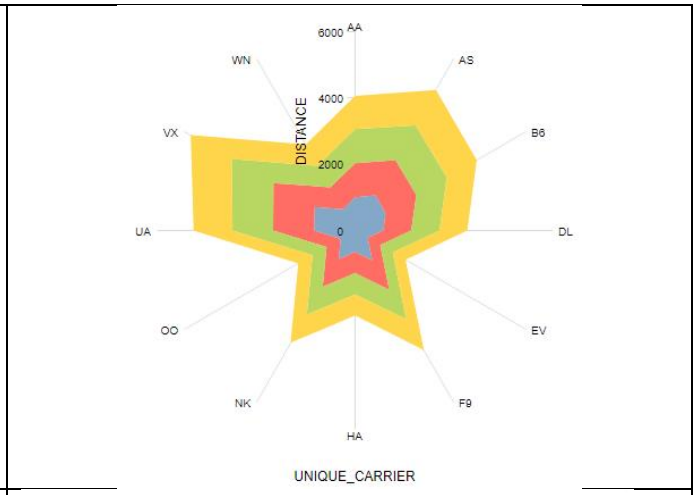
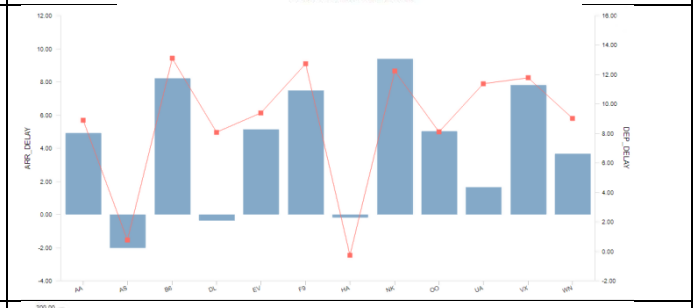
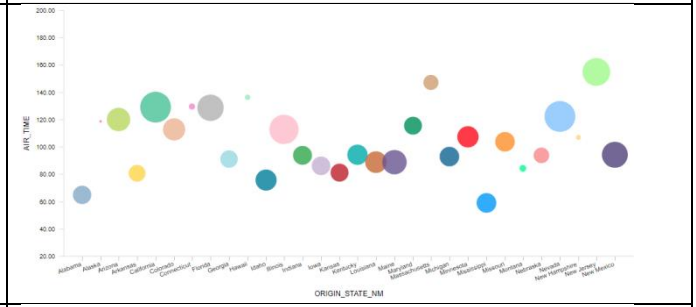
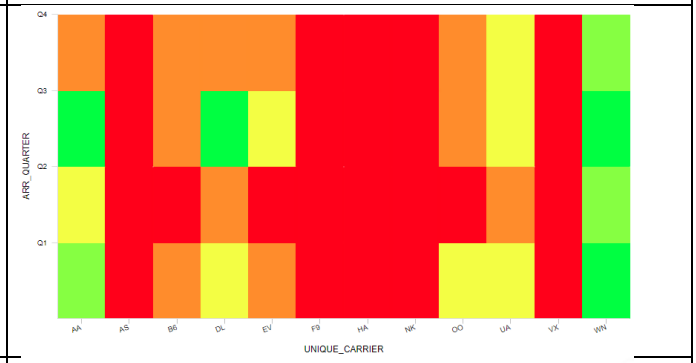
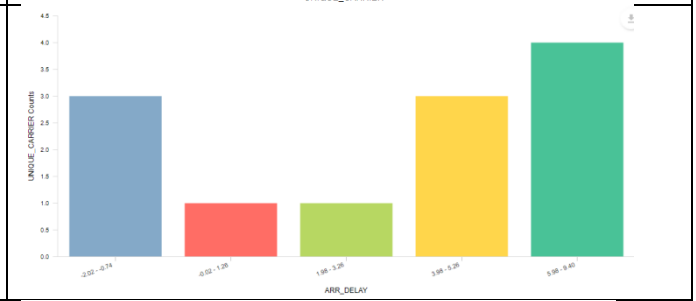
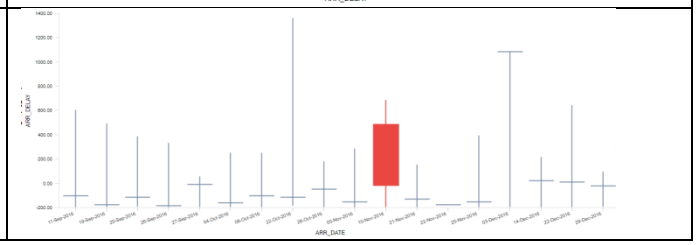
Smart visualization provides a wide range of visualization types, including charts and maps. You can visualize the same data with other possible charts in addition to the system recommended visualization.

Shown below is the list of chart types supported by Smart Visualization:

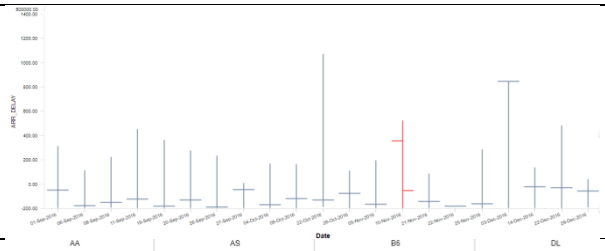
Chart type	Chart image
Vertical bar	
Stacked vertical bar	
Percentage vertical bar	
Horizontal bar	

Stacked horizontal bar	
Percentage horizontal bar	
Line	
Stacked line	
Percentage line	
Area	

Stacked area	
Percentage area	
Pie	
Radar	

Stacked radar	
Combined chart	
XY chart	
Heatmap	
Histogram	
Candlestick	

High/low open/close

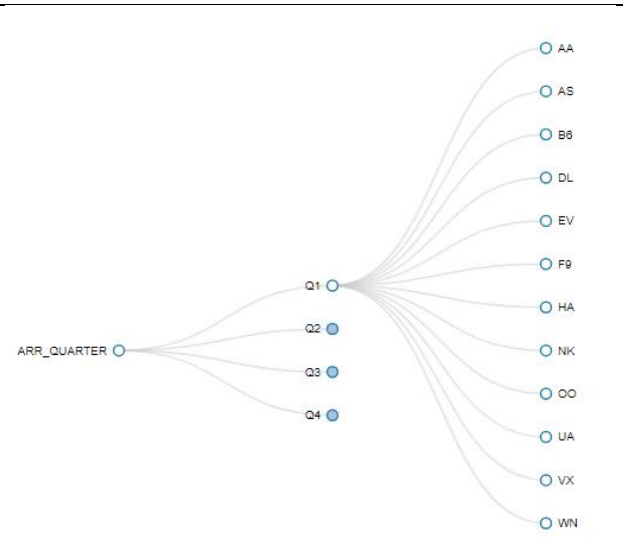


Gauge

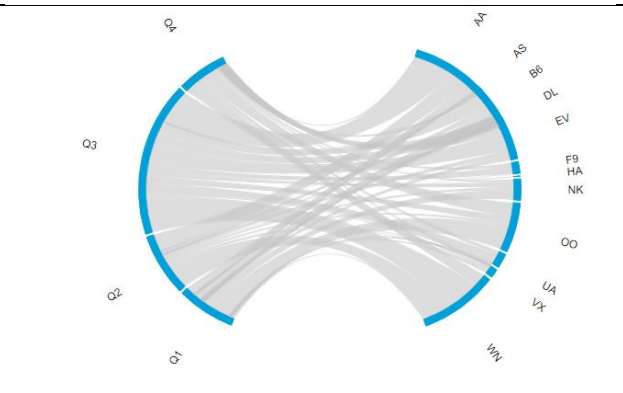
Tabular

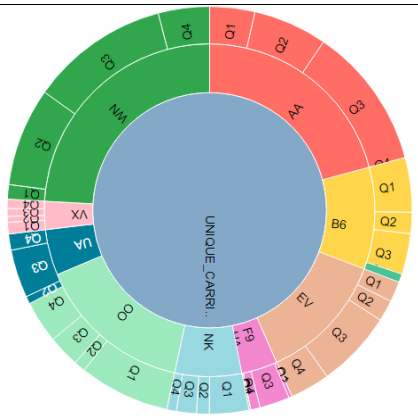
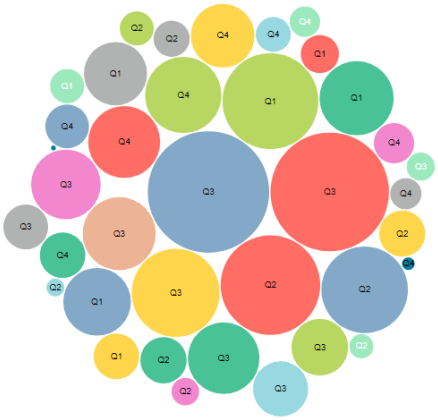
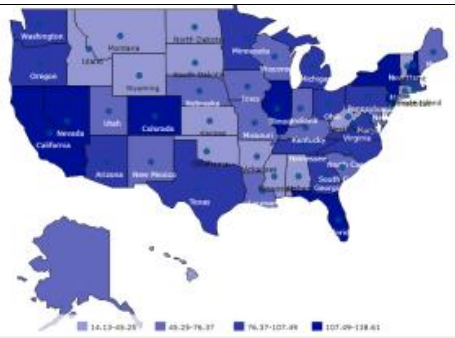
UNIQUE_CARRIER	ORIGIN_STATE_NM	DEST_STATE_NM	DEP_DELAY	ARR_DELAY
WN	Washington	Missouri	11.97	7.28
WN	Washington	Nevada	11.89	6.76
WN	Washington	New Mexico	13.11	8.22
WN	Washington	Tennessee	25.11	20.43
WN	Washington	Texas	13.92	11.39
WN	Washington	Wisconsin	9.59	7.62
WN	Wisconsin	Arizona	6.05	-7.32
WN	Wisconsin	California	9.81	1.53
WN	Wisconsin	Colorado	5.97	-3.66
WN	Wisconsin	Florida	7.34	0.32
WN	Wisconsin	Georgia	3.79	-3.61
WN	Wisconsin	Louisiana	32.00	4.00
WN	Wisconsin	Maryland	5.23	-2.22
WN	Wisconsin	Massachusetts	7.52	1.44
WN	Wisconsin	Minnesota	7.21	4.63
WN	Wisconsin	Missouri	2.30	-4.05
WN	Wisconsin	Nevada	6.43	-4.77
WN	Wisconsin	New York	12.17	4.60
WN	Wisconsin	Texas	11.01	1.90
WN	Wisconsin	Virginia	6.66	1.09
WN	Wisconsin	Washington	1.99	-7.19
Summary			**37291**	**15900**

Tree



Chord



Sunburst	
Hierarchy Tree	
Bubble	
Map	
Google map	

5.3 Creating SmartenView

For creating a SmartenView, you first need to identify the data that you want to visualize from a dataset or a cube. When the Smarten mode is enabled, the machine learning capabilities of the system automatically presents the best suitable chart based on the data type, volume, dimensions, patterns, and nature of data. You can disable the Smarten mode to have more control of visualization and other aspects.

Perform the following steps to create a SmartenView:

1. Select the dataset or cube you want to use.
2. Select the Dimension and Measure columns you want to use.
   The system automatically displays the charts based on the Dimension and Measure columns you have selected.
   Note: The system displays the chart automatically only when the Smarten mode is enabled.
3. Apply visualization type, customize properties, and perform other operations.
4. Disable Smarten mode to have more control of visualization by placing columns into rows, columns, x axis, y axis, and z axis (through color, shape, and size).
5. Use SmartenView as stand-alone objects or embed within dashboards.
6. Save the SmartenView.

5.3.1 Selecting a Cube or a Dataset for SmartenView

You need to select a cube or a dataset that you want to use to create SmartenView. Once you have selected the cube or dataset, you can select the columns that you want to use to create SmartenView.

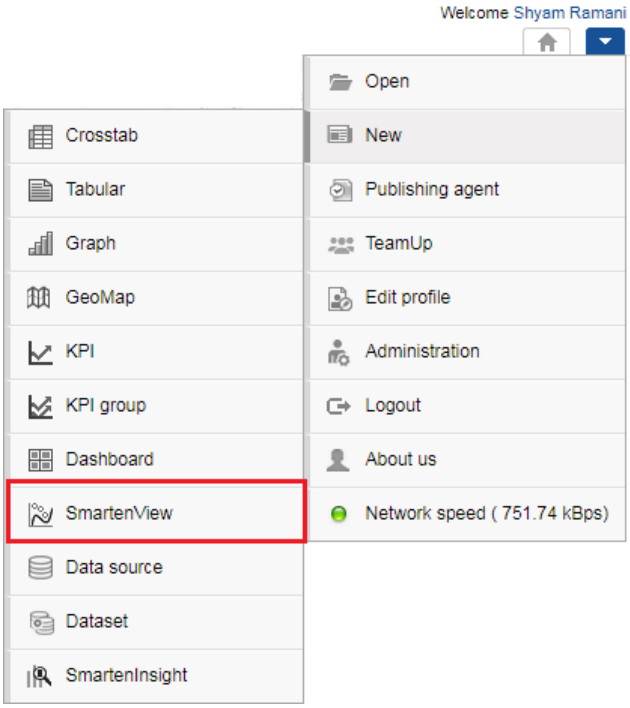
Reference: **Concept Manual > Use data from Datasets or Cubes**

About this task

Use this task to select the cube or dataset for SmartenView.

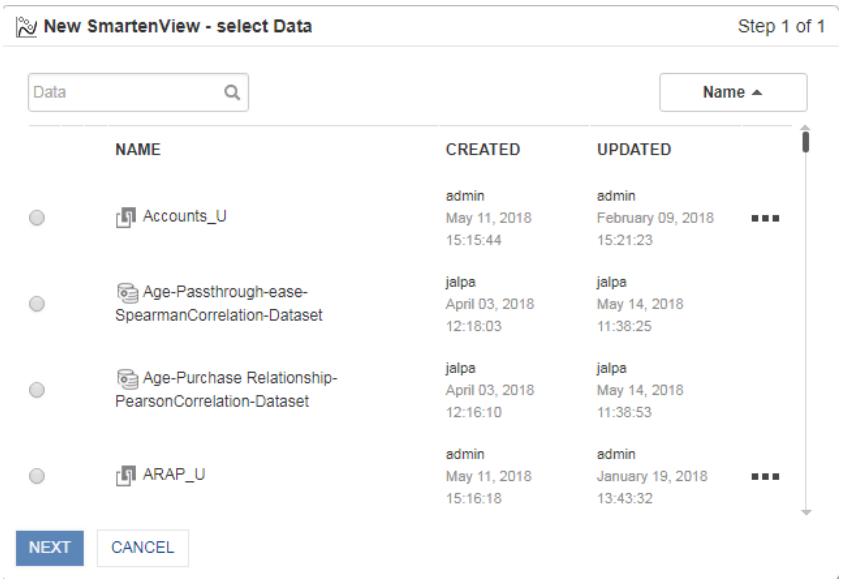
Procedure

1. Click **New** -> **SmartenView** from the menu.



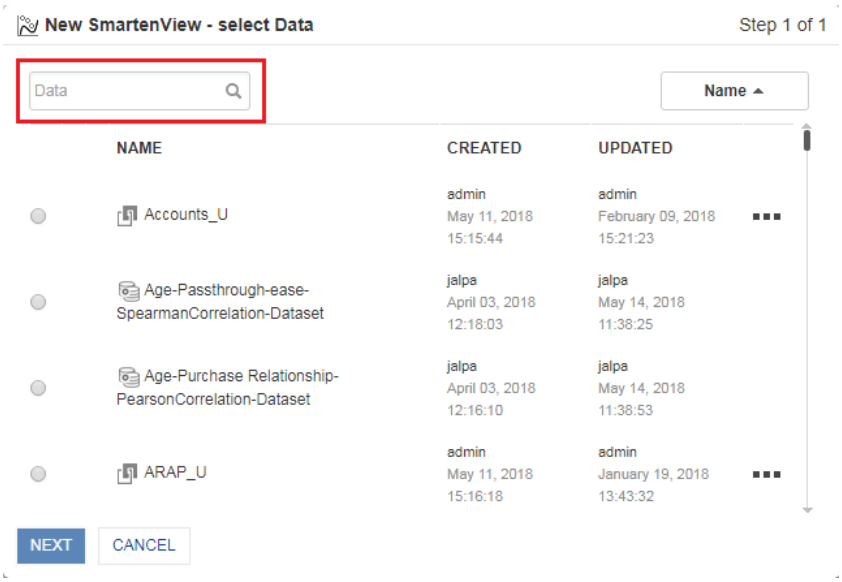
MENU OPTION—NEW DATASET

The system displays the **New SmartenView – select Data** dialog box.



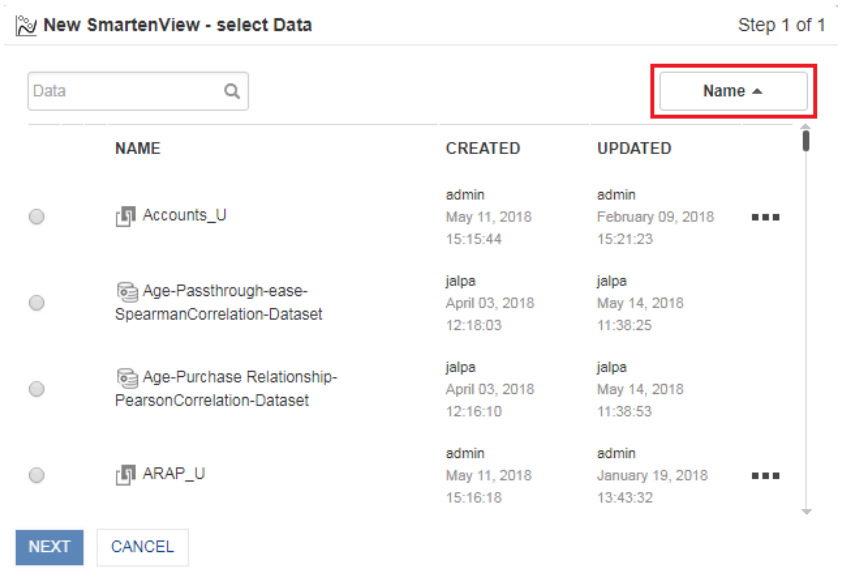
SELECTING A CUBE OR A DATASET—THE NEW SMARTENVIEW DIALOG BOX

2. Select the cube or dataset you want to use to create the SmartenView.
   Or,
   Enter the keyword in the Search box to search for the cube or dataset you want to use to create the SmartenView.



NEW SMARTENVIEW—SEARCHING FOR A CUBE OR A DATASET

3. You can sort the cubes and datasets available based on their name, the date they were created, and the date they were last updated.



NEW SMARTENVIEW—OPTION TO SORT CUBES AND DATASETS

4. Click **NEXT**.

5.3.2 Creating SmartenView with Smarten Mode ON

Enabling the Smarten mode allows you to visualize data without specifying the type of visualization you want to generate. The system automatically generates the visualization that is best suitable based on the data you have selected.

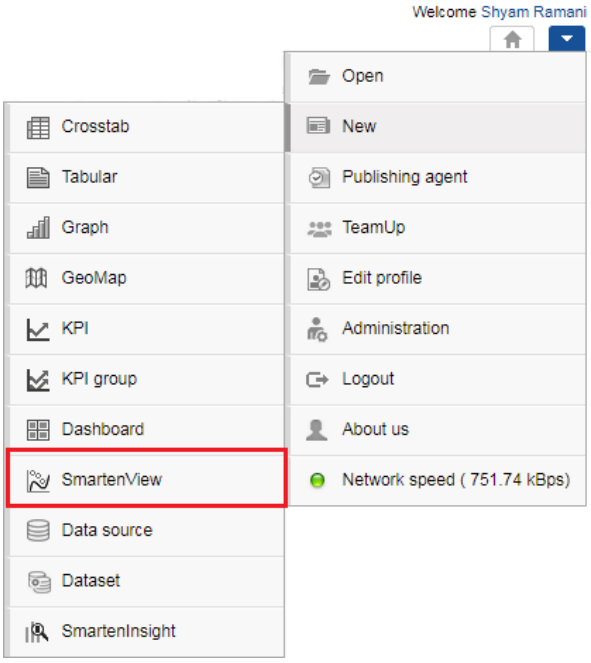
Reference: **Concept Manual > Working with Smarten Mode ON**

About this task

Use this task to create SmartenView with the Smarten mode ON.

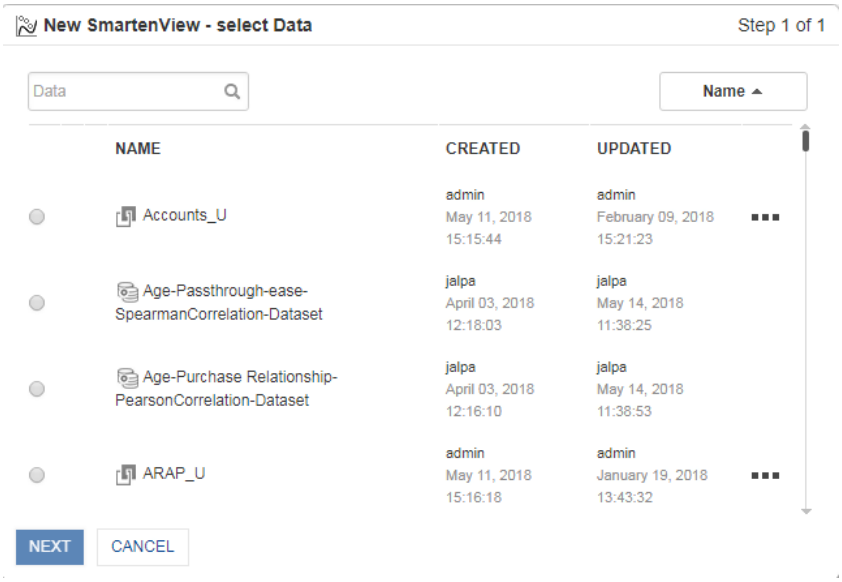
Procedure

1. Click **New** -> **SmartenView** from the menu.



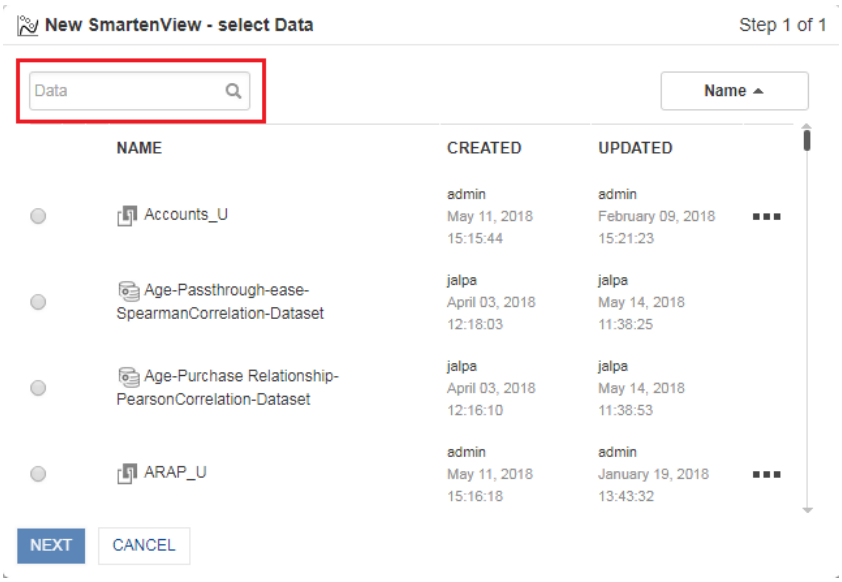
MENU OPTION—NEW DATASET

The system displays the **New SmartenView** dialog box.



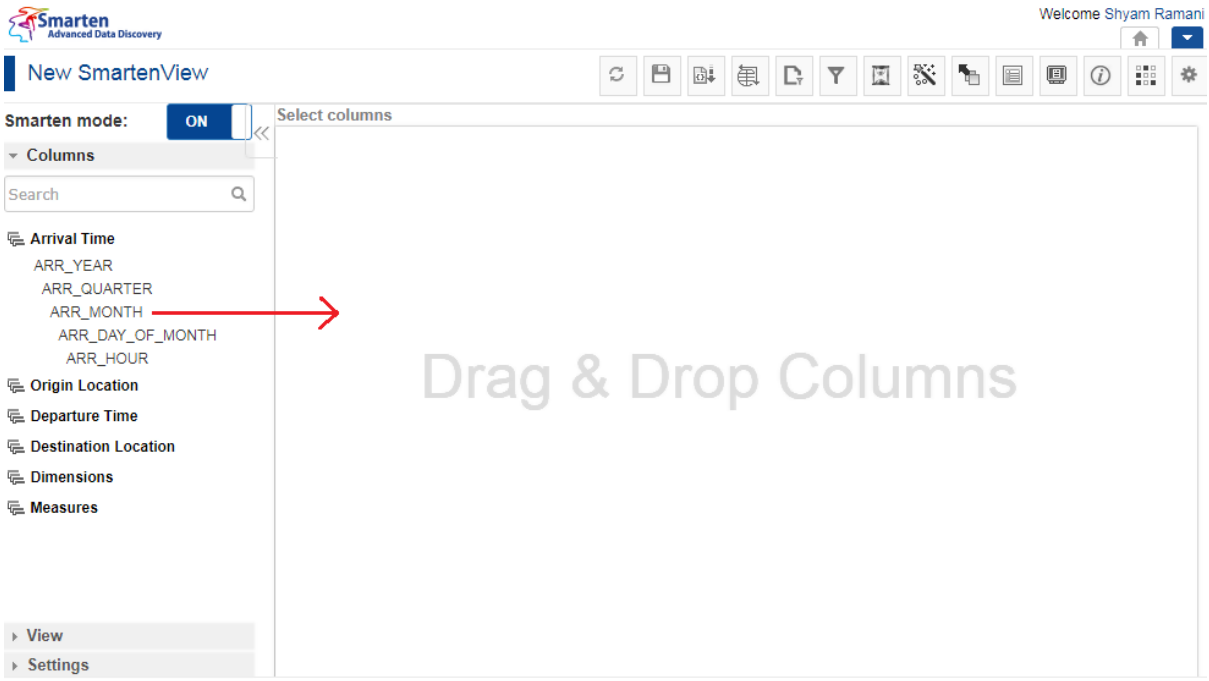
SELECTING A CUBE OR A DATASET—THE NEW SMARTENVIEW DIALOG BOX

2. Select the cube or dataset you want to use to create the SmartenView, and then click **NEXT**. The system displays the **New SmartenView – select Data** screen.



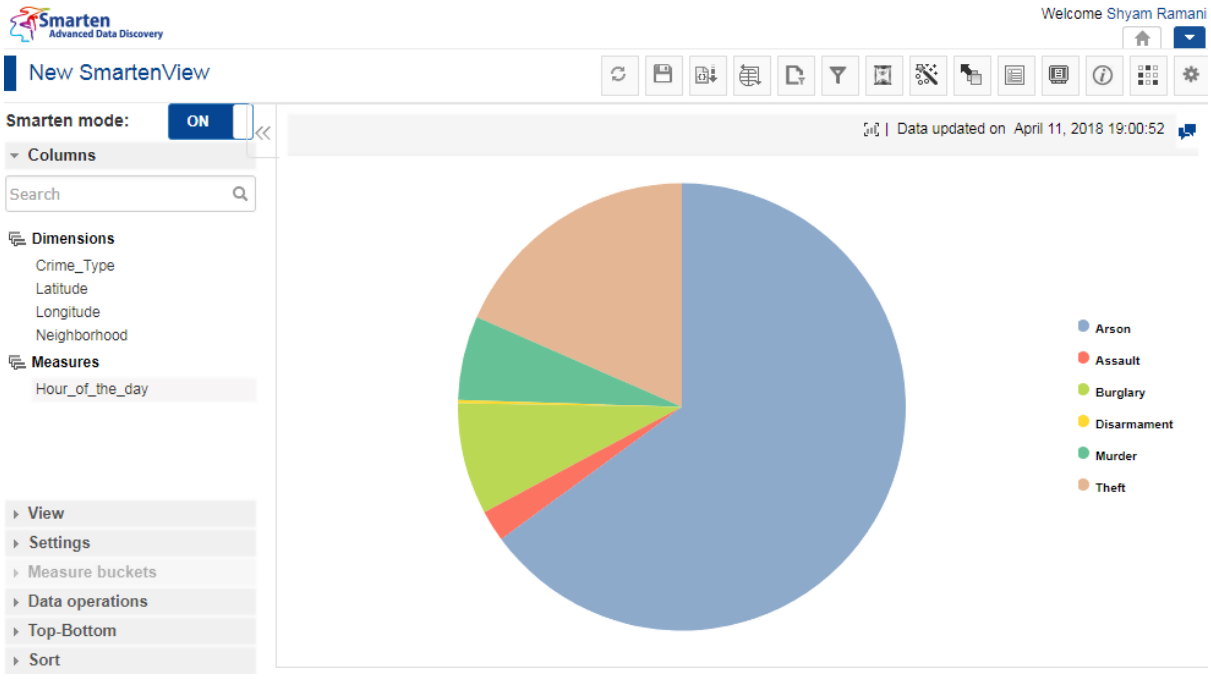
NEW SMARTENVIEW—SEARCHING FOR A CUBE OR A DATASET

3. Drag and drop the columns that you want to use into the Select columns pane.



NEW SMARTENVIEW SCREEN—SELECTING COLUMNS

4. The system automatically generates the visualization based on the data you select.



NEW SMARTENVIEW—SYSTEM AUTOMATICALLY GENERATES THE VISUALIZATION

5.3.3 Creating SmartenView with Smarten Mode OFF

Turning off the Smarten mode allows you to select the visualization you want to generate for the selected data. You have more control over what and how the data is visualized. You can use Outliner to have more control of columns to be placed in X, Y, and Z axis and control the visualization through color, shape and size.

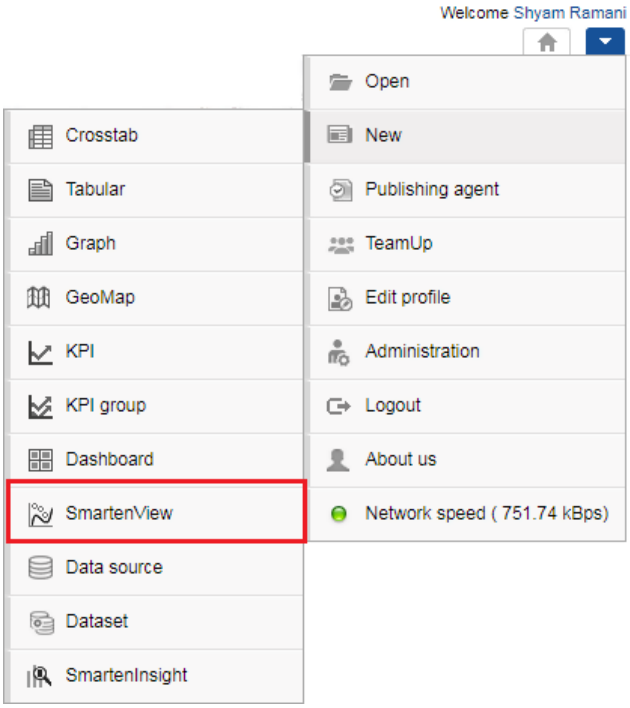
Reference: **Concept Manual > Working with Smarten Mode OFF**

About this task

Use this task to create SmartenView with the Smarten mode OFF.

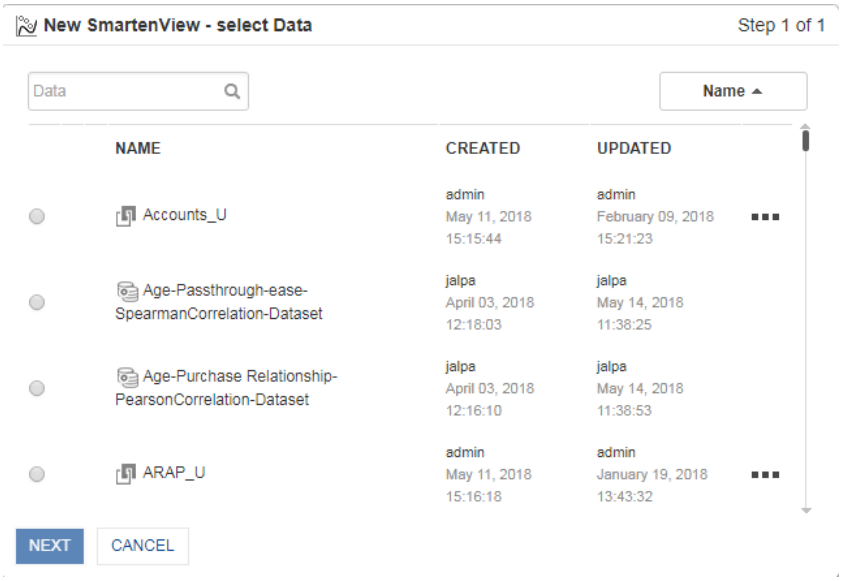
Procedure

1. Click **New** -> **SmartenView** from the menu.



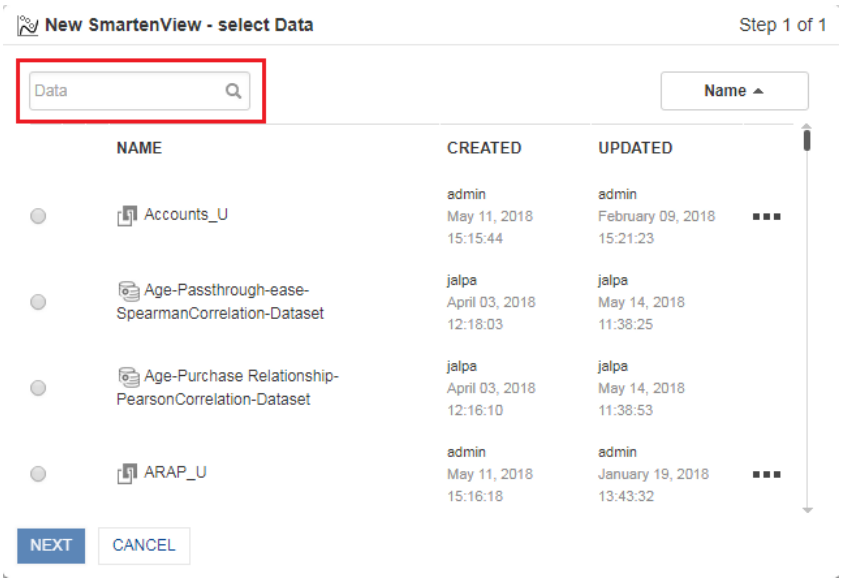
MENU OPTION—NEW DATASET

The system displays the **New SmartenView** dialog box.



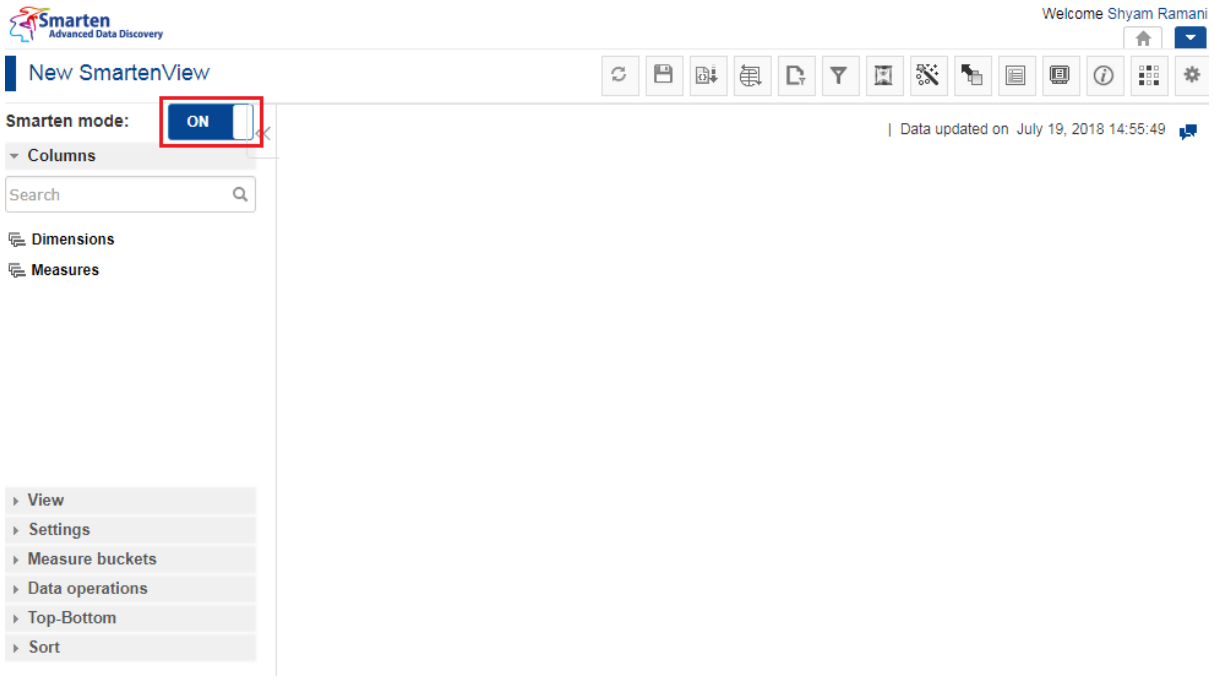
SELECTING A CUBE OR A DATASET—THE NEW SMARTENVIEW DIALOG BOX

2. Select the cube or dataset you want to use to create the SmartenView, and then click **NEXT**. The system displays the **New SmartenView** screen.



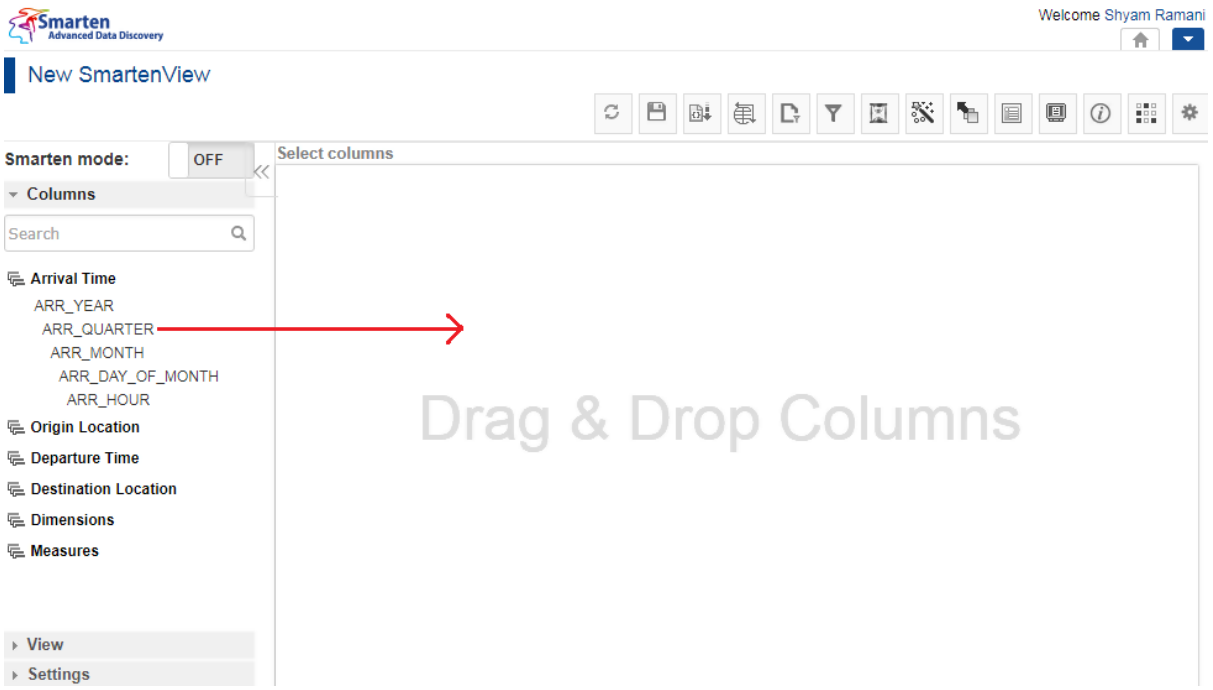
NEW SMARTENVIEW—SEARCHING FOR A CUBE OR A DATASET

3. Click the **Smarten mode** slider to turn off the Smarten mode.
   The system turns off the Smarten mode after confirmation.



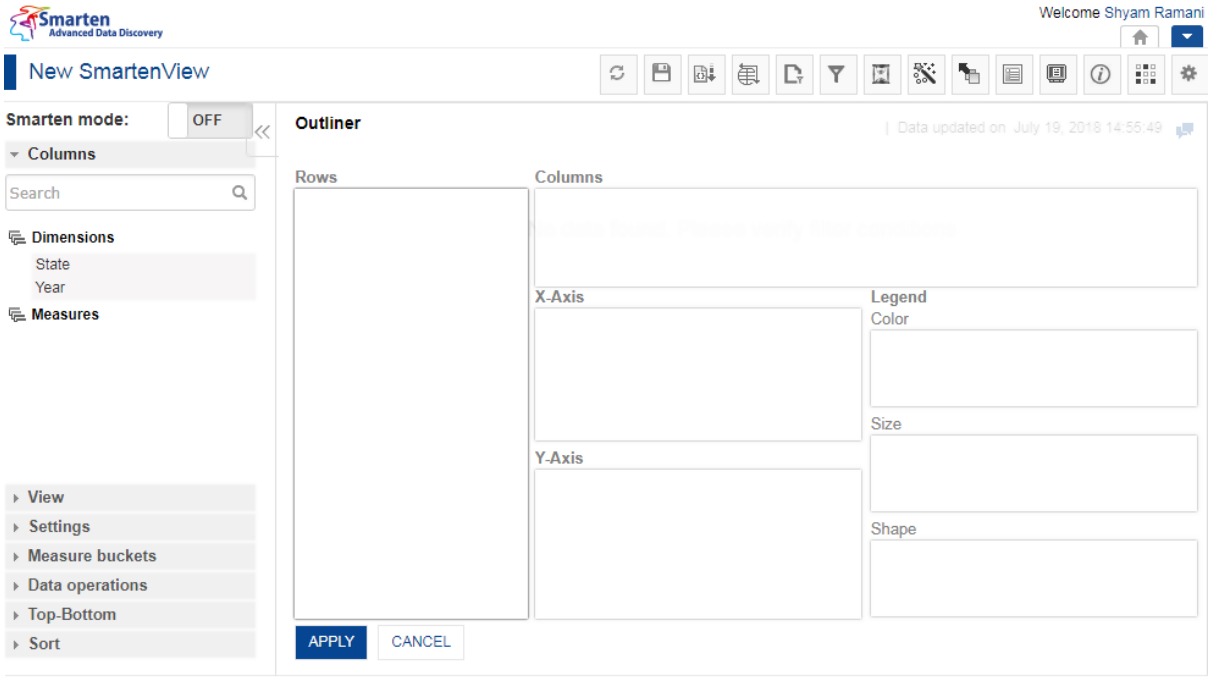
NEW SMARTENVIEW—DISABLING THE SMARTEN MODE

4. Drag and drop the columns that you want to use in the **Columns** pane.



NEW SMARTENVIEW SCREEN—SELECTING COLUMNS

The system displays the **Outliner** pane.

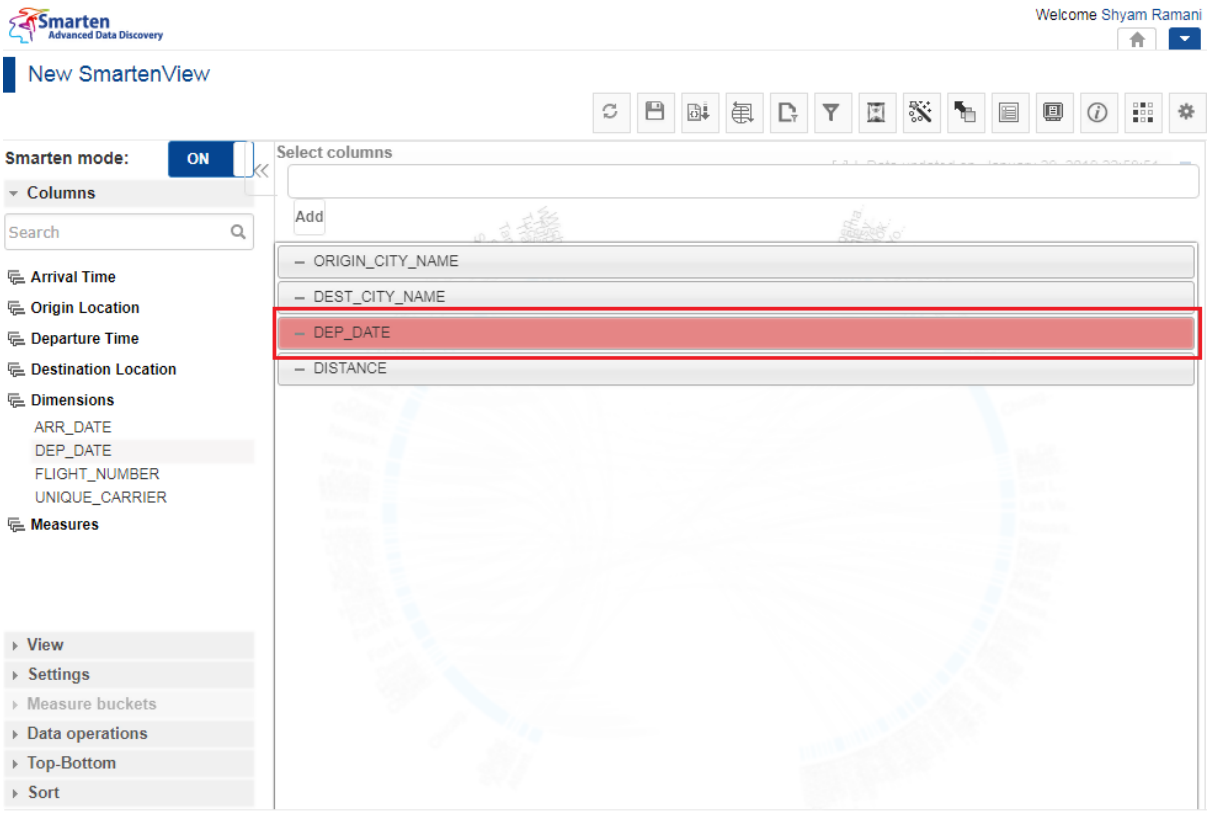


NEW SMARTENVIEW—ADDING COLUMNS TO VARIOUS QUADRANTS

5. Drop the selected columns within the sections available in the **Outliner** pane. You can place columns into the X, Y, and Z axis and manage visualizations with color, shape, and size. For example, in the image above, if you add the Year column to the X-Axis section, the system will use data of the Year column to form the X-Axis of the SmartenView.

   When you add a column to a section of the Outliner that is not applicable for the selected chart type, the system highlights such columns. Similarly, when the chart type is changed and the columns available in any of the sections are not applicable for the new chart type,

the system highlights such columns. For example, for the Chord-type chart, you can only add two Dimension columns and one Measure column. If you add any more columns in the Outliner pane, the system highlights those columns.



NEW SMARTENVIEW—COLUMNS NOT APPLICABLE FOR THE SELECTED CHART TYPE

6. Click **APPLY**.

5.4 Configuring Charts

You can configure various properties of SmartenView, such as title, label, format, legend, and trend from the **Settings** pane. The tabs available in the **Settings** pane allow you to configure properties that are frequently used. The properties you can configure depend on the type of visualization you have selected. For example, you can configure trends for a bar chart, but the same is not applicable for a radar chart or a pie chart.

5.4.1 Configuring Titles of a Chart

You can configure properties for various graph titles, such as font, size, color, style, and text transformation.

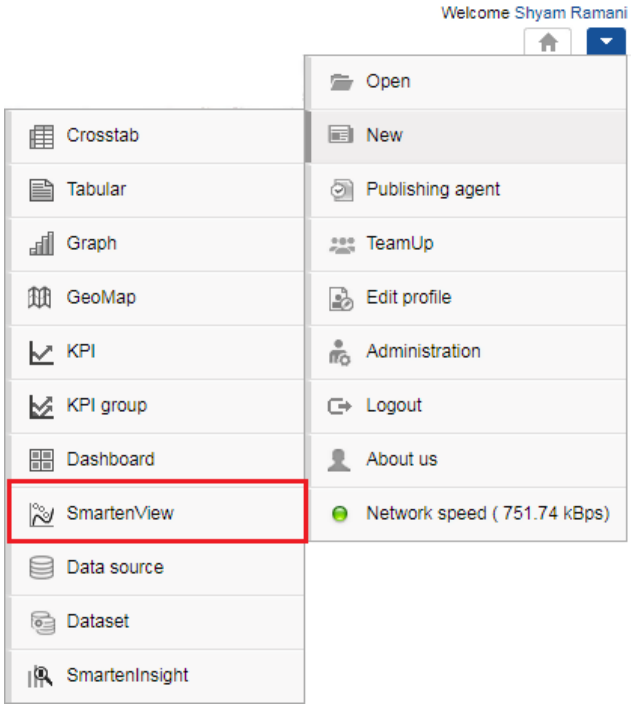
Reference: **Concept Manual > Configuring Charts**

About this task

Use this task to configure titles of a chart for SmartenView.

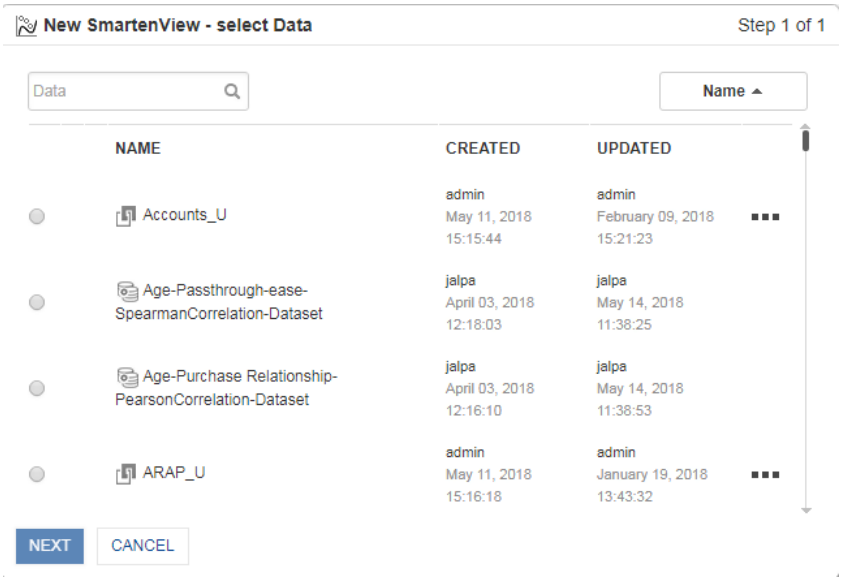
Procedure

1. Click **New** -> **SmartenView** from the menu.



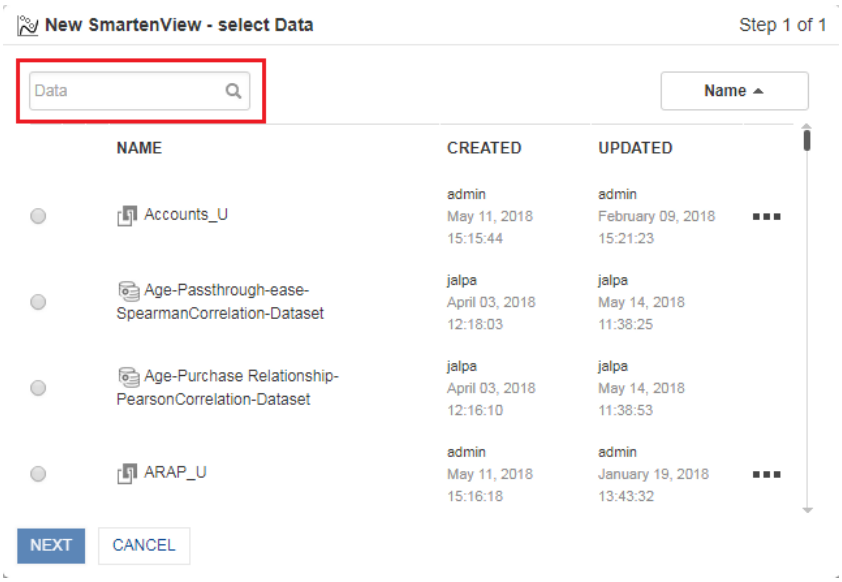
MENU OPTION—NEW DATASET

The system displays the **New SmartenView – select Data** dialog box.



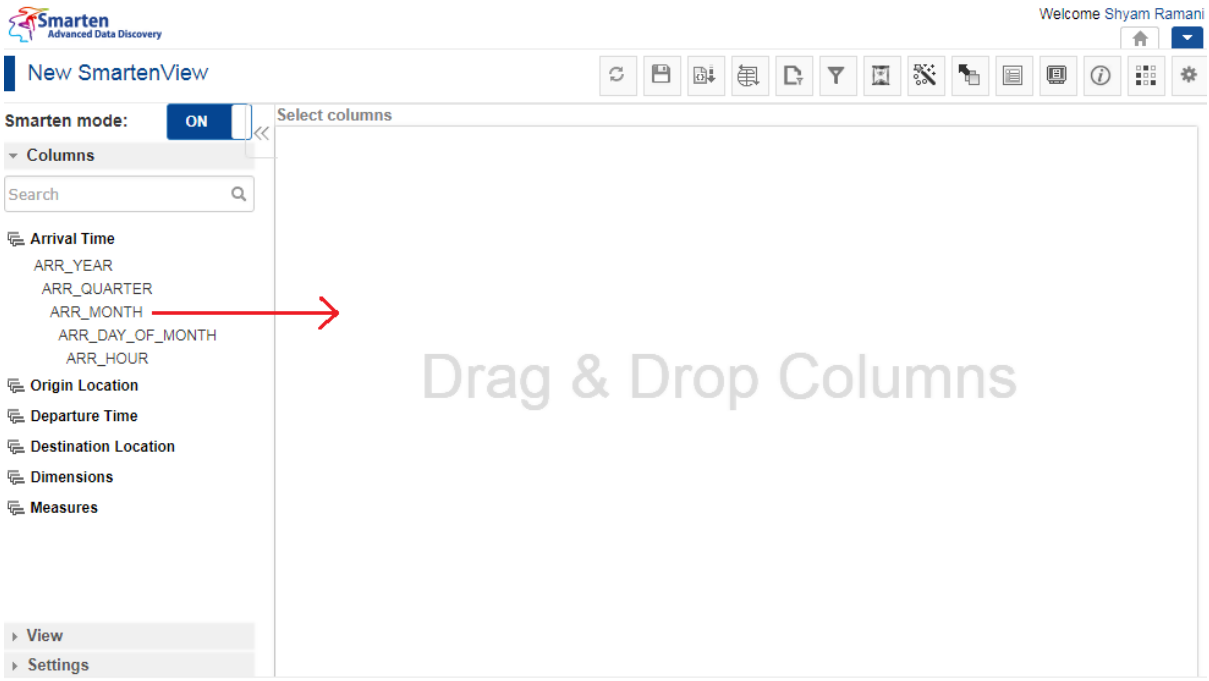
SELECTING A CUBE OR A DATASET—THE NEW SMARTENVIEW DIALOG BOX

2. Select the cube or dataset you want to use to create the SmartenView.
   Or,
   Enter the keyword in the Search box to search for the cube or dataset you want to use to create the SmartenView.



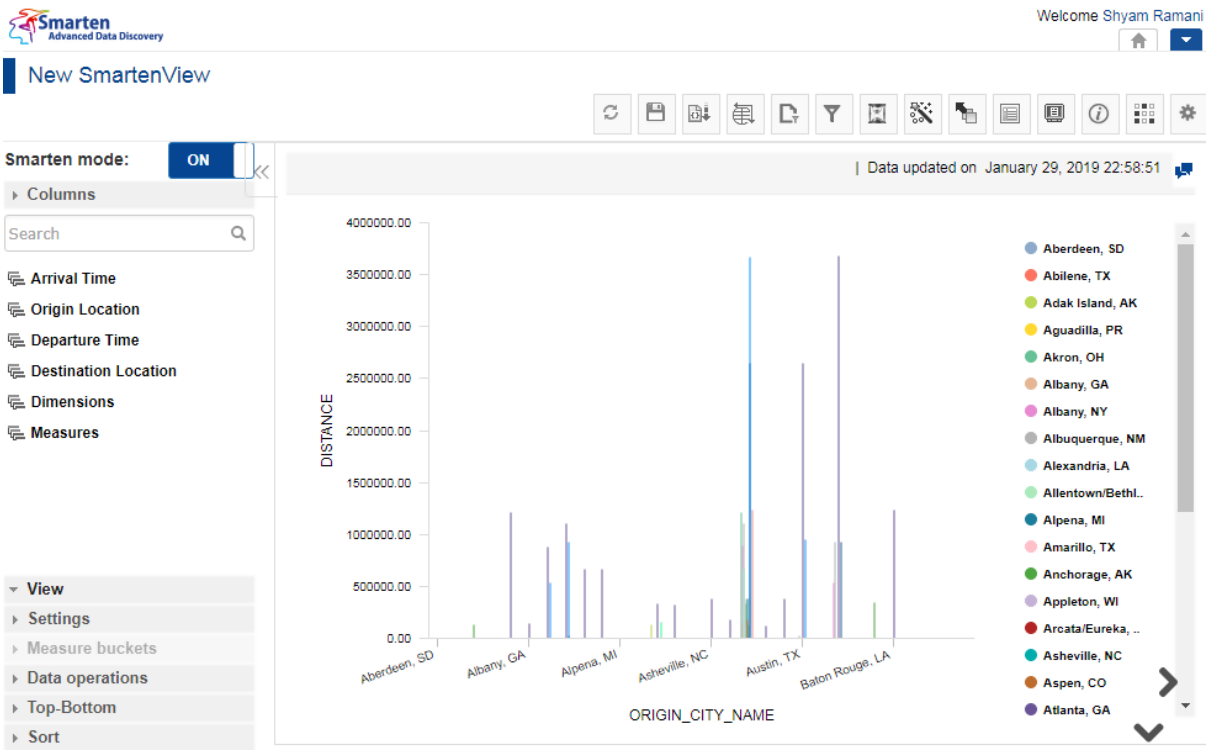
NEW SMARTENVIEW—SEARCHING FOR A CUBE OR A DATASET

3. Click **NEXT**.
4. Drag and drop the columns or measures and dimensions you want to use into the **Columns** pane.



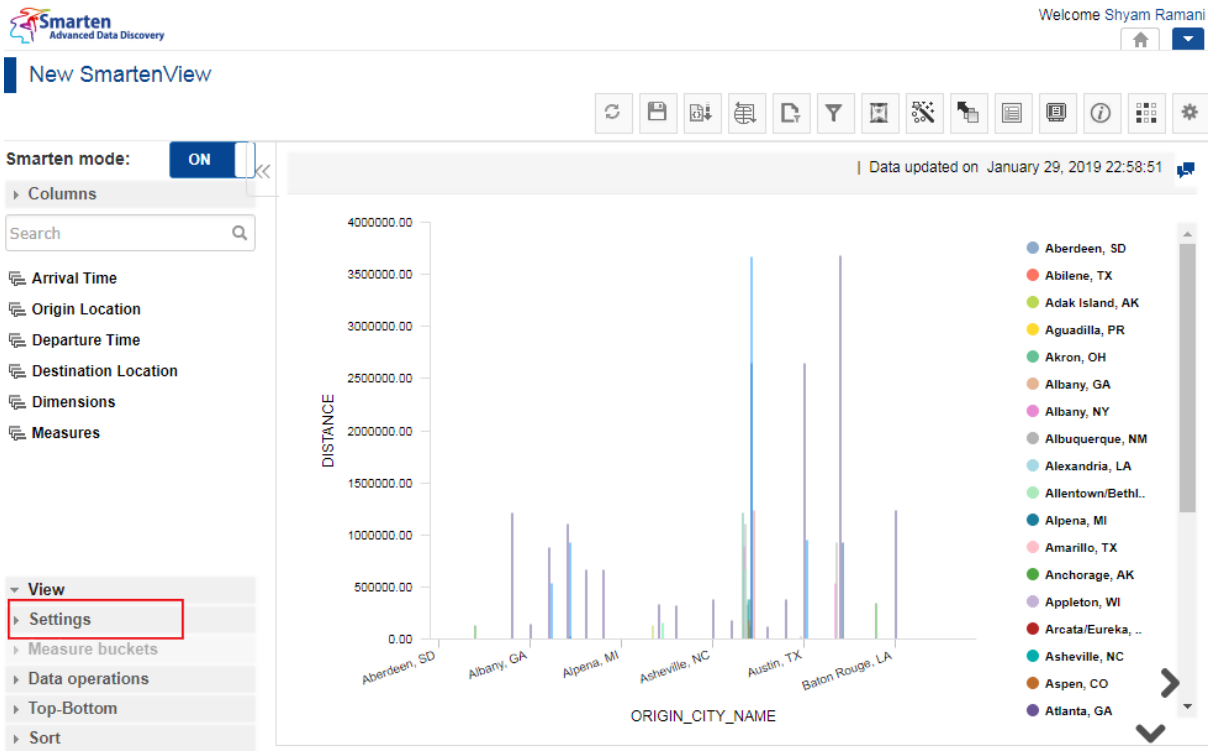
NEW SMARTENVIEW SCREEN—SELECTING COLUMNS, MEASURES, AND DIMENSIONS

The system automatically generates the visualization based on the data you select.



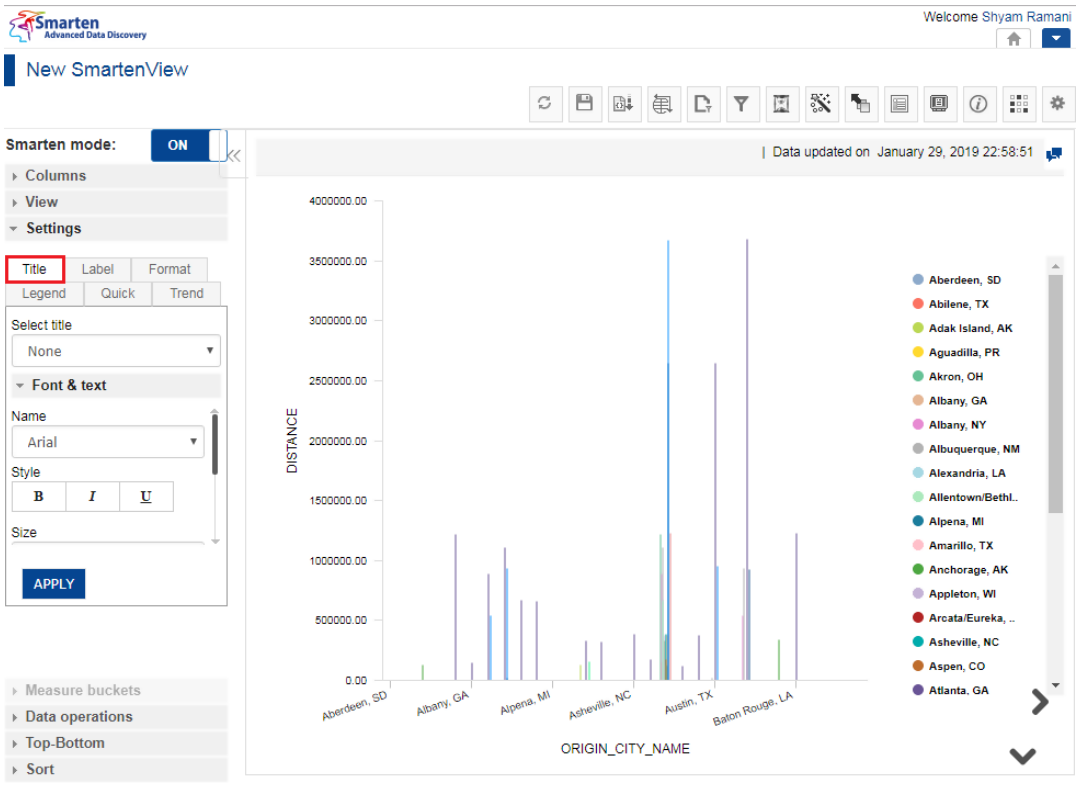
NEW SMARTENVIEW—SYSTEM AUTOMATICALLY GENERATES THE VISUALIZATION

5. Click the **Settings** tab.



CONFIGURING THE CHART—THE SETTINGS TAB

6. Click the **Title** tab to specify properties for the title of the chart.

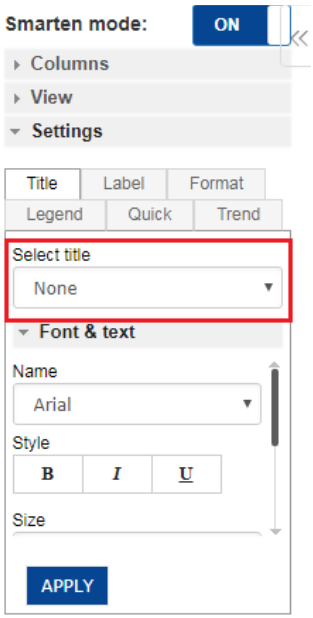


CONFIGURING THE CHART—THE TITLE TAB

7. Select an option from the **Select title list** to specify the title for which you want to configure properties.

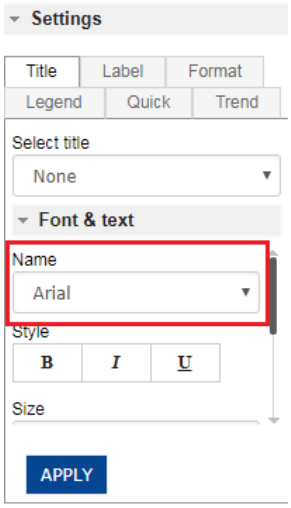
   The following options are available:

   - **None**: By default, this option is selected.
   - **All titles**: Select this option to update properties of all titles in the graph.
   - **Graph title**: Select this option to update properties of only the graph title.
   - **Category axis title**: Select this option to update properties of the title of the x-axis.
   - **Value axis title**: Select this option to update properties of the titles of the values in the y-axis.



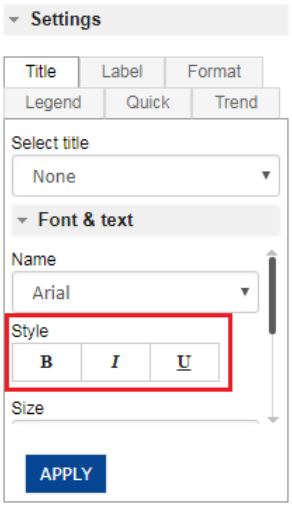
CONFIGURING TITLE—SELECTING THE TITLE TO BE CONFIGURED

8. Select the font you want to apply from the **Name** list.



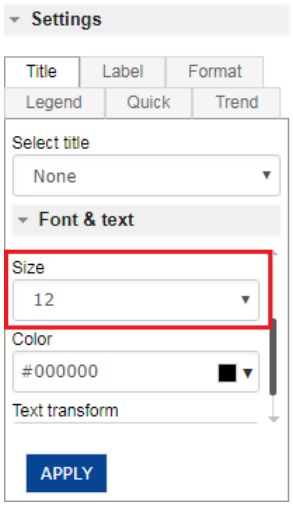
CONFIGURING THE TITLE—SELECTING THE FONT

9. Click the style you want to apply on the font.
   The following styles are available:
   - **B**: Bold
   - **I**: Italics
   - **U**: Underline



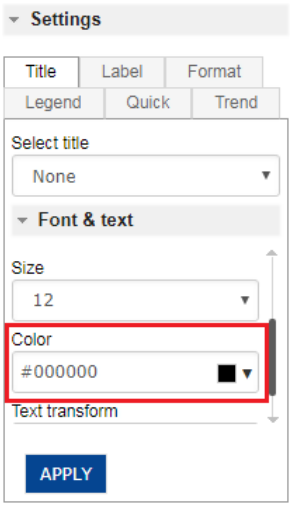
CONFIGURING THE TITLE—SELECTING THE STYLE OF THE FONT

10. Select an option from the **Size** list to specify the size of the font.



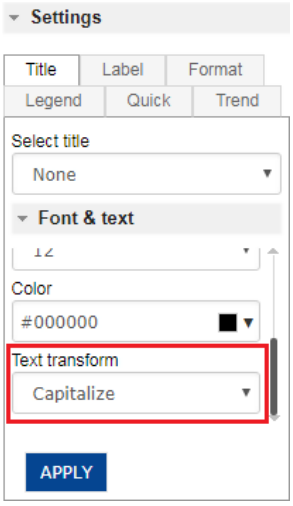
CONFIGURING THE TITLE—SELECTING THE SIZE OF THE FONT

11. Select an option from the **Color** list to specify the color of the font.



CONFIGURING THE TITLE—SELECTING THE COLOR OF THE FONT

12. Select an option from the **Text transformation** list to transform the font.

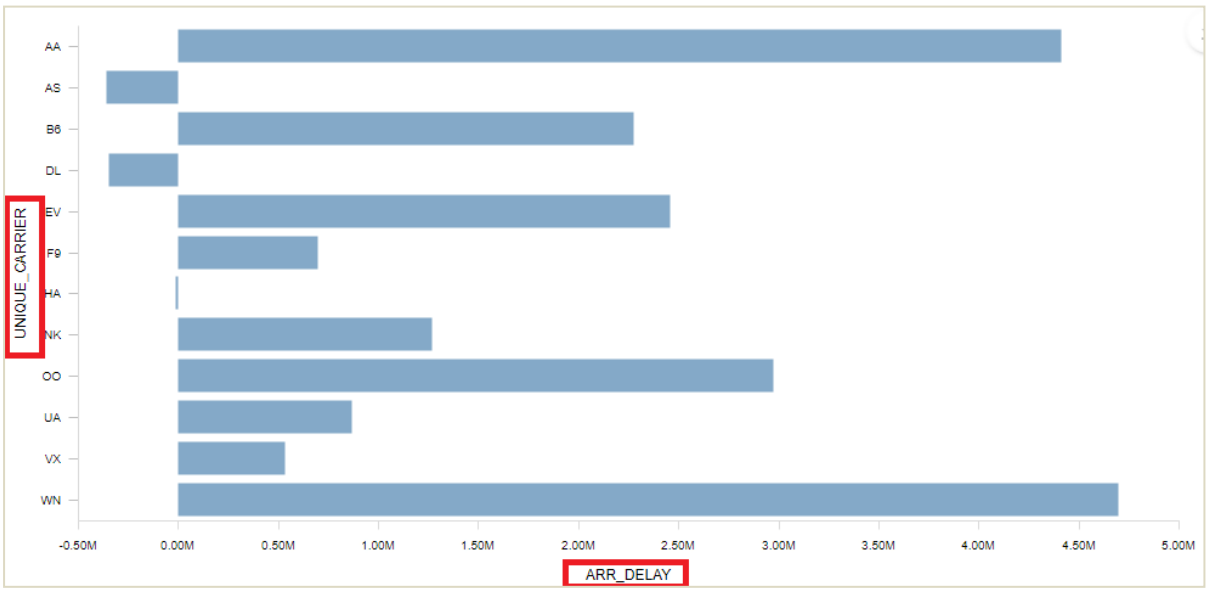


CONFIGURING THE TITLE—SELECTING AN OPTION FOR TEXT TRANSFORMATION

13. Click **APPLY**.

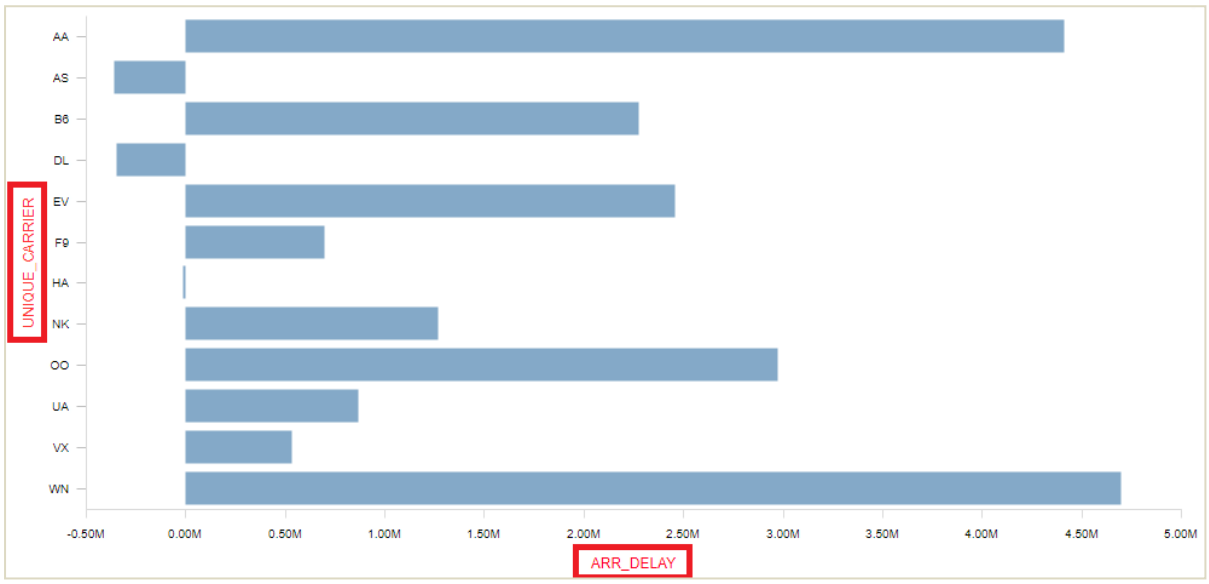
The images below show the before and after scenario for a bar chart after changing the font color of the titles belonging to the category axis and value axis from Black to Red:

Before:



HORIZONTAL BAR CHART

After:



HORIZONTAL BAR CHART

5.4.2 Configuring Labels of a Chart

You can configure properties for various labels of a chart, such as font, size, color, style, and text transformation.

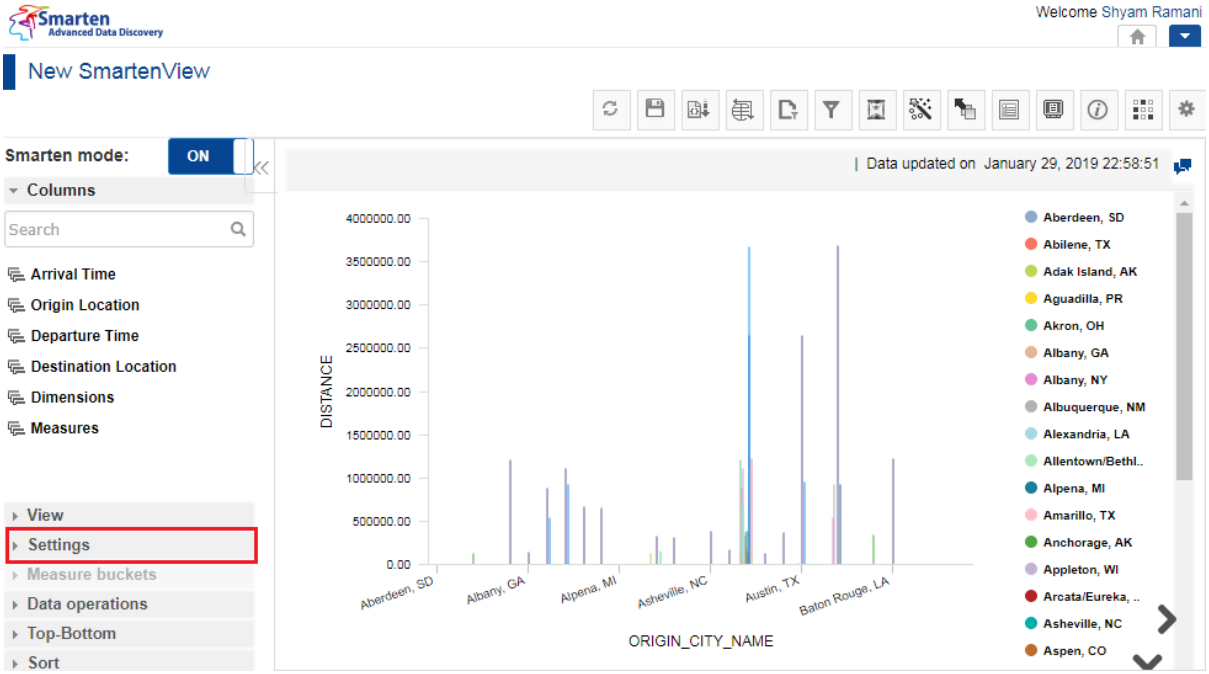
Reference: **Concept Manual > Configuring Charts**

About this task

Use this task to configure labels of a chart for SmartenView.

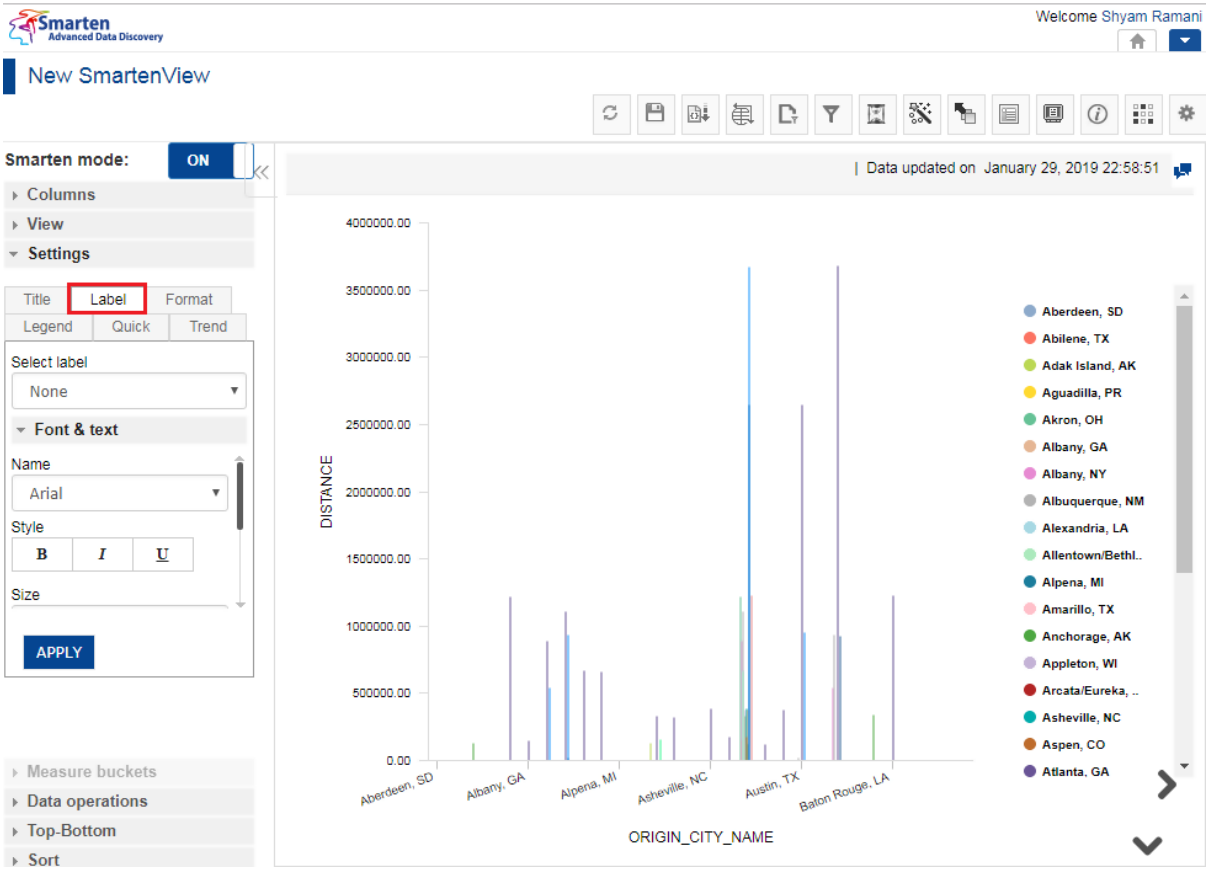
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Settings** tab.



CONFIGURING THE CHART—THE SETTINGS TAB

4. Click the **Label** tab to specify properties for the label of the chart.

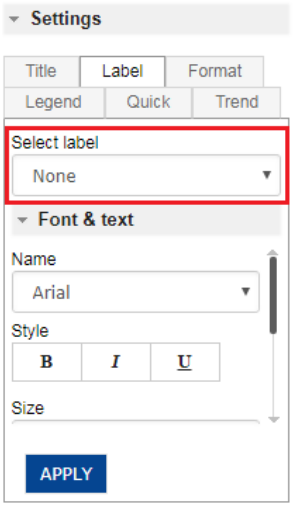


CONFIGURING THE CHART—THE LABEL TAB

5. Select an option from the **Select label** list to specify the label for which you want to configure properties.

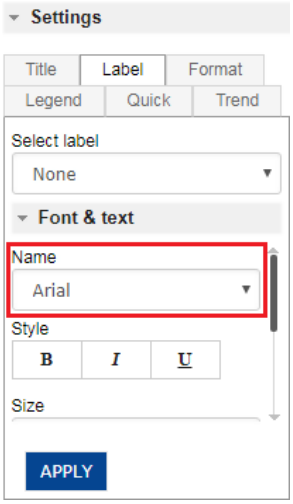
   The following options are available:

   - **None**: By default, this option is selected.
   - **All Labels**: Select this option to update the properties of all labels in the graph.
   - **Category axis labels**: Select this option to update the properties of the labels of the x-axis.
   - **Value axis labels**: Select this option to update the properties of the labels of the values in the y-axis.
   - **Row Labels**: Select this option to update the properties of the labels of only the rows.
   - **Cols labels**: Select this option to update the properties of the labels of the columns.
   - **Legend labels**: Select this option to update the properties of the labels for various legends available in the chart.



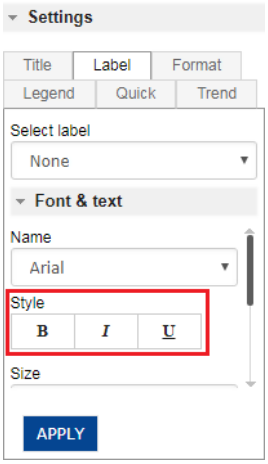
CONFIGURING THE LABEL—SELECTING THE LABEL TO BE CONFIGURED

6. Select the font you want to apply from the **Name** list.



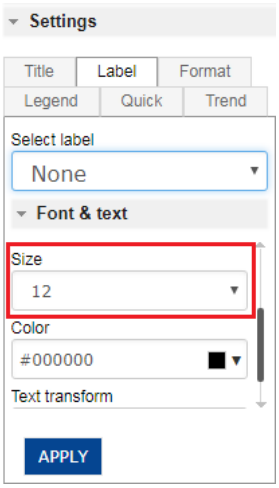
CONFIGURING THE LABEL—SELECTING THE FONT

7. Click the style you want to apply.
   The following styles are available:
   - **B**: Bold
   - **I**: Italics
   - **U**: Underline



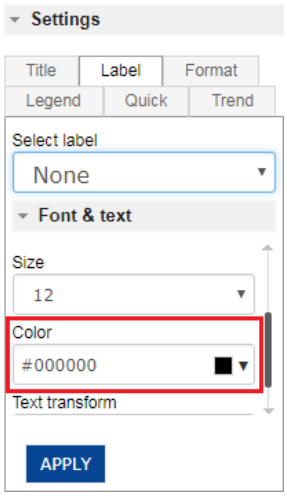
CONFIGURING THE LABEL—SELECTING THE STYLE OF THE FONT

8. Select an option from the **Size** list to specify the size of the font.



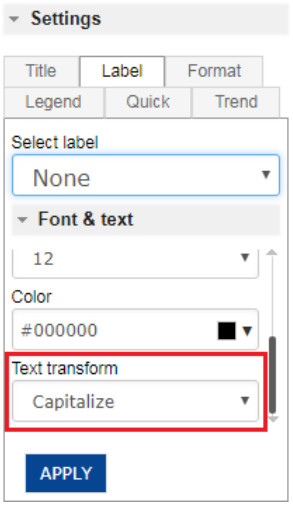
CONFIGURING THE LABEL—SELECTING THE SIZE OF THE FONT

9. Select an option from the **Color** list to specify the color of the font.



CONFIGURING THE LABEL—SELECTING THE COLOR OF THE FONT

10. Select an option from the **Text transformation** list to transform the font.

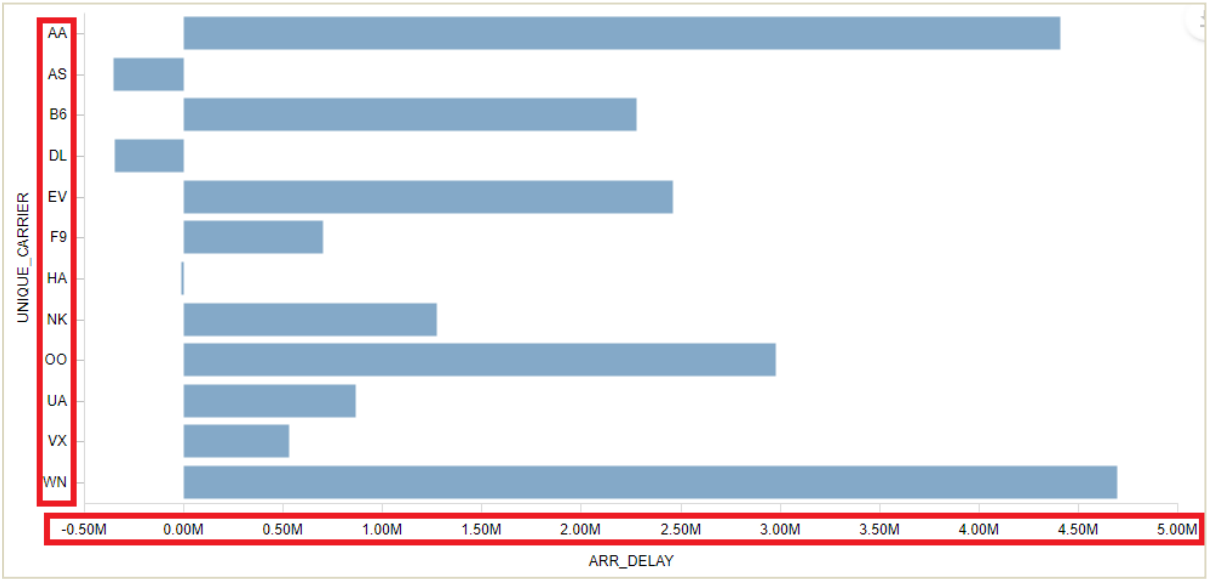


CONFIGURING THE LABEL—SELECTING AN OPTION FOR TEXT TRANSFORMATION

11. Click **APPLY**.

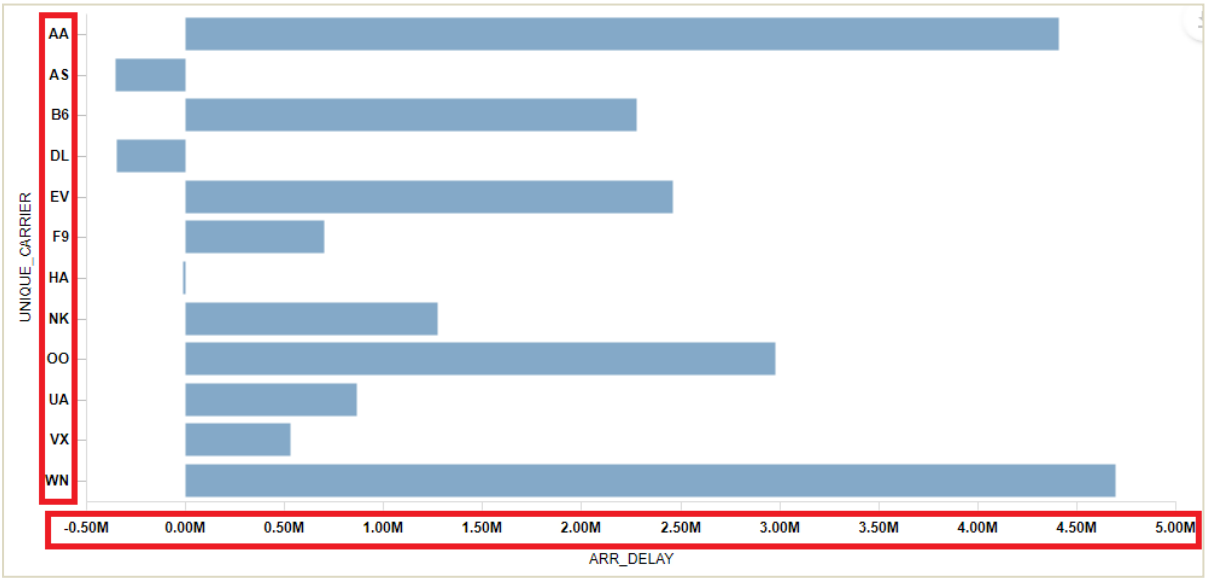
The images below show the before and after scenario for a bar chart after changing the font style of the labels of the category axis and value axis to bold:

Before:



HORIZONTAL BAR CHART

After:



HORIZONTAL BAR CHART

5.4.3 Configuring Labels of a Chart

You can configure properties for various labels of a chart, such as font, size, color, style, and text transformation.

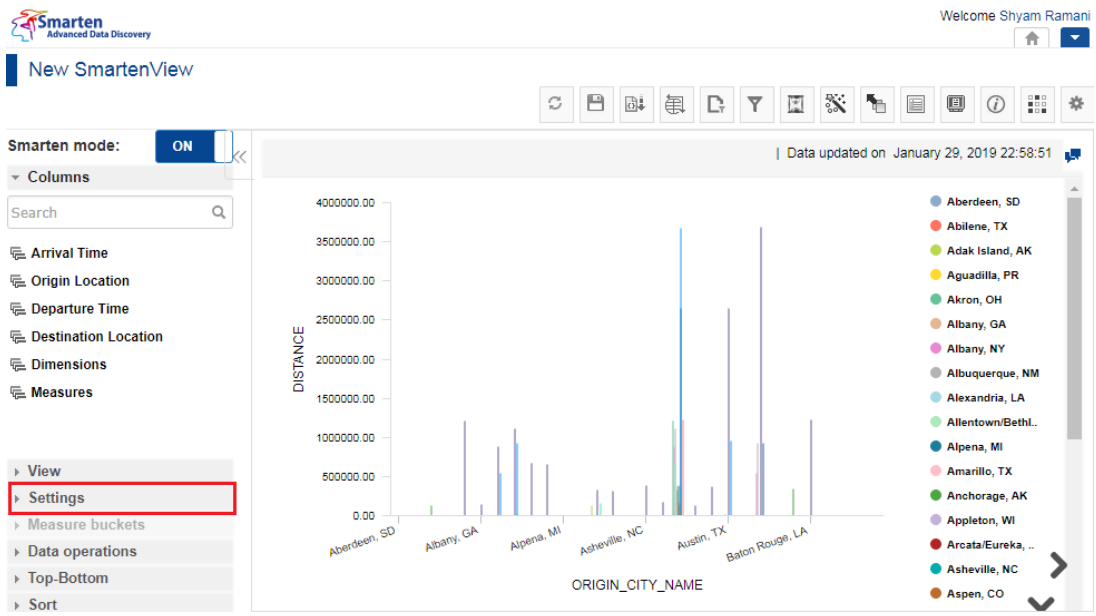
Reference: **Concept Manual > Configuring Charts**

About this task

Use this task to configure labels of a chart for SmartenView.

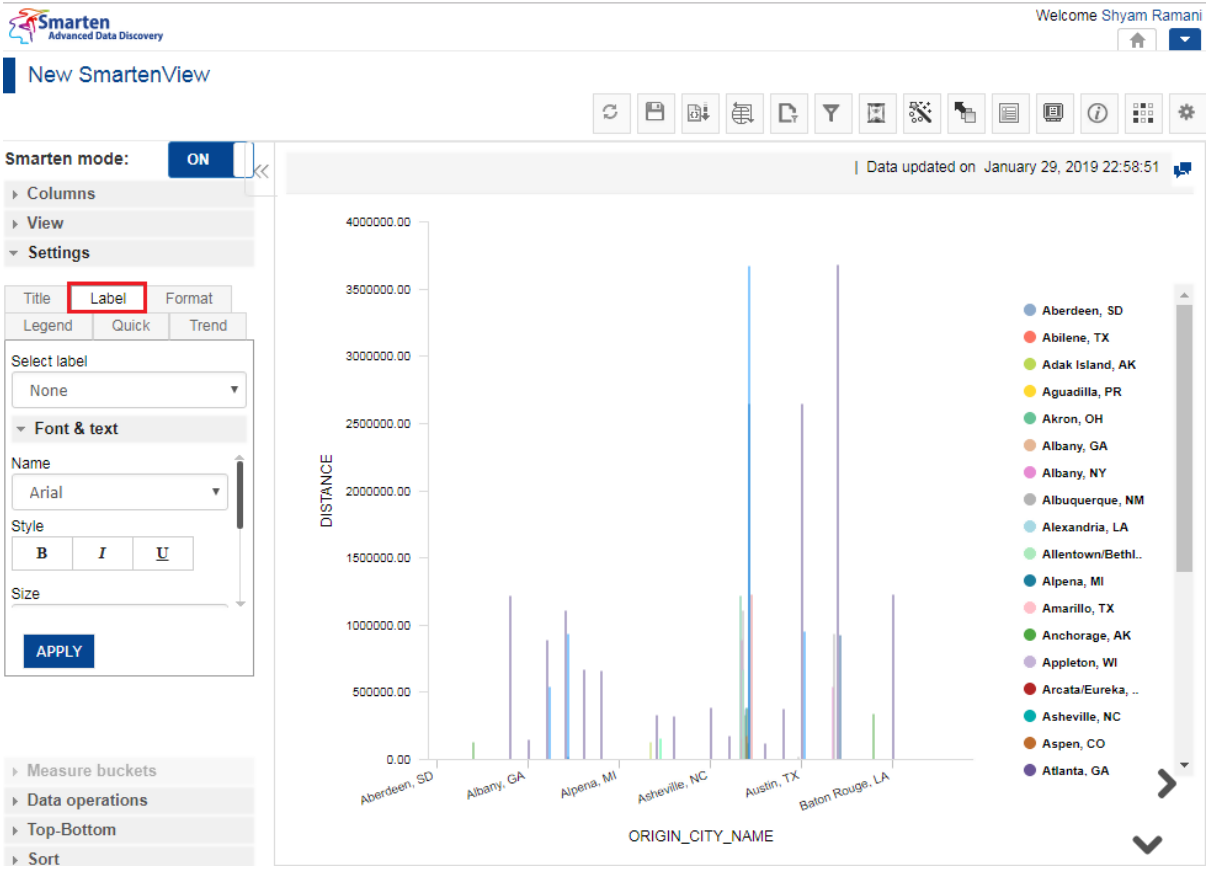
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Settings** tab.



CONFIGURING THE CHART—THE SETTINGS TAB

4. Click the **Label** tab to specify properties for the label of the chart.

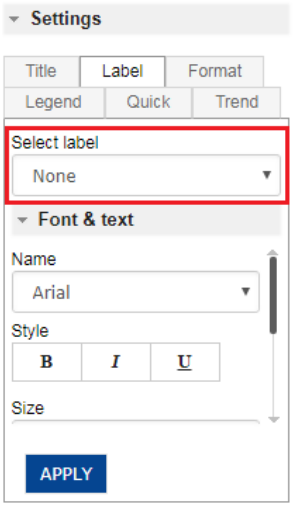


CONFIGURING THE CHART—THE LABEL TAB

5. Select an option from the **Select label** list to specify the label for which you want to configure properties.

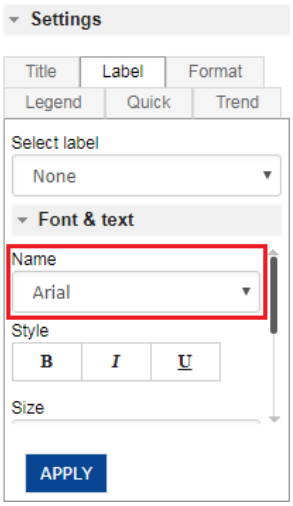
   The following options are available:

   - **None**: By default, this option is selected.
   - **All Labels**: Select this option to update the properties of all labels in the graph.
   - **Category axis labels**: Select this option to update the properties of the labels of the x-axis.
   - **Value axis labels**: Select this option to update the properties of the labels of the values in the y-axis.
   - **Row Labels**: Select this option to update the properties of the labels of only the rows.
   - **Cols labels**: Select this option to update the properties of the labels of the columns.
   - **Legend labels**: Select this option to update the properties of the labels for various legends available in the chart.



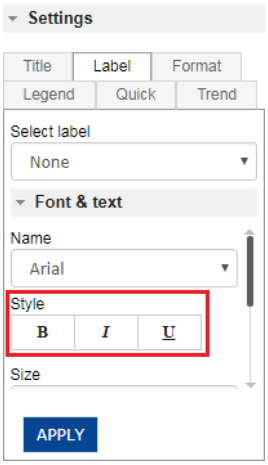
CONFIGURING THE LABEL—SELECTING THE LABEL TO BE CONFIGURED

6. Select the font you want to apply from the **Name** list.



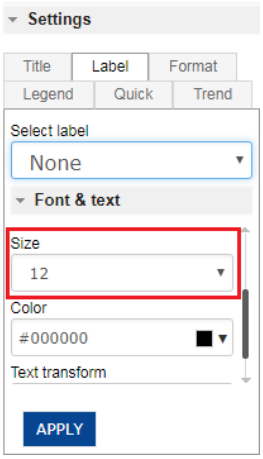
CONFIGURING THE LABEL—SELECTING THE FONT

7. Click the style you want to apply.
   The following styles are available:
   - **B**: Bold
   - **I**: Italics
   - **U**: Underline



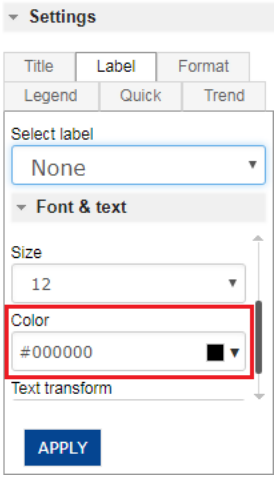
CONFIGURING THE LABEL—SELECTING THE STYLE OF THE FONT

8. Select an option from the **Size** list to specify the size of the font.



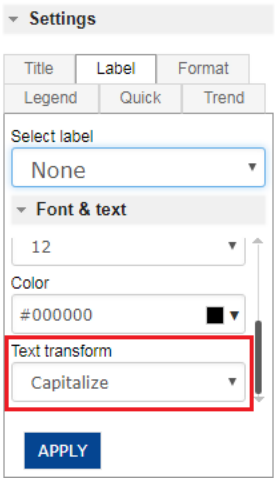
CONFIGURING THE LABEL—SELECTING THE SIZE OF THE FONT

9. Select an option from the **Color** list to specify the color of the font.



CONFIGURING THE LABEL—SELECTING THE COLOR OF THE FONT

10. Select an option from the **Text transformation** list to transform the font.

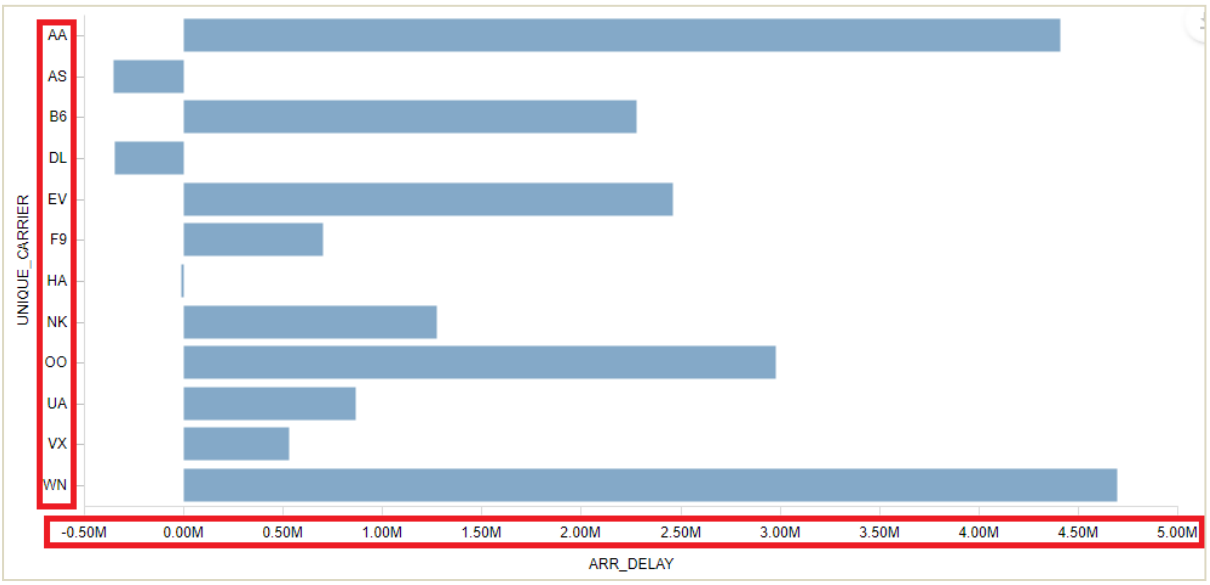


CONFIGURING THE LABEL—SELECTING AN OPTION FOR TEXT TRANSFORMATION

11. Click **APPLY**.

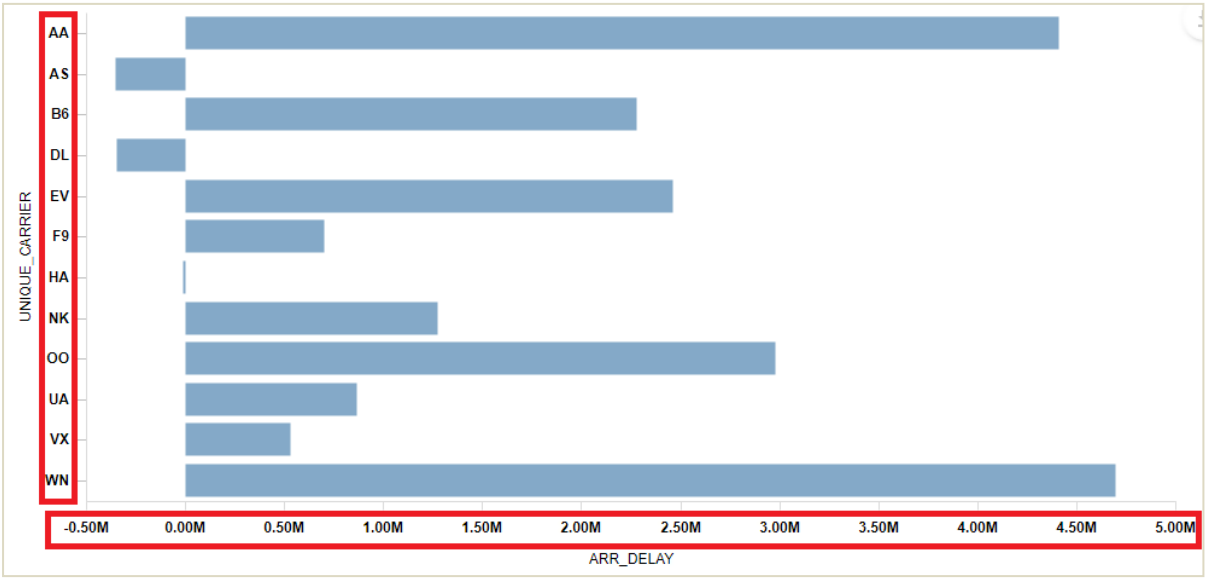
The images below show the before and after scenario for a bar chart after changing the font style of the labels of the category axis and value axis to bold:

Before:



HORIZONTAL BAR CHART

After:



HORIZONTAL BAR CHART

5.4.4 Configuring the Legends of a Chart

You can configure the colors used for various legends in a chart. You can specify whether to use system-specified colors, the same color, a range of color, or specify a color of your choice.

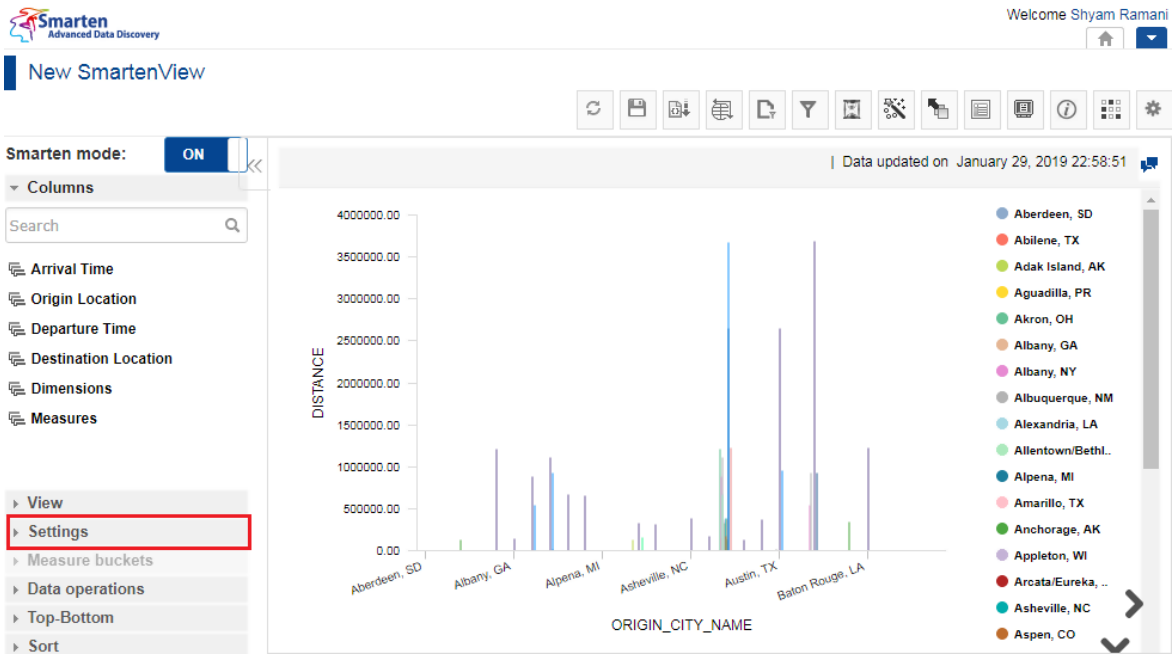
Reference: **Concept Manual > Configuring Charts**

About this task

Use this task to configure the color of the legends used in a chart for SmartenView.

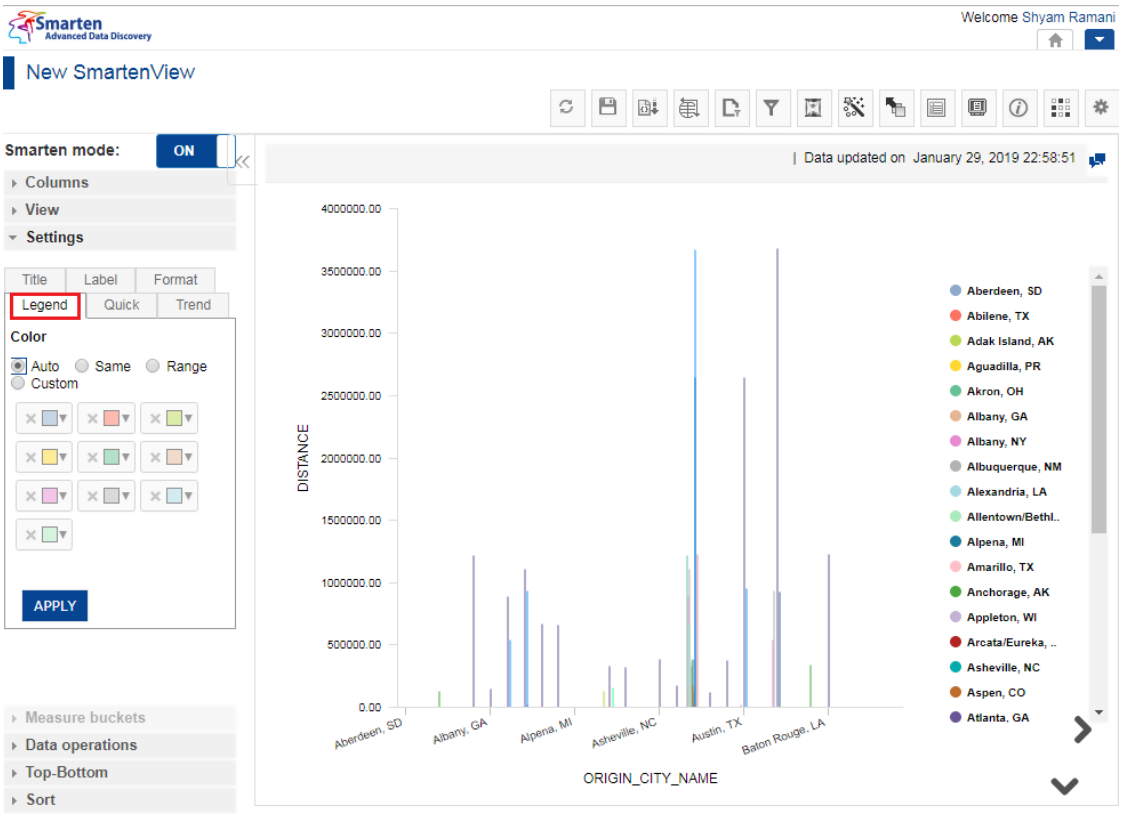
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Settings** tab.



CONFIGURING THE CHART—THE SETTINGS TAB

4. Click the **Legend** tab to specify the properties for the title of the chart.

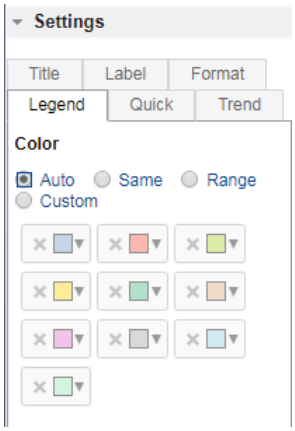


CONFIGURING THE CHART—THE LEGEND TAB

5. Select an option to specify the legend you want to use:

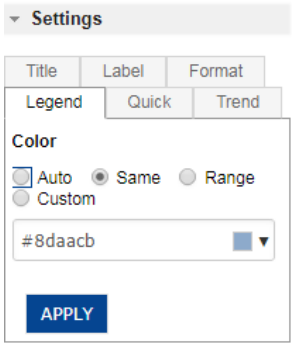
   The following options are available:

   - **Auto**: Select this option if you want to use colors specified by the system for legends.



CONFIGURING THE LEGEND—THE AUTO OPTION

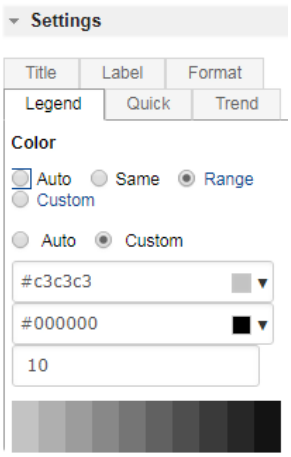
   - **Same**: Select this option to specify the same color from the color pallete for all legends.



CONFIGURING THE LEGEND—THE SAME OPTION

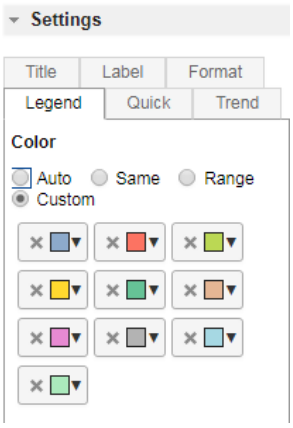
   - **Range**: Select this option to specify a range of hex code of the color to be used for legends.

     If you have selected the **Auto** option, the system automatically divides the hex codes of the colors provided equally among the legends. If you have selected the **Custom** option, the system divides the hex codes of the colors by the value you have provided. For example, in the following image, the range from c3c3c3 to 000000 will be divided by 10, and the resultant values will be used for legends. If the number of legends is more than 10, the colors will be repeated.



CONFIGURING THE LEGEND—THE RANGE OPTION

- **Custom**: Select this option if you want to specify the color for an individual legend by selecting a color from the color pallete.

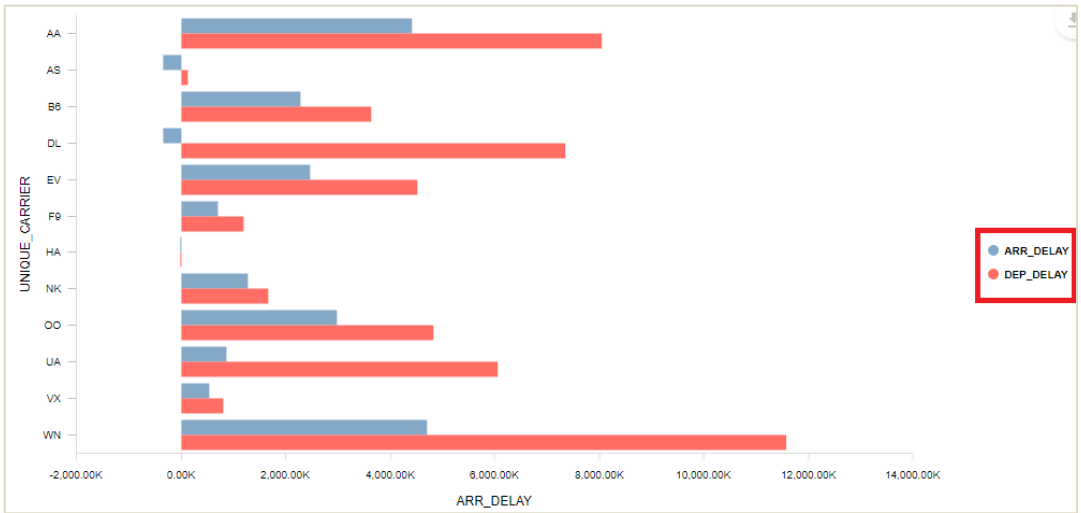


CONFIGURING THE LEGEND—OPTIONS TO SPECIFY COLORS FOR LEGENDS

6. Click **APPLY**.

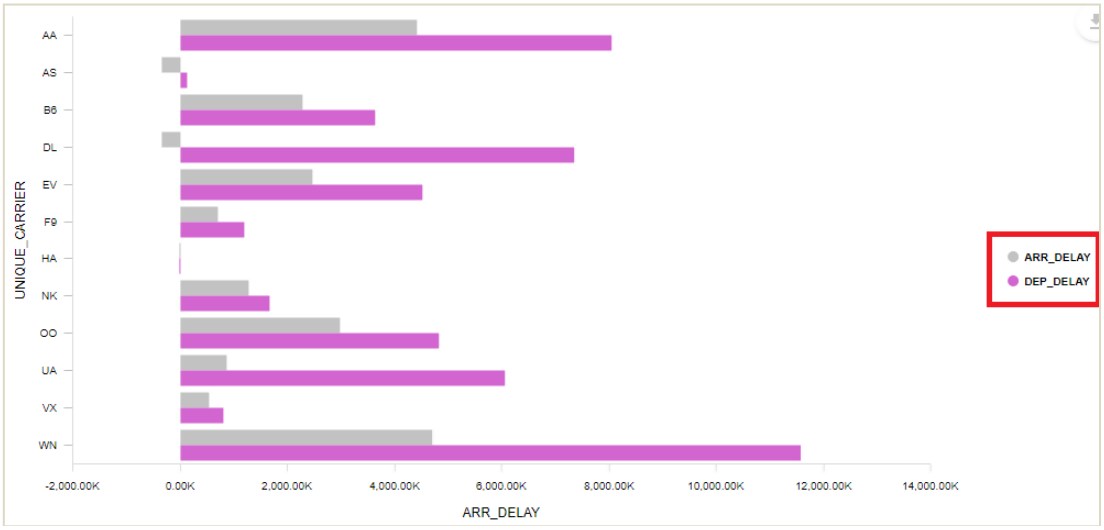
The following images show the before and after scenario for a bar chart after configuring the color combination for the legend:

Before:



HORIZONTAL BAR CHART

After:



HORIZONTAL BAR CHART

5.4.5 Showing All Data Values

You can use this option to display or hide all the data values in the visualization.

> Note:
> This option is not applicable for Tabular, Tree, Chord, Sunburst, Hierarchy tree, and Bubble types of visualization.

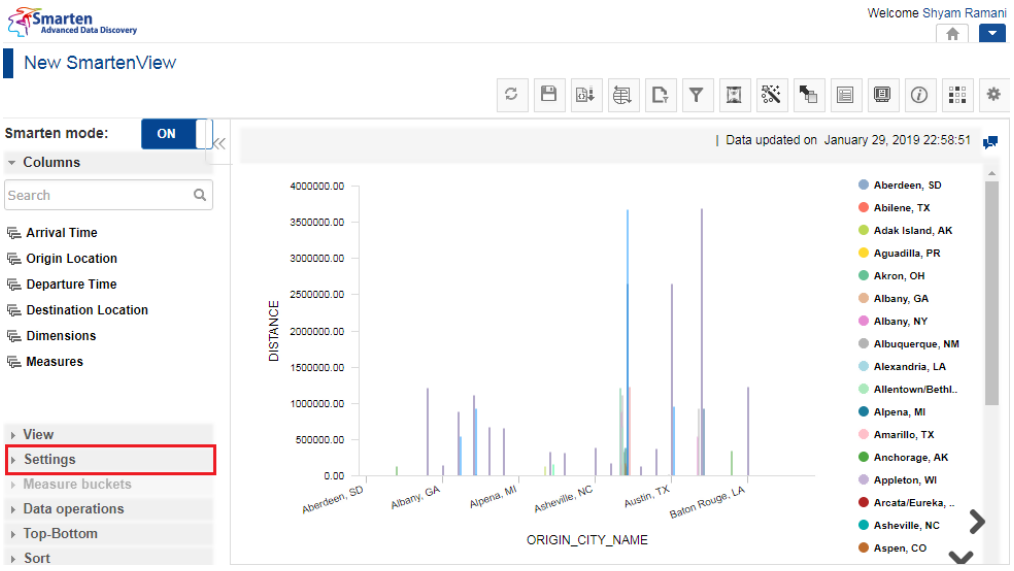
Reference: **Concept Manual > Configuring Charts > Settings > Show all data value**

About this task

Use this task to show all data values in a chart for SmartenView.

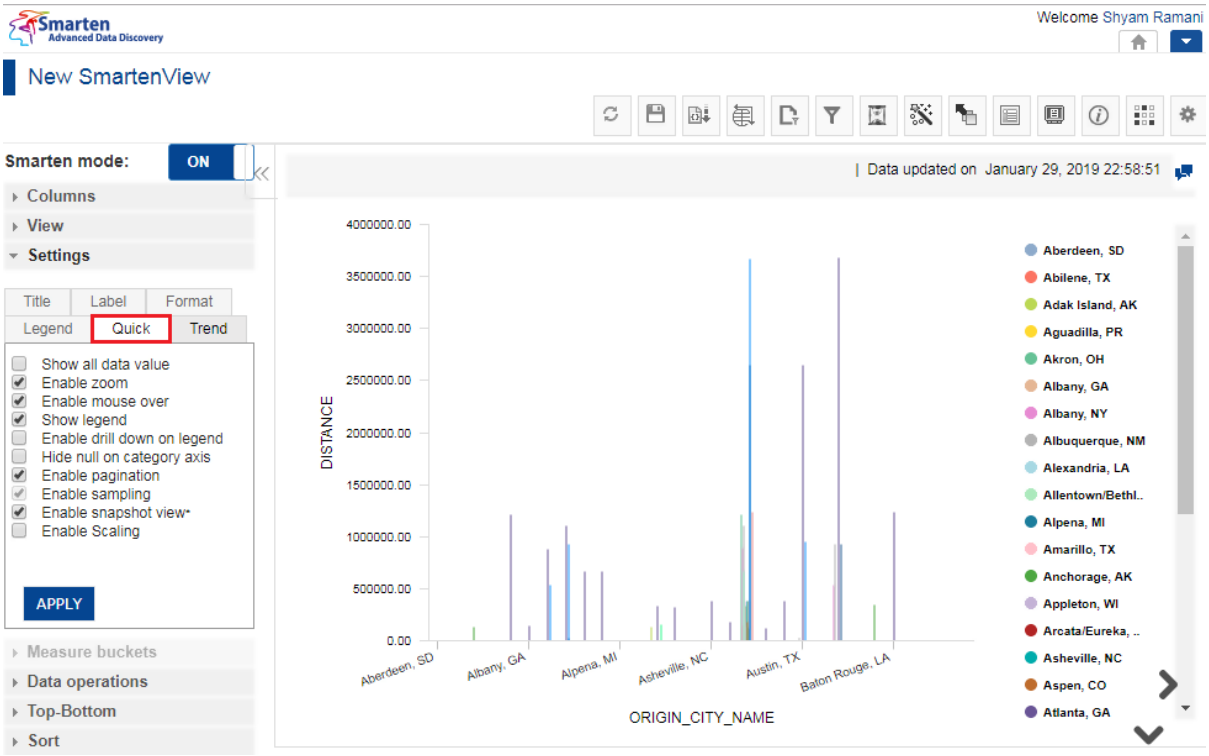
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Settings** tab.



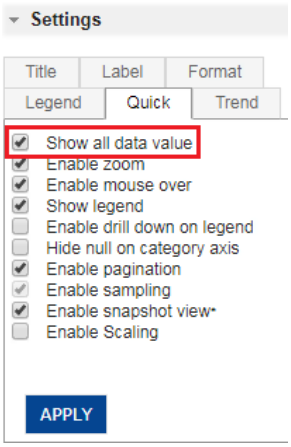
CONFIGURING A CHART—THE SETTINGS TAB

4. Click the **Quick** tab.



CONFIGURING A CHART—THE QUICK TAB

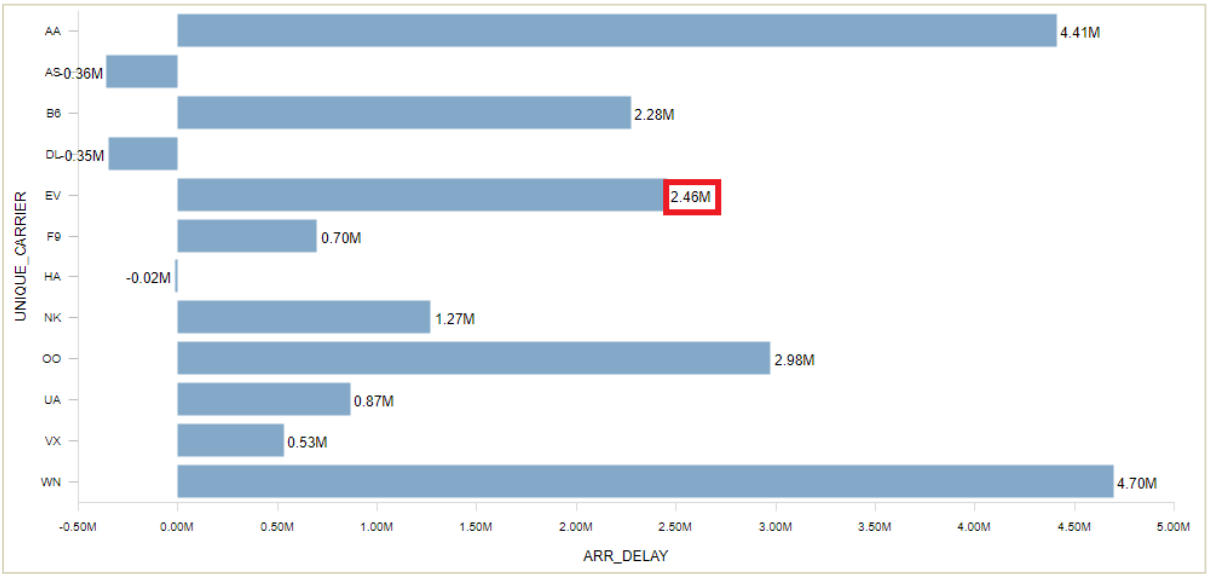
5. Select the **Show all data value** option.



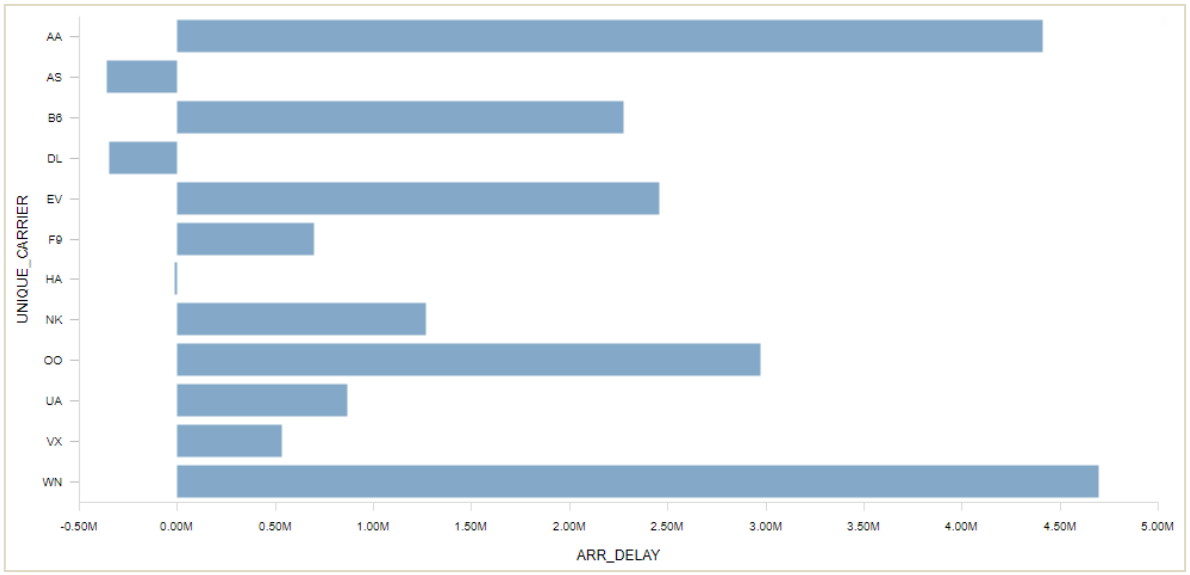
CONFIGURING A CHART—THE SHOW ALL DATA VALUE OPTION

6. Click **APPLY**.

The images below are examples of a Horizontal bar chart with “Show all data value” as enabled and disabled:



QUICK SETTINGS—SHOW ALL DATA VALUE (ENABLED)



QUICK SETTINGS—SHOW ALL DATA VALUE (DISABLED)

5.4.6 Enabling Zoom

You can enable or disable the ability to zoom in to the visualization. This feature is helpful when there is a lot of data displayed on the chart, and this option allows you to zoom in to a particular section on the chart and view it clearly in close-up. By default, this option is selected.

> Note:
> This property is not applicable for a Pie chart, Radar charts, Tabular, Tree, Gauge, Chord, Sunburst, Hierarchy tree, Map, and Bubble types of visualizations.

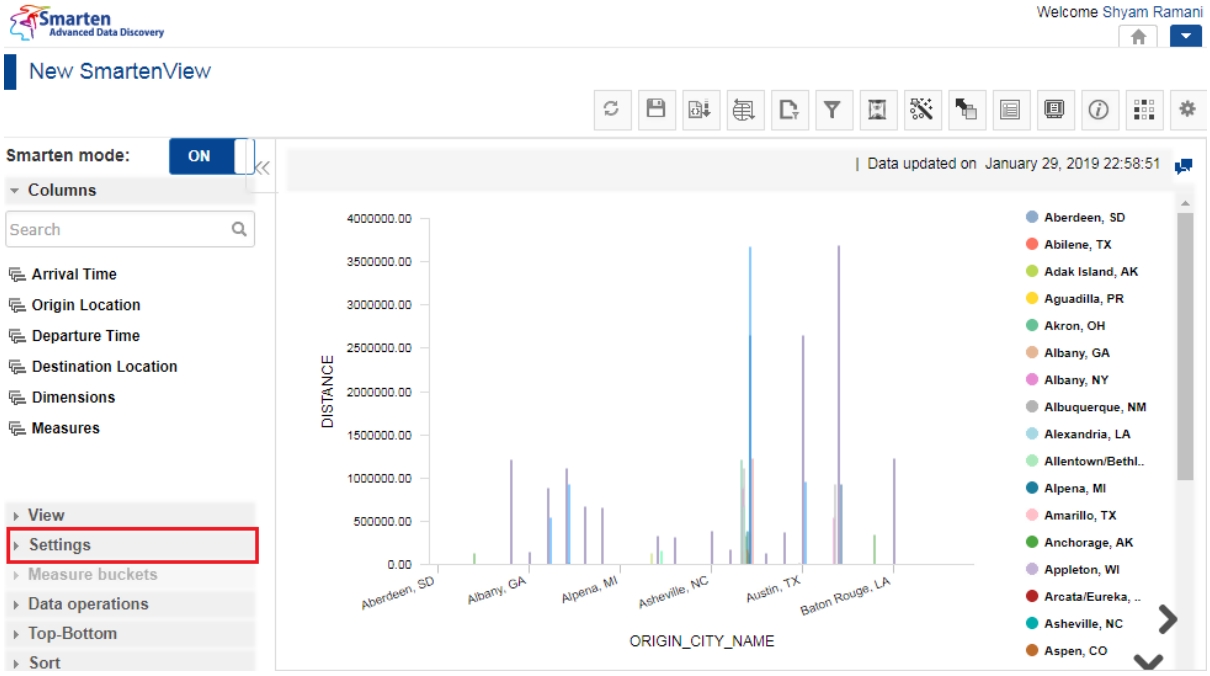
Reference: **Concept Manual > Configuring Charts > Settings > Enable zoom**

About this task

Use this task to enable zoom in on a chart for SmartenView.

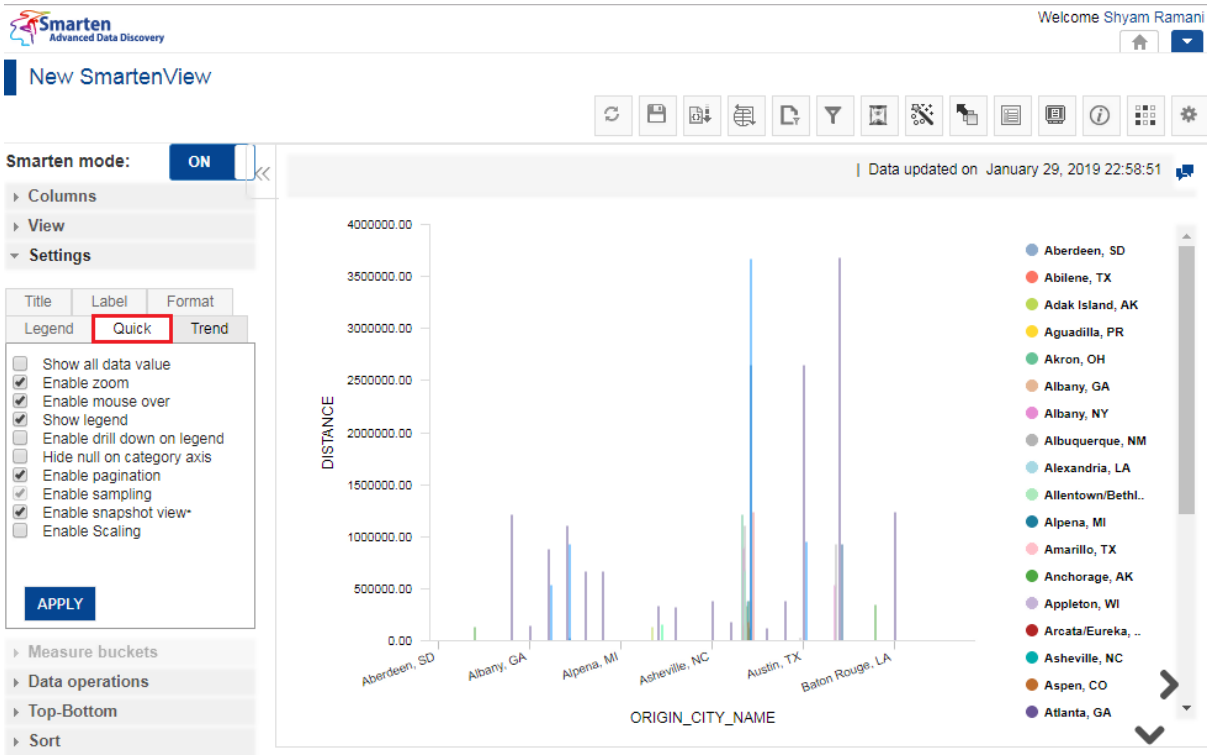
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Settings** tab.



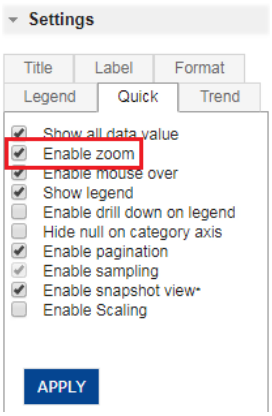
CONFIGURING A CHART—THE SETTINGS TAB

4. Click the **Quick** tab.



CONFIGURING A CHART—THE QUICK TAB

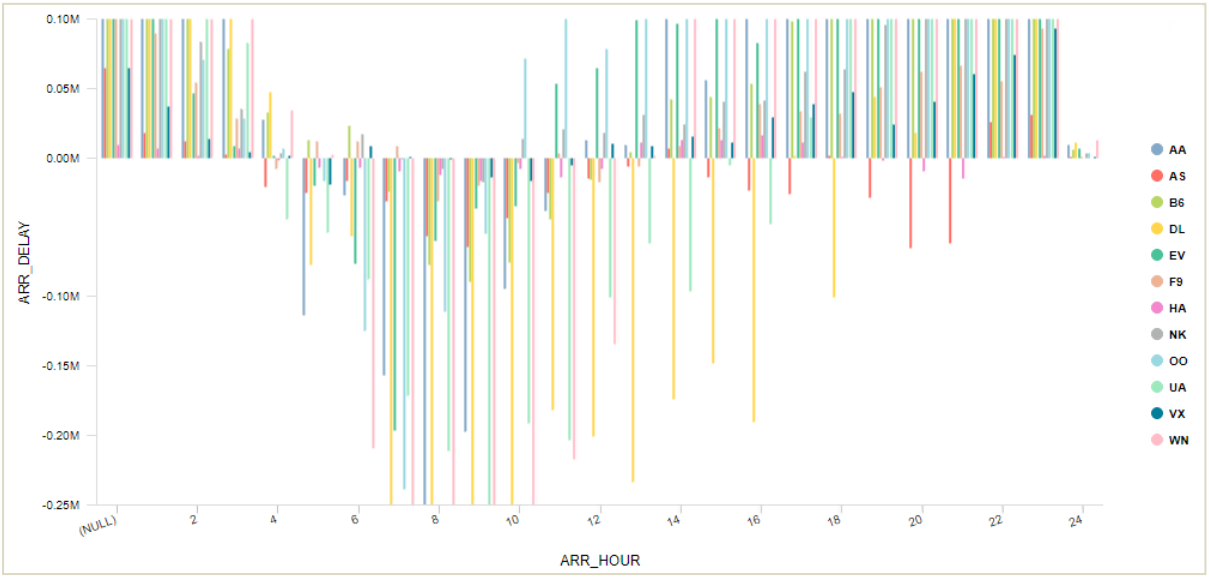
5. Select the **Enable zoom** option.



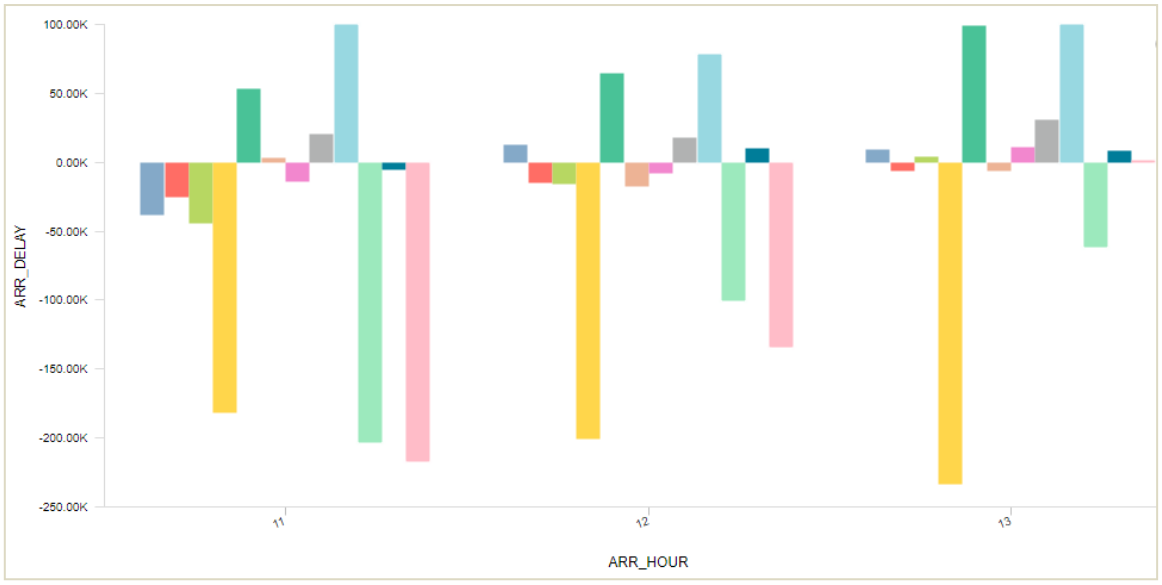
CONFIGURING A CHART—THE ENABLE ZOOM OPTION

6. Click **APPLY**.

The images below are examples of a Vertical bar chart with zoom in to arrival hour 11, 12, and 13:



VERTICAL BAR CHART



QUICK SETTINGS—ENABLE ZOOM

5.4.7 Enabling Mouse Over

You can display or hide values on the visualization when you move the mouse pointer over the chart. By default, this option is selected.

> Note:
> This property is not applicable for Tabular, Tree, Gauge, Chord, Sunburst, Hierarchy tree, Map, and Bubble types of visualization.

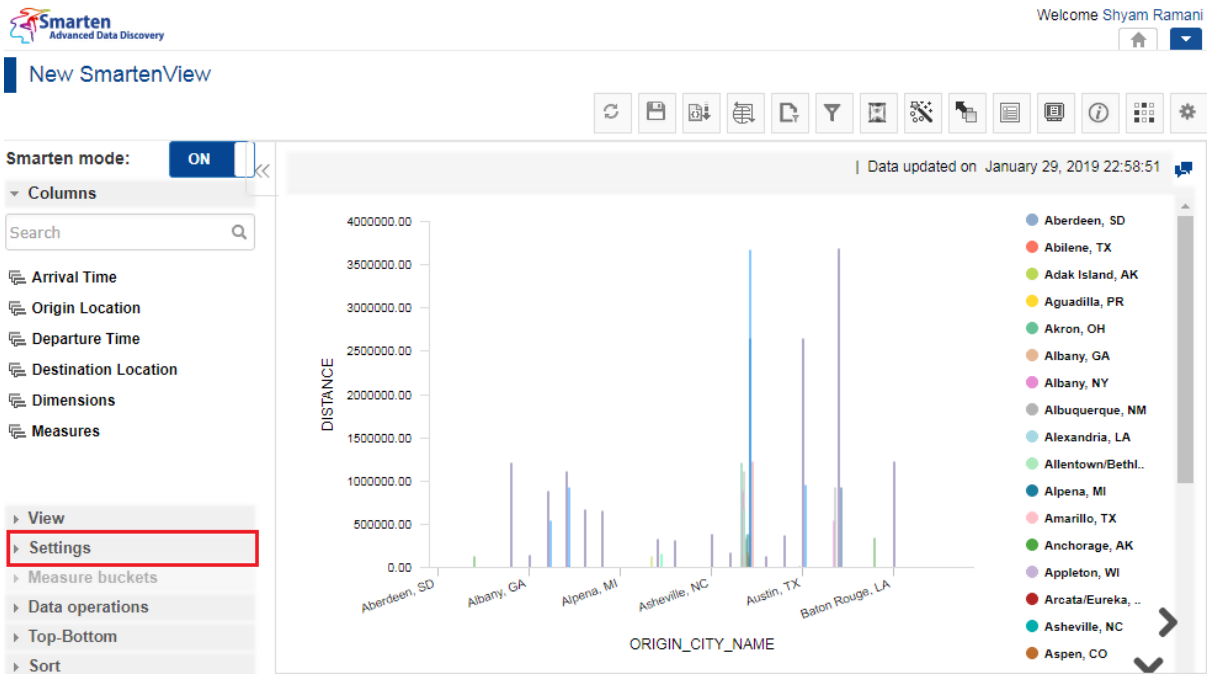
Reference: **Concept Manual > Configuring Charts > Settings > Enable mouse over**

About this task

Use this task to display values when you hover the mouse pointer in the chart.

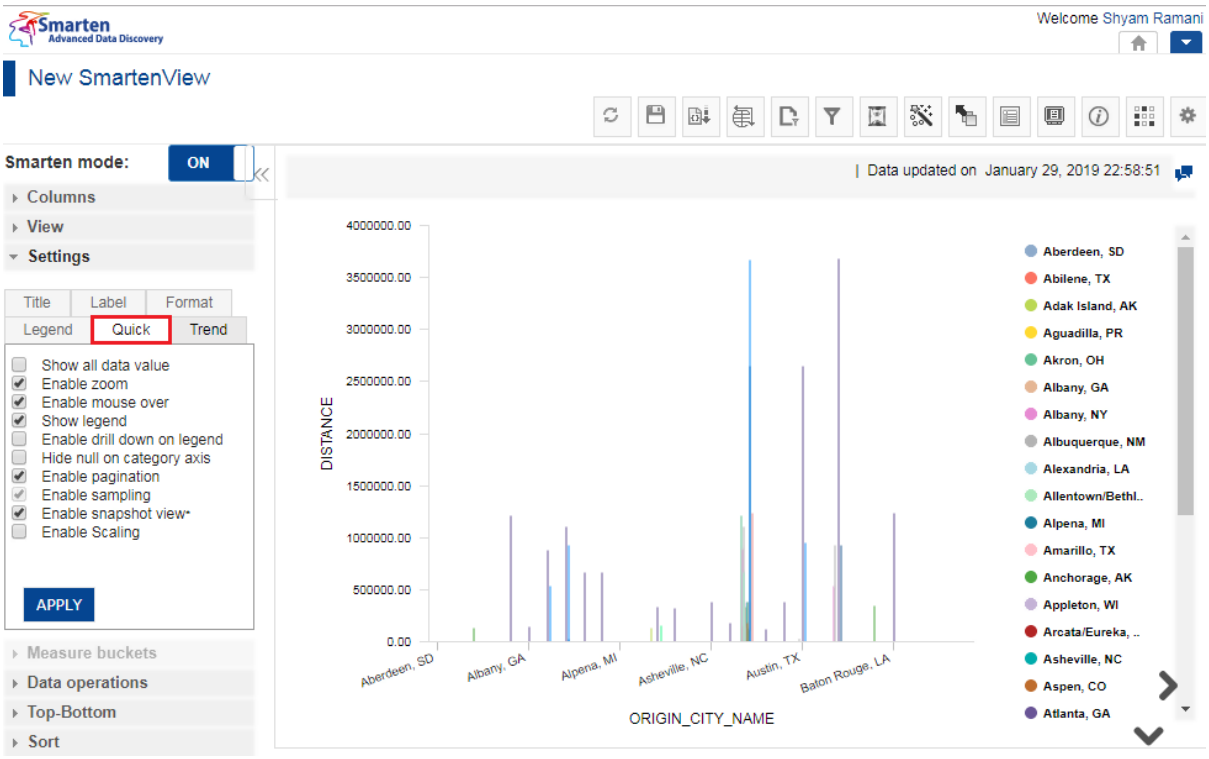
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Settings** tab.



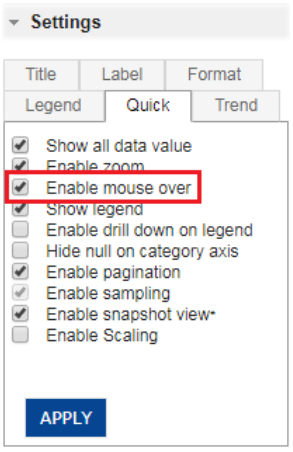
CONFIGURING A CHART—THE SETTINGS TAB

4. Click the **Quick** tab.



CONFIGURING A CHART—THE QUICK TAB

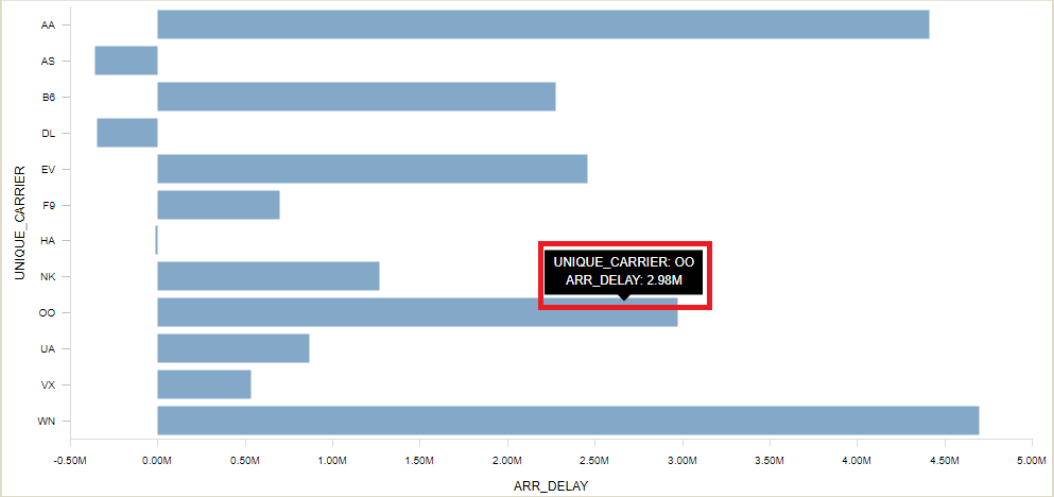
5. Select the **Enable mouse over** option.



CONFIGURING A CHART—THE ENABLE MOUSE OVER OPTION

6. Click **APPLY**.

The image below is an example of a Horizontal bar chart with values on mouse over:



QUICK SETTINGS—ENABLE MOUSE OVER

5.4.8 Showing Legends on a Chart

You can show or hide the legend in the visualization. By default, this option is selected.

> Note:
> This property is not applicable for Tabular, Tree, Gauge, Chord, Sunburst, Hierarchy tree, Map, Bubble, Candlestick, and high/low, open/close types of visualization.

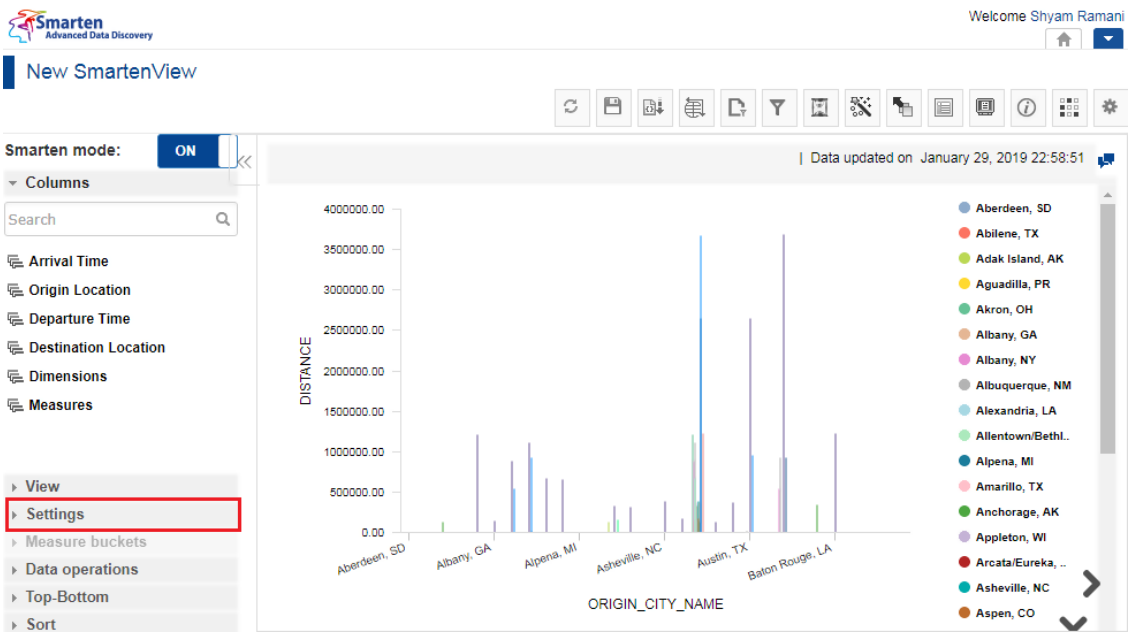
Reference: **Concept Manual > Configuring Charts > Settings > Show legend**

About this task

Use this task to show legends in a chart.

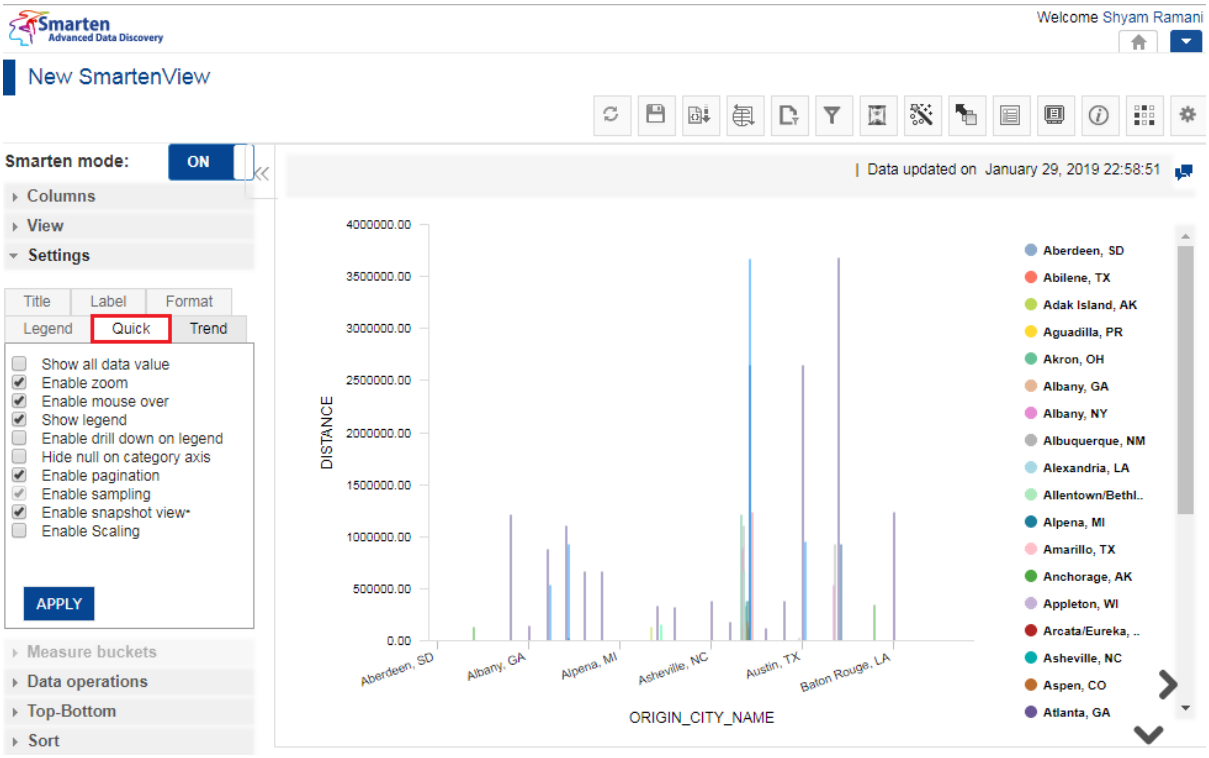
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Settings** tab.



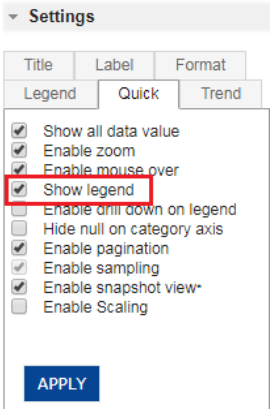
CONFIGURING A CHART—THE SETTINGS TAB

4. Click the **Quick** tab.



CONFIGURING A CHART—THE QUICK TAB

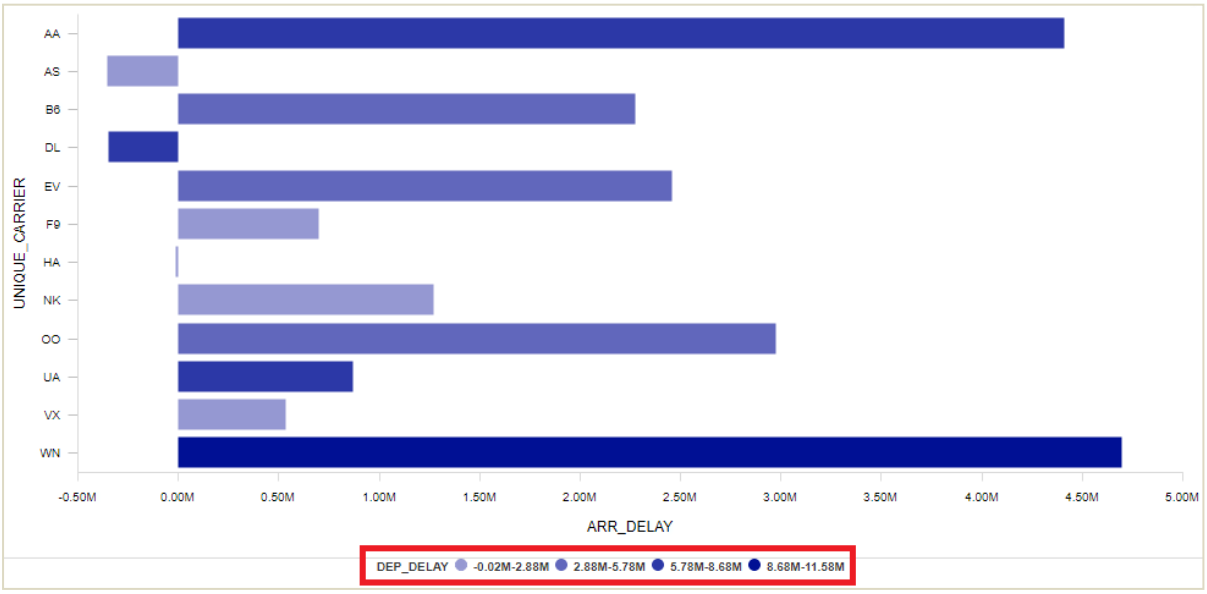
5. Select the **Show legend** option.



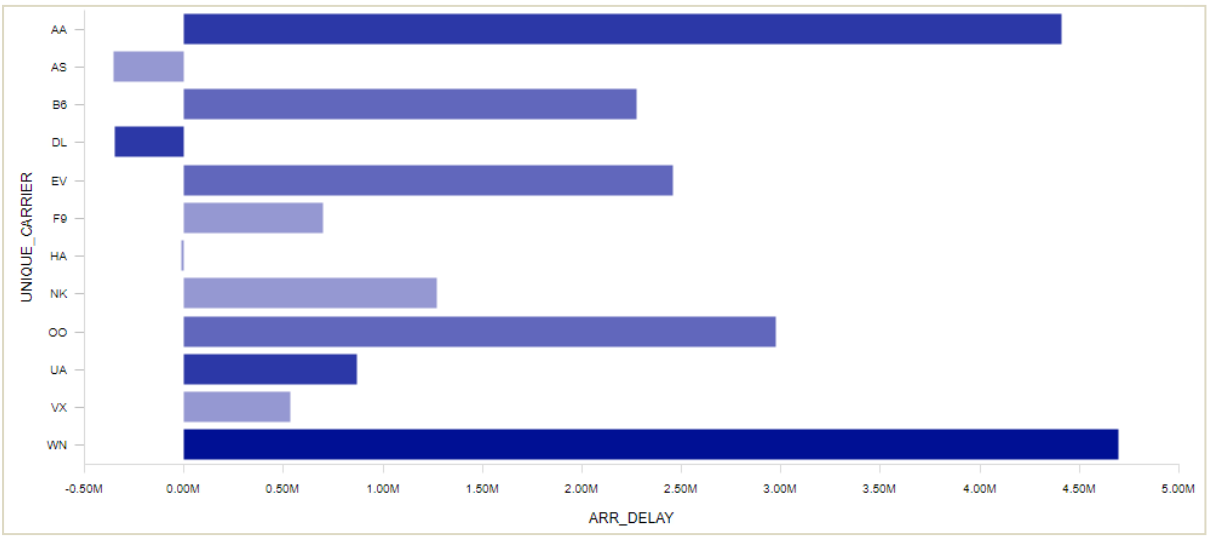
CONFIGURING A CHART—THE SHOW LEGEND OPTION

6. Click **APPLY**.

The images below are examples of a Horizontal bar chart with “Show legend” as enabled and disabled:



QUICK SETTINGS—SHOW LEGEND (ENABLED)



QUICK SETTINGS—SHOW LEGEND (DISABLED)

5.4.9 Enabling Drill Down on Legends

You can enable or disable drill down on legend. This option allows you to drill down to different dimensions from the legend to access specific information.

> Note:
> This property is not applicable for Tabular, Tree, Gauge, Chord, Sunburst, Hierarchy tree, Map, Bubble, Candlestick, and high/low, open/close types of visualization.

Reference: **Concept Manual > Configuring Charts > Settings > Enable drill down on legend**

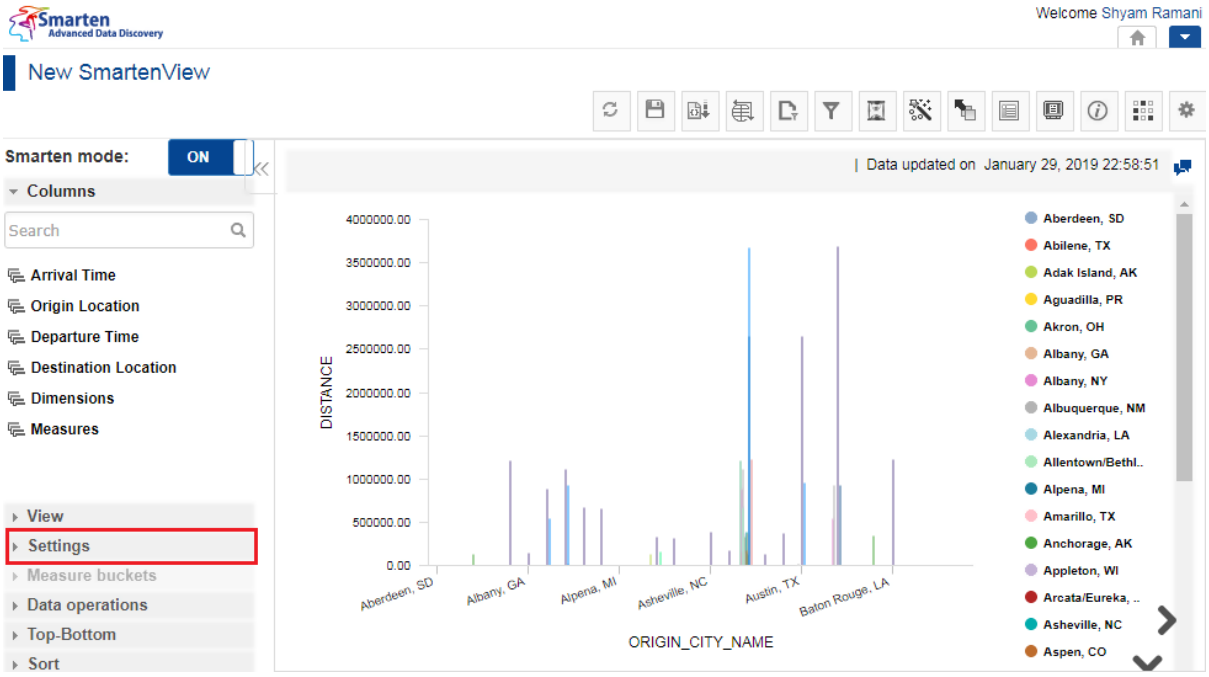
About this task

Use this task to enable drill down on legends in a chart.

Procedure

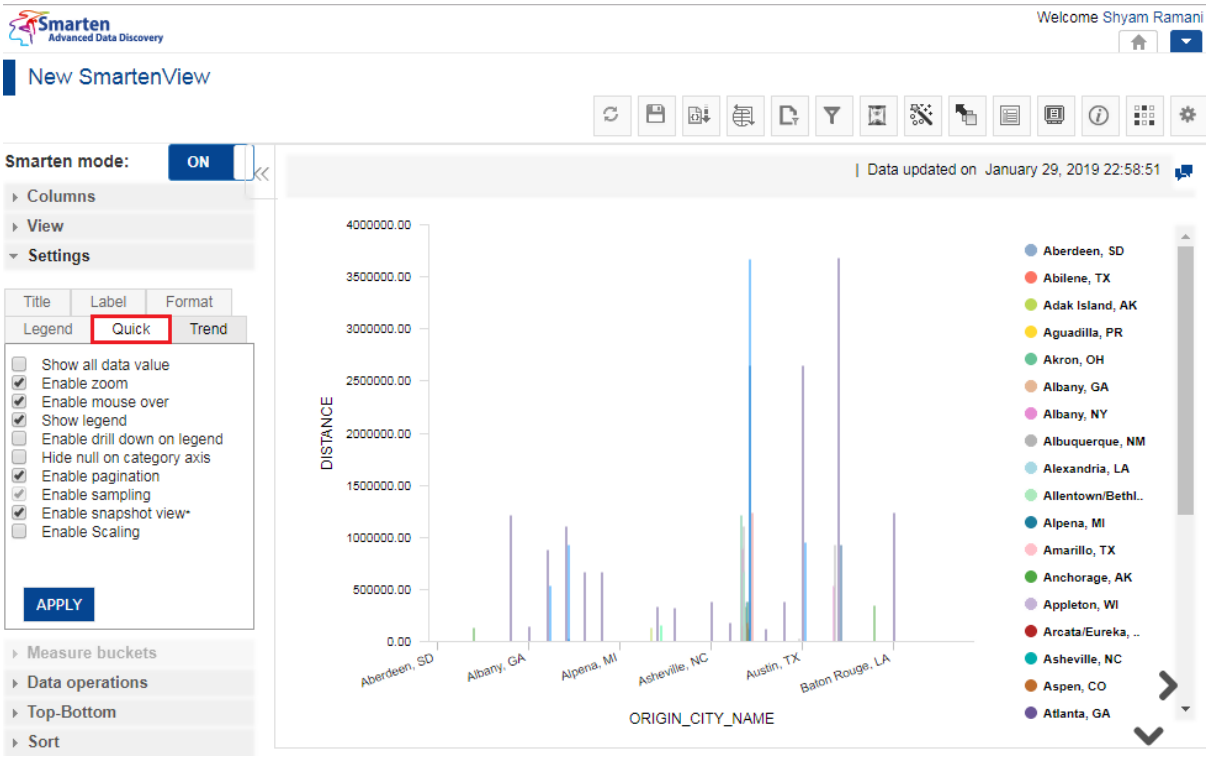
1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.

3. Click the **Settings** tab.



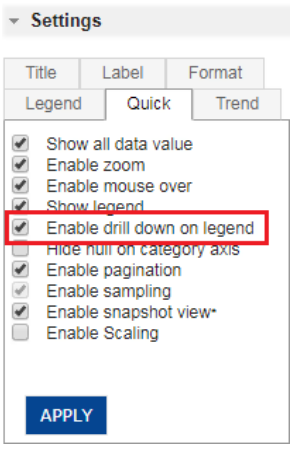
CONFIGURING A CHART—THE SETTINGS TAB

4. Click the **Quick** tab.



CONFIGURING A CHART—THE QUICK TAB

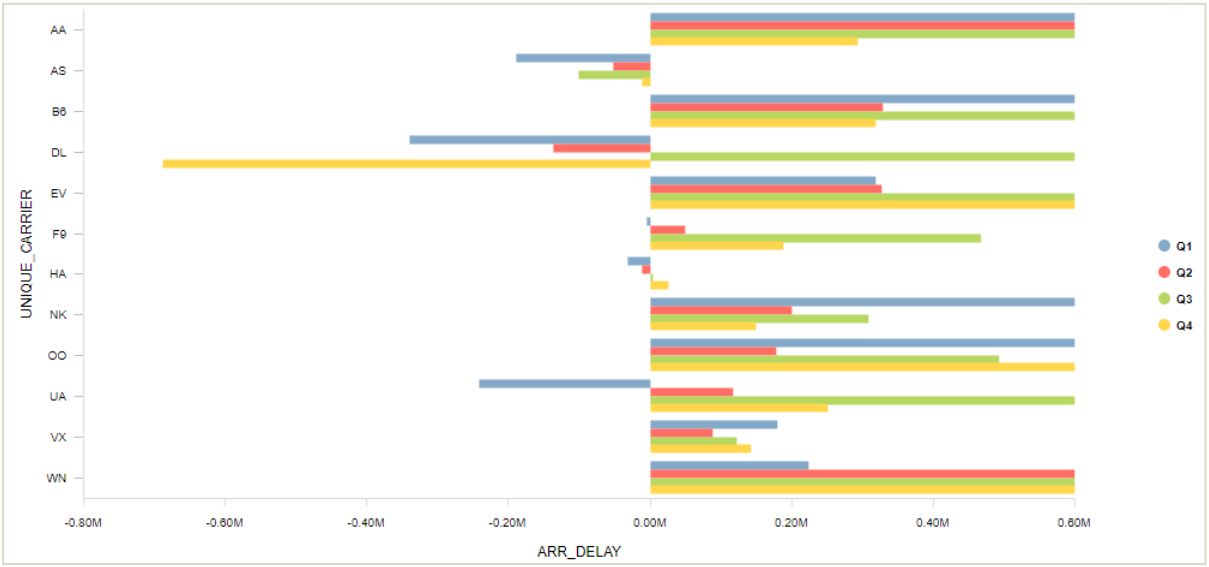
5. Select the **Enable drill down on legend** option.



CONFIGURING A CHART—THE ENABLE DRILL DOWN ON LEGEND OPTION

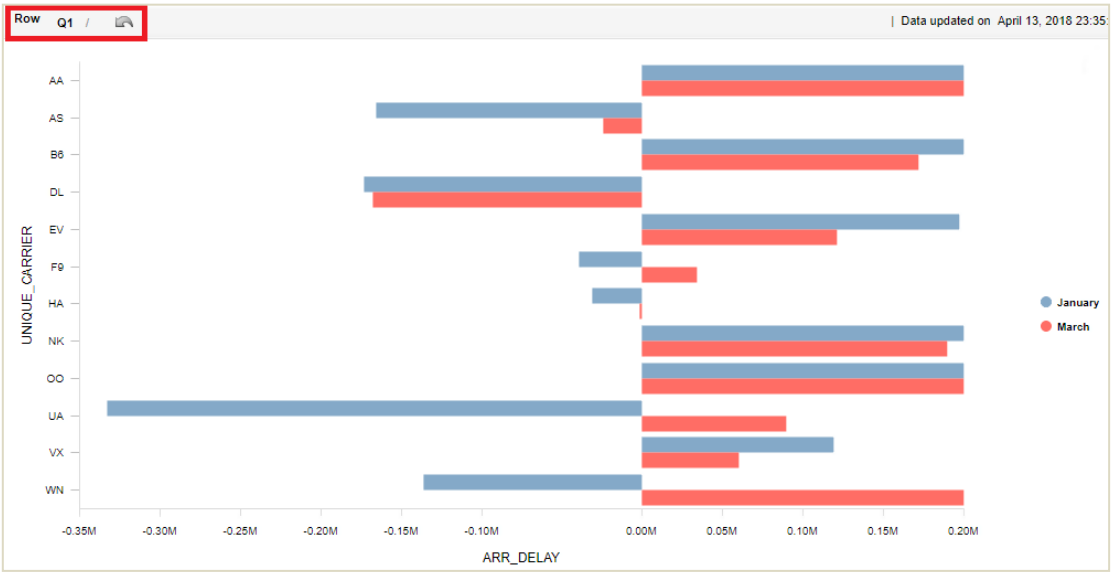
6. Click **APPLY**.

The images below are examples of a Horizontal bar chart showing arrival delay of each carrier for all four quarters of the year.

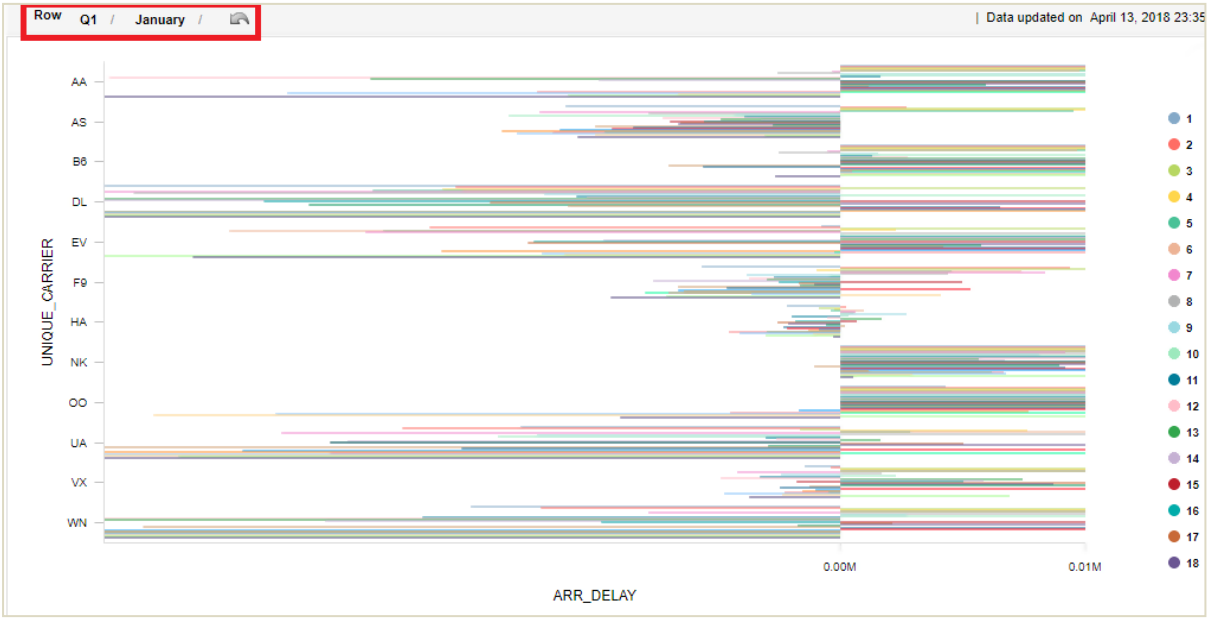


HORIZONTAL BAR CHART

When the "Enable drill down on legend" property is enabled, users can drill down each quarter to months, which in turn can be further drilled down to each day and so on until the last dimension is reached.



QUICK SETTINGS—ENABLE DRILL DOWN ON LEGEND (ENABLED)



QUICK SETTINGS—ENABLE DRILL DOWN ON LEGEND (ENABLED)

When the “Enable drill down on legend” property is disabled, users cannot drill down from the legend. Instead, they can choose to show or hide the information related to any of the legend label, quarters in this case.

5.4.10 Hiding Null Values on the Category Axis

You can show or hide the null values of the category axis. For example, the flight data contains information related to the distance covered by flights belonging to various carriers for various states. All carriers may not be available for all states. In such cases, the visualization will not display any information for carriers that do not operate in a state.

> Note:
> This property is not applicable for Pie chart, Radar chart, Combined chart, XY Chart, HeatMap, Histogram, Tabular, Tree, Gauge, Chord, Sunburst, Hierarchy tree, Map, Bubble, Candlestick, and high/low, open/close types of visualization.

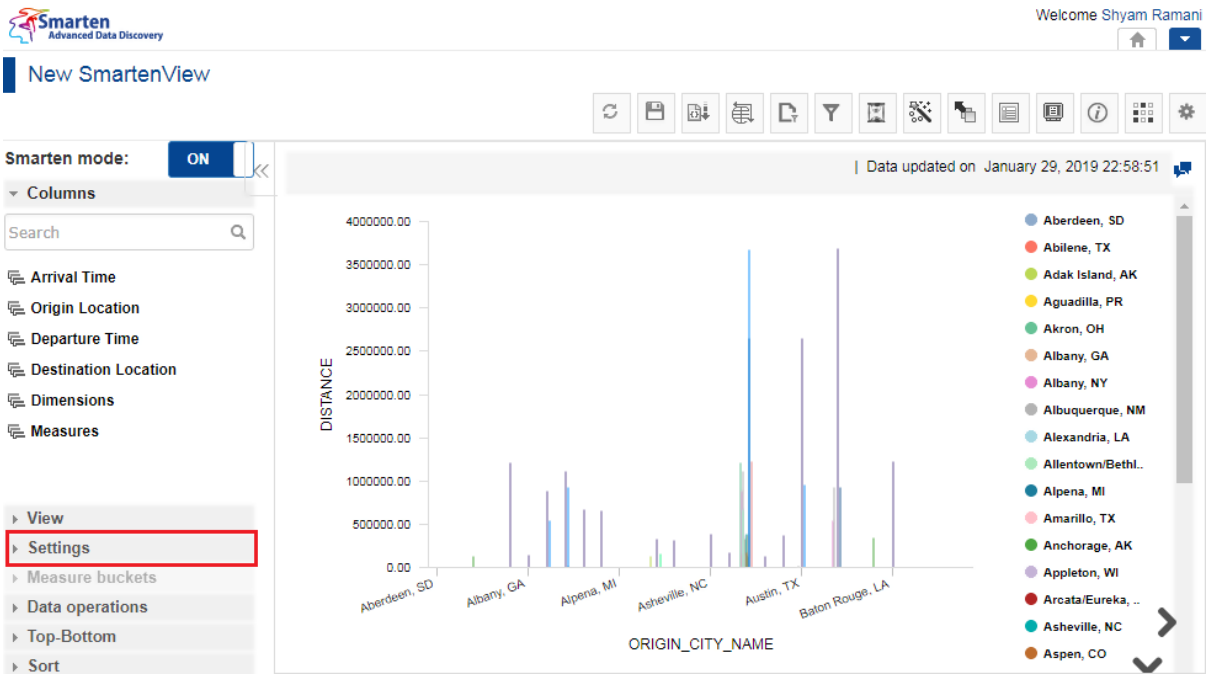
Reference: **Concept Manual > Configuring Charts > Settings > Hide null on category axis**

About this task

Use this task to hide the null values on the category axis.

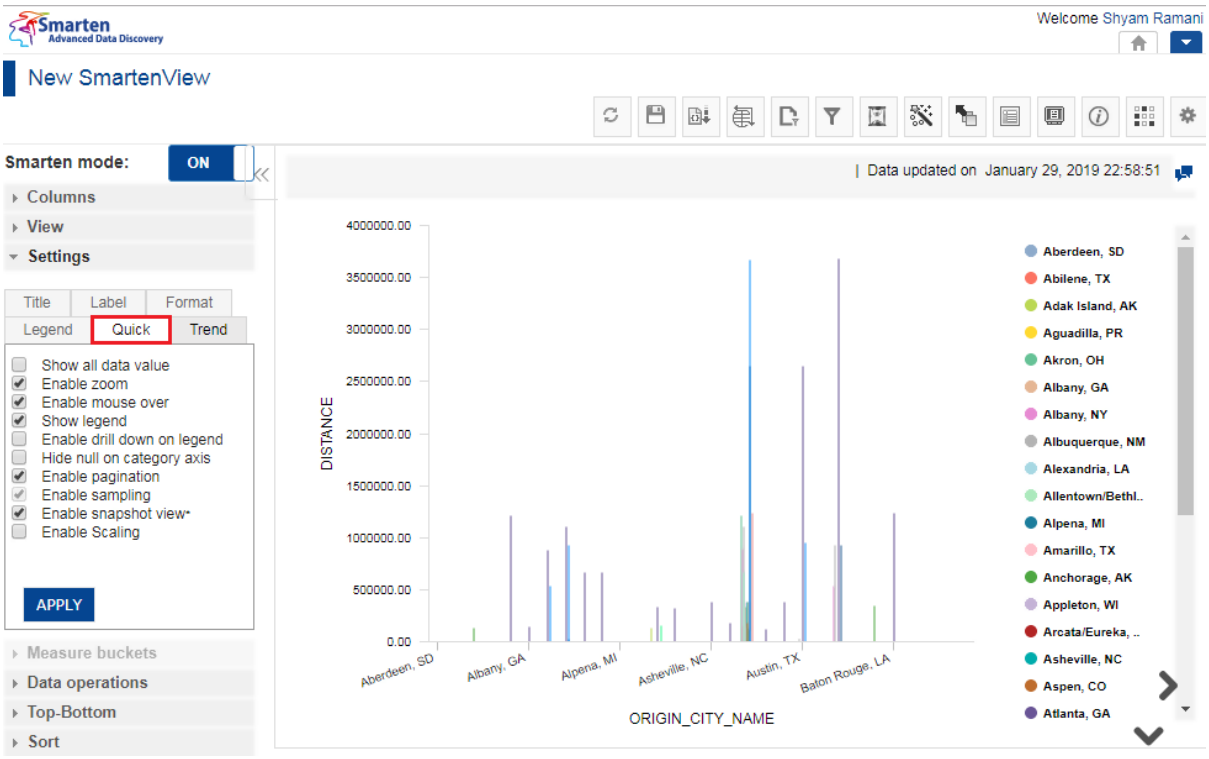
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Settings** tab.



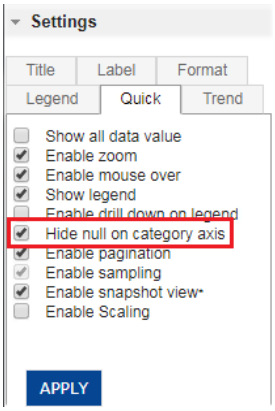
CONFIGURING A CHART—THE SETTINGS TAB

4. Click the **Quick** tab.



CONFIGURING A CHART—THE QUICK TAB

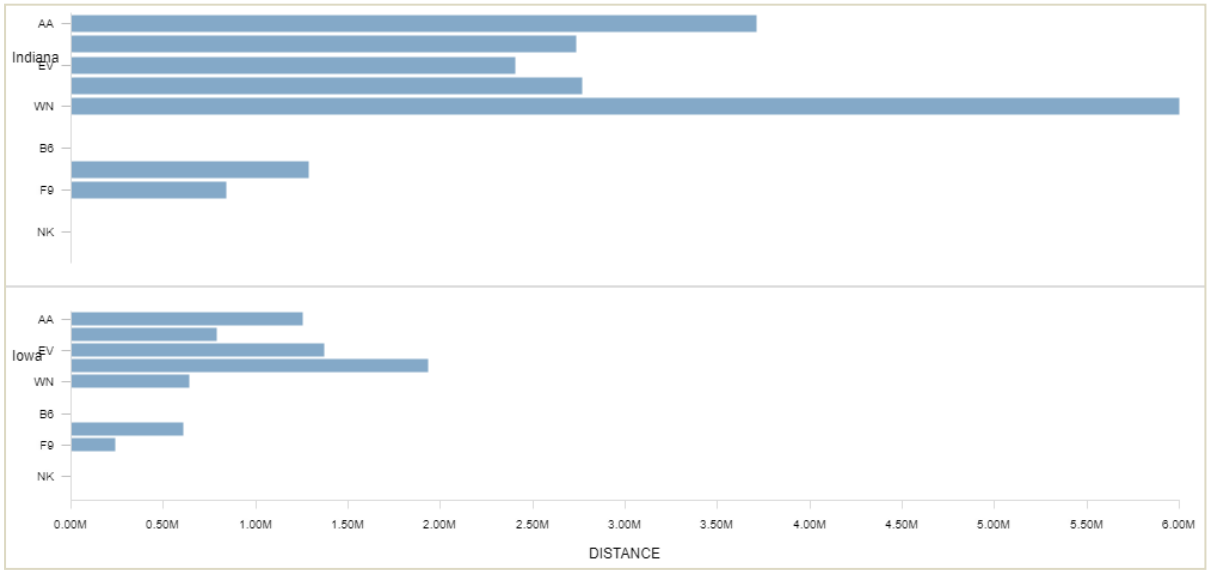
5. Select the **Hide null on category axis** option.



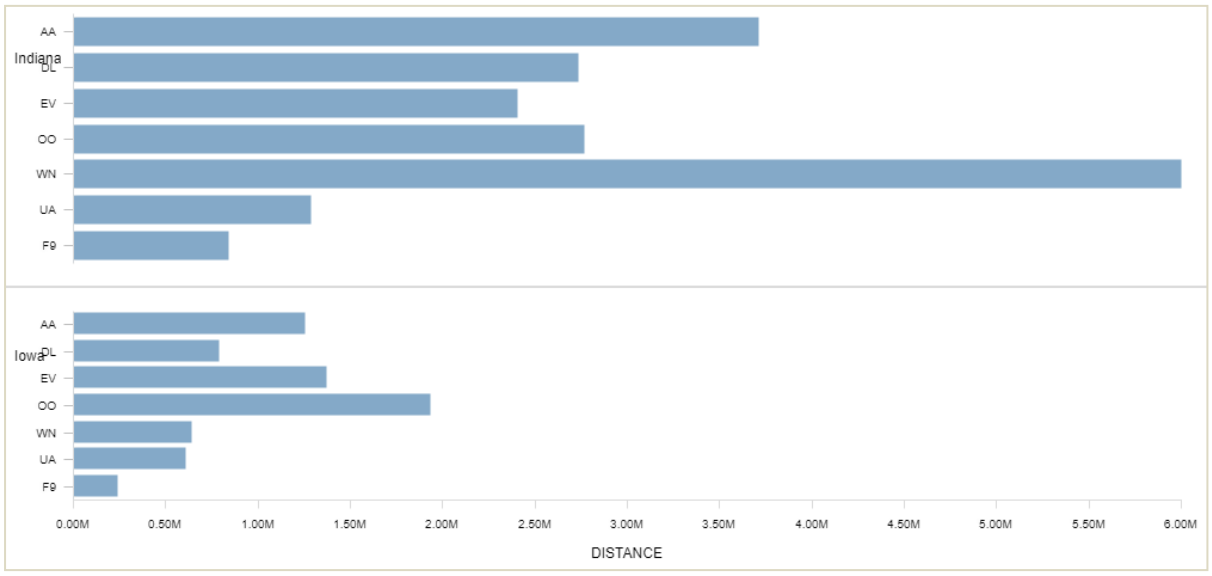
CONFIGURING A CHART—THE HIDE NULL ON CATEGORY AXIS OPTION

6. Click **APPLY**.

The images below are examples of a Horizontal bar chart with “Hide null on category axis” as disabled and enabled:



QUICK SETTINGS—HIDE NULL ON CATEGORY AXIS (DISABLED)



QUICK SETTINGS—HIDE NULL ON CATEGORY AXIS (ENABLED)

5.4.11 Enabling Pagination

You can enable pagination to navigate through the multiple pages of the visualization. By default, this option is selected.

> Note:
> This property is available only when there are multiple pages in the visualization.
> It is not available for Pie, Radar, Candlestick, high/low, open/close, Chord, Sunburst, Hierarchy tree, Bubble, and Map types of visualization.

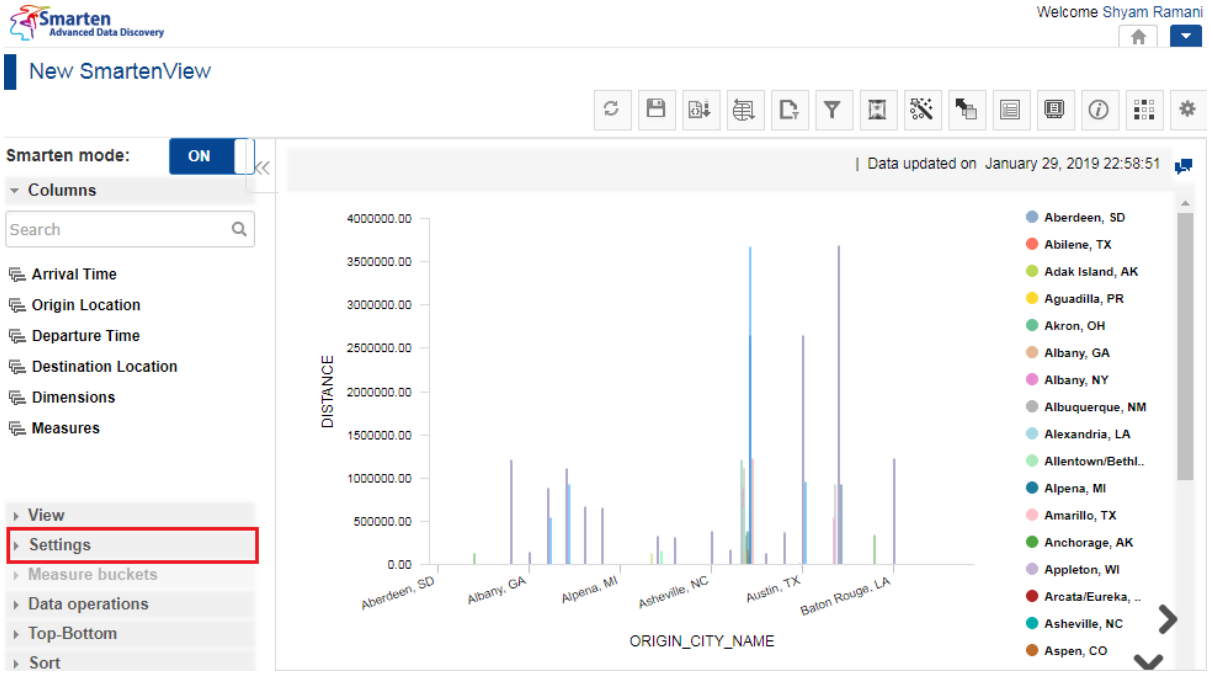
Reference: **Concept Manual > Configuring Charts > Settings > Enable pagination**

About this task

Use this task to enable pagination in the chart.

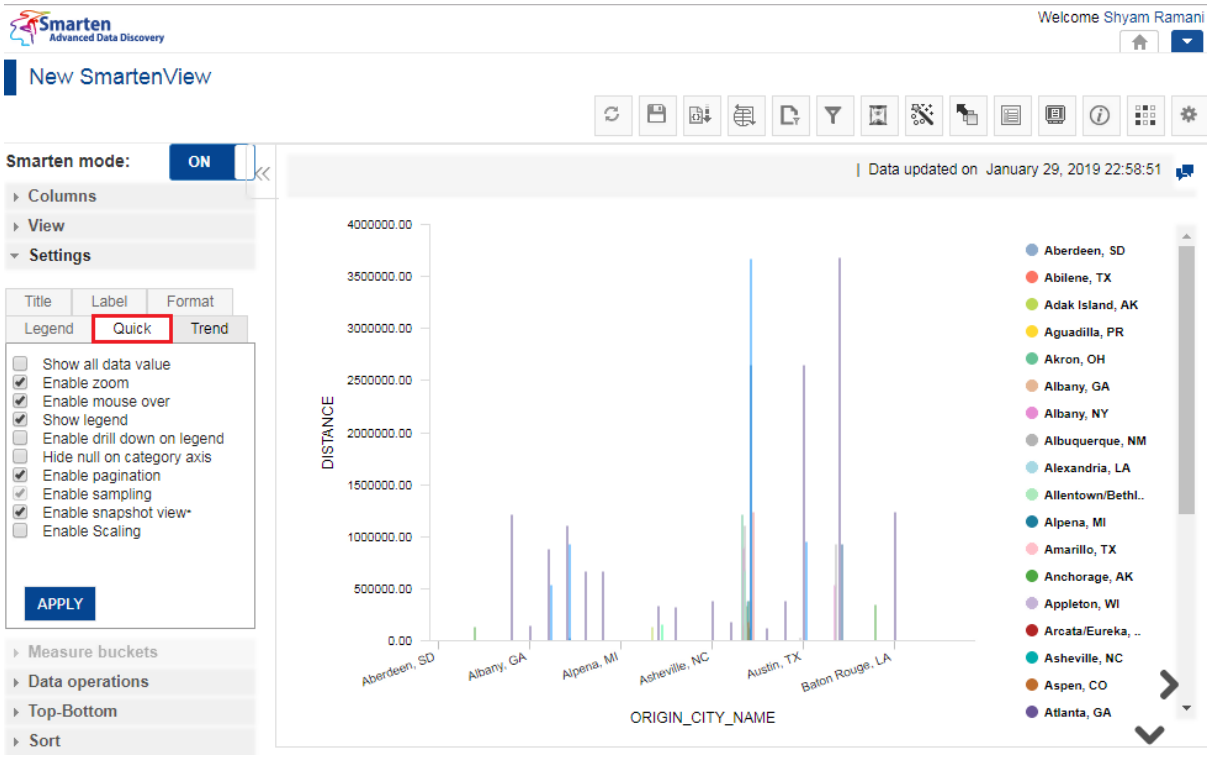
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Settings** tab.



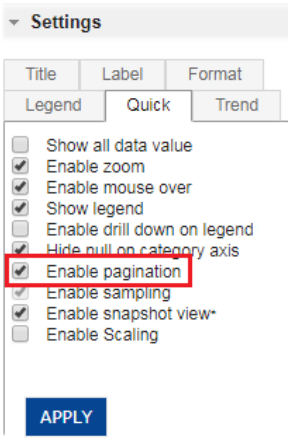
CONFIGURING A CHART—THE SETTINGS TAB

4. Click the **Quick** tab.



CONFIGURING A CHART—THE QUICK TAB

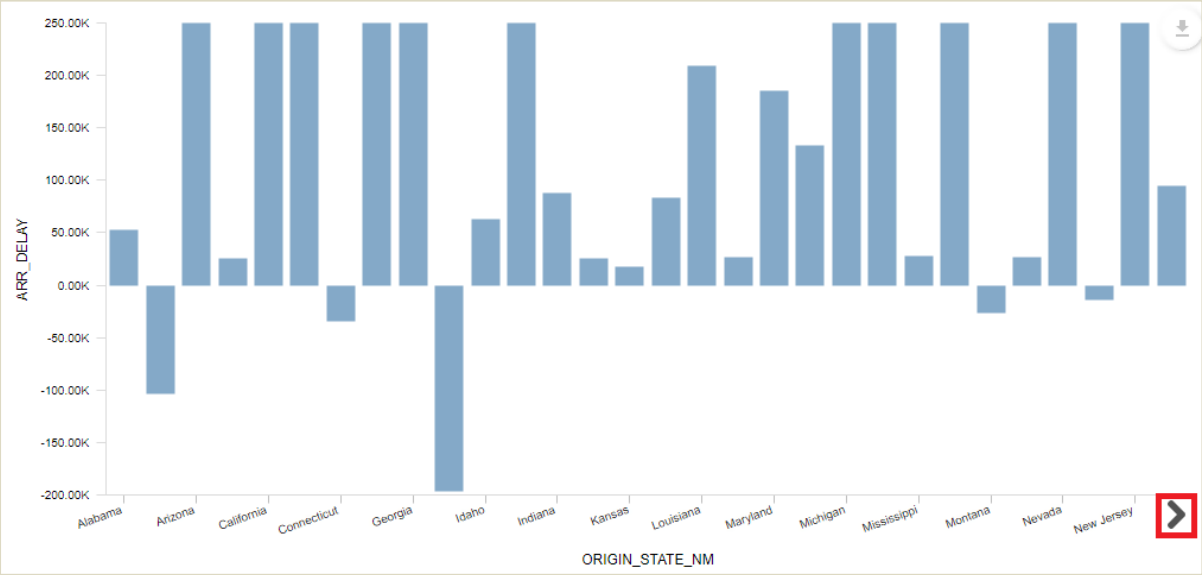
5. Select the **Enable pagination** option.



CONFIGURING CHART – THE ENABLE PAGINATION OPTION

6. Click **APPLY**.

The image below is an example of a Horizontal bar chart with “Enable pagination” enabled:



QUICK SETTINGS—ENABLE PAGINATION (ENABLED)

5.4.12 Enable Sampling of Data for Visualization

Rendering visualization with a large amount of data takes a lot of time, or sometimes visualization loses the purpose. To overcome this, Smart Visualization allows visualization to be created with a sample of such data instead of the whole data.

This option allows you to choose whether or not a sample data should be considered to create visualization. This option is applied automatically for large data, and visualization is displayed for the sample data with “Enable pagination” property automatically turned on. You can turn off this option to generate visualization using the whole data.

> Note:
> The size of the sample depends upon the size of the data.

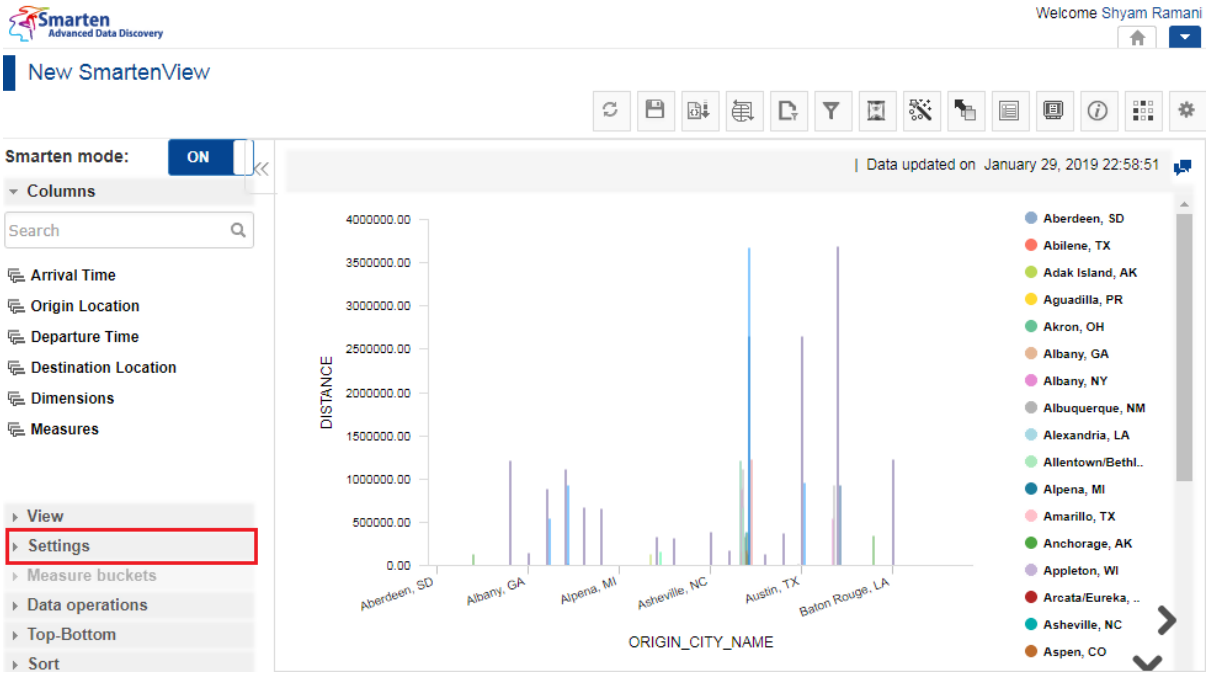
Reference: **Concept Manual > Configuring Charts > Settings > Enable sampling**

About this task

Use this task to enable sampling of data for visualization.

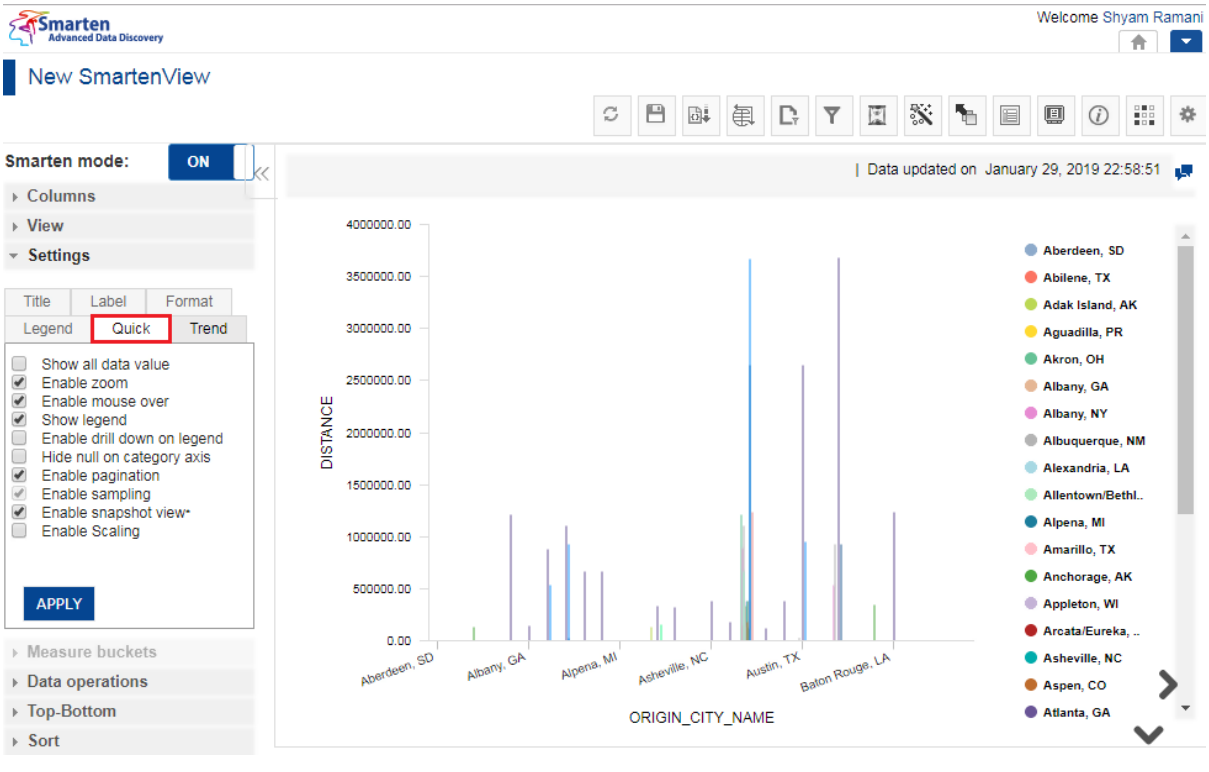
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Settings** tab.



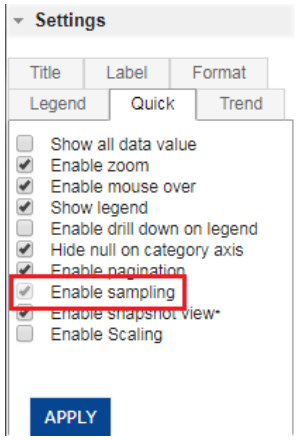
CONFIGURING A CHART—THE SETTINGS TAB

4. Click the **Quick** tab.



CONFIGURING A CHART—THE QUICK TAB

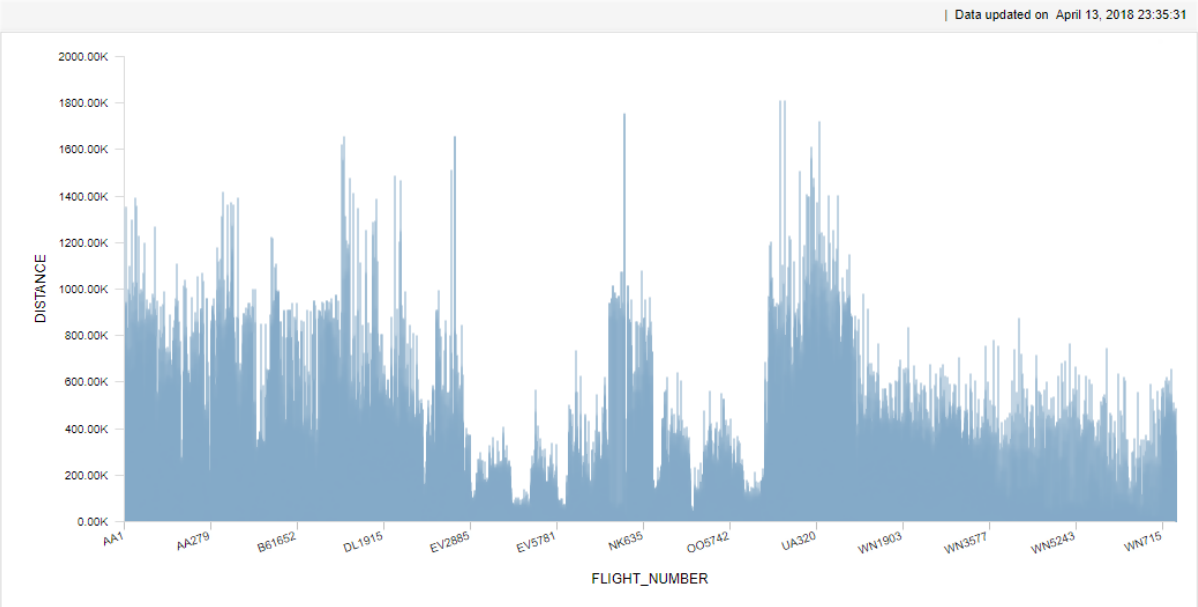
5. Select the **Enable sampling** option.



CONFIGURING A CHART—THE ENABLE SAMPLING OPTION

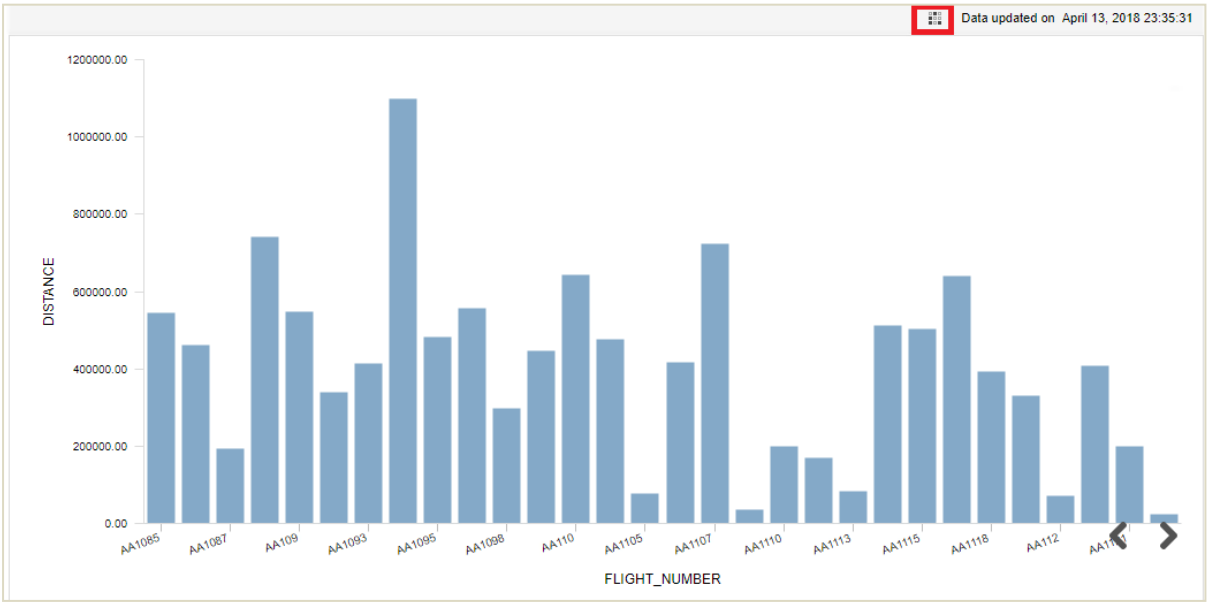
6. Click **APPLY**.

The following image is an example of a Vertical bar chart displaying complete data containing more than 2.5 million records without any sampling applied:



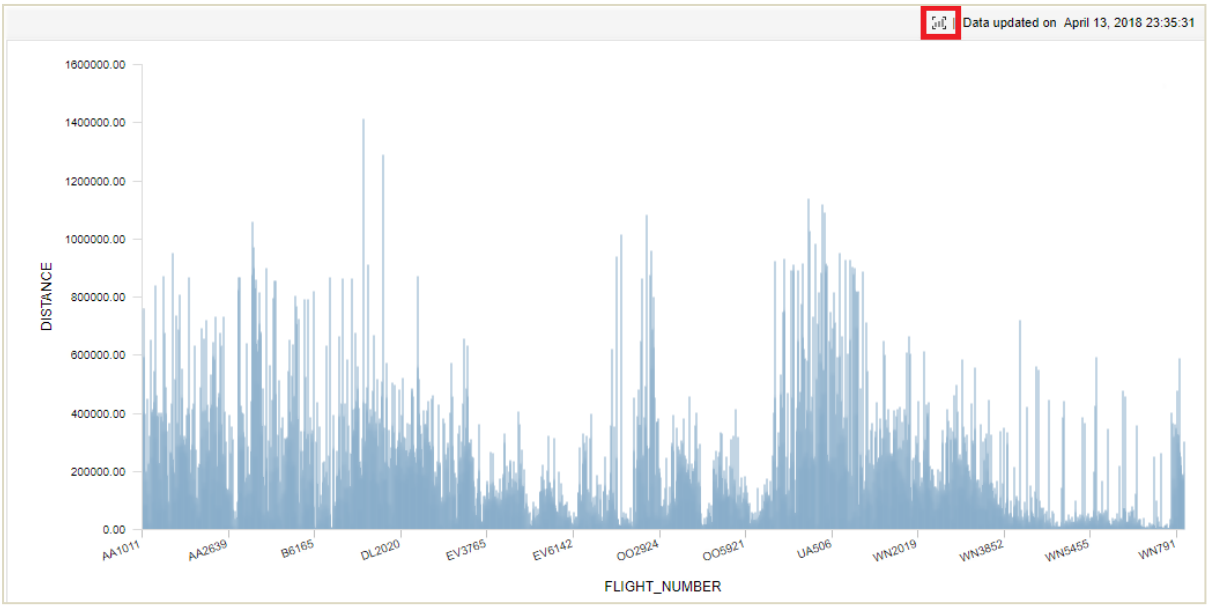
QUICK SETTINGS—ENABLE SAMPLING (DISABLED)

The following image is an example of a Vertical bar chart with “Enable sampling” as enabled and “Enable pagination” as enabled for data containing more than 2.5 million records:



QUICK SETTINGS—ENABLE SAMPLING (ENABLED)

The following image is an example of a Vertical bar chart with “Enable sampling” as enabled and “Enable pagination” as disabled for data containing more than 2.5 million records:



QUICK SETTINGS—ENABLE SNAPSHOT VIEW (ENABLED)

5.4.13 Enabling Snapshot View

You can create a snapshot of the visualization for a large amount of data using a sample of such data instead of the whole data. This option allows for understanding the trends by creating meaningful visualizations for a large amount of data.

This feature automatically detects a large amount of data and creates a snapshot view by using the sample data from the large data. When this option is selected, the system automatically applies to the sample as and when required to display the best possible visualization.

You can also turn off the option to generate visualization using the whole data.

> Note:
> This property is not available for the Tabular type of visualization.
> The size of the sample depends upon the type of visualization.

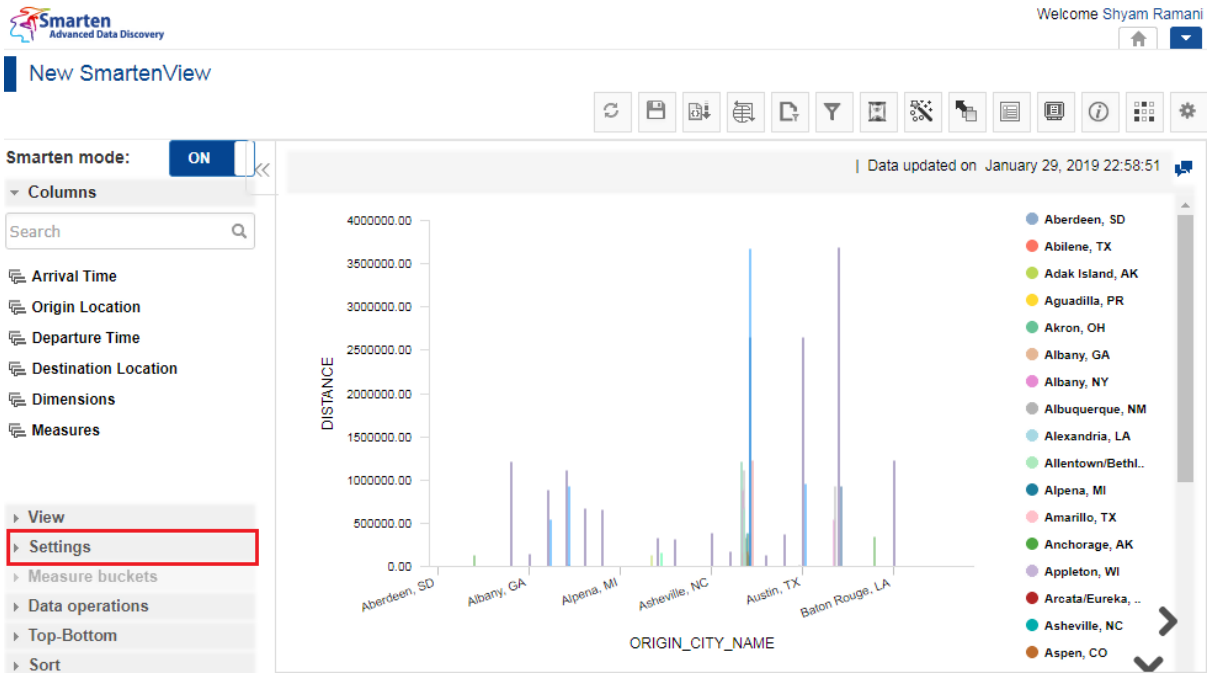
Reference: **Concept Manual > Configuring Charts > Settings > Enable snapshot view**

About this task

Use this task to enable a snapshot view for a chart.

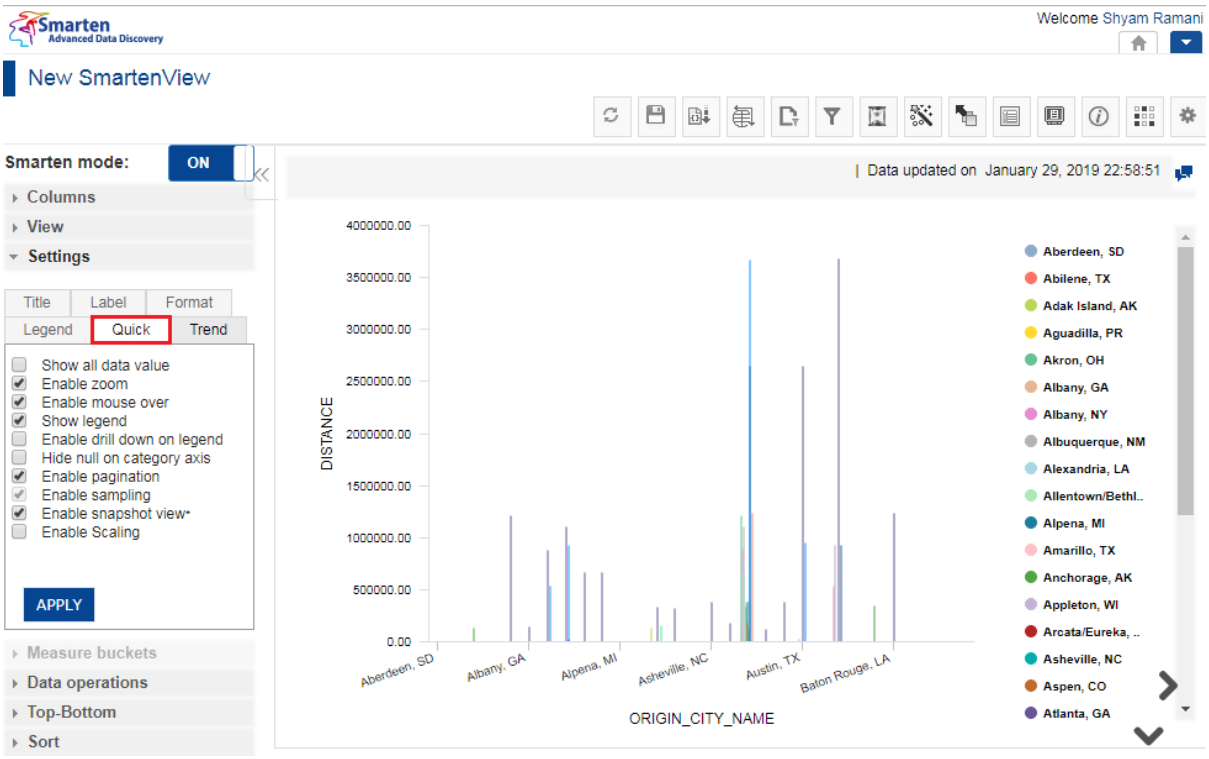
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Settings** tab.



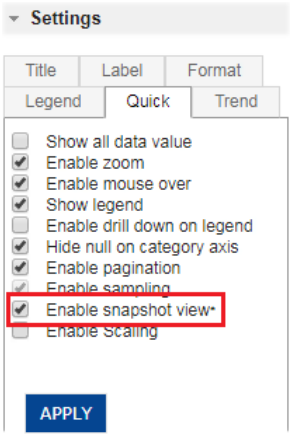
CONFIGURING A CHART—THE SETTINGS TAB

4. Click the **Quick** tab.



CONFIGURING A CHART—THE QUICK TAB

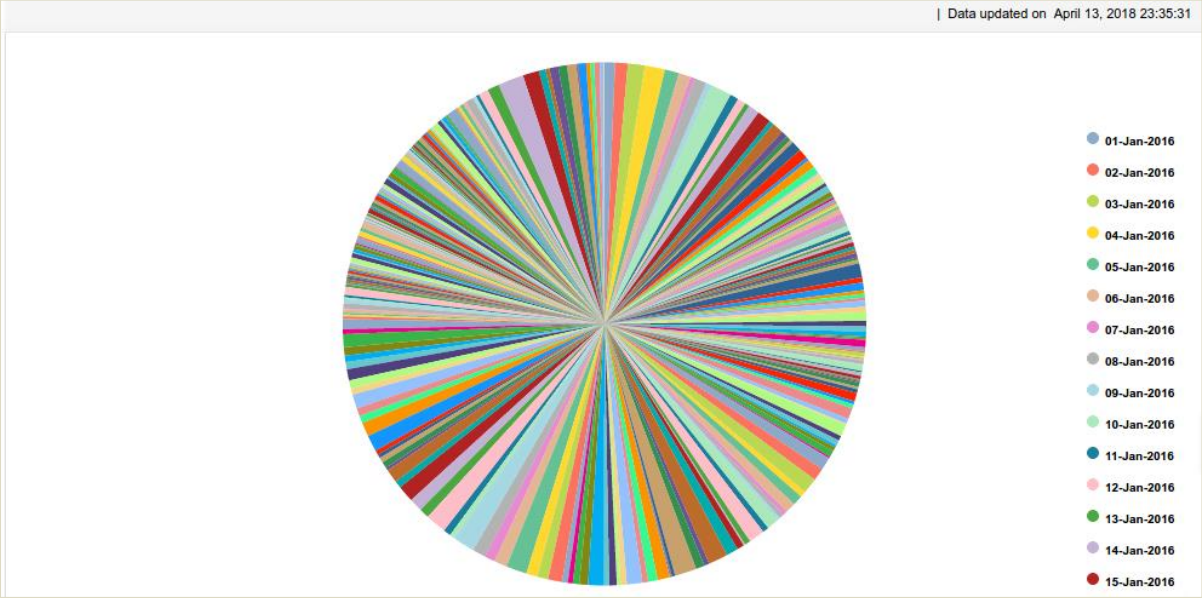
5. Select the **Enable snapshot view** option.



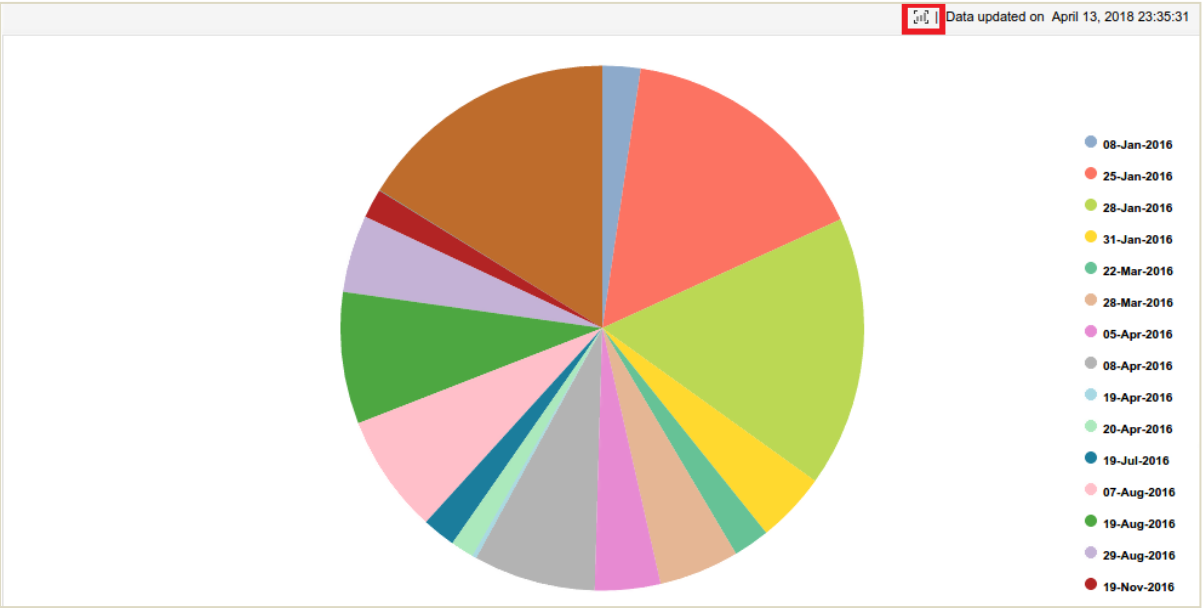
CONFIGURING A CHART—THE ENABLE SNAPSHOT VIEW OPTION

6. Click **APPLY**.

The following images are examples of a Pie chart generated for data containing more than 2.5 million records with “Enable snapshot view” property turned off and on:



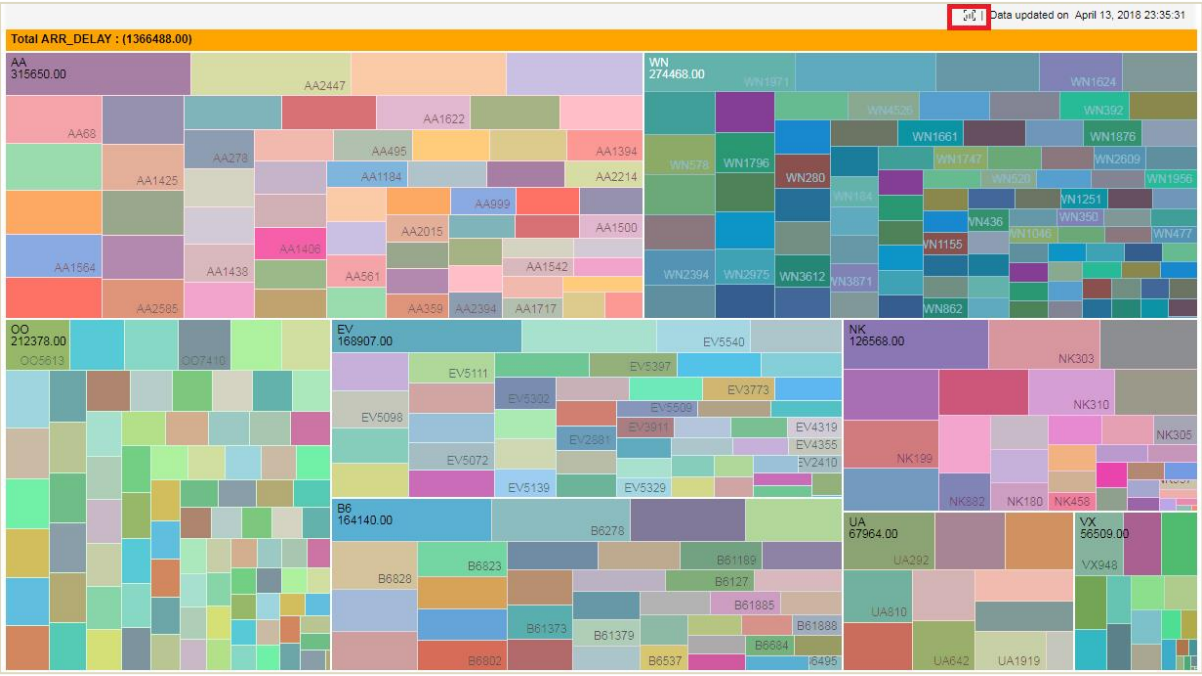
QUICK SETTINGS—ENABLE SNAPSHOT VIEW (DISABLED)



QUICK SETTINGS—ENABLE SNAPSHOT VIEW (ENABLED)

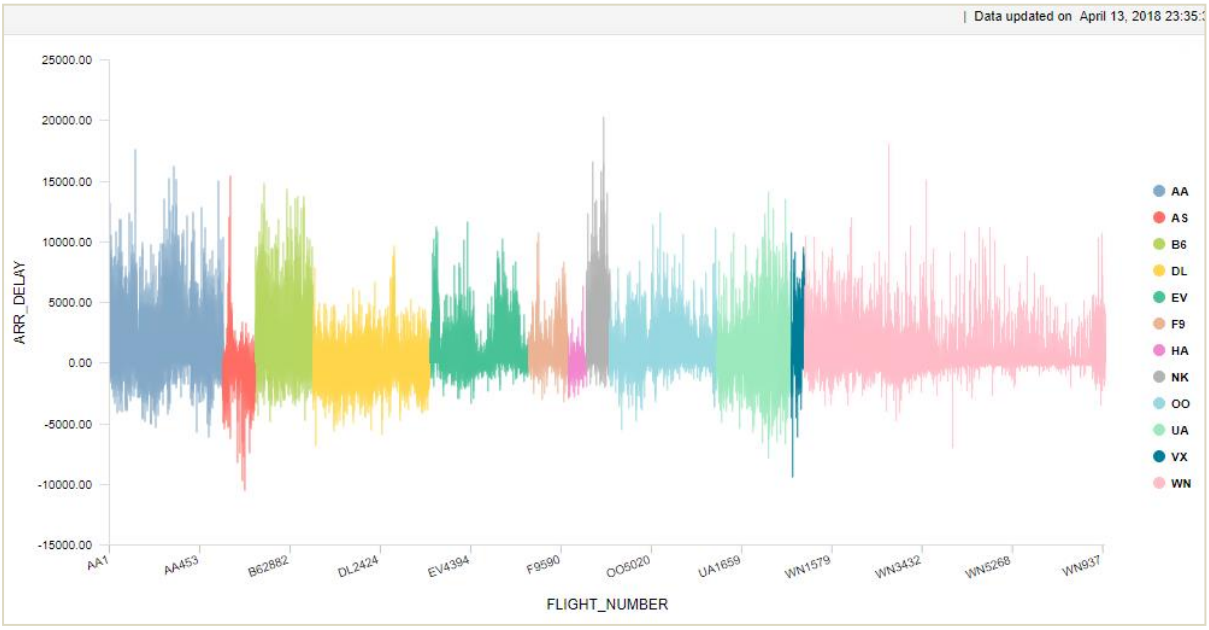
The following images are examples of a Hierarchy tree generated for data containing more than 2.5 million records with “Enable snapshot view” property turned off and on:

QUICK SETTINGS—ENABLE SNAPSHOT VIEW (DISABLED)

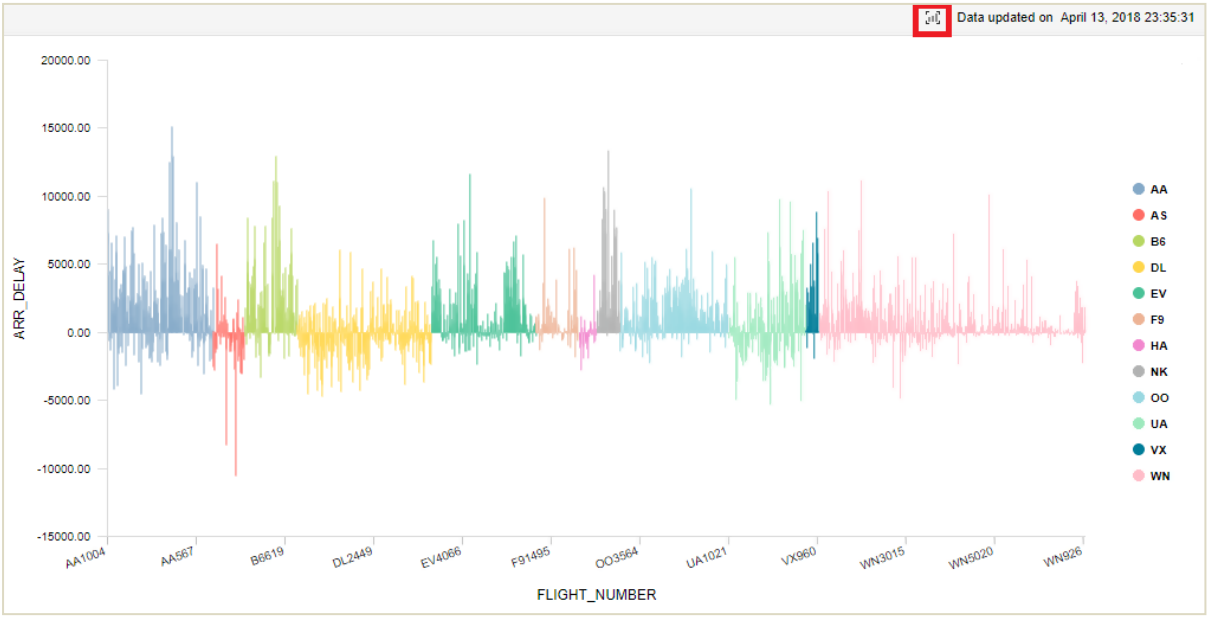


QUICK SETTINGS—ENABLE SNAPSHOT VIEW (ENABLED)

The following images are examples of a Bar chart generated for data containing more than 2.5 million records with “Enable snapshot view” property turned off and on:



QUICK SETTINGS—ENABLE SNAPSHOT VIEW (DISABLED)



QUICK SETTINGS—ENABLE SNAPSHOT VIEW (ENABLED)

5.4.14 Enabling Scaling

You can enable or disable the scale of visualization. When there is a huge variation in data and scaling is not applied, data points representing lower values are too small, and those representing higher values are too big. In such a scenario, data points with disproportionate sizes affect the interpretation of the chart. When this option is enabled, the system applies to scale on the axis values and generates meaningful visualizations by keeping the proportions aligned with the data.

> Note:
> This property is available only for Vertical and Horizontal bar charts, Line charts, and Combined charts.

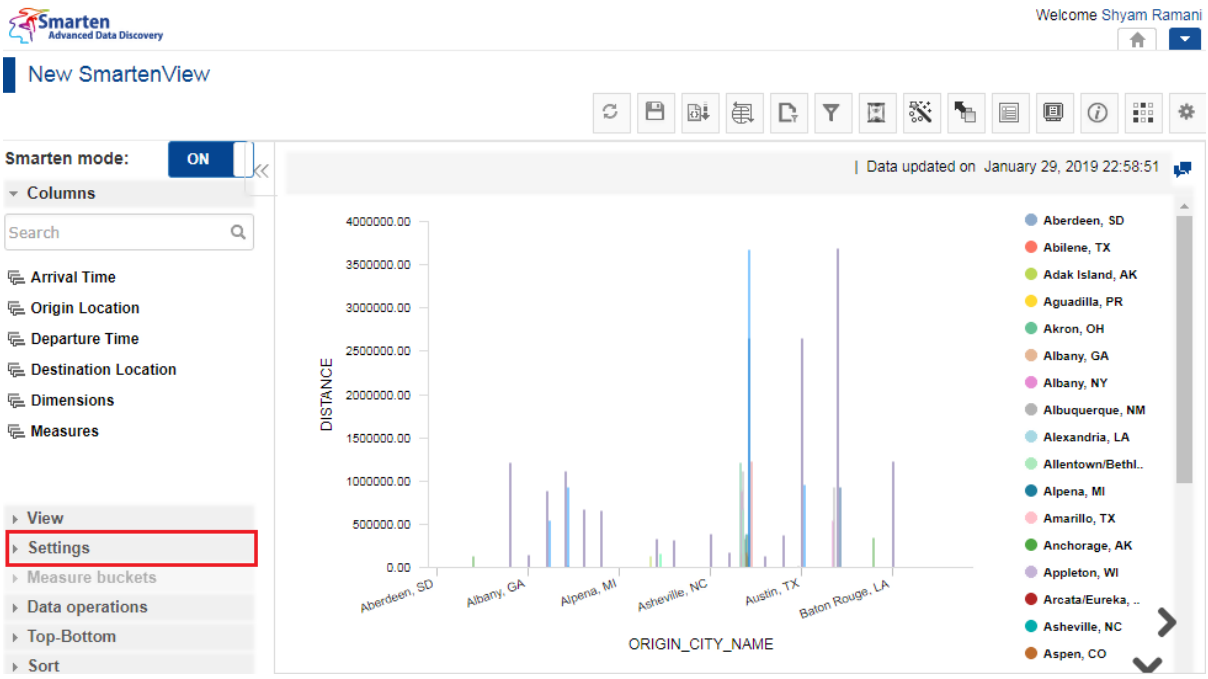
Reference: **Concept Manual > Configuring Charts > Settings > Enable scaling**

About this task

Use this task to enable scaling of data for a chart.

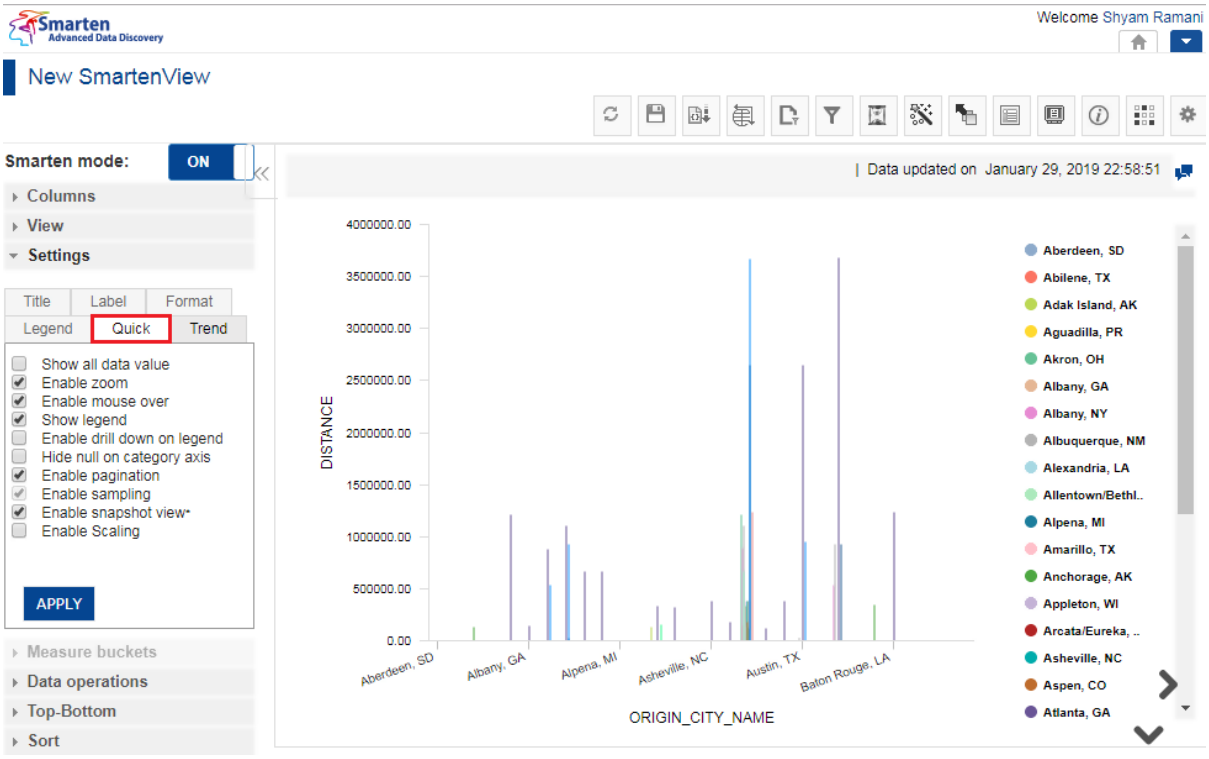
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Settings** tab.



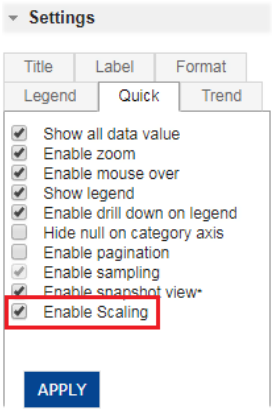
CONFIGURING A CHART—THE SETTINGS TAB

4. Click the **Quick** tab.



CONFIGURING A CHART—THE QUICK TAB

5. Select the **Enable Scaling** option.

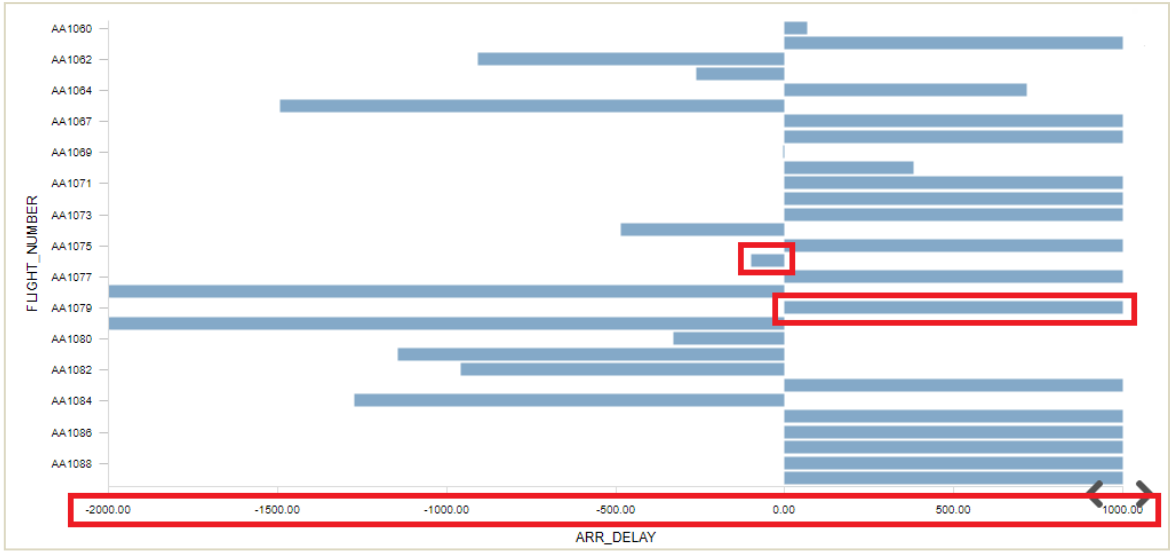


CONFIGURING CHART – THE ENABLE SCALING OPTION

6. Click **APPLY**.

The following images are examples of a Horizontal bar chart with "Enable scaling" as disabled and enabled:

QUICK SETTINGS—ENABLE SCALING (DISABLED)



QUICK SETTINGS—ENABLE SCALING (ENABLED)

5.4.15 Performing Data Operations on a Chart

You can perform various operations on the values of a chart.

Reference: **Concept Manual > Configuring Charts > Operations on charts > Data operations**

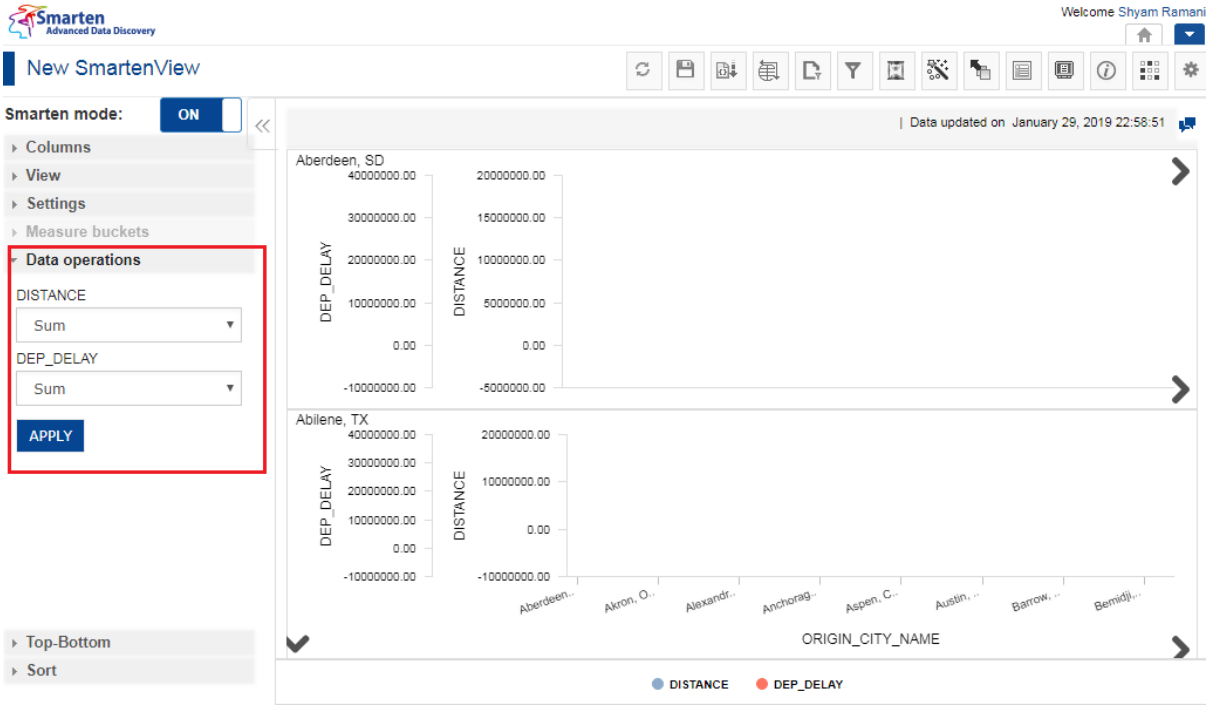
About this task

Use this task to perform data operations on a chart for SmartenView.

Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Data operations** tab.

   The columns you have added from the **Measures** node are available.



CONFIGURING A CHART—THE DATA OPERATIONS TAB

4. Select an option from the list for each Measure column you have added for the chart.

   The following options are available:

   - Sum
   - Average
   - Effective average
   - Count
   - Effective count
   - Maximum
   - Minimum
   - First
   - Last
   - Row group percentage

- Column percentage
- Column group percentage
- Total percentage
- Relative row difference
- Relative row difference percentage
- Relative column group difference
- Relative column group difference percentage
- Row cumulative sum
- Row group cumulative sum
- Least recent value
- Most recent value
- Distinct

5. Click **APPLY**.

5.4.16 Top-Bottom Ranking in a Chart

You can view dimension values that have the highest and the lowest values for a measure in a chart. You can select the Dimension column and the Measure column based on which the topmost or the bottommost dimensions are displayed. You specify the number of Dimension values that are displayed in a chart.

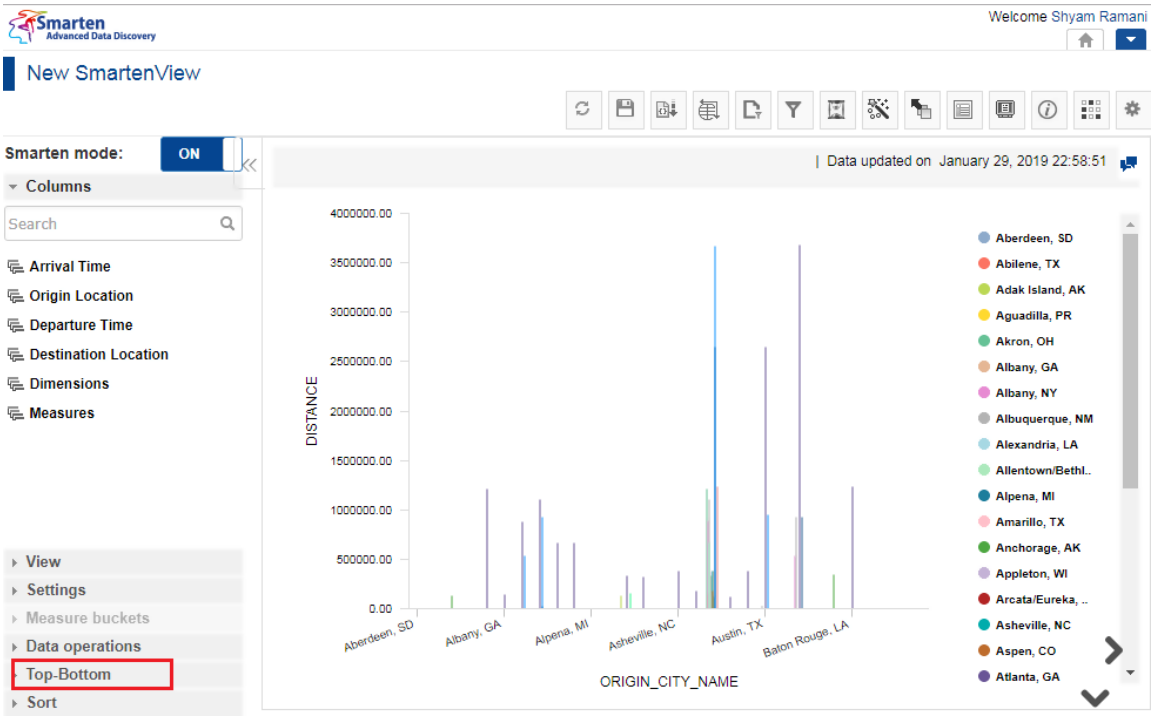
Reference: **Concept Manual > Configuring Charts > Operations on charts > Top bottom**

About this task

Use this task to view the top and bottom values in a chart.

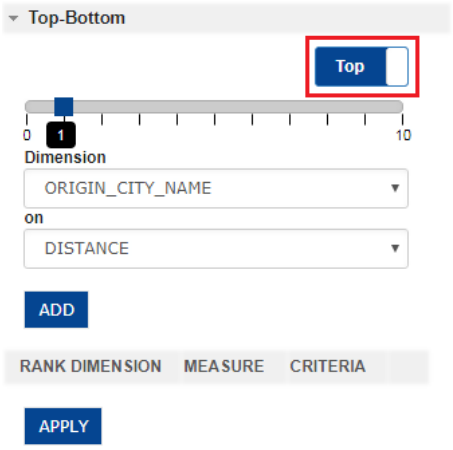
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Top-Bottom** tab.



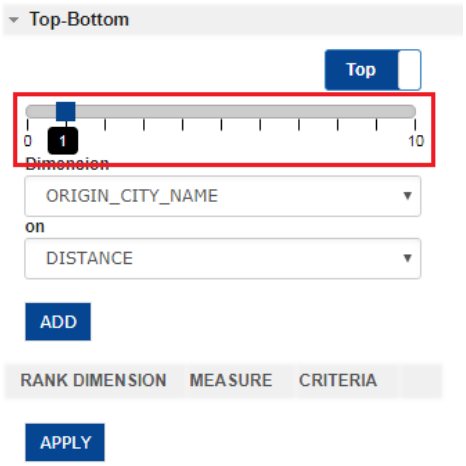
CONFIGURING A CHART—THE TOP-BOTTOM TAB

4. Click the top-bottom slider to specify whether you want to display the highest value or the lowest value.



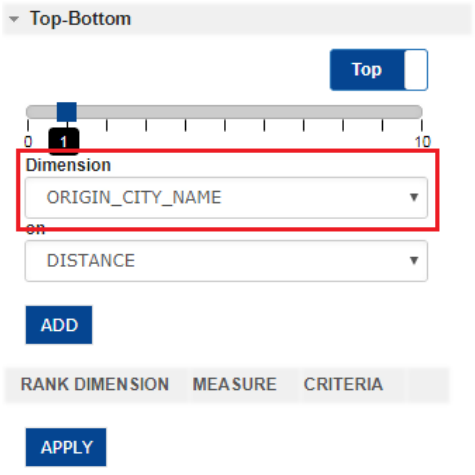
THE TOP-BOTTOM TAB—THE TOP-BOTTOM TOGGLE OPTION

5. Click the slider to specify the number of highest or lowest values to be displayed.



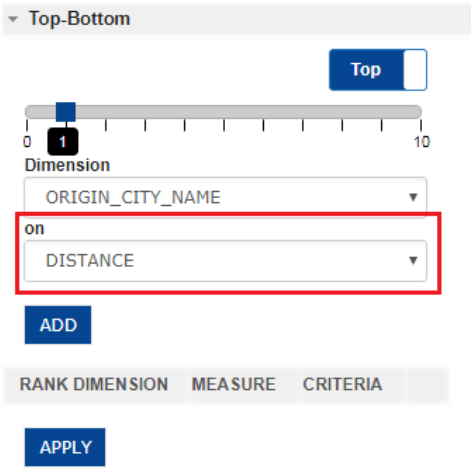
THE TOP-BOTTOM TAB—SPECIFY NUMBER OF VALUES TO BE EXTRACTED

6. Select an option from the **Dimension** list to specify the dimension for which you want to display the highest or lowest values.



THE TOP-BOTTOM TAB—THE DIMENSION LIST

7. Select an option from the **on** list to specify the measure based on which you want to display highest or lowest values.



THE TOP-BOTTOM TAB—THE ON LIST

8. Click **ADD**.
9. You can perform steps 4 to 8 to add more than one criteria for displaying the highest or lowest values.
10. Click **APPLY**.

5.4.17 Sorting Values in a Chart

You can arrange the values of Dimension columns in a chart in ascending or descending order.

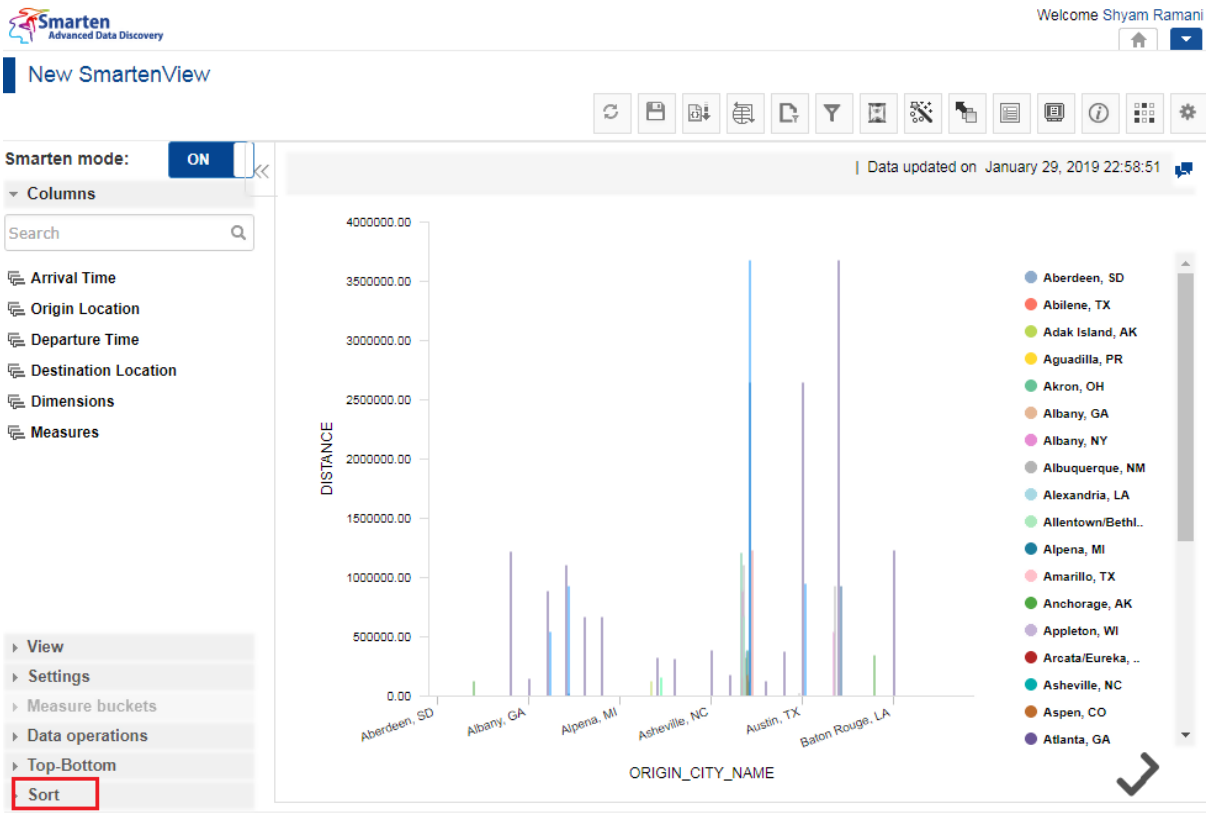
Reference: **Concept Manual > Configuring Charts > Operations on charts > Sort**

About this task

Use this task to arrange values of a Dimension column in ascending or descending order in the chart.

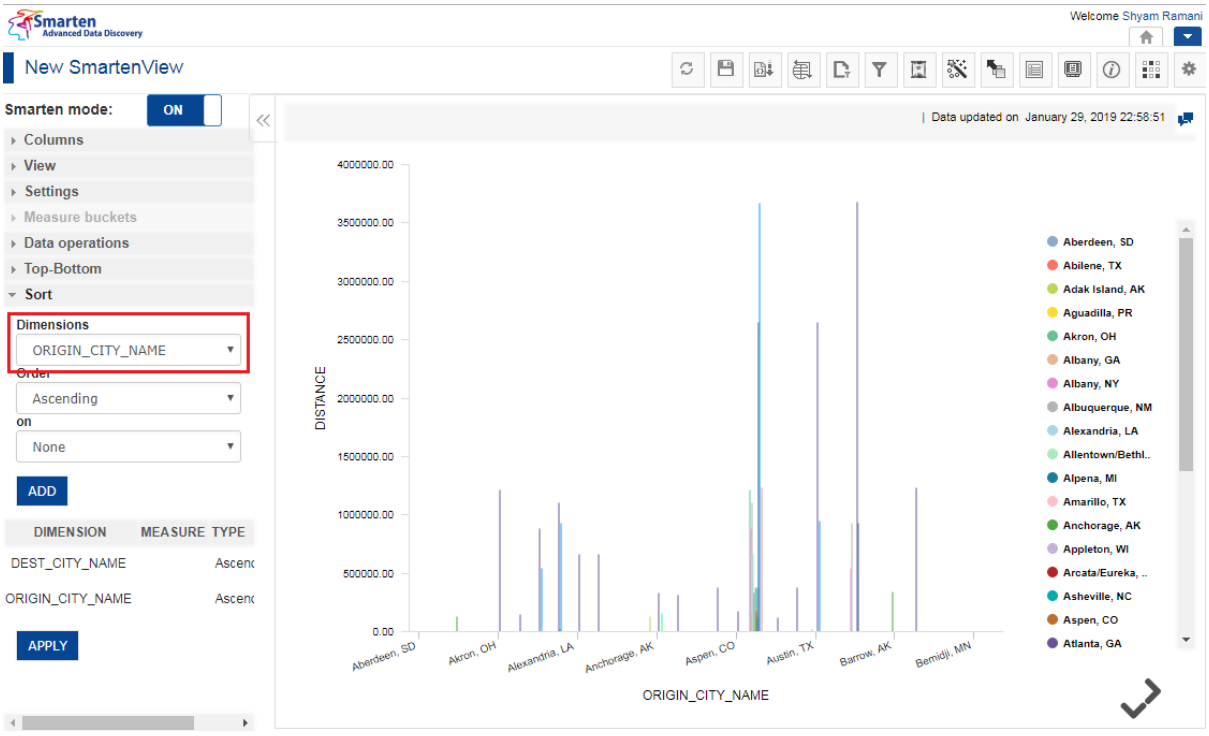
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Sort** tab.



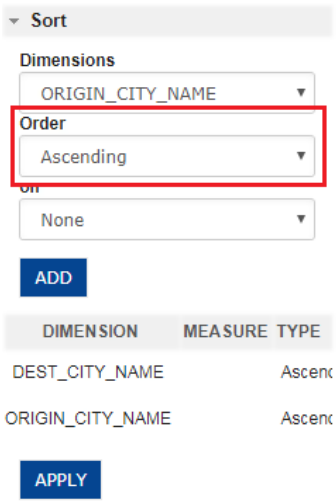
CONFIGURING A CHART—THE SORT TAB

4. Select a Dimension column from the Dimensions list.



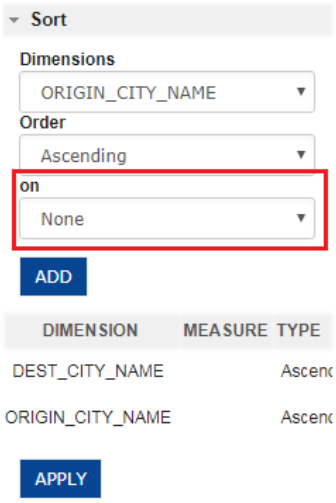
SORTING VALUES—SELECTING THE COLUMN TO SORT

5. Select an option from the **Order** list to specify whether you want to sort the values in ascending or descending order.



SORTING VALUES—SELECTING THE SORT ORDER

6. Select the Measure column from the **on** list, and then click **ADD**.



SORTING VALUES—SELECTING THE MEASURE COLUMN

Select None if you want to sort a chart by dimension values.
Select a particular measure if you want to sort by measure values.
The selected parameters for sorting are added.

7. Click **APPLY**.

5.5 Operations on Charts

Smart visualization allows users to perform various operations on the charts, such as apply sampling, outliers, data operations, filters, sorting, ranking, and other functions.

5.5.1 Data Operations

You can perform various data operations on the measures of charts by using an extensive collection of functions.

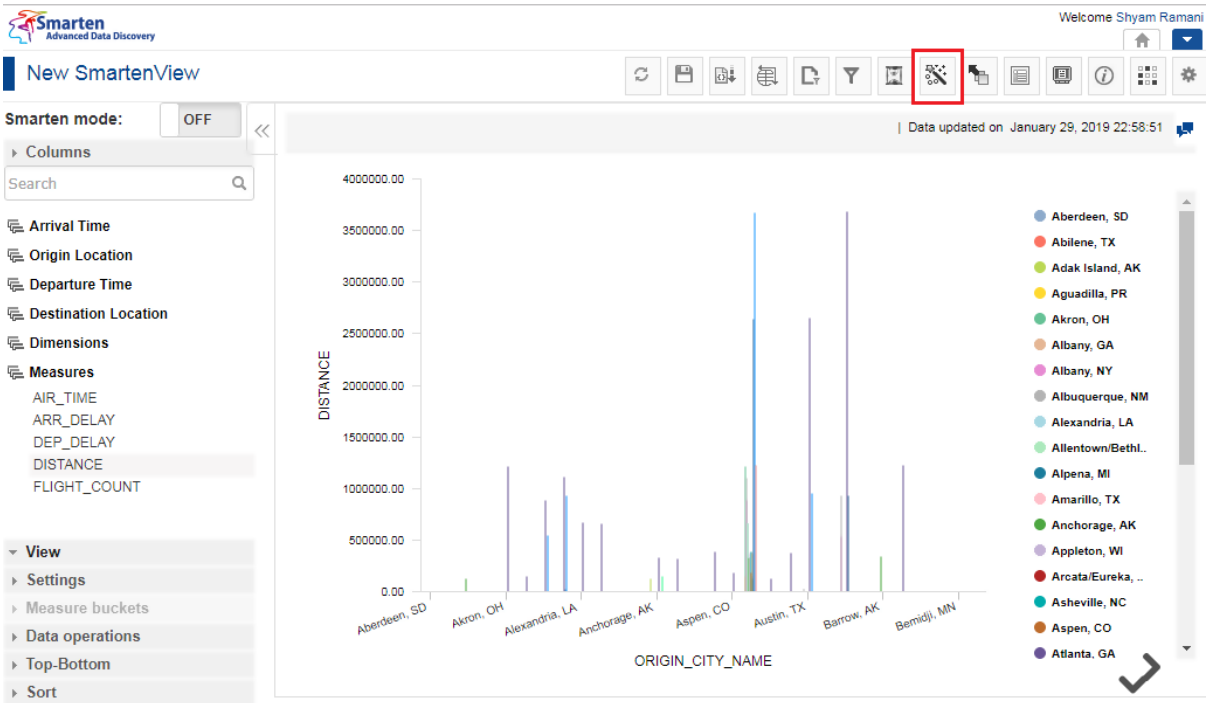
Reference: **Concept Manual > Operations on Charts > Data Operations**

About this task

Use this task to perform data operations on a chart for SmartenView.

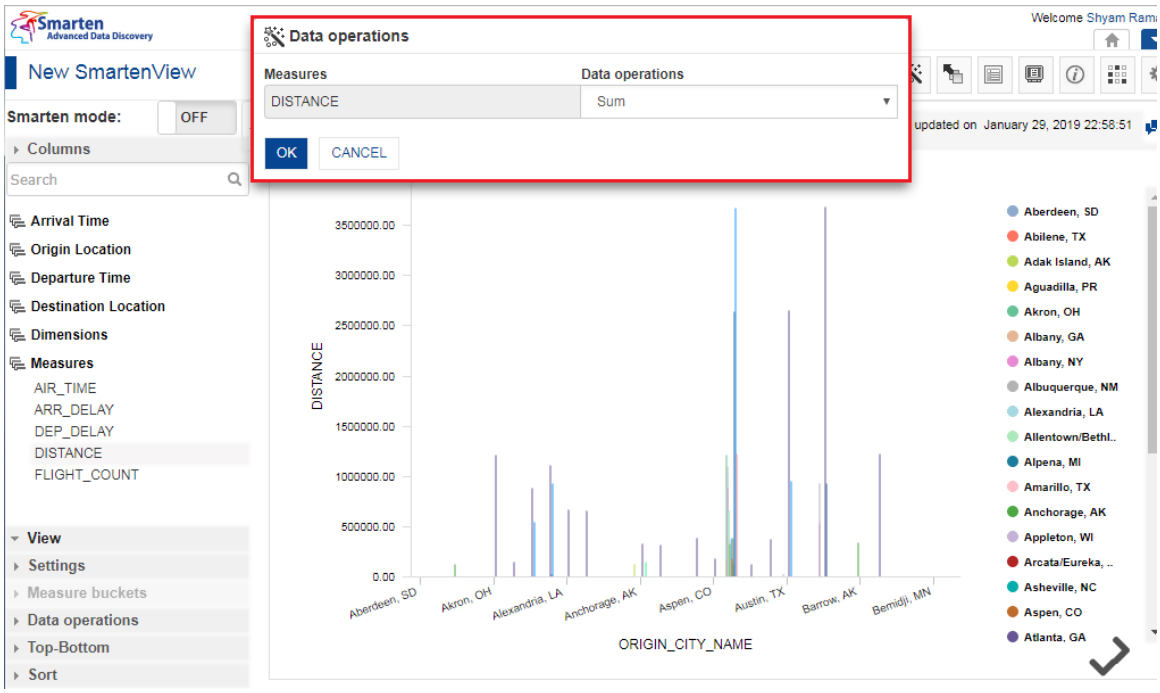
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Data operations option on the toolbar.



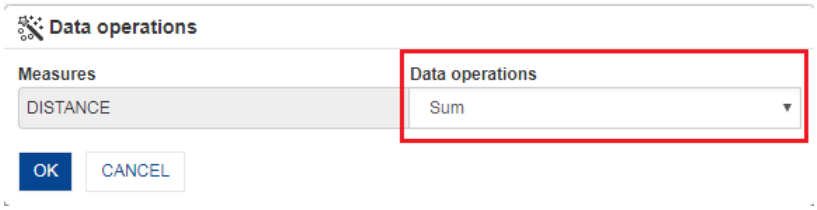
OPERATIONS ON A CHART—THE DATA OPERATIONS OPTION

The system displays the **Data operations** dialog box.



OPERATIONS ON A CHART—THE DATA OPERATIONS BOX

4. Select an option from the **Data operations** list.



OPERATION ON A CHART—THE DATA OPERATIONS LIST

The following options are available:

- Sum
- Average
- Effective average
- Count
- Effective count
- Maximum
- Minimum
- First
- Last
- Row group percentage
- Column percentage
- Column group percentage
- Total percentage
- Relative row difference
- Relative row difference percentage
- Relative column group difference
- Relative column group difference percentage
- Row cumulative sum

- Row group cumulative sum
- Least recent value
- Most recent value
- Distinct

5. Click **OK**.

5.5.2 Top-Bottom Rank

Ranking is the positioning of one value in comparison with other values. It is used to display top *n* or bottom *n* data values. In Smarten, you can rank dimensions on columns. The remaining values that are not part of the ranking are grouped as "others."

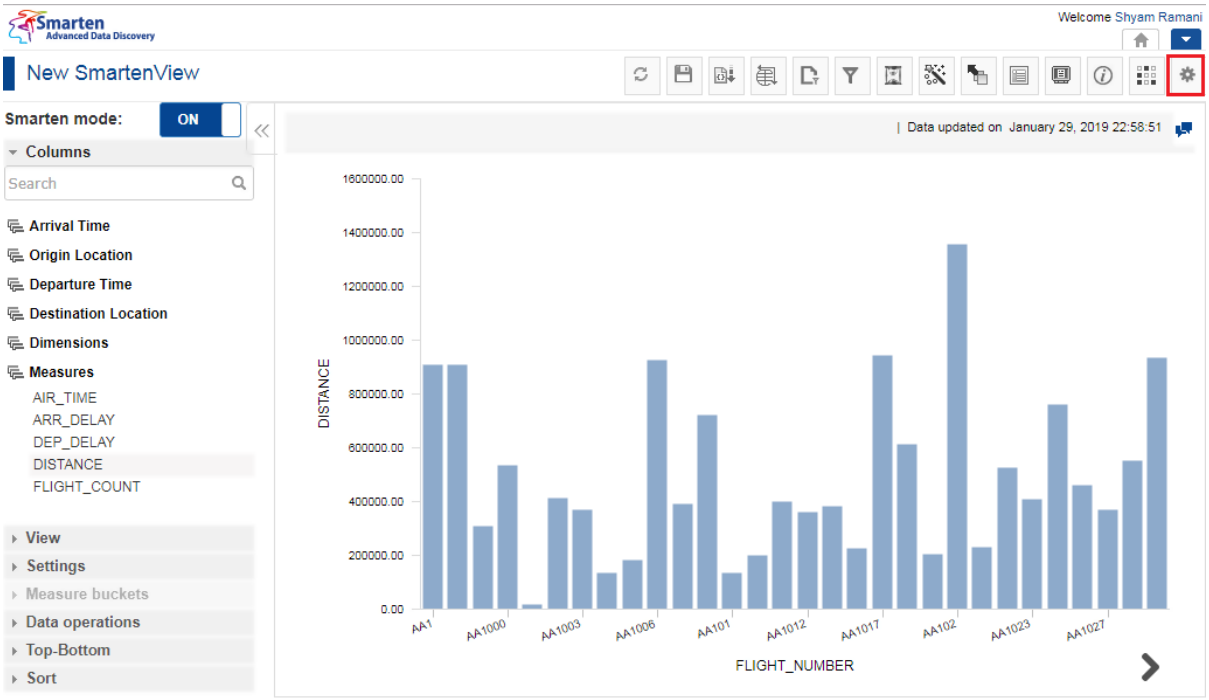
Reference: **Concept Manual > Filters and Expressions > Rank**

About this task

Use this task to assign ranks to columns for SmartenView.

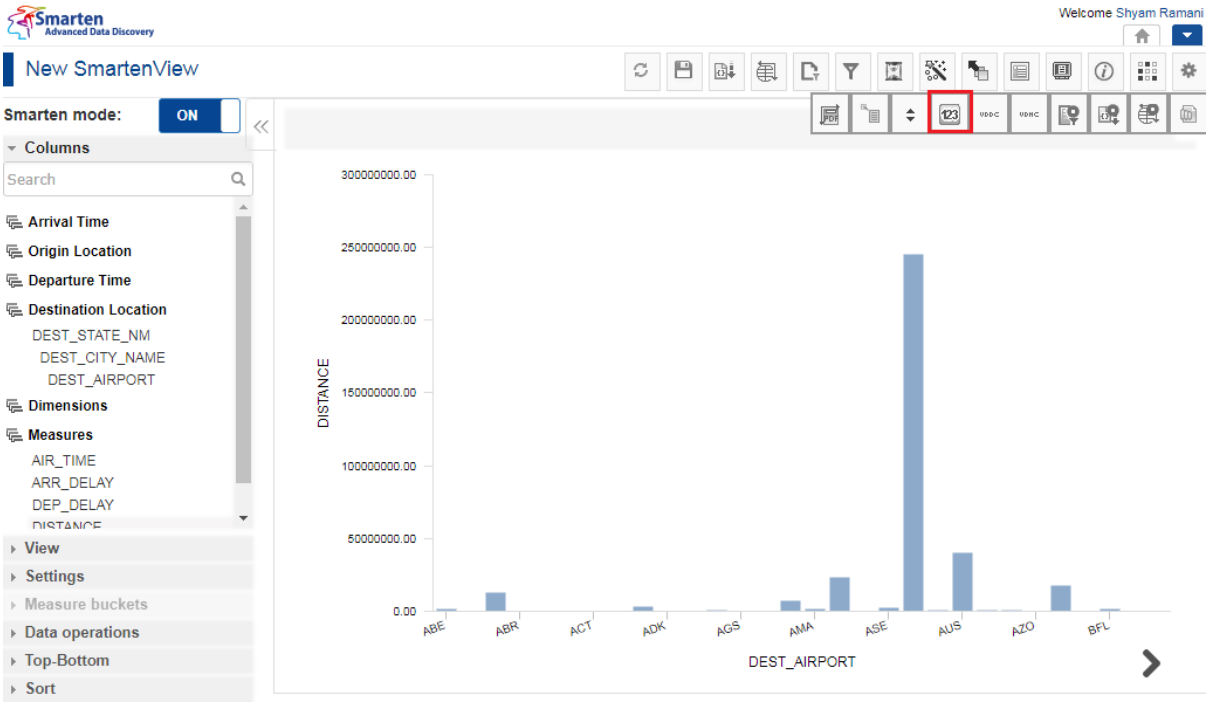
Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Settings icon on the toolbar.



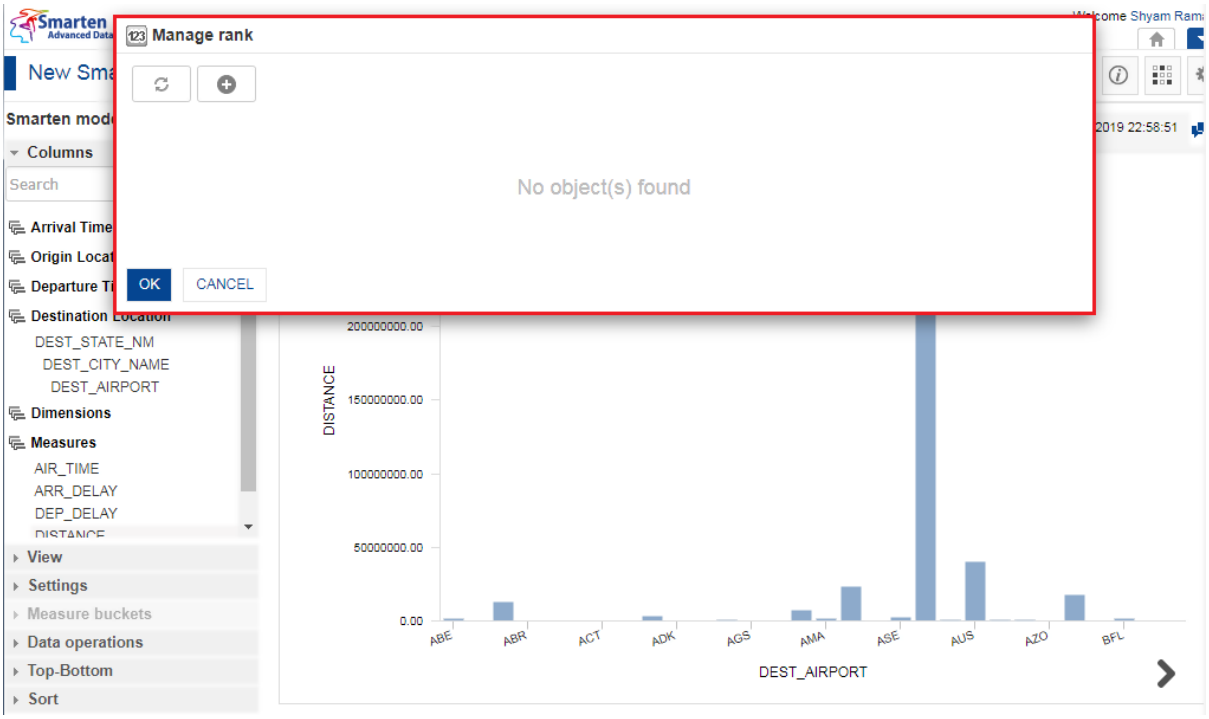
OPERATIONS ON A CHART—THE SETTINGS ICON

4. Click the Manage rank icon.



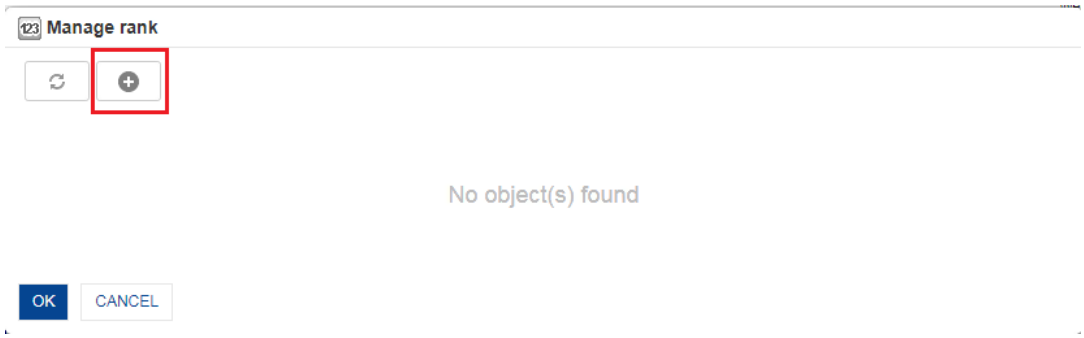
OPERATIONS ON A CHART—THE MANAGE RANK OPTION

The system displays the **Manage rank** dialog box.



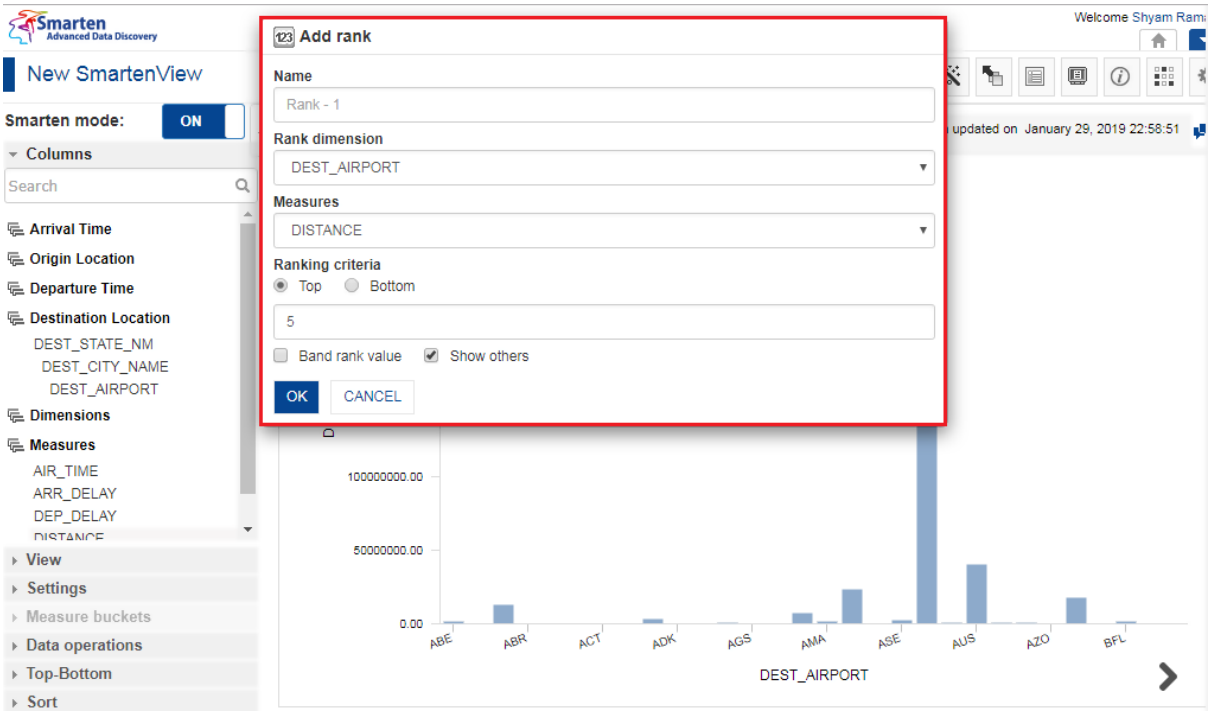
OPERATIONS ON A CHART—THE MANAGE RANK DIALOG BOX

5. Click the Add icon.



OPERATIONS ON A CHART—THE ADD RANK OPTION

The system displays the **Add rank** dialog box.



OPERATIONS ON A CHART—THE ADD RANK DIALOG BOX

6. Specify a name for the rank in the **Name** field.
7. Select a dimension from the **Rank dimension** list.
8. Select a measure from the **Measures** list.
9. Select the **Top** or the **Bottom** option to specify the ranking criteria.
10. Specify the number of values on which you want to apply ranking the **Ranking Criteria** field.
11. Select the **Band rank value** option to apply band ranking.
12. Select the **Show others** option to show other columns.
13. Click **OK**.

5.5.3 Sort

Data can be sorted in ascending, descending, and custom (user defined) orders, using particular Dimension or Measure fields.

Reference: **Concept Manual > Analytic Functions > Sort**

5.5.3.1 Simple Sort

Simple sorting in ascending or descending order.

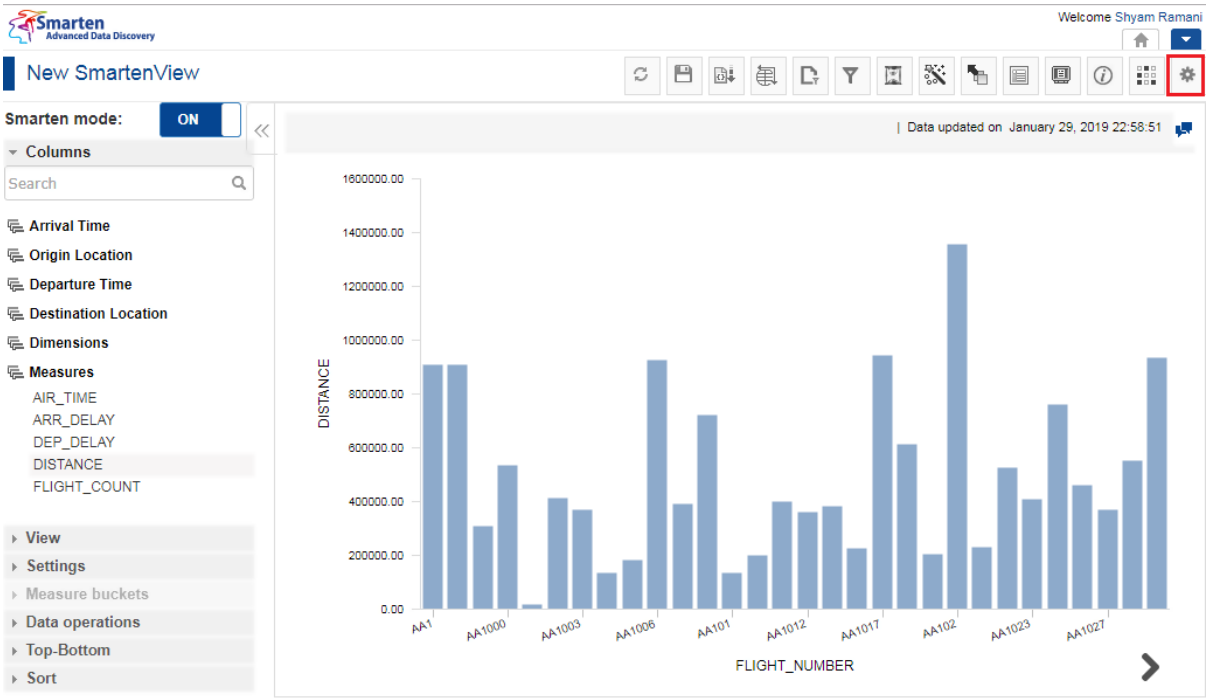
Reference: **Concept Manual > Analytic Functions > Sort > Simple Sort**

About this task

Use this task to manage simple sort on columns.

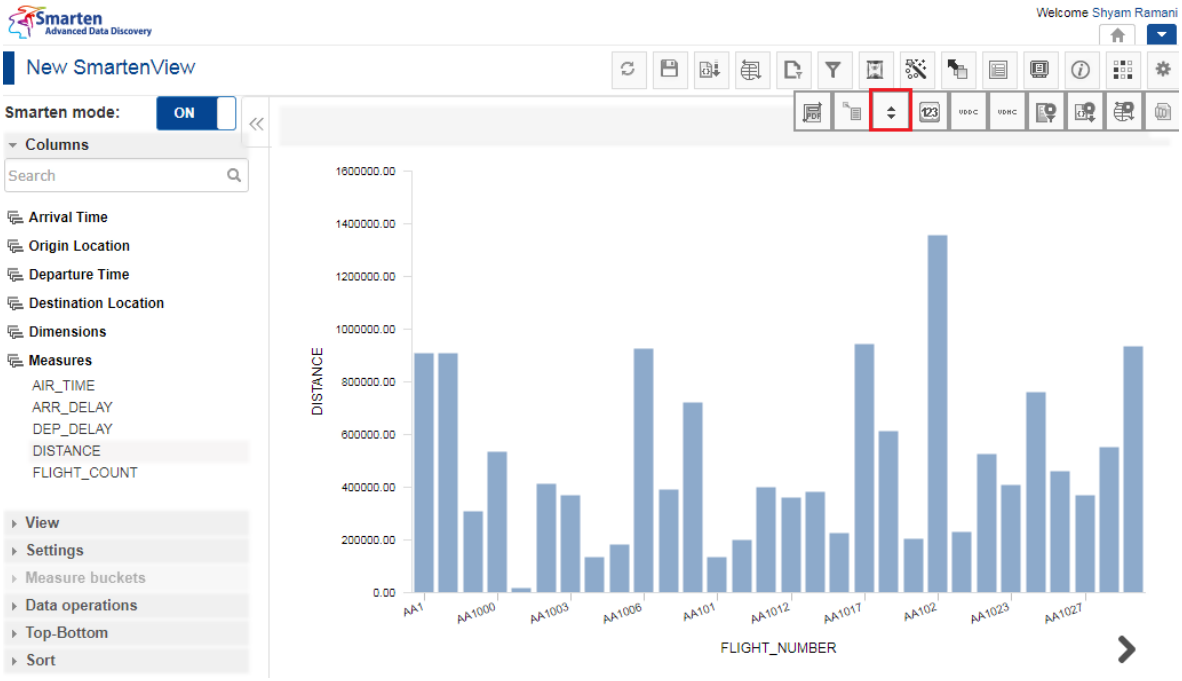
Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Settings icon on the toolbar.



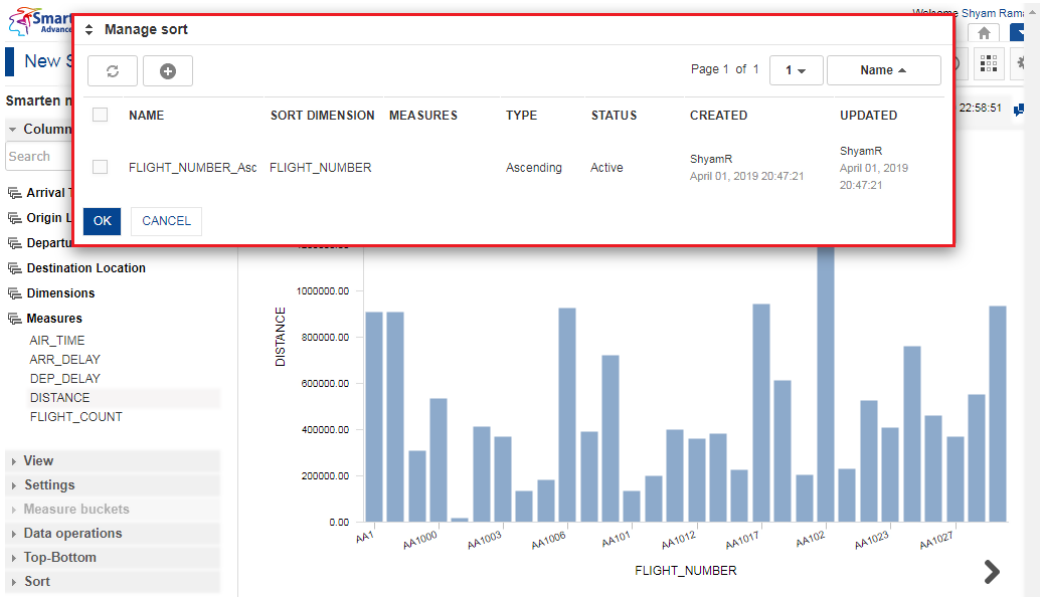
MANAGE SORT—THE SETTINGS ICON

4. Click the Manage sort icon.



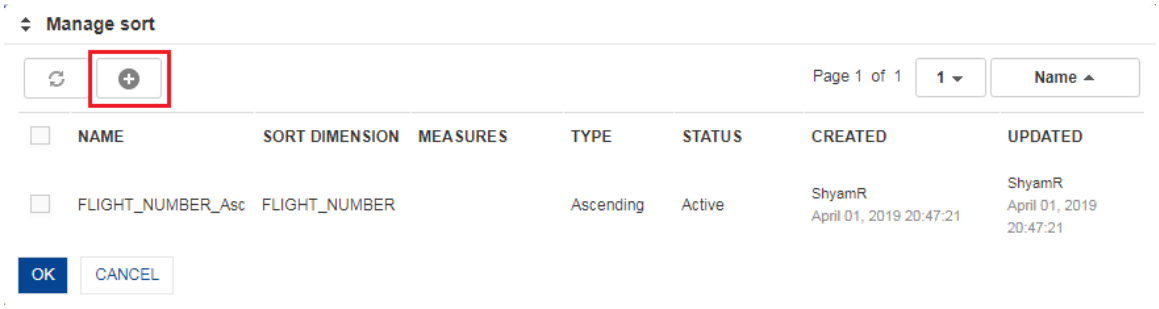
MANAGE SORT—THE MANAGE SORT ICON

The system displays the **Manage sort** dialog box.



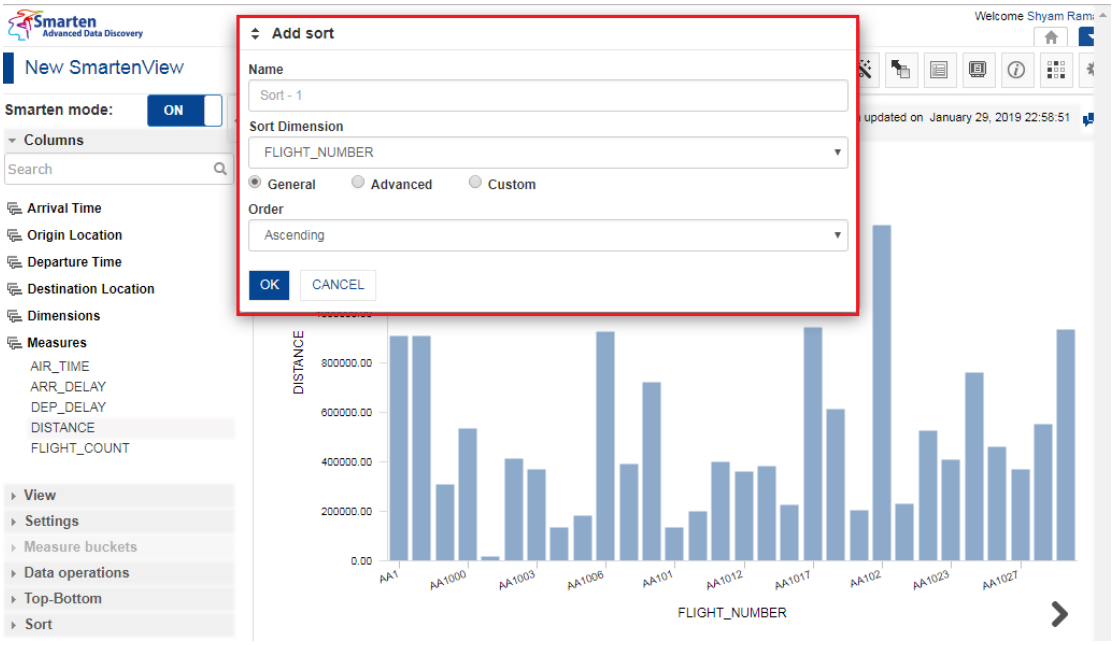
MANAGE SORT—THE MANAGE SORT DIALOG BOX

5. Click the Add icon.



MANAGE SORT—THE ADD ICON

The system displays the **Add sort** dialog box.



MANAGE SORT—THE ADD SORT DIALOG BOX

6. Specify a name for the sort in the **Name** field.
7. Select an option from the **Sort Dimensions** list to specify the column on which you want to apply sort.
8. Click the **General** option.
9. Select an option from the **Order** list to specify the sort order, and then click **OK**.

5.5.3.2 Advanced Sort

Users can also apply sorting of data by using various data operations on a particular measure. For example, users can sort the ProductCategory column in “descending” order on the Sum of GrossSales for the state of Arizona.

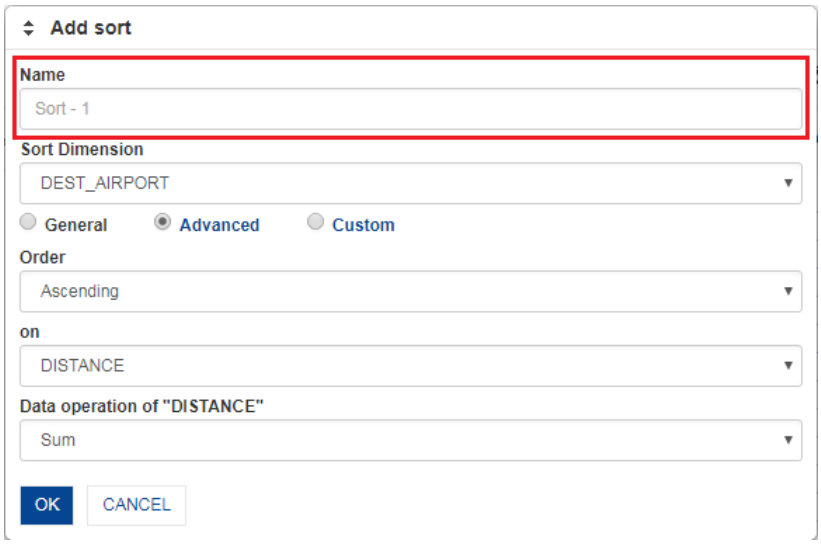
Reference: **Concept Manual > Analytic Functions > Sort > Advance Sort**

About this task

Use this task to manage advanced sort on columns.

Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Specify a name for the sort in the **Name** field.



ADVANCED SORT—ADDING CRITERIA FOR ADVANCED SORT

4. Select an option from the **Sort Dimensions** list to specify the column on which you want to apply sort.
5. Click the **Advanced** option.
6. Select an option from the **Order** list to specify the sort order.
7. Select an option from the on list to specify the measure column on which you want to apply the sort.
8. Select an option from the **Data operation** list, and then click **OK**.

5.5.3.3 Custom Sort

Users can also sort data in custom order based on specific requirements.

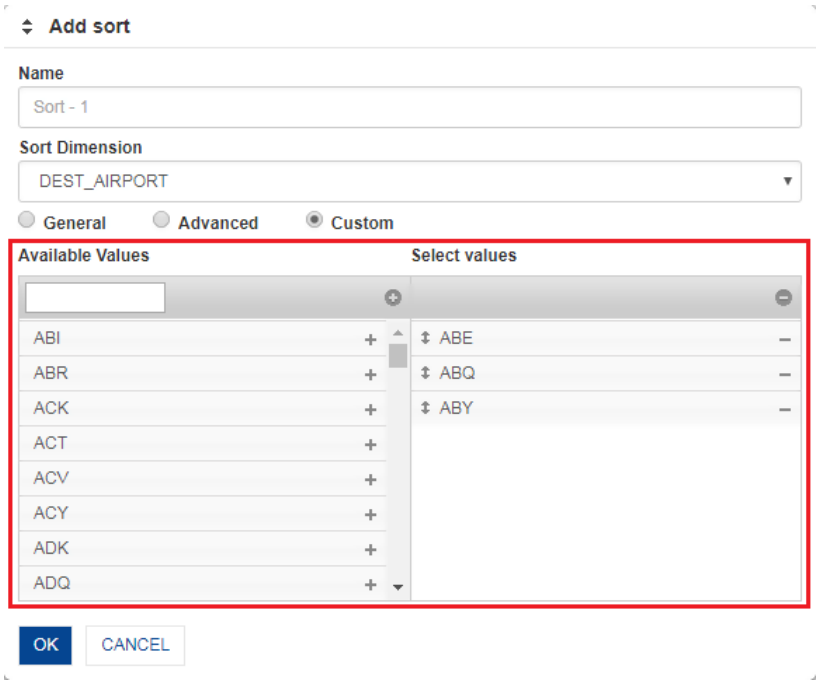
Reference: **Concept Manual > Analytic Functions > Sort > Custom Sort**

About this task

Use this task to manage custom sort on columns.

Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Specify a name for the sort in the **Name** field.
4. Select an option from the **Sort Dimensions** list to specify the column on which you want to apply sort.
5. Click the **Custom** option.
6. Select the values from the **Available Values** section that you want to use to specify sort order.



CUSTOM SORT—SELECT THE VALUES

7. You can rearrange the selected values to specify the sort order.
8. Click **OK**.

5.5.4 Grouping Dimension Values in a Chart

You can use the Group option to merge two or more Dimension values. Users can create multiple groups for a Dimension. In case there is more than one Dimension in the visualization, users can create groups for multiple Dimensions as well.

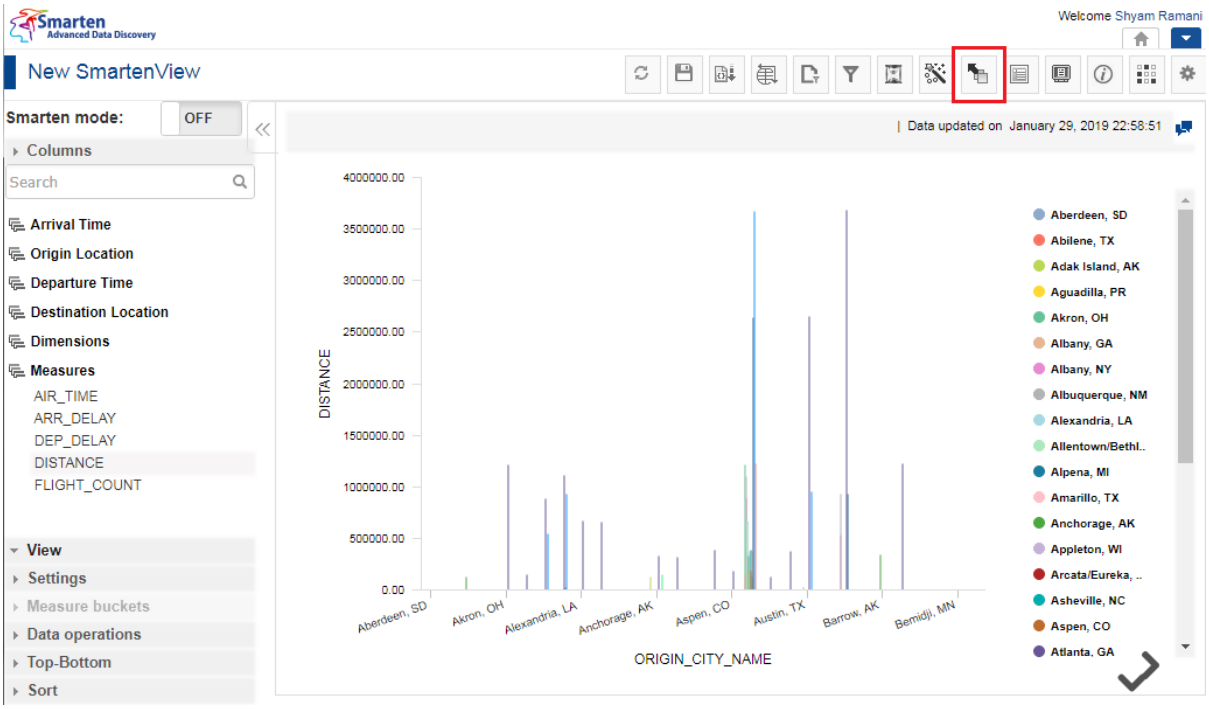
Reference: **Concept Manual > Operations on charts > Group**

About this task

Use this task to group data of various columns in a chart for SmartenView.

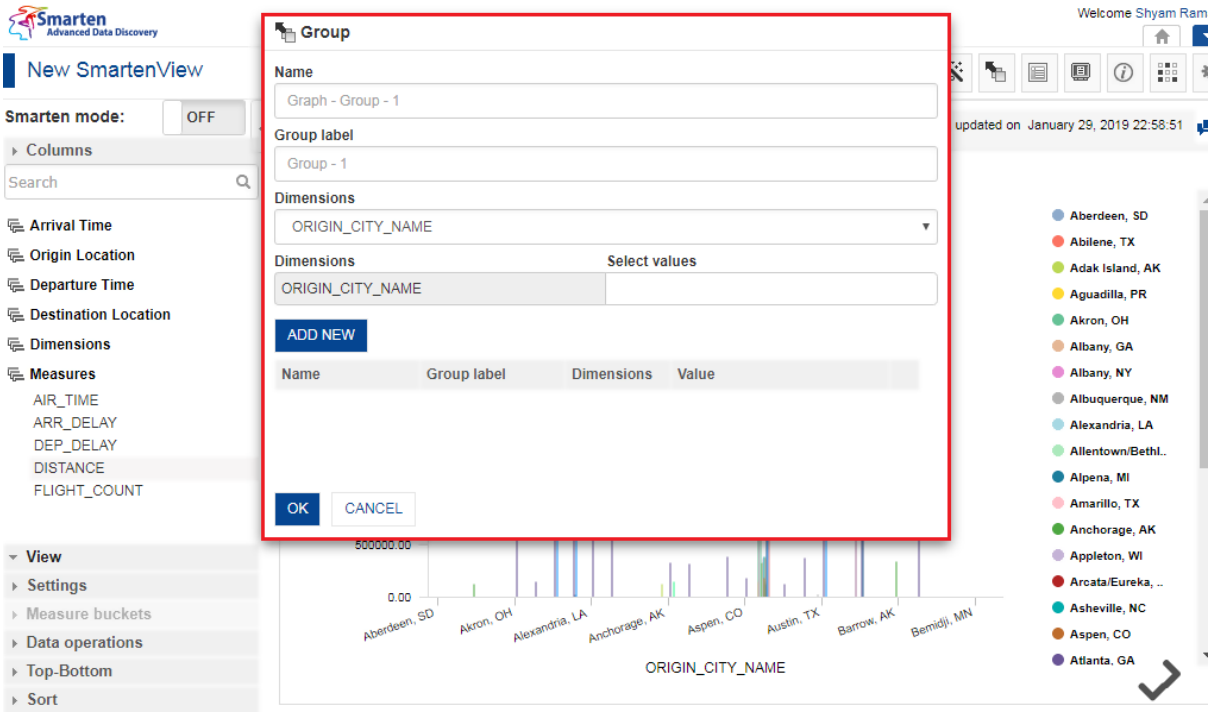
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Group option on the toolbar.



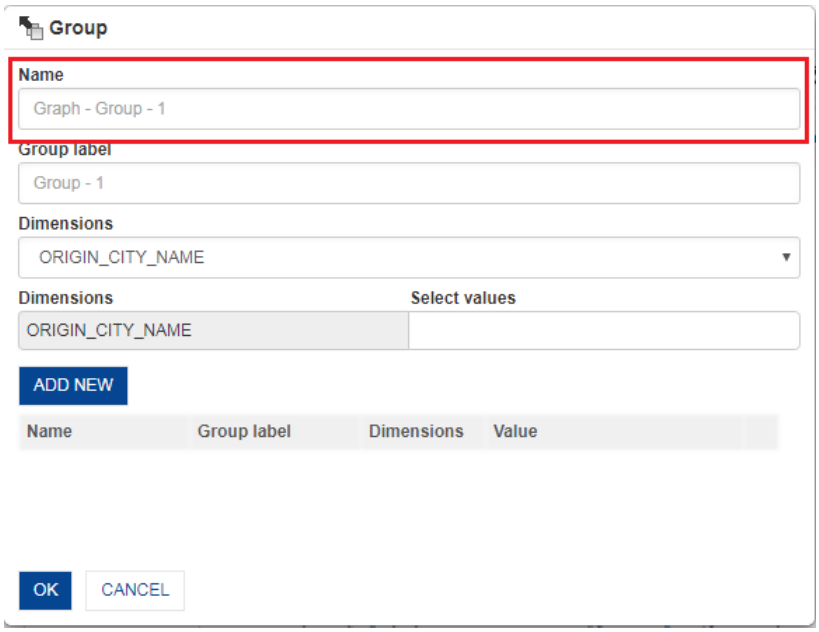
OPERATIONS ON A CHART—THE GROUP OPTION

The system displays the **Group** dialog box.



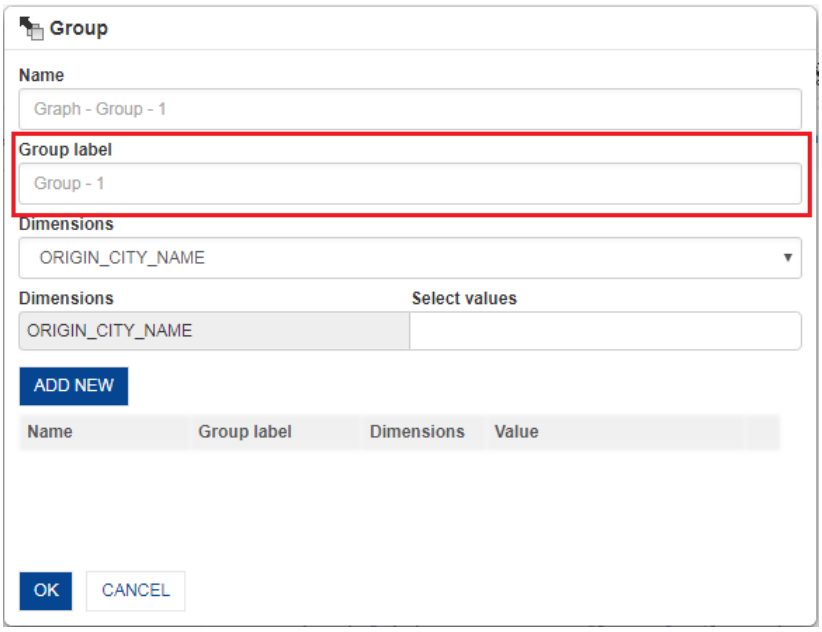
OPERATIONS ON A CHART—THE GROUP DIALOG BOX

4. Type a name for the group in the **Name** field.



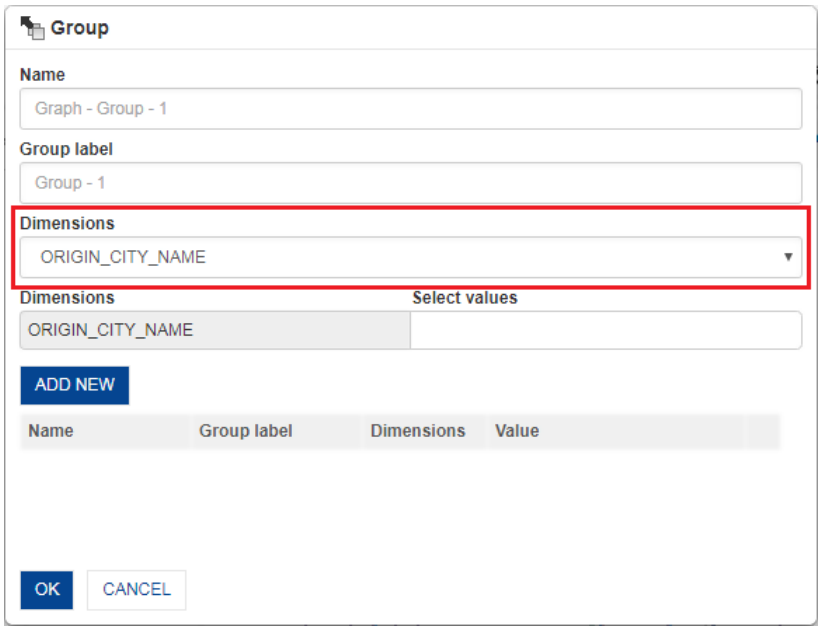
GROUPING DATA—SPECIFY NAME FOR THE GROUP

5. Type a name for the group label in the **Group label** field.



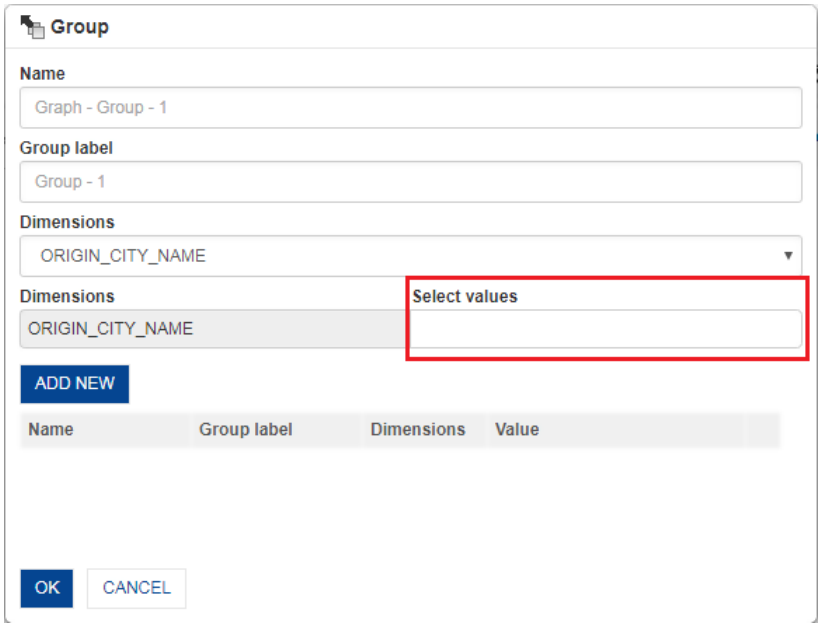
GROUPING DATA—SPECIFY A NAME FOR THE GROUP LABEL

6. Select a Dimension column whose data you want to group from the **Dimensions** list.



GROUPING DATA—SELECT THE DIMENSION COLUMN

7. Select a value you want to group from the **Select values** list.



GROUPING DATA—SELECTING THE VALUES TO BE GROUPED

8. Click **ADD NEW**.
9. You can perform steps 4 to 8 to add more values you want to group.
10. Click **OK**.

5.5.5 Filters

Various kinds of filters are available in Smarten. These filters are Retrieval Filters, Advanced Filters, Time Series Filters, Data Filters (Custom Cube Dimension and Custom Cube Measure Filters), and Page Filters.

Filters are made interdependent throughout the system. If you have used two filters, setting the value in one filter will filter values in the other filter.

Reference: **Concept Manual > Filters and Expression**

5.5.5.1 Time Series

Time Series is defined as an ordered sequence of equally spaced time intervals. When monitoring business processes or tracking corporate business metrics, a need often arises for usage of time series data across financial and calendar years and then down to half years, quarters, months, weeks, days and dates, days of the year, and weeks of the year.

The Smarten built-in customizable time series lets you analyze what has changed over the previous years, half years, quarters, months, weeks, days, dates, and other critical measures.

Reference: **Concept Manual > Filters and Expressions > Time Series**

5.5.5.1.1 Absolute Time Series

The absolute time filtering option is used to know the value of a measure at a particular year or half year or quarter or month or week or day or date. It has no dependency or relevance to the current date.

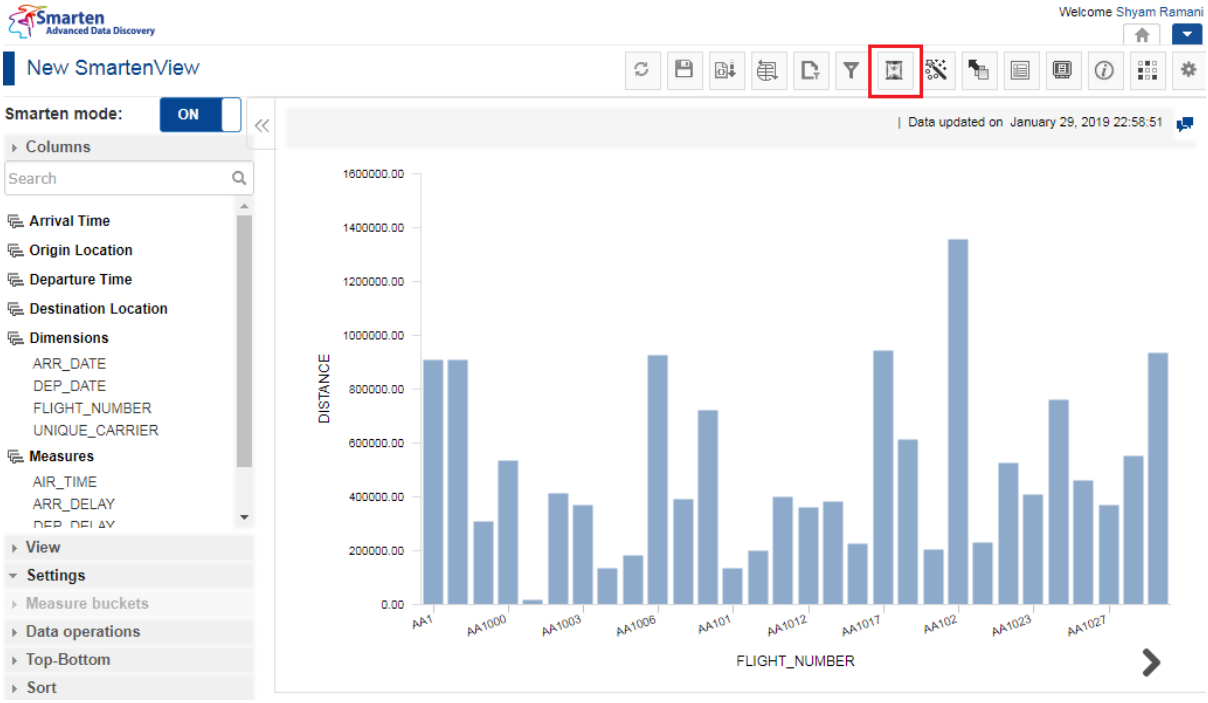
Reference: **Concept Manual > Filters and Expressions > Time Series > Absolute Time Series**

About this task

Use this task to apply absolute time series analysis on a chart for SmartenView.

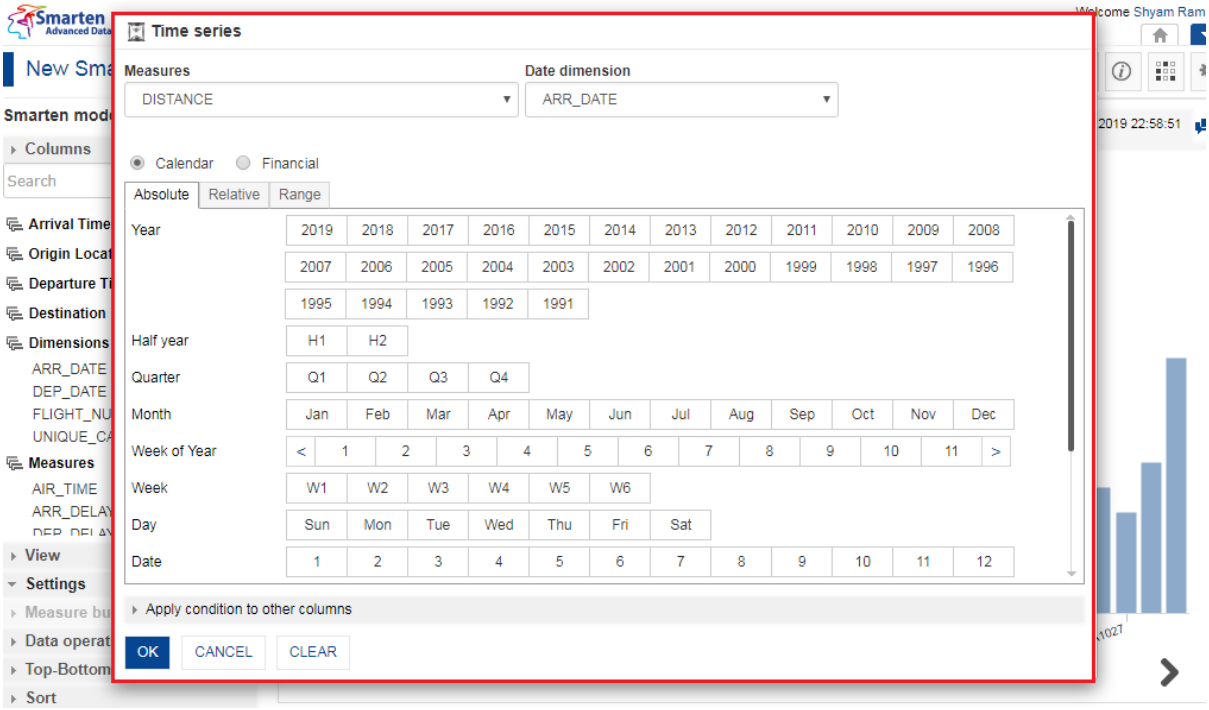
Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Time series** option on the toolbar.



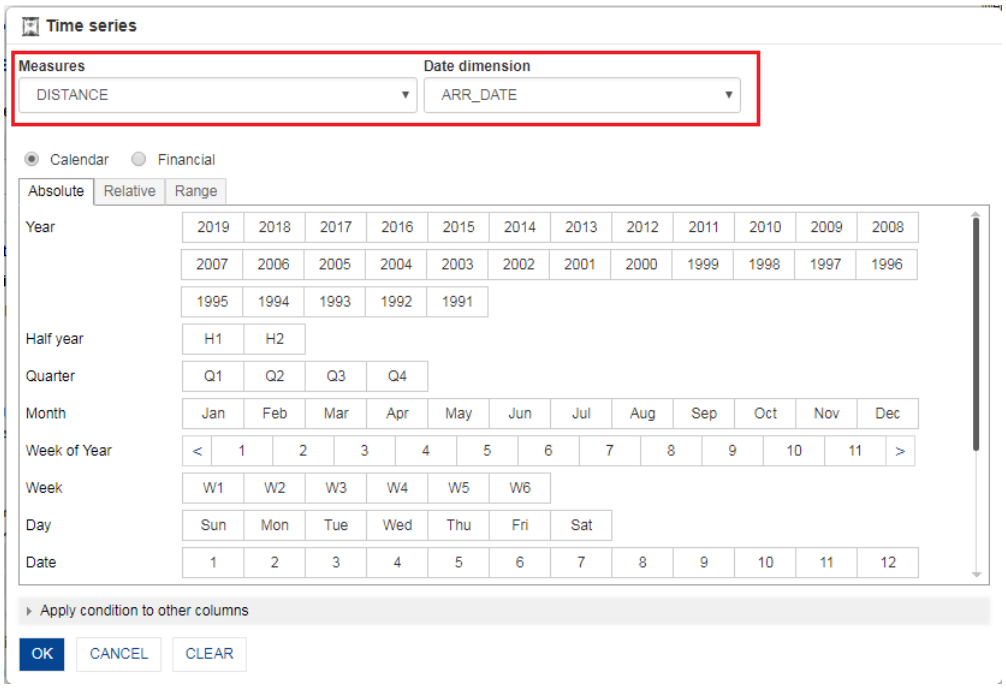
TIME SERIES ANALYSIS ON A CHART—THE TIME SERIES OPTION

The system displays the **Time series** dialog box.



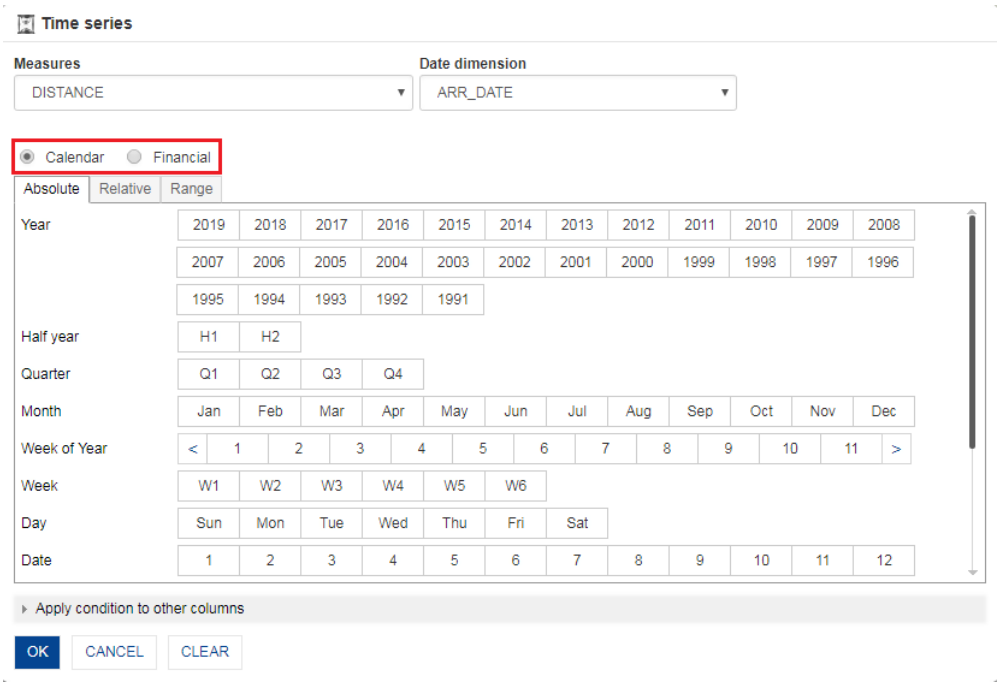
TIME SERIES ANALYSIS ON A CHART—THE TIME SERIES DIALOG BOX

4. Select an option from the **Measures** and **Date dimension** lists to specify the measure and date dimension on which you want to apply time series.



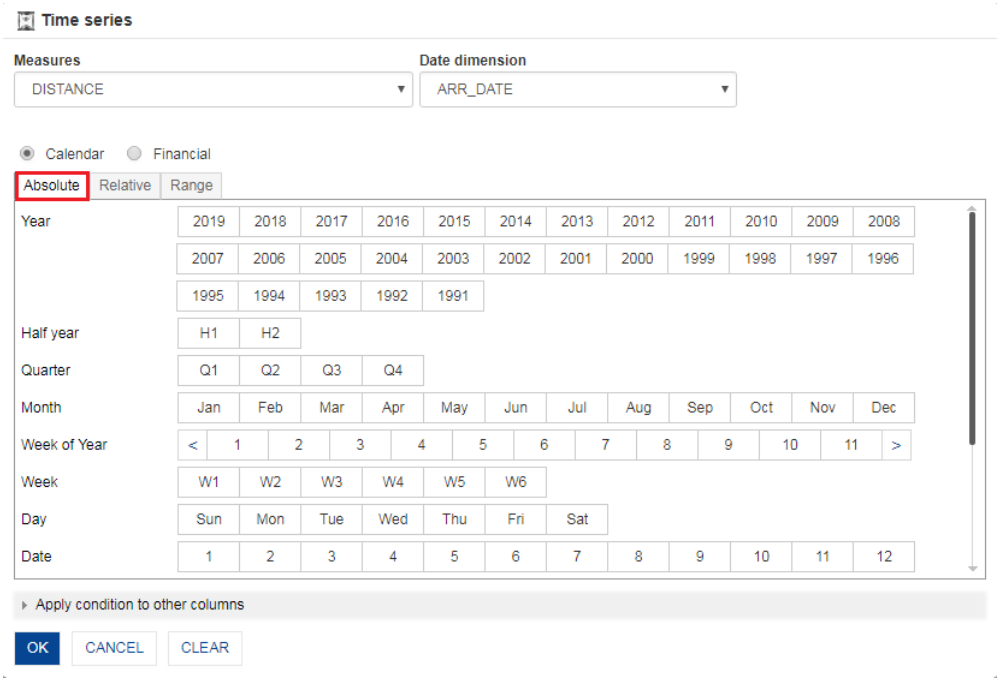
TIME SERIES ANALYSIS ON A CHART—SELECTING THE MEASURE AND DATE DIMENSION

5. Select the **Calendar** or the **Financial** option to specify the year type you want to use.



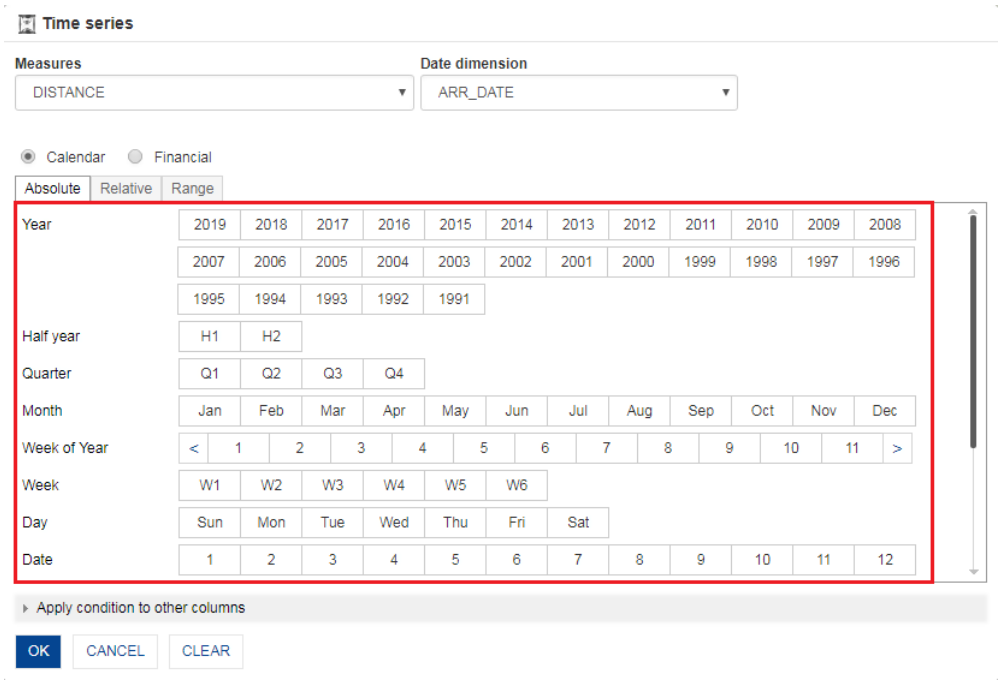
TIME SERIES ANALYSIS ON A CHART—SPECIFYING THE YEAR TYPE

6. Click the **Absolute** tab.



TIME SERIES ANALYSIS ON A CHART—ABSOLUTE TIME SERIES FILTER

7. Select the options to specify the filters you want to apply.



TIME SERIES ANALYSIS ON A CHART—SELECTING THE FILTER OPTIONS

8. Click the **Apply condition to other columns** to apply the condition on other columns in the SmartenView.
9. Click **OK**.

5.5.5.1.2 Relative Time Series

Relative time filtering is used to know the value of a measure at a particular period relative to the current date. Here the current date value affects the definition of time series periods.

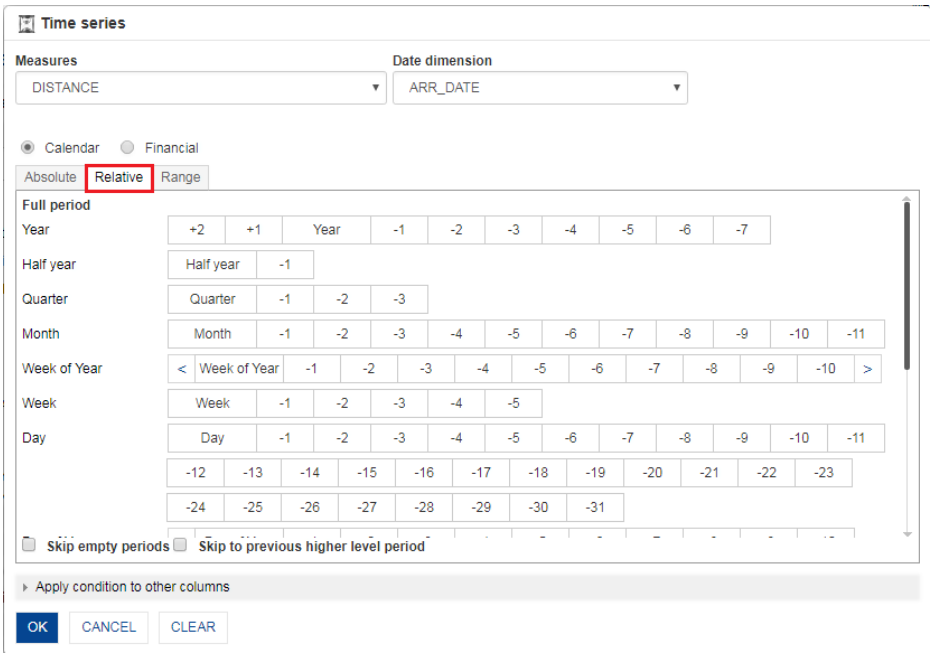
Reference: **Concept Manual > Filters and Expressions > Time Series > Relative Time Series**

About this task

Use this task to apply relative time series analysis on a chart for SmartenView.

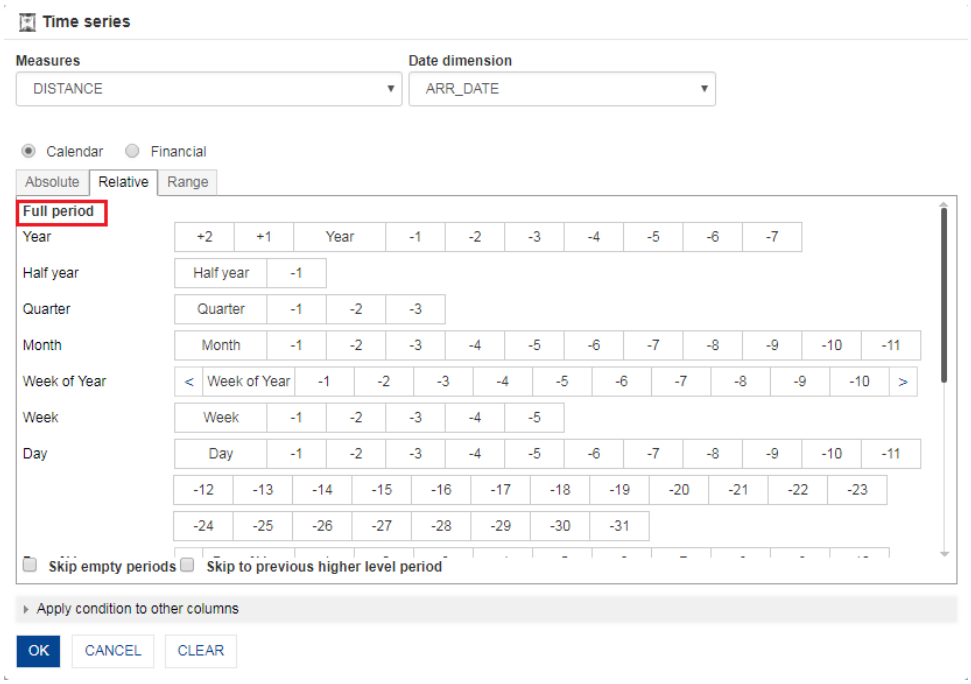
Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Relative** tab.



TIME SERIES ANALYSIS ON A CHART—RELATIVE TIME SERIES FILTER

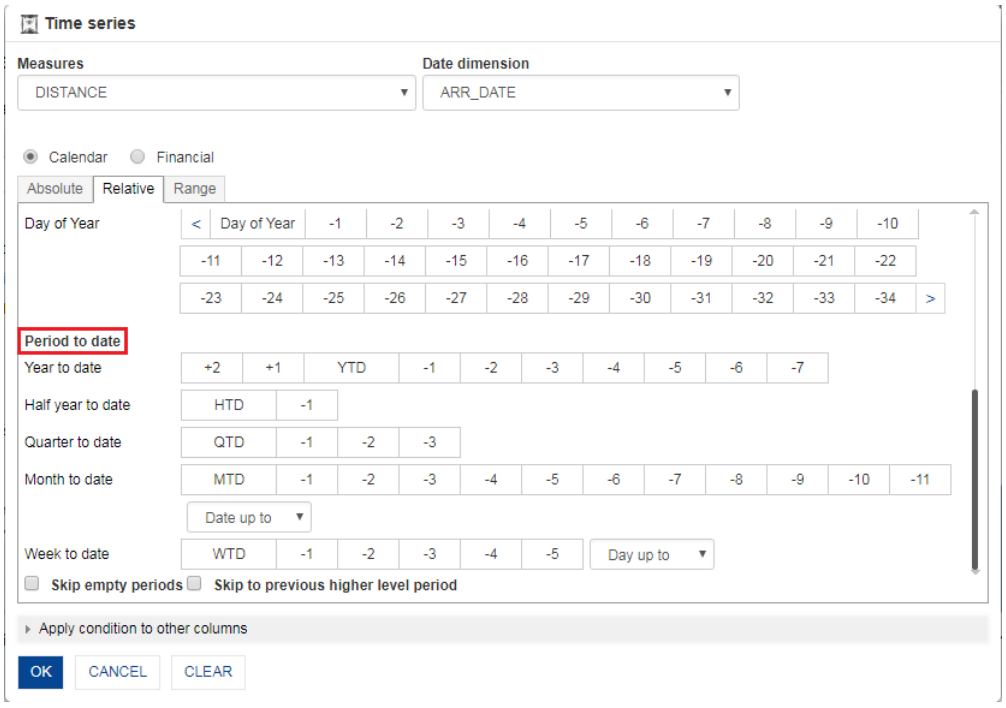
4. Select the options from the **Full period** section to specify the filters you want to apply.



TIME SERIES ANALYSIS—THE RELATIVE TIME FILTER OPTIONS

Or,

Select the options from the **Period to date** section to specify the filters you want to apply.



TIME SERIES ANALYSIS—THE PERIOD TO DATE FILTER OPTIONS

5. Select the **Skip empty periods** option to skip empty periods.
6. Select the **Skip to previous higher level period** option to skip to the previous higher level period.
7. Click the **Apply condition to other columns** to apply the condition on other columns in the cross-tab.
8. Click **OK**.

5.5.5.1.3 Range Time Series

This option is used to filter time based on range and custom periods. Users can apply simple time filtering based on before, after, range, and other conditions.

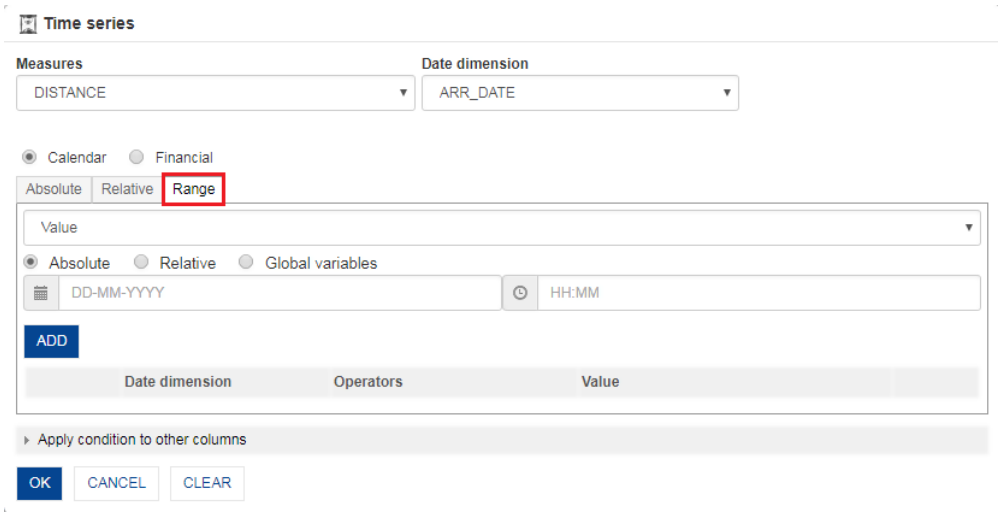
Reference: **Concept Manual > Filters and Expressions > Time Series > Range Time Series**

About this task

Use this task to apply filter time based on a range of period on a chart for SmartenView.

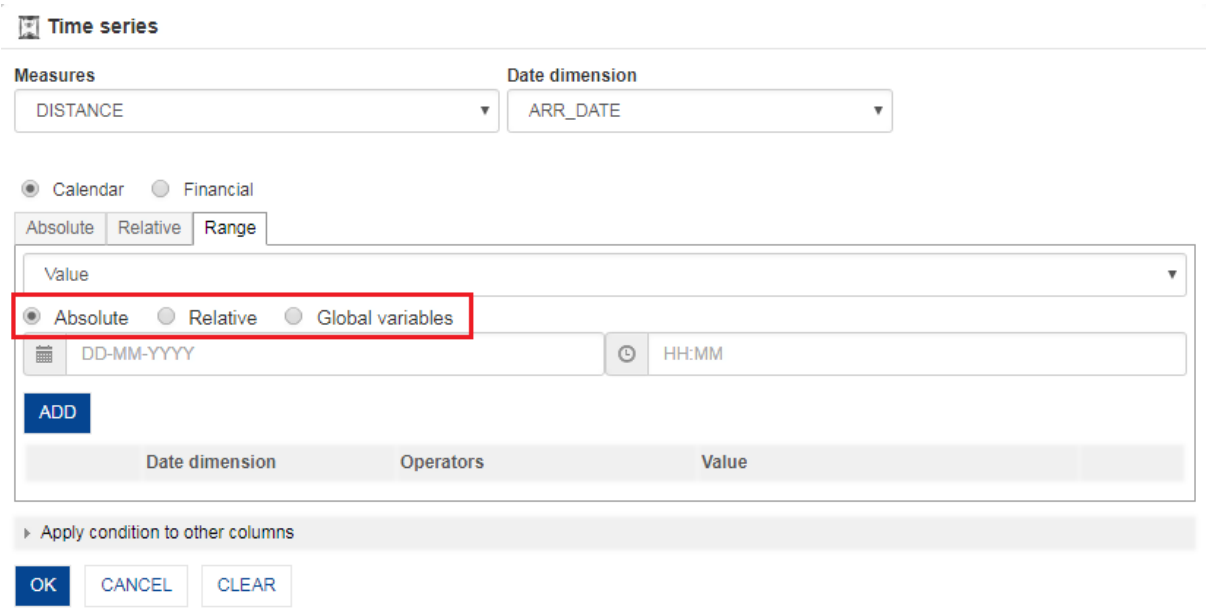
Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. You can click the **Range** tab to filter time based on range and custom periods.



TIME SERIES ANALYSIS—THE RANGE TAB

4. Select an option from the Value list.
5. You can select the **Absolute**, **Relative**, or **Global variables** option.
6. If you have selected the Absolute option, specify a date and time within the respective fields.
7. If you have selected the Relative or the Global variables field, specify a value.



TIME SERIES ANALYSIS—THE ABSOLUTE RANGE OPTION

8. Click **ADD**.
   You can repeat steps 7–11 to add more filters.
9. Click the **Apply condition to other columns** to apply the condition on other columns in the cross-tab.
10. Click **OK**.

5.5.5.2 Advanced Filters on the Object Data

The advanced filter is a type of filter that can be applied on the dimensions as well as measures. Users can create filters based on various string, arithmetic, date, statistics, trigonometry, or

conditional statements using various arithmetic operators (such as +, -, /, etc.) or comparison operators (such as =, >, < etc.)

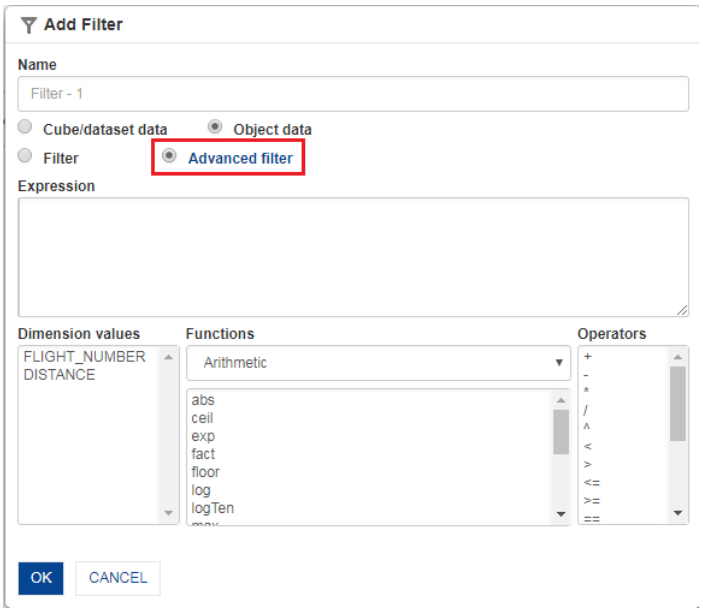
Reference: **Concept Manual > Filters and Expression > Advanced Filter**

About this task

Use this task to apply filters on the object data in a chart for SmartenView using the advanced option.

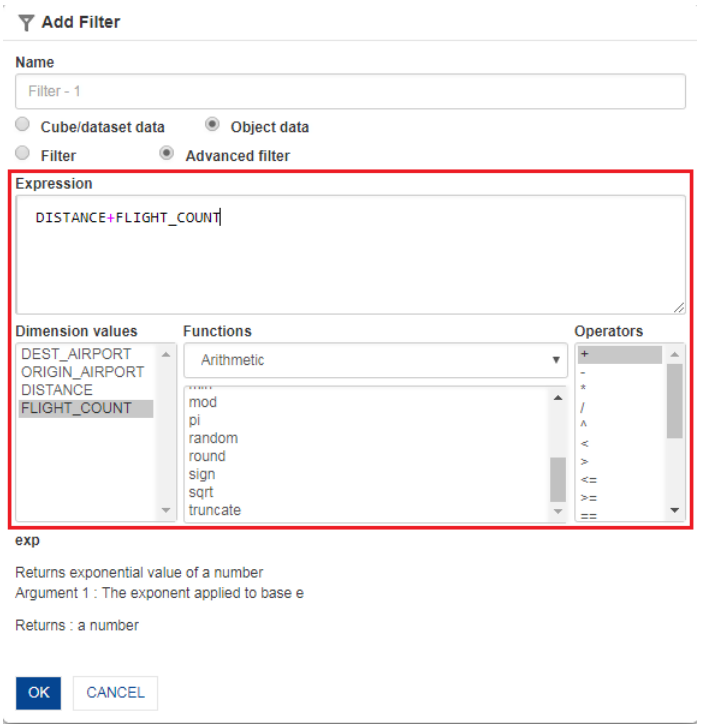
Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Select the **Advanced filter** option.



FILTER OBJECT DATA—THE FILTER OPTION

4. You can build an expression that you want to use to filter the data. You can use the dimensions available in the Dimension values, Functions, and Operators section.



FILTER OBJECT DATA—BUILDING A FILTER EXPRESSION

5. Click **OK**.

5.5.5.2.1 Filters on the Cube or Dataset Data

You can apply filters on the cube or dataset data. These filters are known as backend filters.

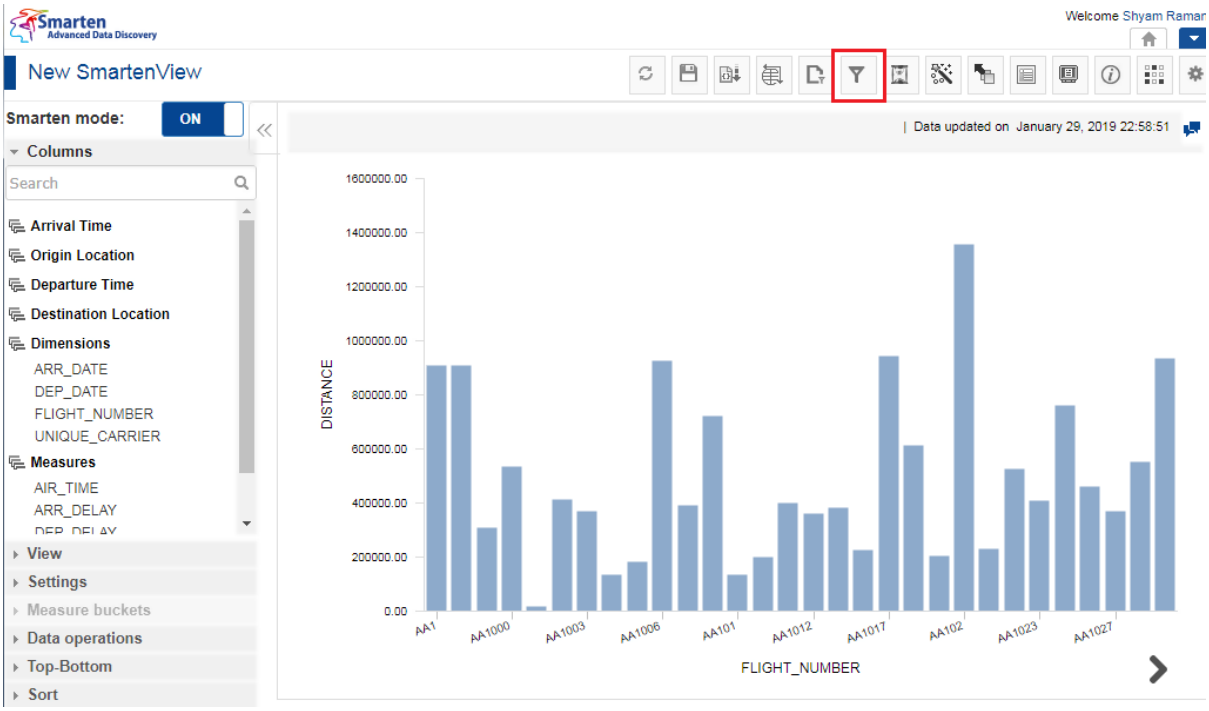
Reference: **Concept Manual > Filters and Expressions**

About this task

Use this task to apply filters on the cube or dataset data in a chart for SmartenView.

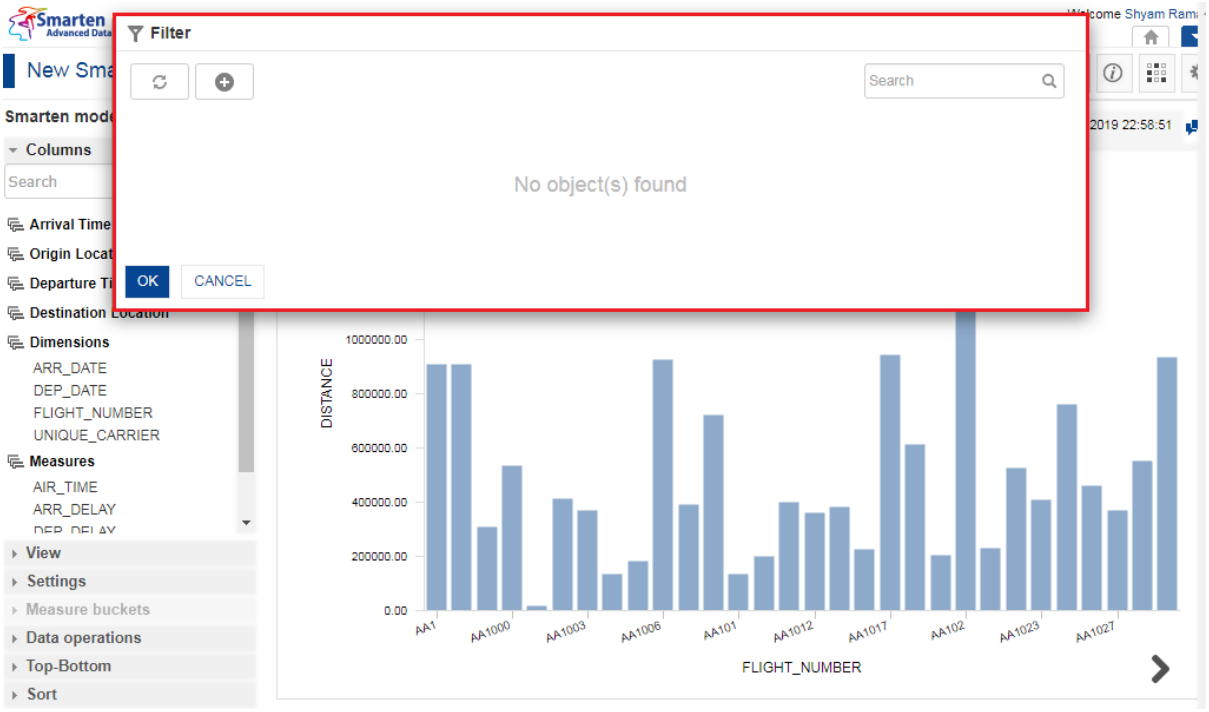
Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the **Filter** option on the toolbar.



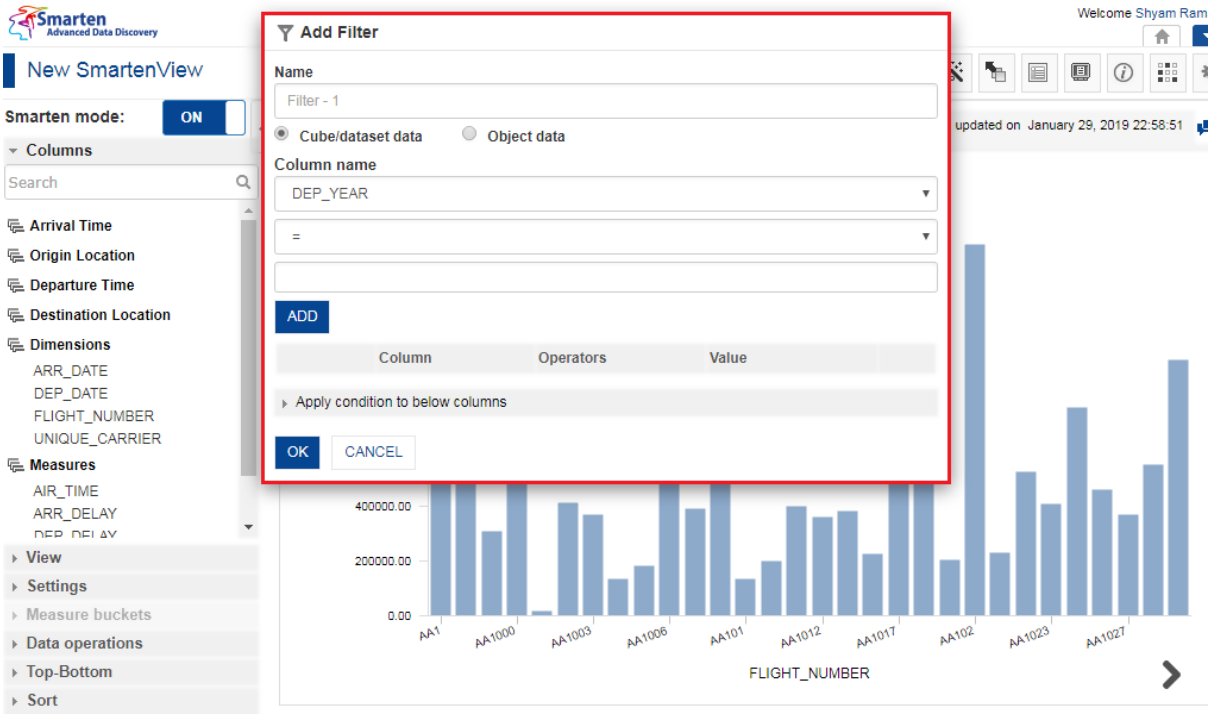
FILTERING CUBE OR DATASET DATA—THE FILTER OPTION

The system displays the **Filter** dialog box.



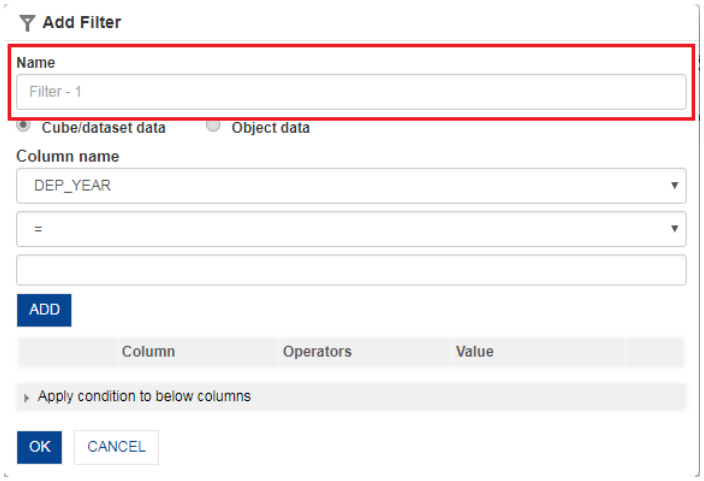
FILTER CUBE OR DATASET DATA—THE FILTER DIALOG BOX

4. Click the Add icon.
   The system displays the **Add Filter** dialog box.



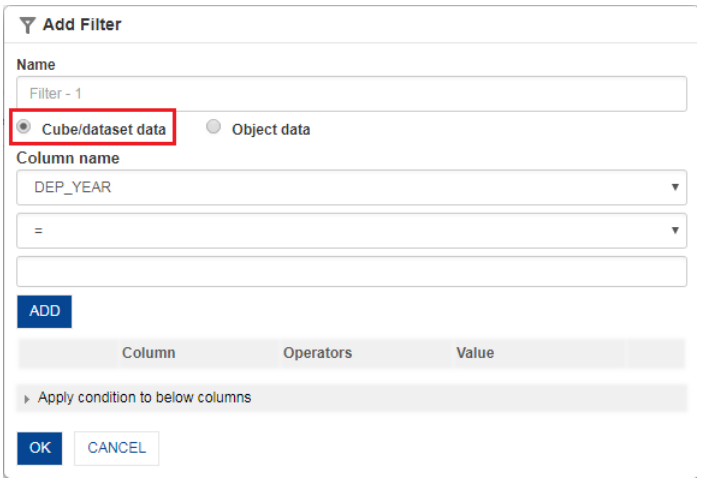
FILTER CUBE OR DATASET DATA—THE ADD FILTER DIALOG BOX

5. Select a name for the filter in the **Name** field.



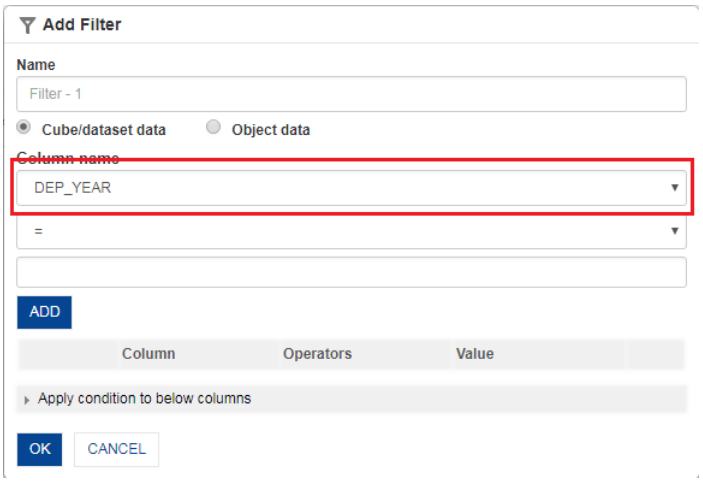
FILTER CUBE OR DATASET DATA—SPECIFYING A NAME FOR THE FILTER

6. Select the **Cube/dataset data** option.



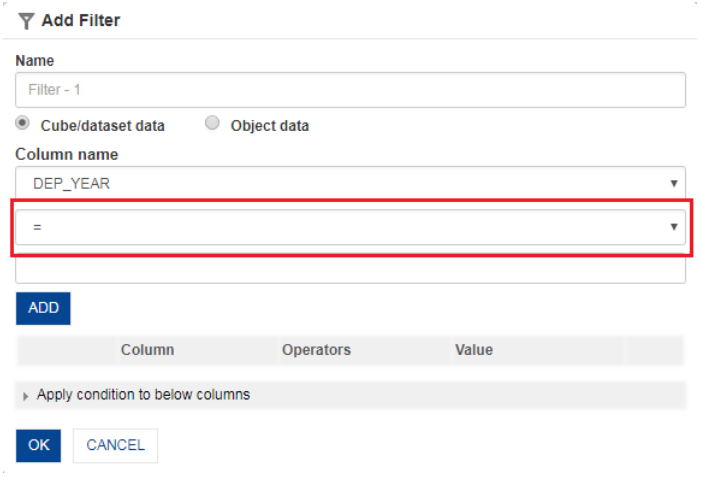
FILTER CUBE OR DATASET DATA—THE CUBE OR DATASET DATA OPTION

7. Select an option from the **Column name** list to specify the column on which you want to apply a filter.



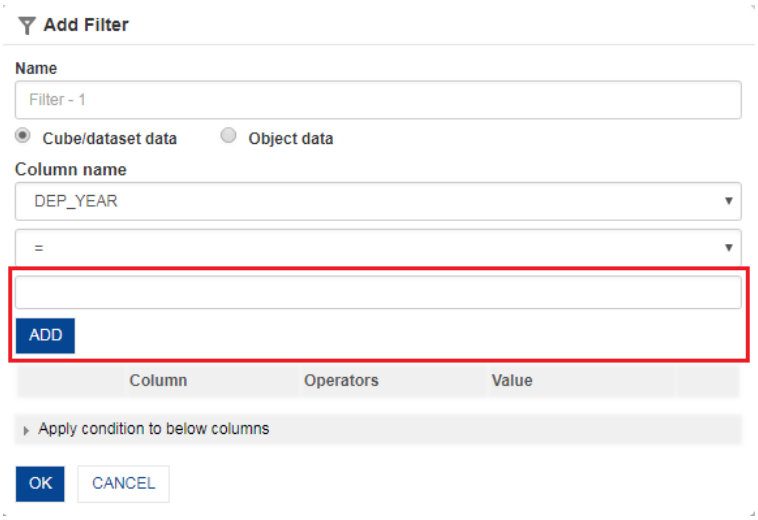
FILTER CUBE OR DATASET DATA—SELECTING THE COLUMN

8. Select an operation from the list.



FILTER CUBE OR DATASET DATA—SELECTING THE OPERATION

9. Specify a value in the field, and then click **ADD**.



FILTER CUBE OR DATASET DATA—SPECIFYING THE VALUE

10. You can repeat steps 7–9 to add more conditions.
11. Click the **Apply condition to other columns** to apply the condition on other columns in the SmartenView.
12. Click **OK**.

5.5.5.2.2 Filters on the Object Data

You can apply filters on the object data. These filters are known as frontend filters.

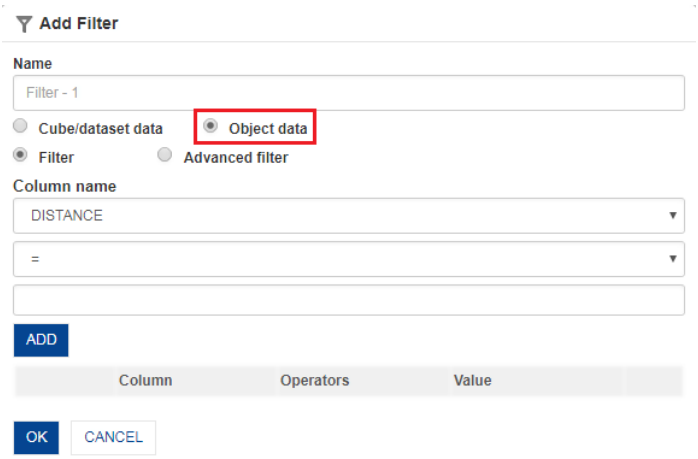
Reference: **Concept Manual > Filters and Expressions**

About this task

Use this task to apply filters on the object data in a chart for SmartenView.

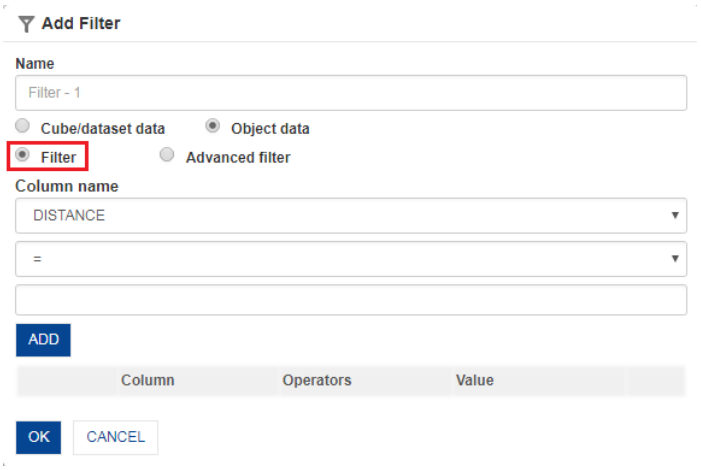
Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Select the **Object data** option.



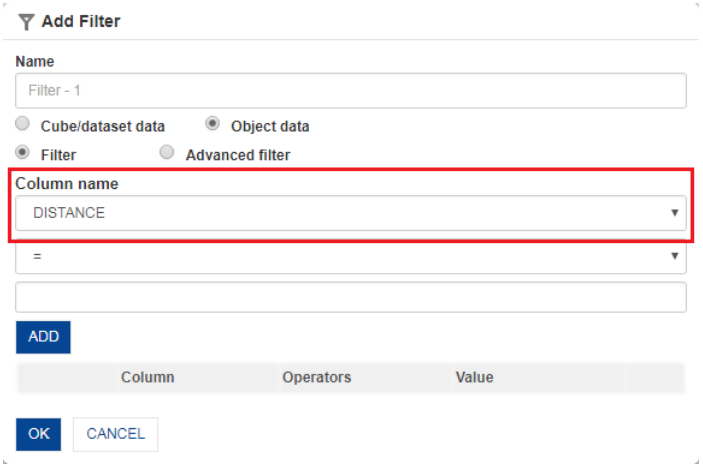
FILTER OBJECT DATA—THE OBJECT DATA OPTION

4. Select the **Filter** option.



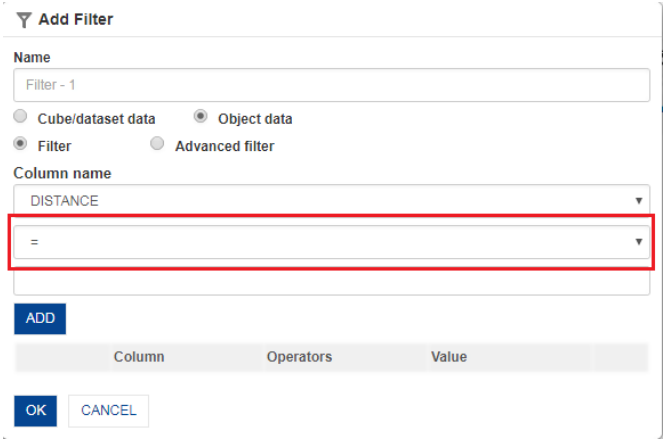
FILTER OBJECT DATA—THE FILTER OPTION

5. Select an option from the **Column name** list to specify the column on which you want to apply a filter.



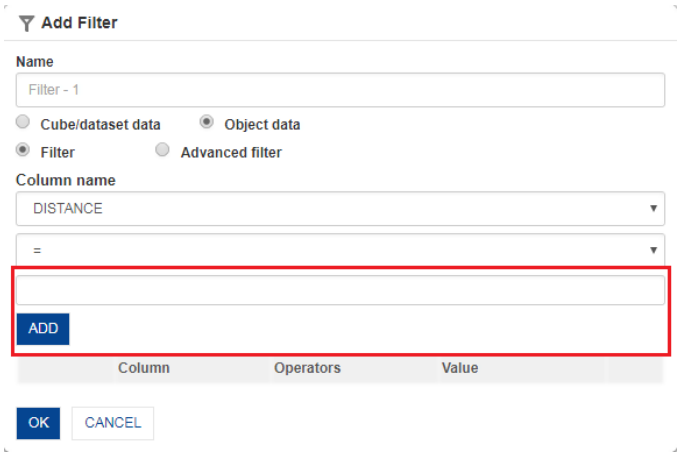
FILTER CUBE OR DATASET DATA—SELECTING THE COLUMN

6. Select an operation from the list.



FILTER CUBE OR DATASET DATA—SELECTING THE OPERATION

7. Specify a value in the field, and then click **ADD**.



FILTER CUBE OR DATASET DATA—SPECIFYING THE VALUE

8. You can repeat steps 7–9 to add more conditions.
9. Click the **Apply condition to other columns** to apply the condition on other columns in the cross-tab.
10. Click **OK**.

5.5.5.3 Global Variables

Global variables are defined at the cube or dataset level. They can be accessed globally with various expressions and filters for BI objects within Smarten.

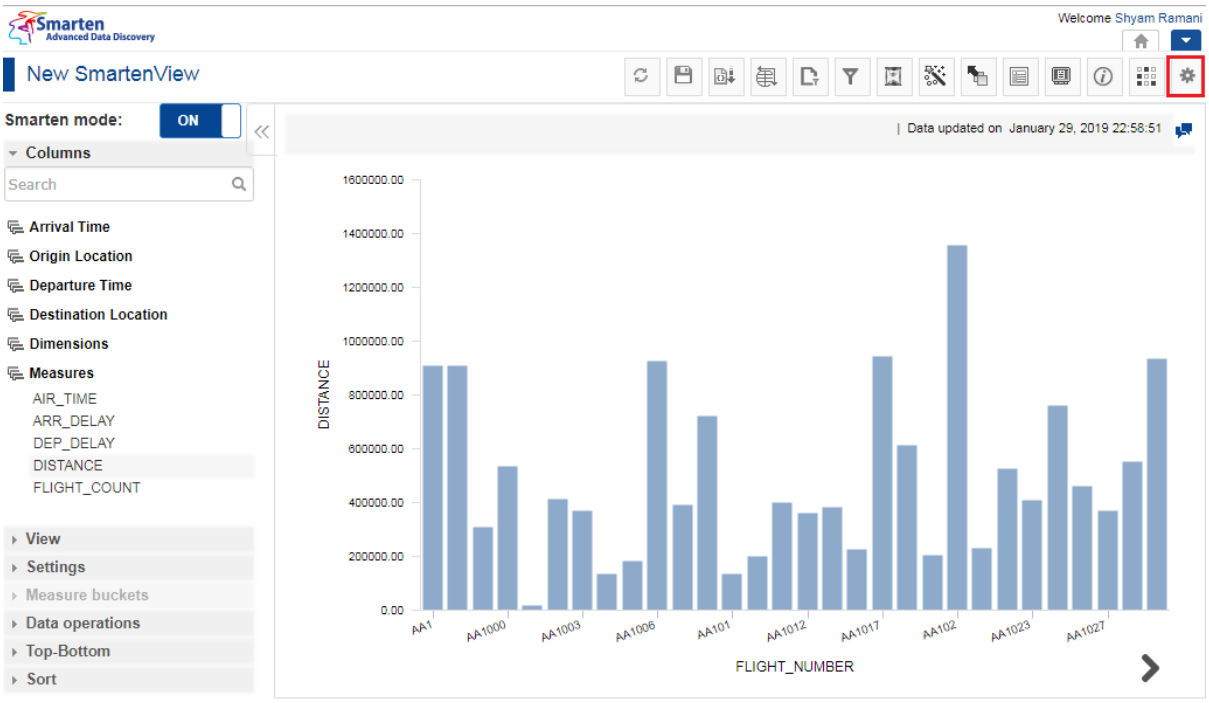
Reference: **Concept Manual > Filters and Expressions > Global Variables**

About this task

Use this task to manage global variables for SmartenView.

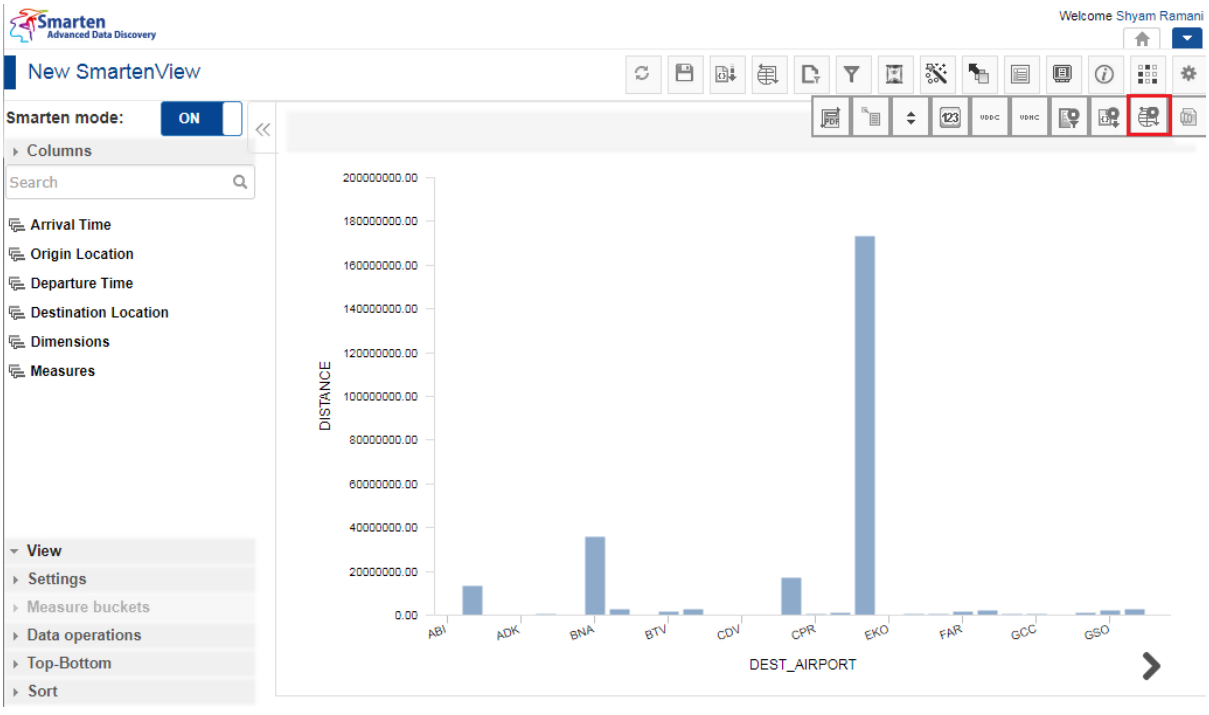
Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Settings icon on the toolbar.



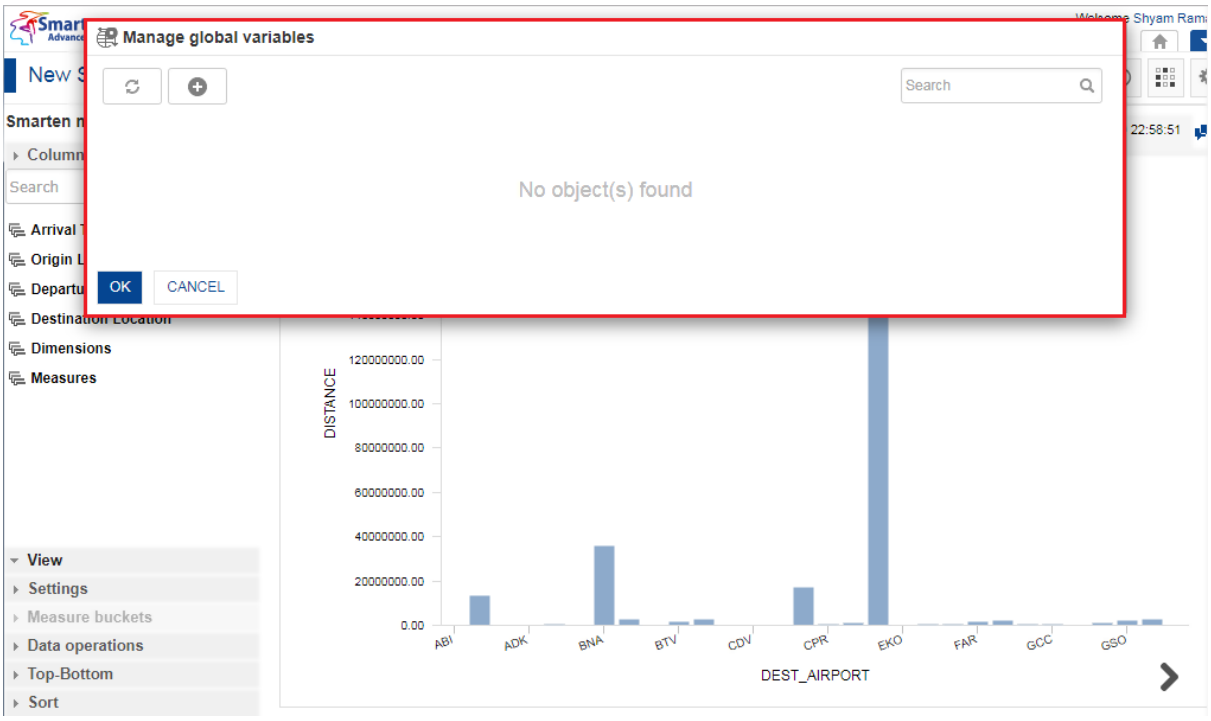
OPERATIONS ON A CHART—THE SETTINGS ICON

4. Click the Manage global variables icon.



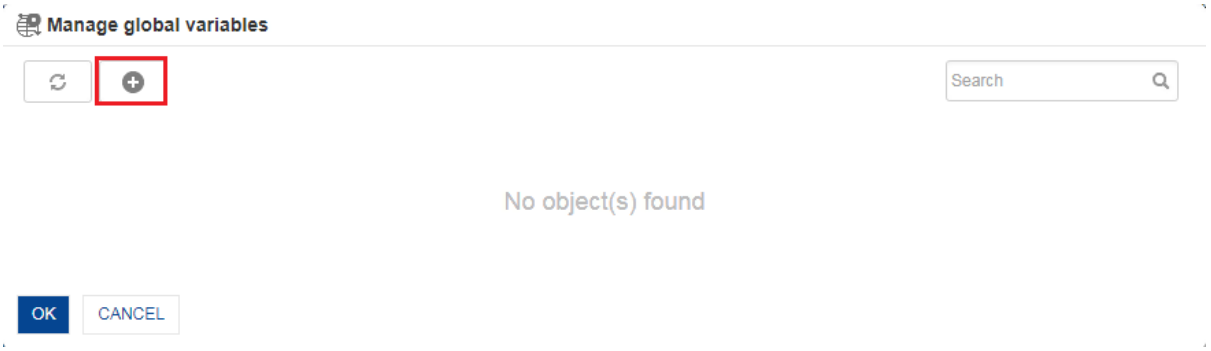
OPERATIONS ON A CHART—THE MANAGE GLOBAL VARIABLES ICON

The system displays the **Manage global variables** dialog box.



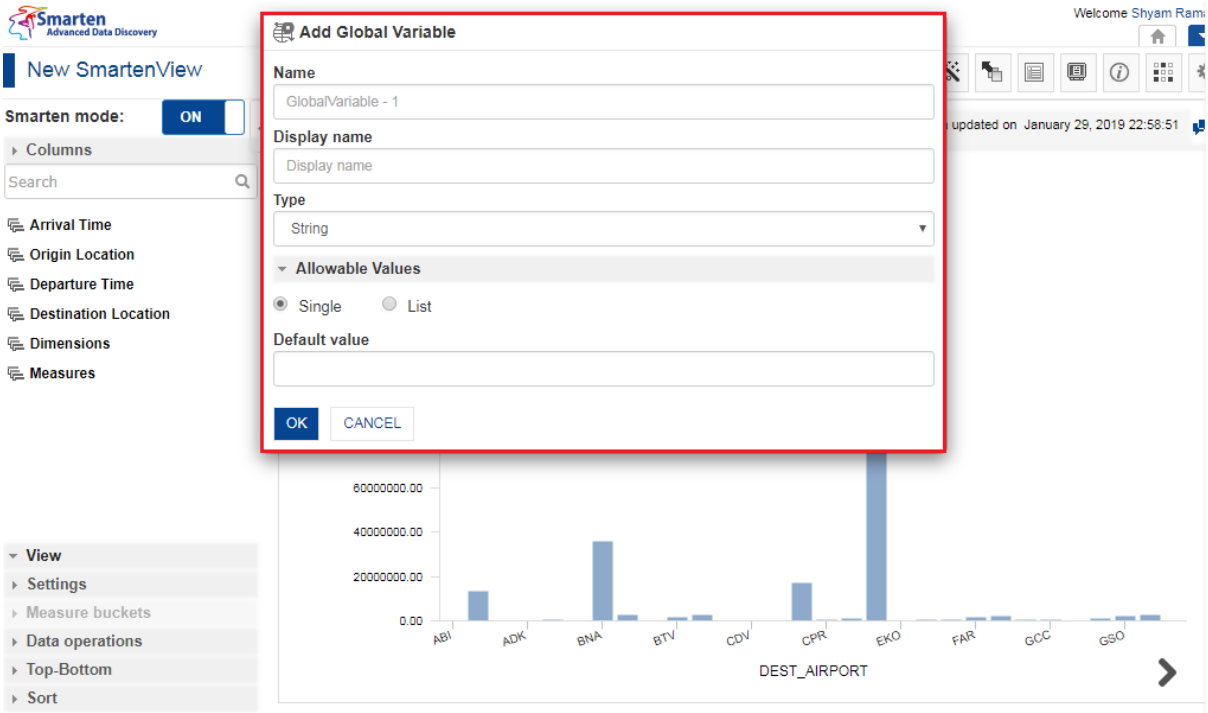
OPERATIONS ON A CHART—THE MANAGE GLOBAL VARIABLES DIALOG BOX

5. Click the Add icon.



OPERATIONS ON A CHART—THE ADD ICON

The system displays the **Add Global Variable** dialog box.



OPERATIONS ON A CHART—THE ADD GLOBAL VARIABLE DIALOG BOX

6. Specify a name for the measure in the **Name** field.
7. Specify a name that you want to be displayed instead of the actual value in the **Display name** field.
8. Select an option from the **Type** list.
9. You can select the **Single** option from the Allowable Values section if you want to allow only one value for the variable.
   Or,
   You can select the **List** option from the Allowable Values section if you want to allow more than one value for the variable.
10. Specify a value in the **Default value** field.
11. Click **OK**.

5.5.5.4 Retrieval Parameters

SmartenView objects are created from a cube or a dataset, and by default these objects are fully loaded with data from the cube or dataset, but in order to see filtered views, run time parameters/retrieval parameters are provided.

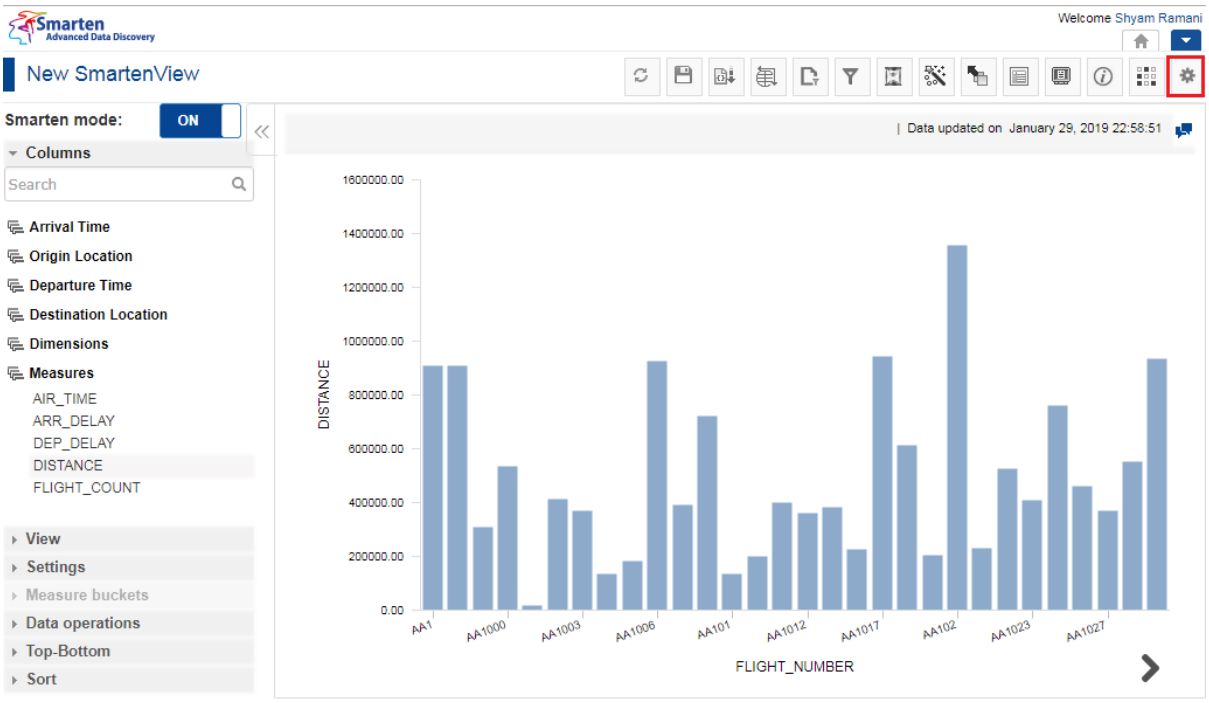
Reference: **Concept Manual > Filters and Expressions > Retrieval Parameters**

About this task

Use this task to manage retrieval parameters for SmartenView.

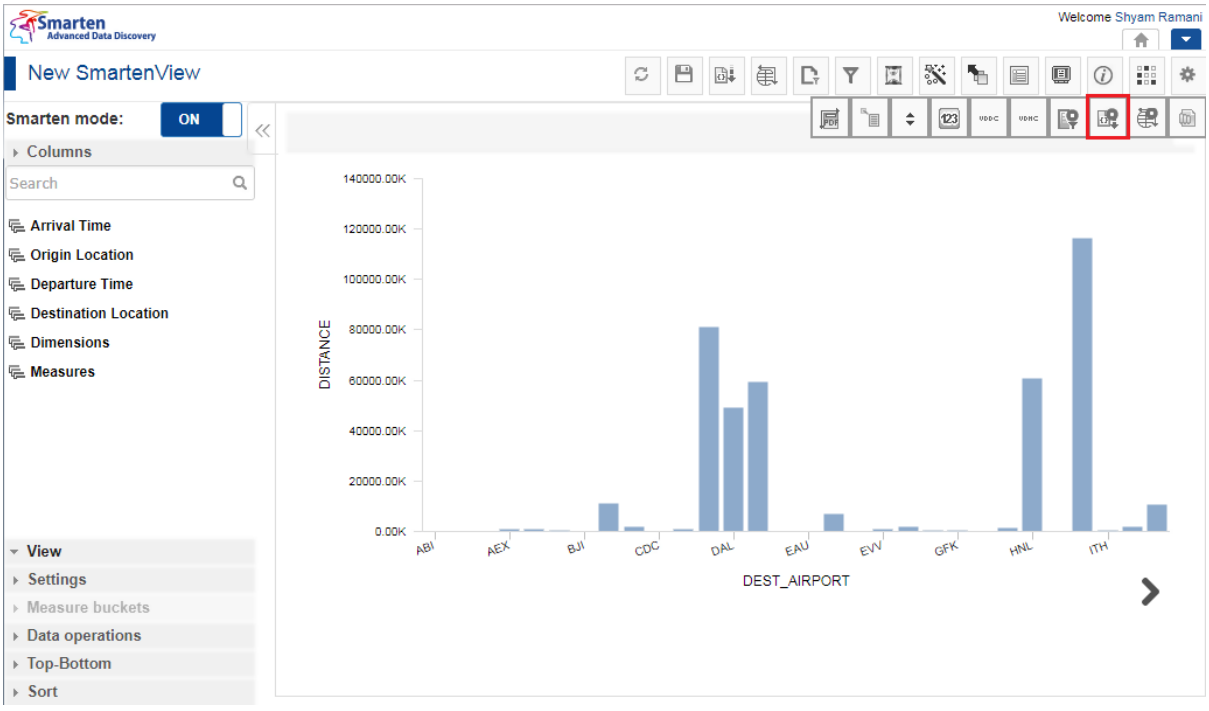
Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Settings icon on the toolbar.



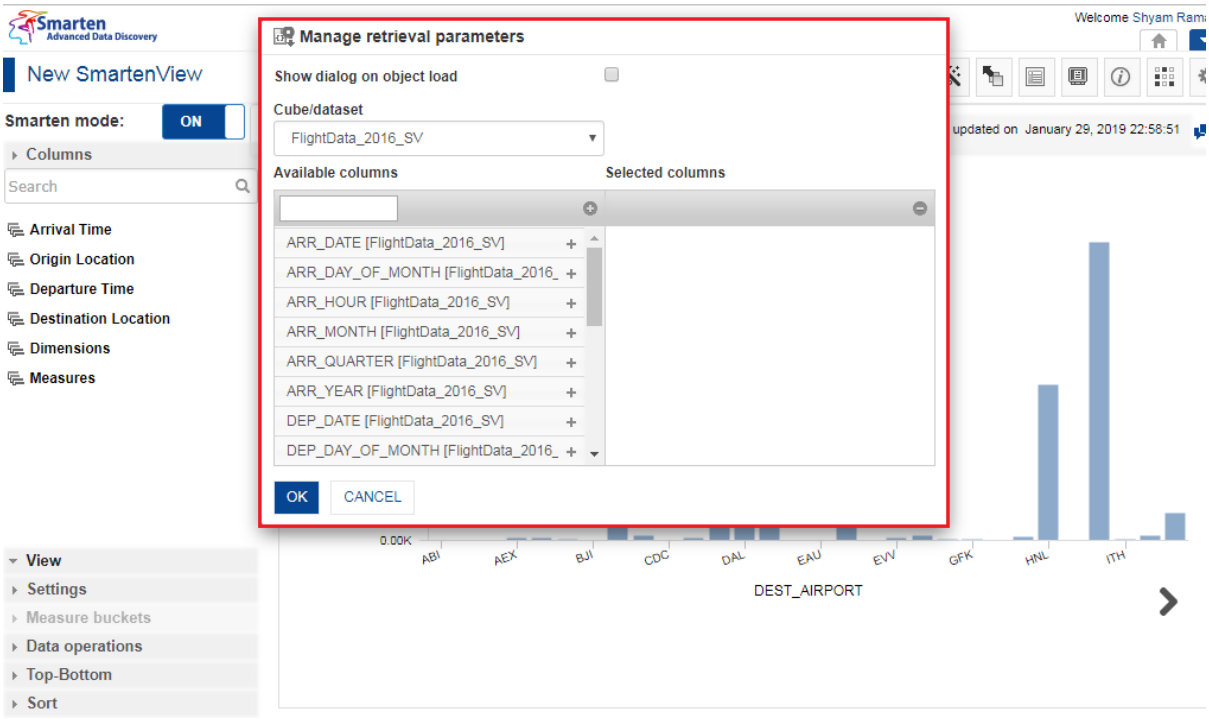
OPERATIONS ON A CHART—THE SETTINGS ICON

4. Click the Manage retrieval parameter icon.



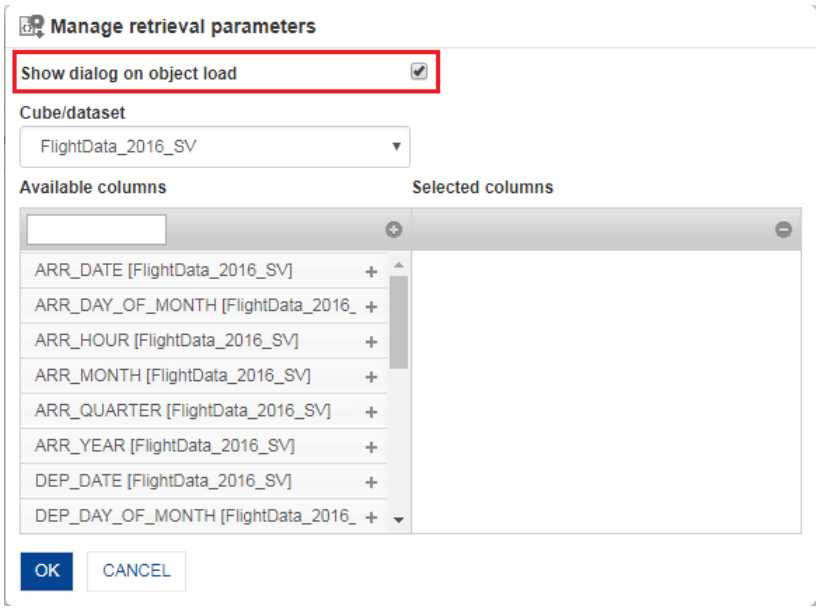
OPERATIONS ON A CHART—THE RETRIEVAL PARAMETERS ICON

The system displays the **Manage retrieval parameters** dialog box.



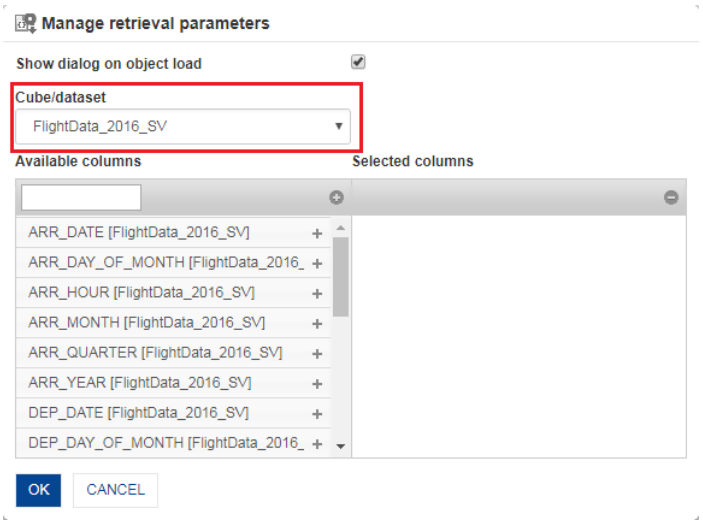
OPERATIONS ON A CHART—THE MANAGE RETRIEVAL PARAMETERS DIALOG BOX

5. You can select the Show dialog on object load option to display the retrieval parameters dialog box when an object is loaded.



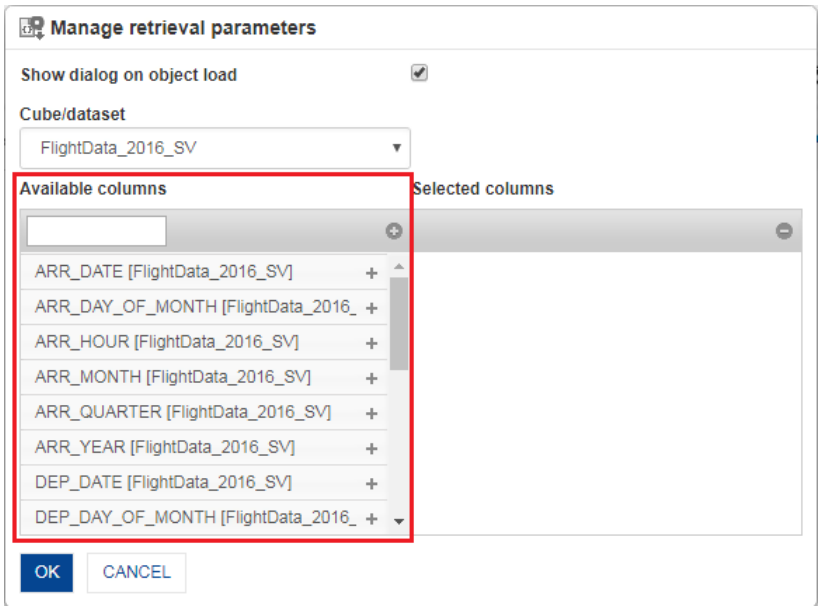
OPERATIONS ON A CHART—THE ADD ICON

6. Select the cube or dataset from which you want to retrieve parameters from the **Cube/dataset** list.



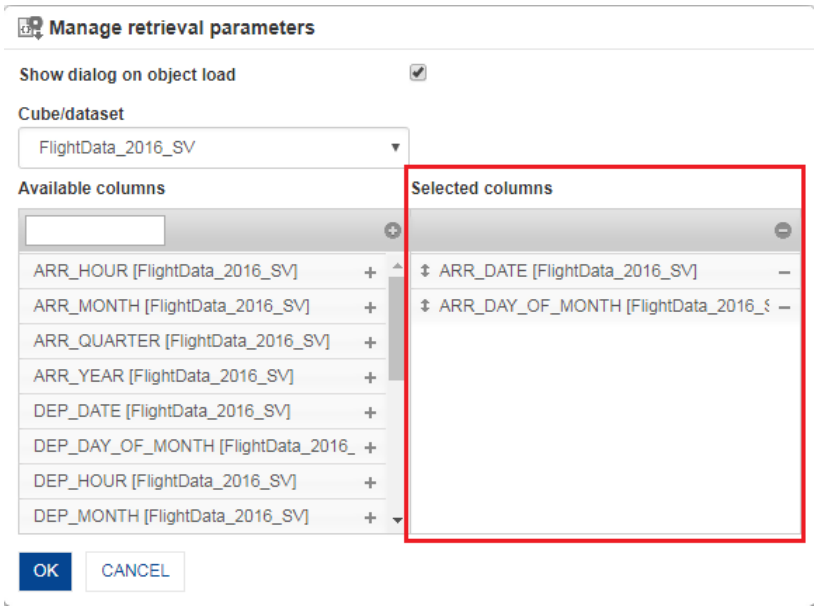
OPERATIONS ON A CHART—SELECTING THE CUBE/DATASET

7. Click the Add icon adjacent to the column you want to select from the **Available columns** section.



OPERATIONS ON A CHART—SELECTING THE COLUMNS

The selected columns are available in the **Selected columns** section.



OPERATIONS ON A CHART—THE ADD RANK DIALOG BOX

8. Click **OK**.

5.5.6 Creating Custom Measures

The custom measures in Smarten are easy to build. They can be created by building a formula on existing columns according to the SmartenView requirements. The custom measures are also known as **User Defined Data Columns (UDDC)**.

Users can create custom Measure columns from existing measures by performing various string, arithmetic, date, statistics, trigonometry, or conditional statements using various arithmetic operators (such as +, -, /, etc.) or comparison operators (such as =, >, < etc.).

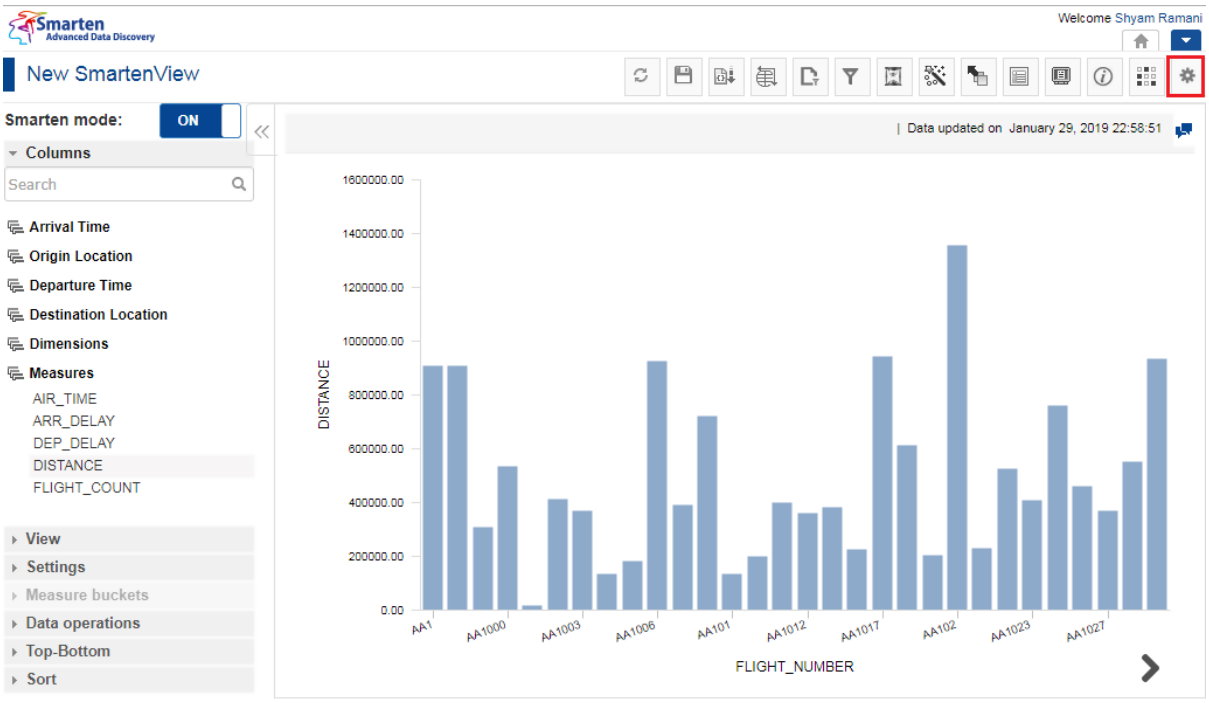
Reference: **Concept Manual > Analytic Functions > UDDC & UDHC > Custom Measure**

About this task

Use this task to create custom measures for SmartenView.

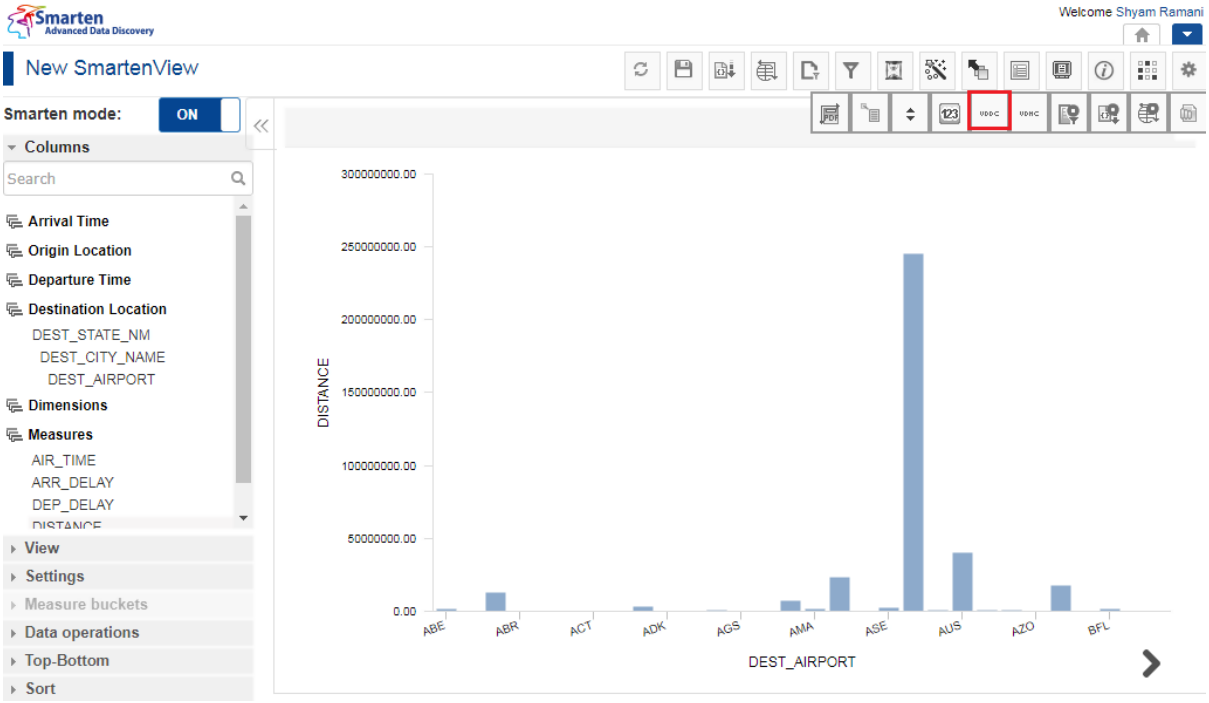
Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Settings icon on the toolbar.



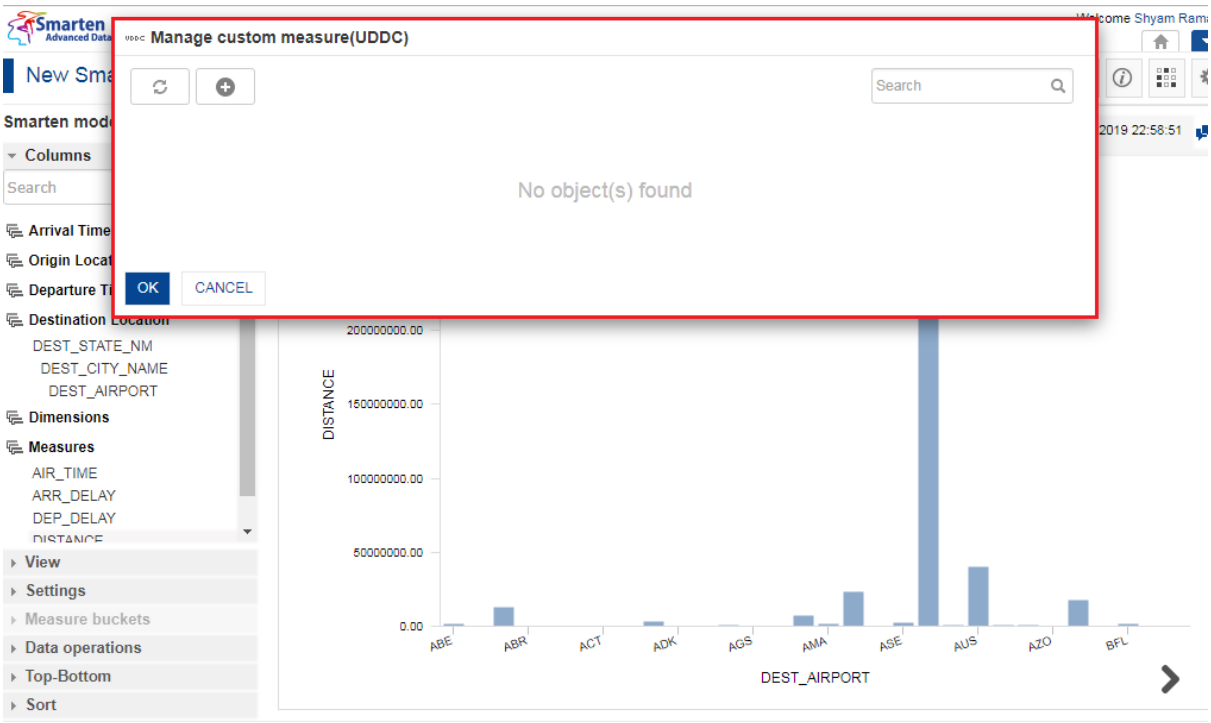
OPERATIONS ON A CHART—THE SETTINGS ICON

4. Click the Manage UDDC icon.



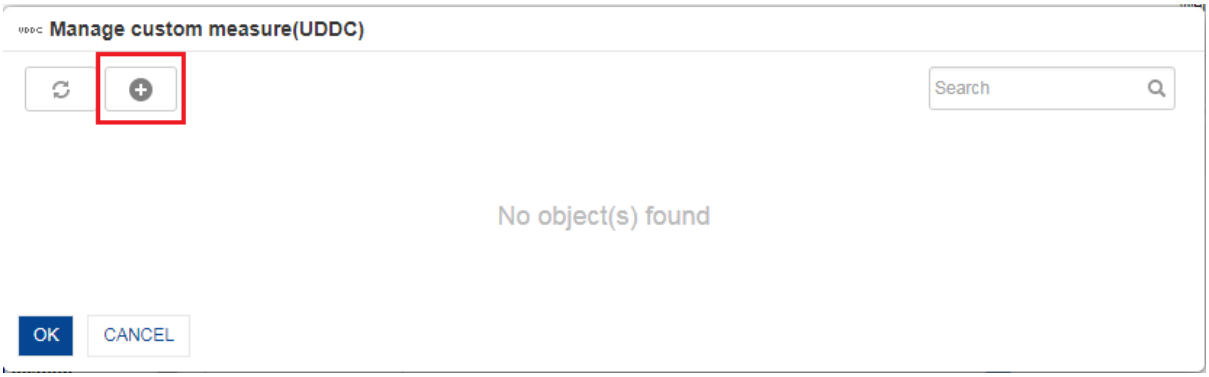
OPERATIONS ON A CHART—THE MANAGE UDDC ICON

The system displays the **Manage custom measure (UDDC)** dialog box.



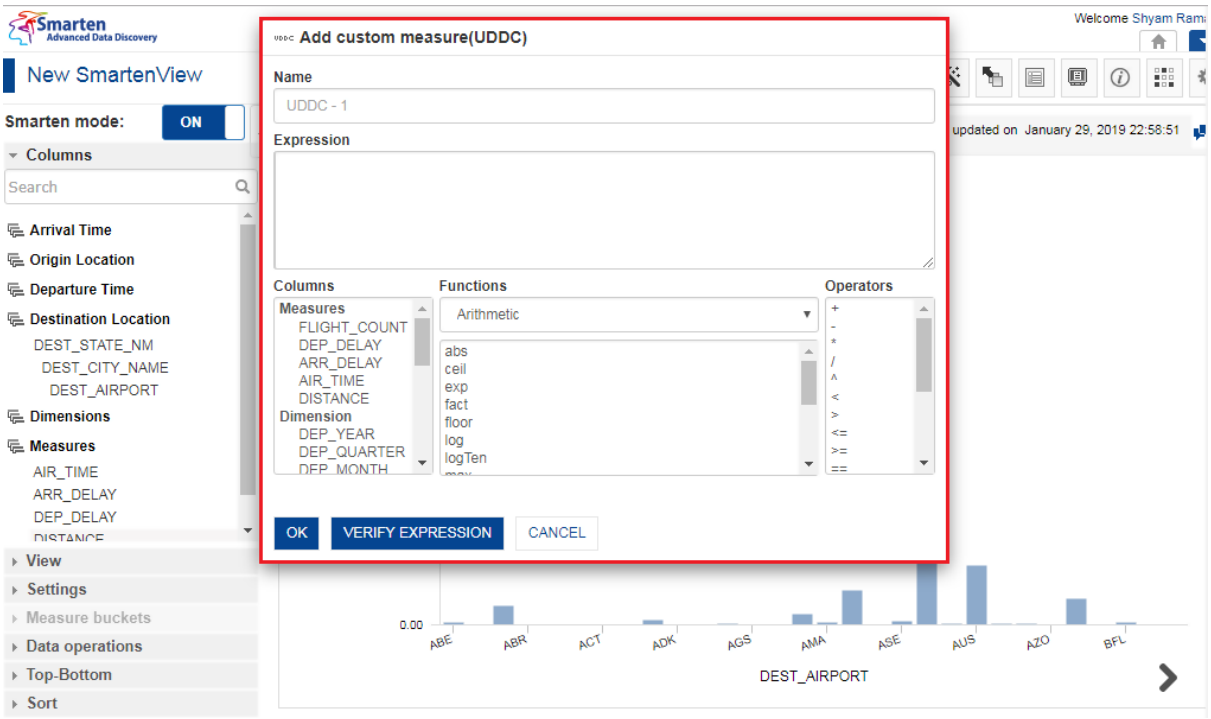
OPERATIONS ON A CHART—THE MANAGE CUSTOM MEASURE DIALOG BOX

5. Click the Add icon.



OPERATIONS ON A CHART—THE ADD ICON

The system displays the **Add custom measure (UDDC)** dialog box.



OPERATIONS ON A CHART—THE ADD CUSTOM MEASURE DIALOG BOX

6. Specify a name for the measure in the **Name** field.
7. You can select values from the **Columns**, **Functions**, and **Operators** sections to create or edit an expression.
8. You can click the **VERIFY EXPRESSION** to verify the expression you have created.
9. Click **OK**.

5.5.7 Sampling Data on a Chart

Rendering visualizations with a large amount of data takes a lot of time or sometimes visualization loses the purpose. To overcome this, Smart Visualization provides a feature to create a visualization with a sample of such data instead of the whole data.

Reference: **Concept Manual > Operations on charts > Sampling**

5.5.7.1 Working with Auto Sampling Mode

The auto mode automatically applies sampling on the columns that contain more than certain records and generates visualization with sample data instead of the whole data. The size of the sample depends upon the size of the data.

Reference: **Concept Manual > Operations on charts > Sampling > Sampling – Auto**

About this task

Use this task to perform auto sampling of data on a chart for SmartenView.

Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
   The system automatically performs sampling on the columns that contain more than certain

records. When you perform sampling in the **Auto** mode, you cannot change other options in the **Sampling** dialog box. The system performs random sampling if you have selected only one Dimension column. If you have selected more than one Dimension column, stratified sampling is applied.

You can click the **Sampling** option on the toolbar to view information about the sampling method applied and the size of the sample. By default, the **Auto** option is selected, and if you want to change the sampling method or sampling size, you must select the **Manual** option to change sampling parameters.

You cannot change other options in the **Sampling** dialog box.

5.5.7.2 Working with Manual Sampling Mode

The manual mode of sampling allows you to change the limit of records that should be considered for a sample. You can also select the method of sampling using manual mode.

You can create samples by using two sampling methods:

- Simple random sampling
- Stratified sampling

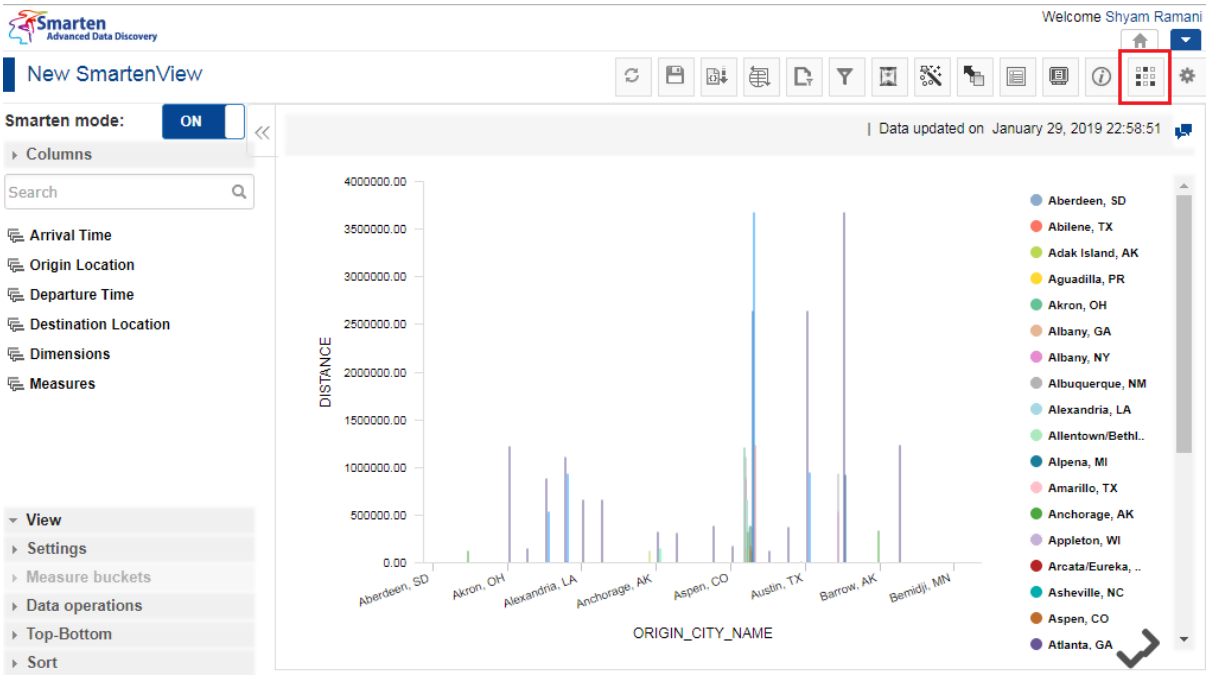
Reference: **Concept Manual > Operations on charts > Sampling > Sampling – Manual**

About this task

Use this task to perform manual sampling of data on a chart for SmartenView.

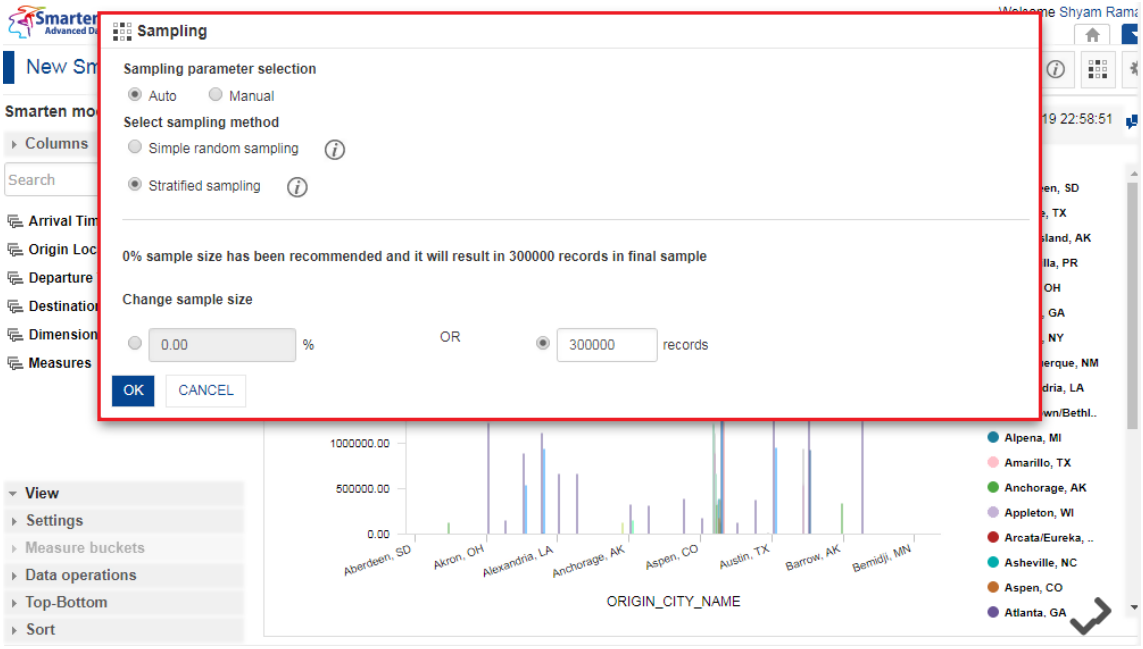
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Sampling option on the toolbar.



OPERATIONS ON A CHART—THE SAMPLING OPTION

The system displays the **Sampling** dialog box.

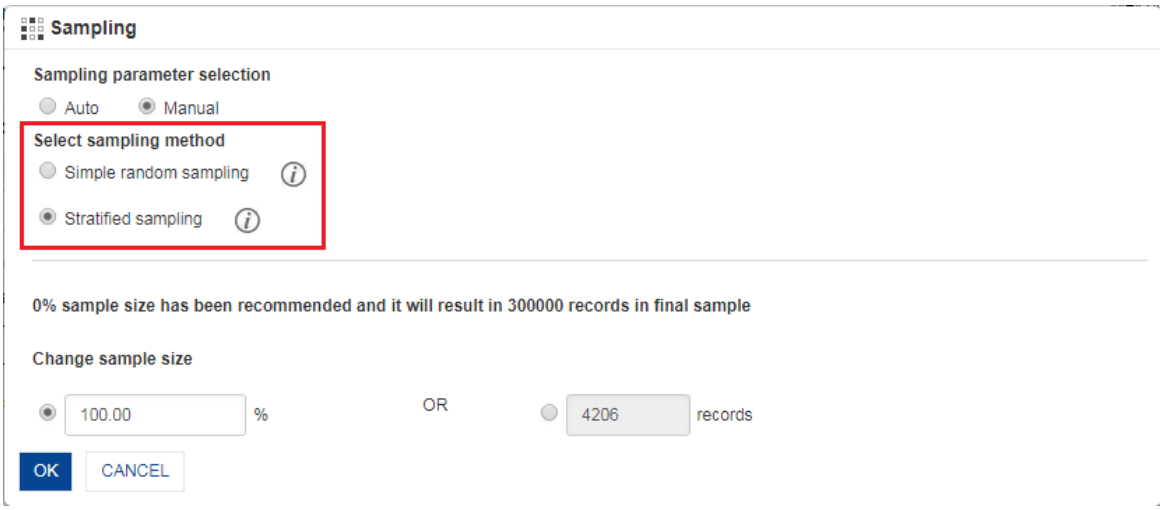


OPERATIONS ON A CHART—THE SAMPLING DIALOG BOX

4. Click **Manual**.
5. Select an option to specify the sampling method you want to use.

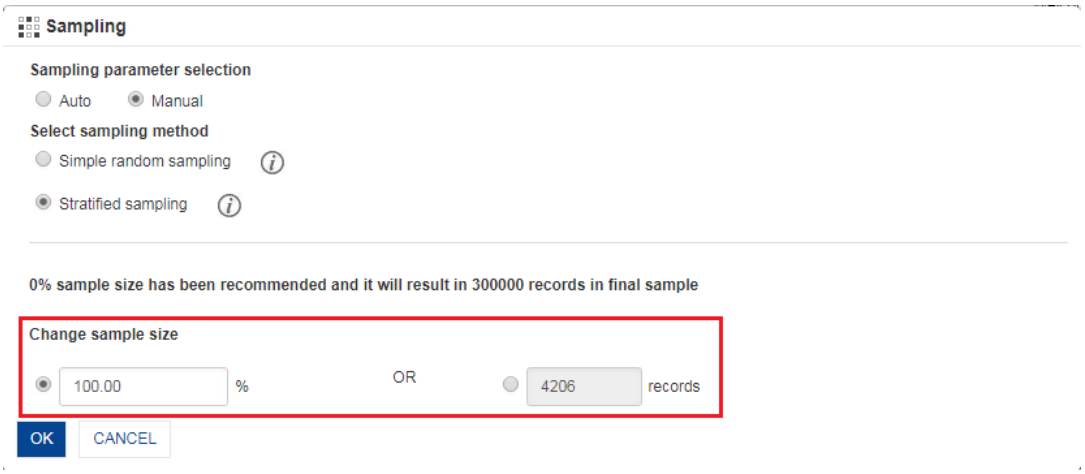
   The following options are available:

   - **Simple random sampling**: Simple random sampling is a method of sampling in which the selection is based purely on chance, and every item has an equal chance of being selected. For example, in a lottery system, each member of the population is assigned a number after which the numbers are selected at random.
   - **Stratified sampling**: Stratified random sampling is a method of sampling that involves the division of a population into smaller groups known as strata.
     In stratified random sampling or stratification, the strata are formed based on members' shared attributes or characteristics. For example, subgroups of customers can be formed on the basis of any of their demographics, such as income group, region, and gender. A random sample from each of these subgroups is taken in proportion to the subgroup size relative to the population size, and these samples are then added to form a final stratified random sample.



SAMPLING DATA—SELECTING A SAMPLING METHOD

6. Select an option to specify the sample size in percentage or number of records.



SAMPLING DATA—SPECIFYING SAMPLING SIZE

7. Click **OK**.

5.5.7.3 Viewing Object Information for a Chart

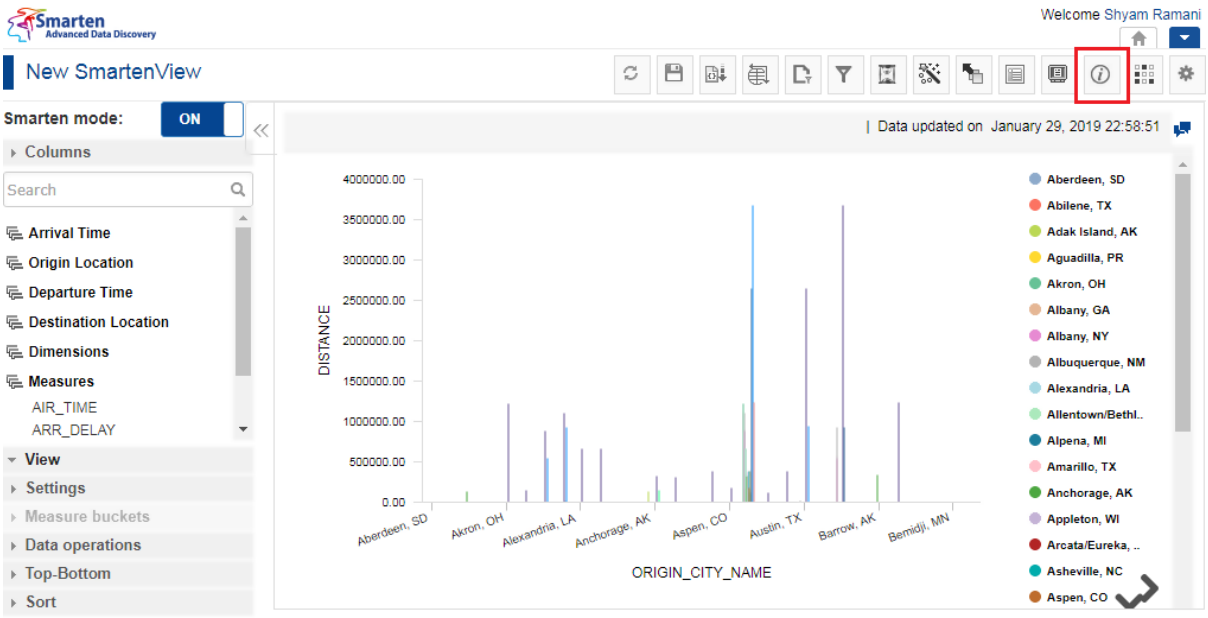
You can view information about the SmartenView, such as a name of the SmartenView, the title of the SmartenView, name of the user who created it, name of the dataset or cube, and others.

About this task

Use this task to view dimensions that contain the highest and lowest values in a chart.

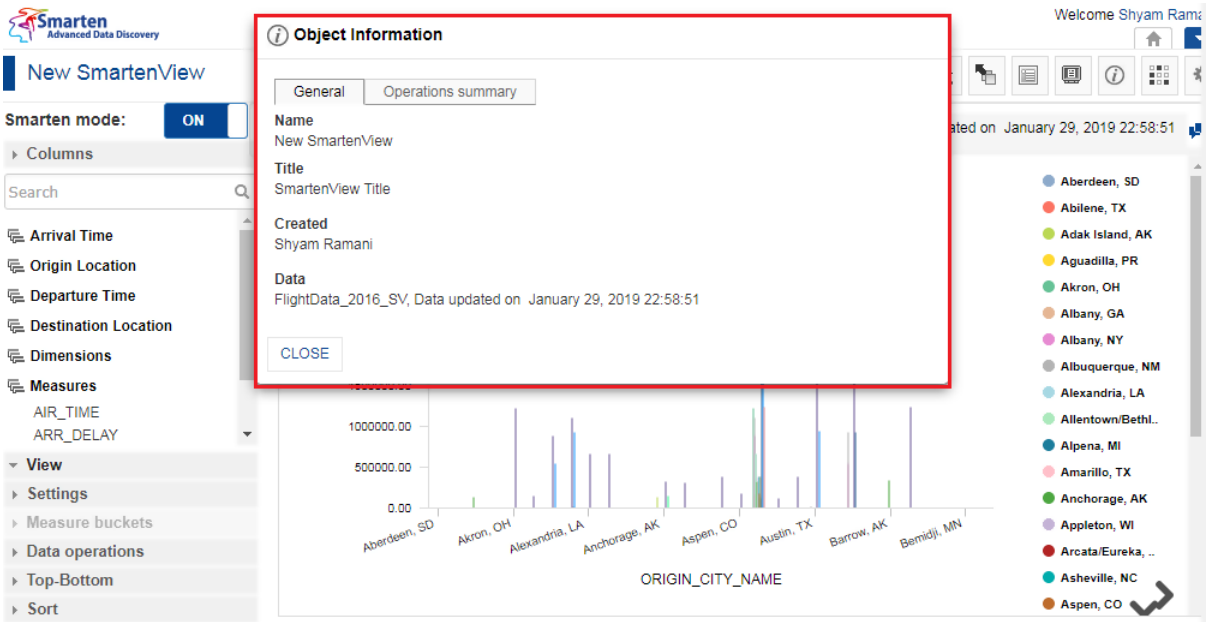
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Object information option on the toolbar.



OBJECT INFORMATION—THE OBJECT INFORMATION OPTION

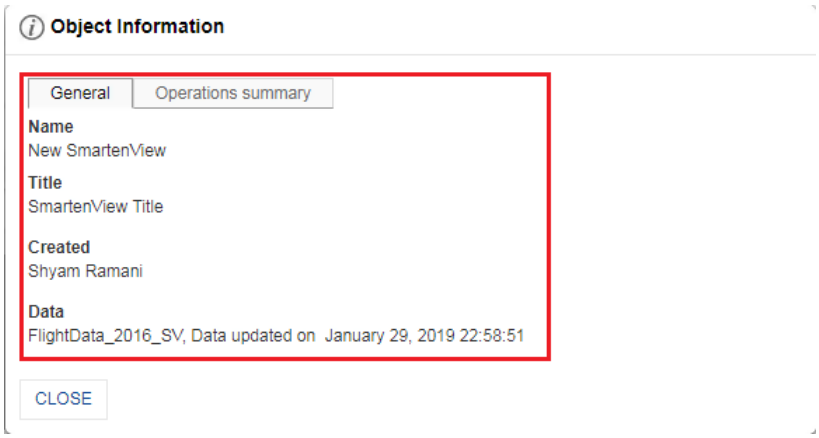
The system displays the **Object Information** dialog box.



OBJECT INFORMATION—THE OBJECT INFORMATION DIALOG BOX

4. Click the **General** tab to view general information about the dataset. The following information is displayed:

- **Name**: Name of the SmartenView.
- **Title**: Title of the SmartenView.
- **Created**: Name of the user who created the SmartenView.
- **Data**: Name of the dataset or cube and the time it was last updated.

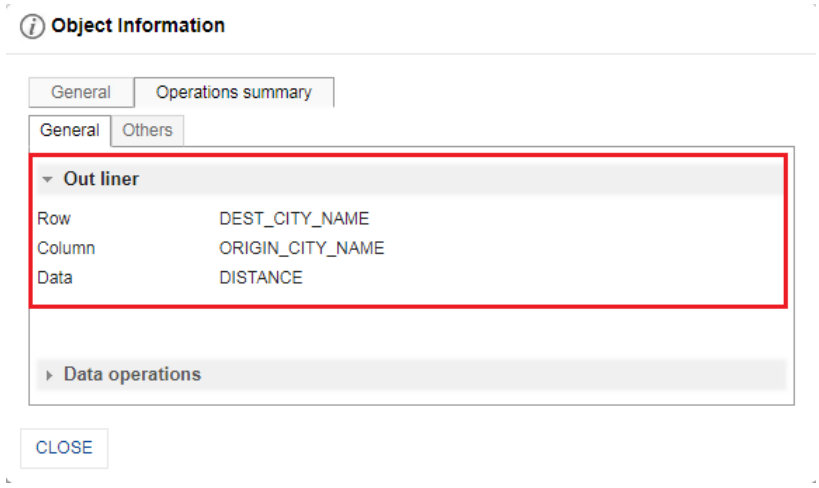


OBJECT INFORMATION—THE GENERAL TAB

5. Click the **Operations summary** tab.

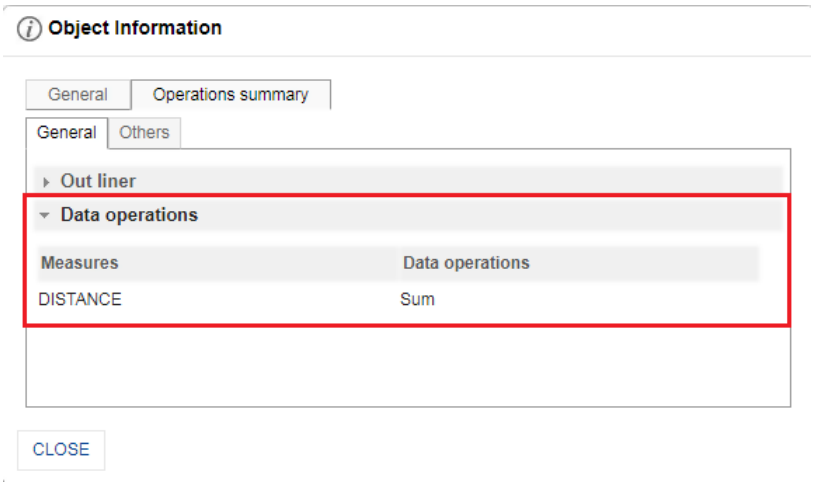
   The **Operations Summary** tab contains two tabs: **General** and **Others**. The **General** tab contains the **Outliner** and **Data operations** sections.

   Information about the columns added to outliner is displayed within the Outliner tab.



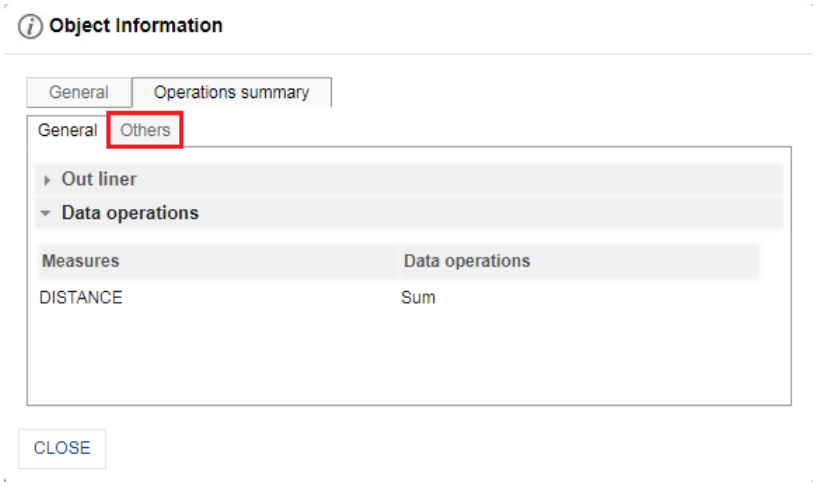
OPERATIONS SUMMARY—THE OUTLINER SUMMARY

6. Click the **Data operations** tab to view information about data operations applied to the chart.



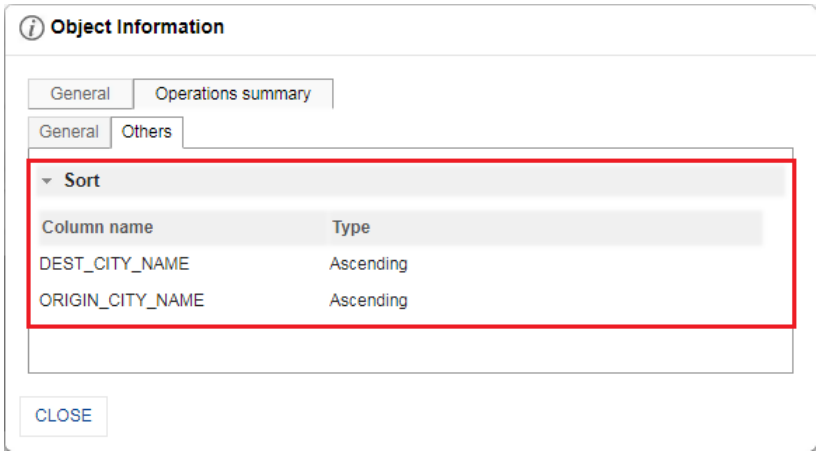
OBJECT INFORMATION—DATA OPERATIONS INFORMATION

7. Click the **Others** tab.



OBJECT INFORMATION—THE OTHERS TAB

8. Information about the type of sort applied on various columns.



OBJECT INFORMATION—THE OTHERS TAB

9. Click **CLOSE**.

5.5.7.4 Working with Outliner

Outliner allows you to specify the placement of Dimension and Measure columns to generate the SmartenView chart.

Reference: **Concept Manual > Working with Smarten Mode On > Outliner**

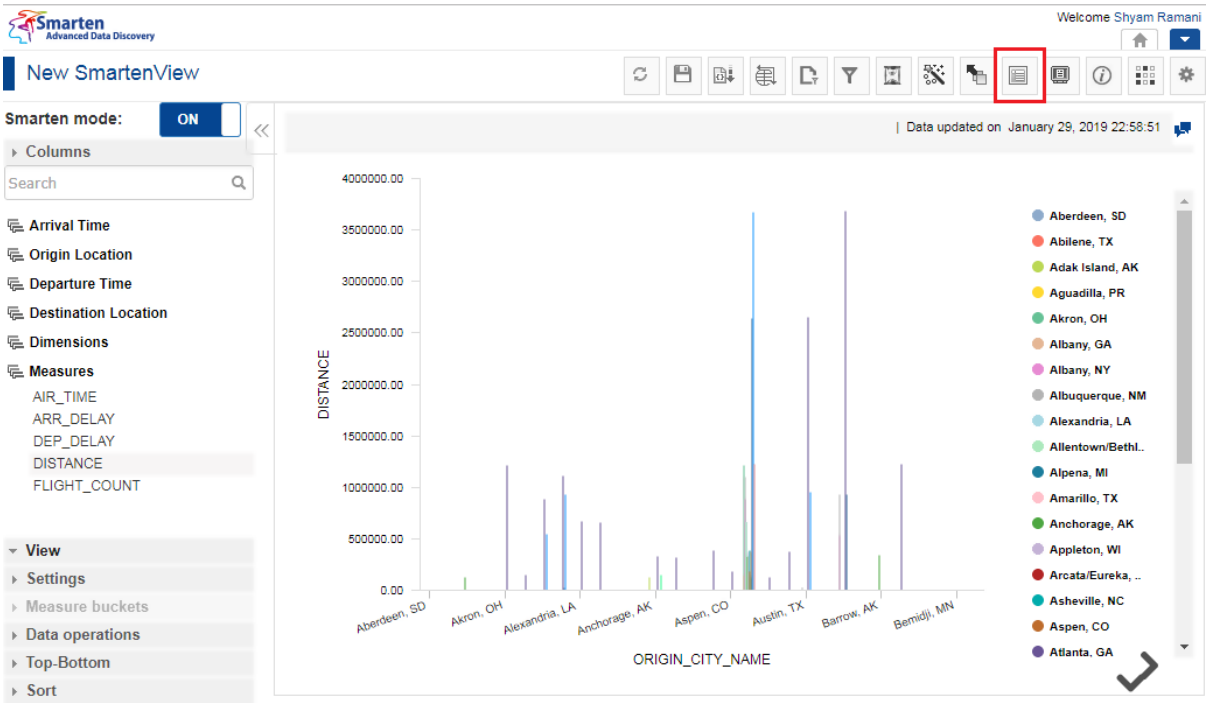
About this task

Use this task to manage columns that are used to generate the chart.

Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Outliner option.

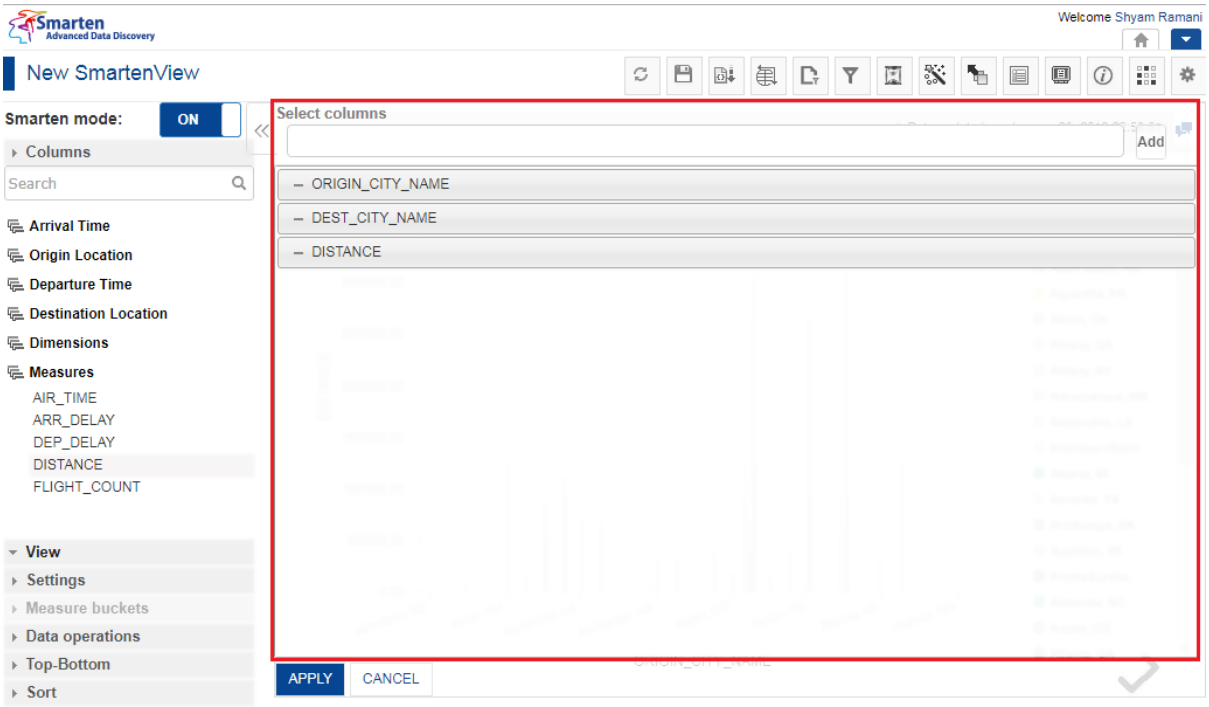
   The system shows the **Select columns** pane.



MANAGING COLUMNS—THE OUTLINER OPTION

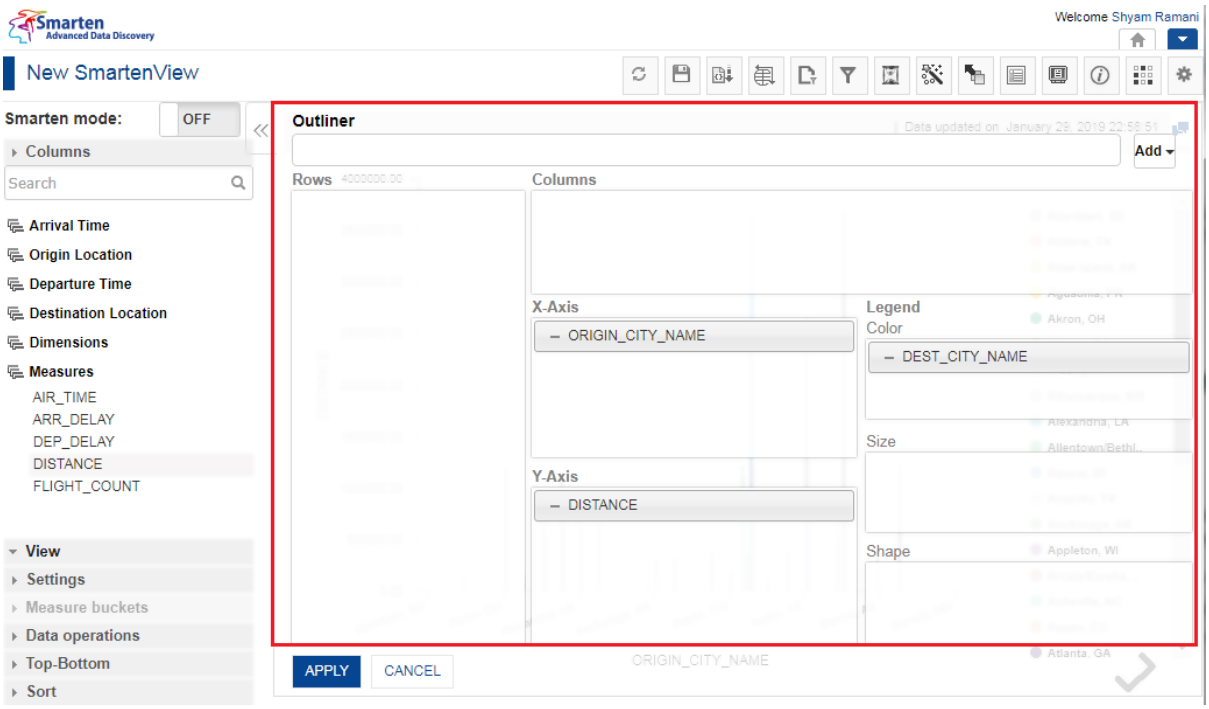
4. You can drag and drop columns in the Select columns pane to use those columns for generating the SmartenView chart.

   If **Smarten mode** is on, the system displays the columns in a single list within the **Select columns** pane.



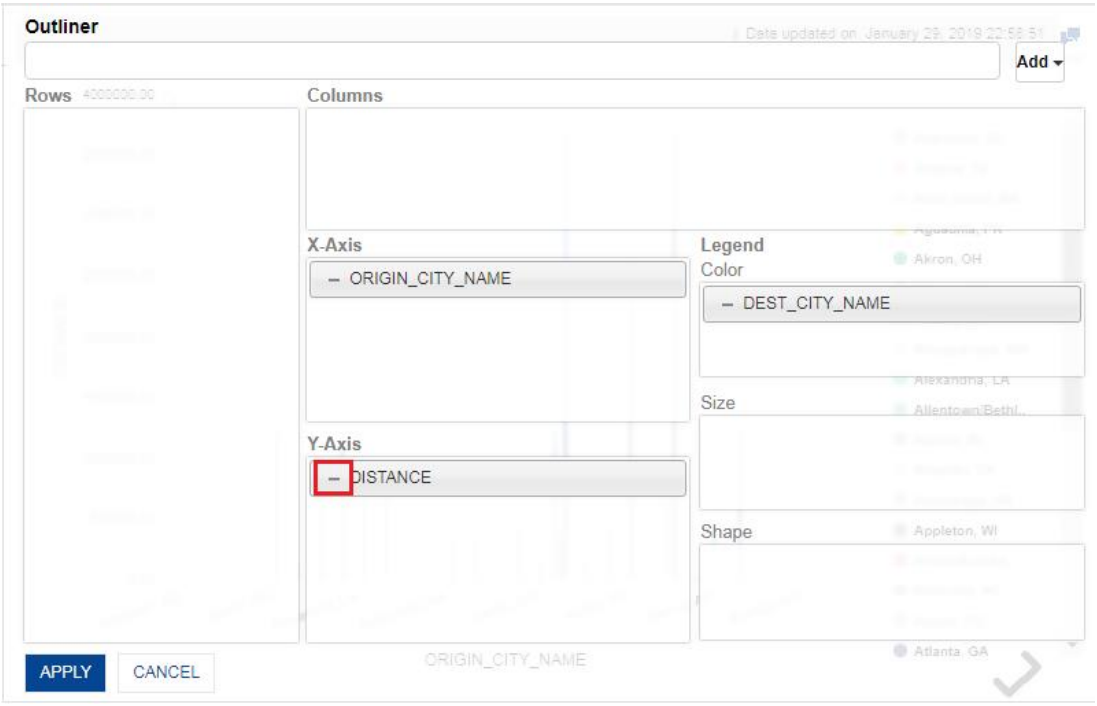
MANAGING COLUMNS—THE SELECT COLUMNS PANE WITH SMARTEN MODE TURNED ON

If the Smarten mode is off, the system displays the columns within various sections. These sections represent various aspects of a chart, for example, the X-Axis and Y-Axis section represent the x-axis and y-axis of the chart. You can add columns to a section to use data of those columns to generate the aspect of the chart that section represents.



MANAGING COLUMNS—THE SELECT COLUMN PANE WITH SMARTEN MODE TURNED OFF

5. You can click the minus sign for a column to remove that column from the **Select columns** pane.



MANAGING VALUES—REMOVING COLUMNS FROM THE SELECT COLUMNS PANE

6. Click **APPLY**.

5.5.8 Changing Smart Visualization Type

You can change the graph type used for a chart based on your requirement. By default, the system uses the graph type that it seems most appropriate based on the columns you have selected for a SmartenView.

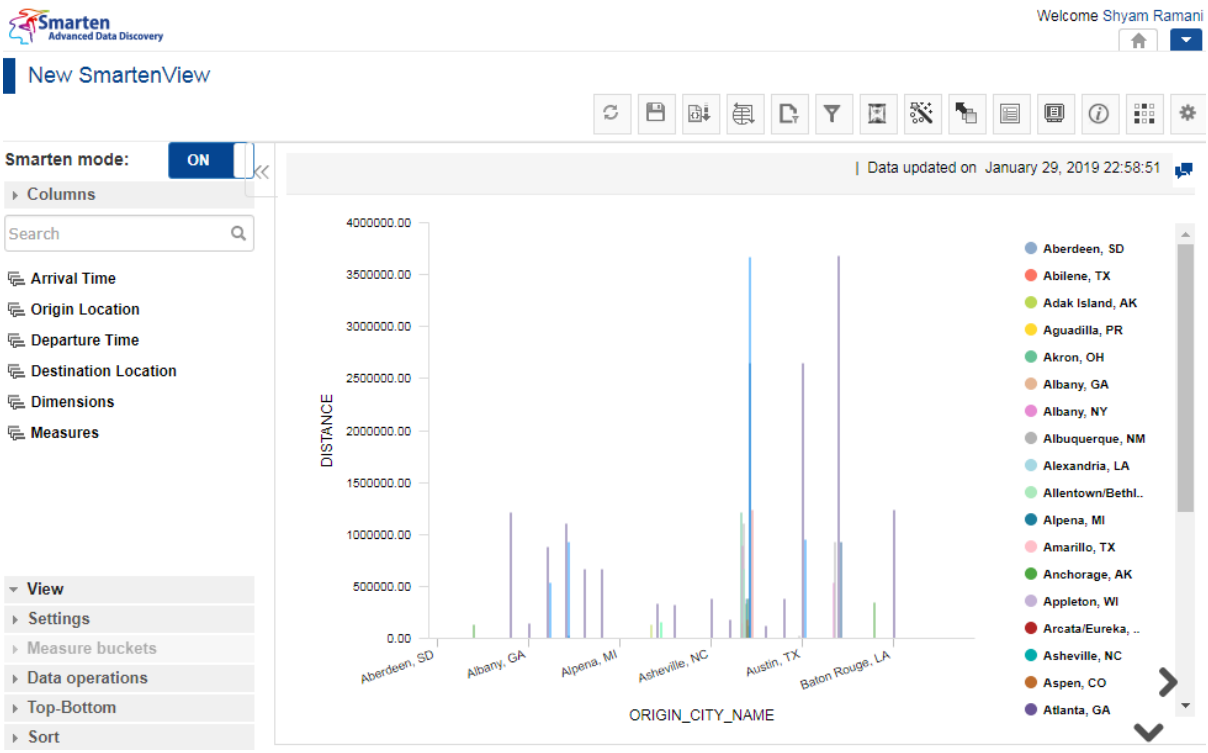
Reference: **Concept Manual > Exploring and using chart types**

About this task

Use this task to change the graph type for SmartenView.

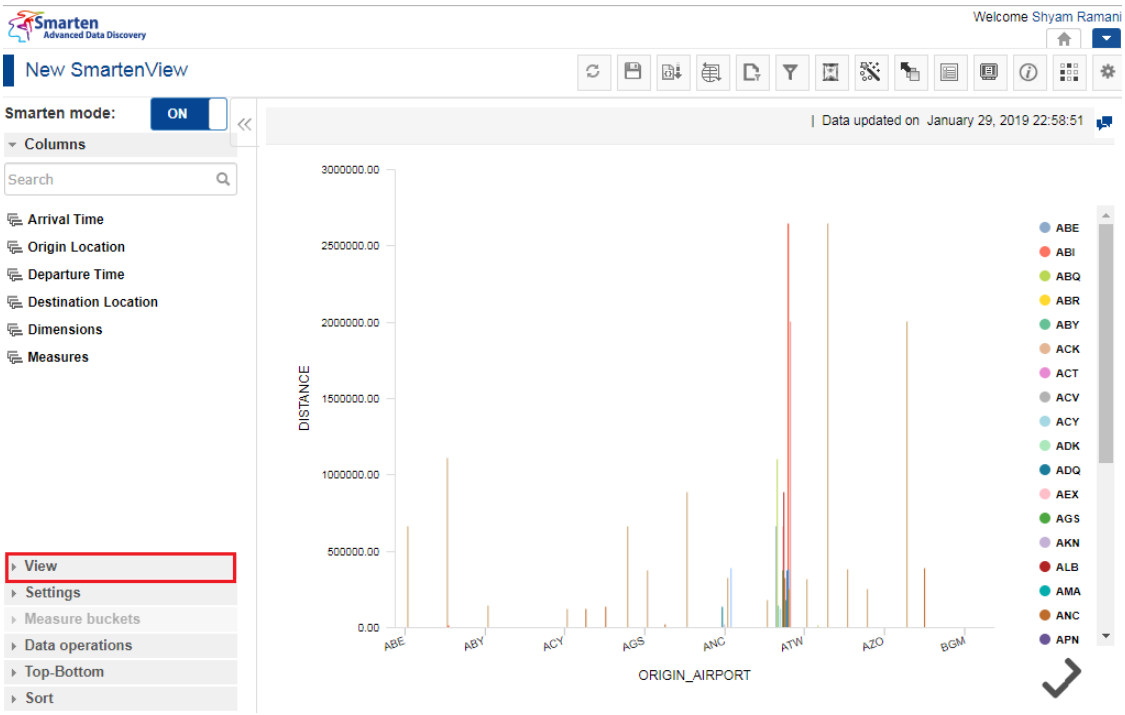
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. The system automatically generated the visualization based on the data you select.



NEW SMARTENVIEW – SYSTEM AUTOMATICALLY GENERATES THE VISUALIZATION

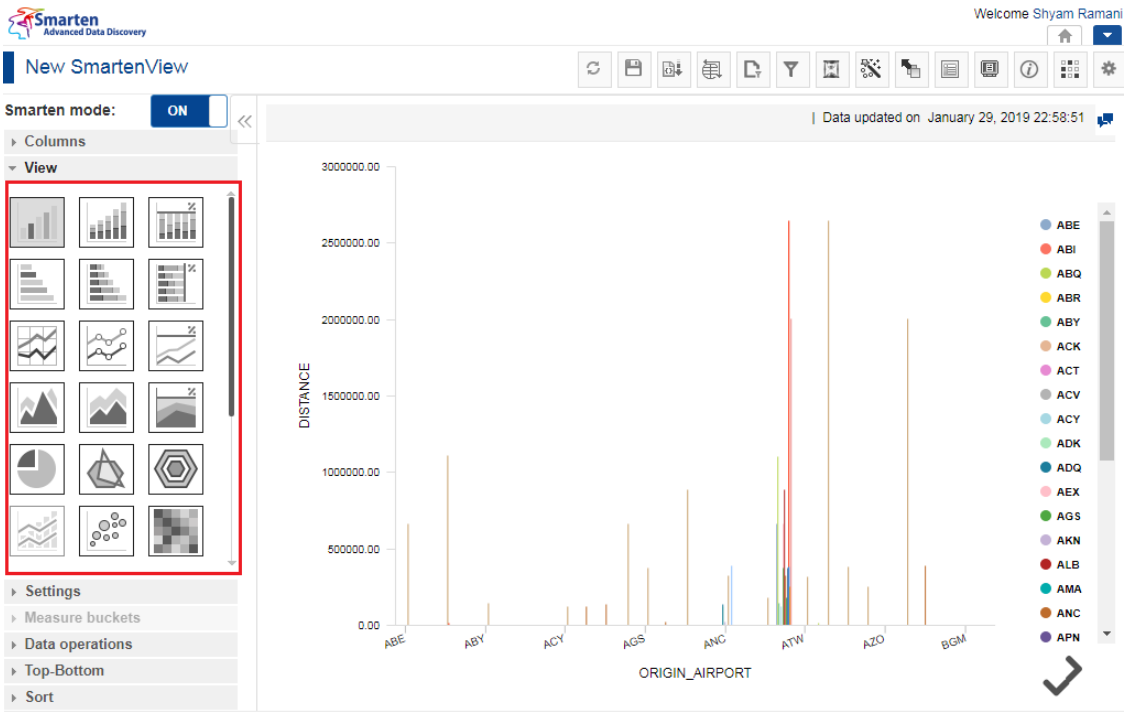
5. Click the **View** tab.



CHANGING GRAPH TYPE – THE VIEW TAB

6. Select the graph type you want to apply on the SmartenView.

Note:
The graph types available in the **View** section depends on the columns you have selected for SmartenView.



CHANGING GRAPH TYPE – THE VIEW SECTION

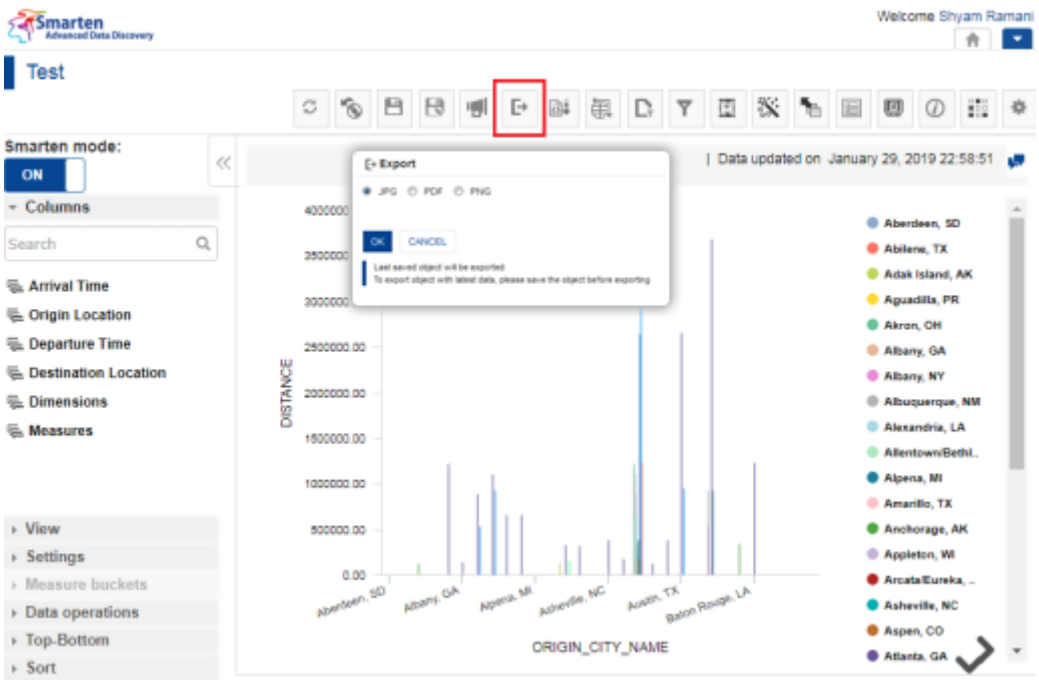
The selected graph type is applied on the SmartenView.

5.5.9 Export SmartenView

This option is used to export a chart data to PDF, PNG, and JPG file formats.

Procedure

1. In the **Repository**, open chart.
2. The system displays the chart.
3. In the SmartenView Toolbar, click **Export**.
4. The system displays the **Export** dialog box.
5. Select the desired radio button (JPG, PDF, or PNG).
6. Click **OK**.



SMARTENVIEW: EXPORT ICON & DIALOG

5.5.10 Save SmartenView

5.5.10.1 Save

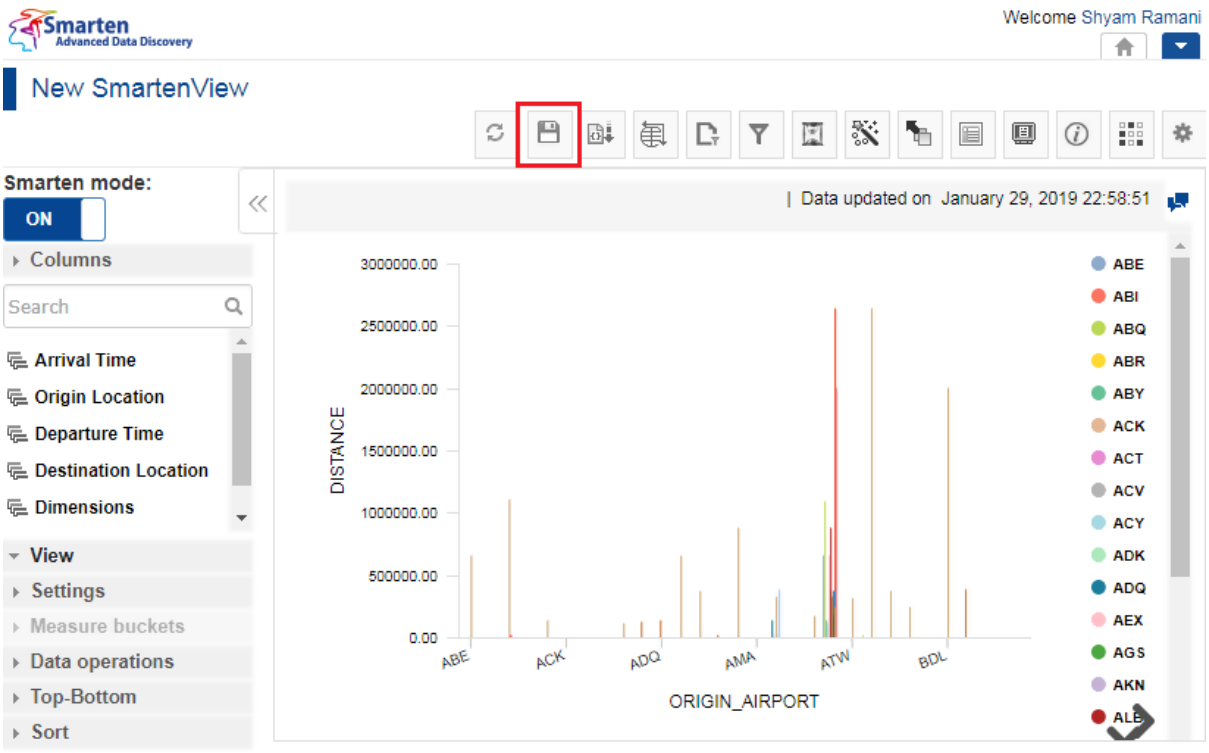
You can either create and save a new SmartenView or modify and save an existing SmartenView.

About this task

Use this task to save a SmartenView.

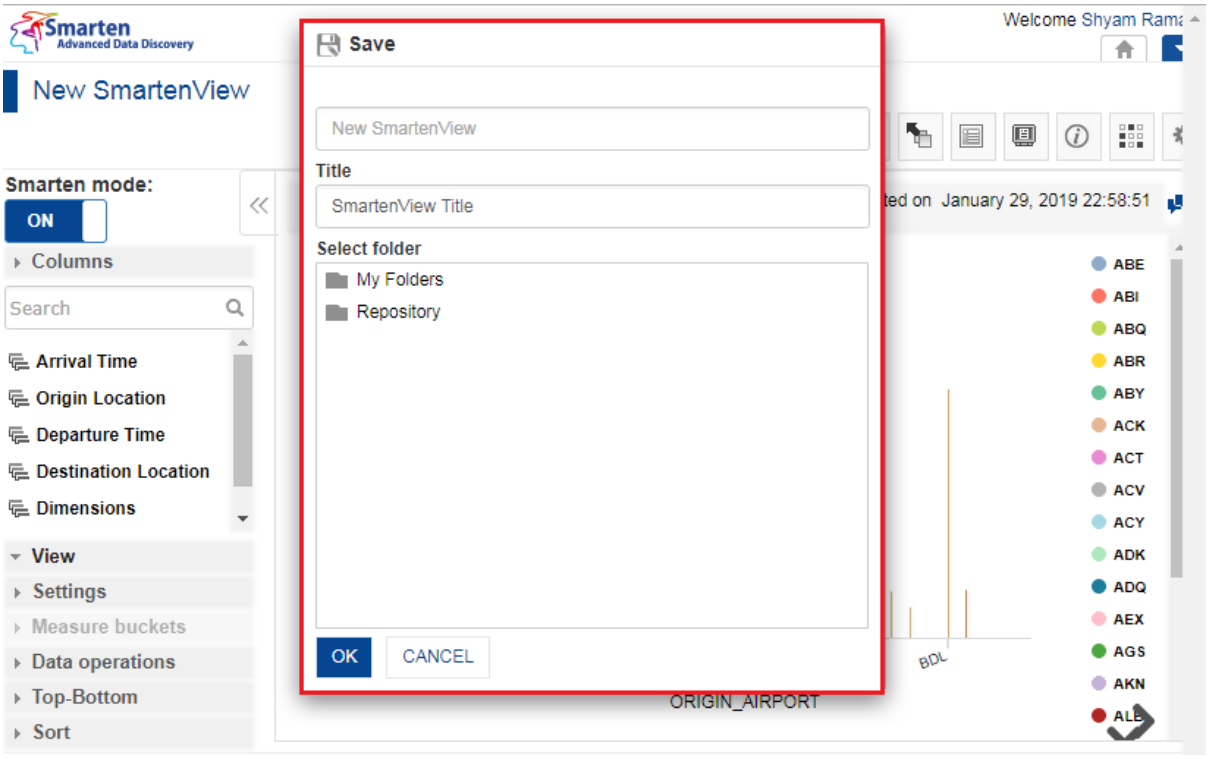
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Make the required changes in the SmartenView.
4. Click the Save icon.



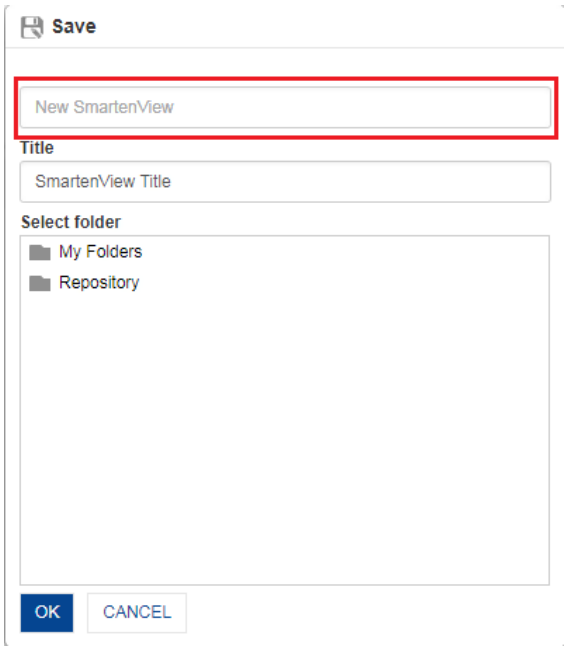
OPERATIONS ON A CHART—THE SAVE ICON

The system displays the **Save** dialog box.



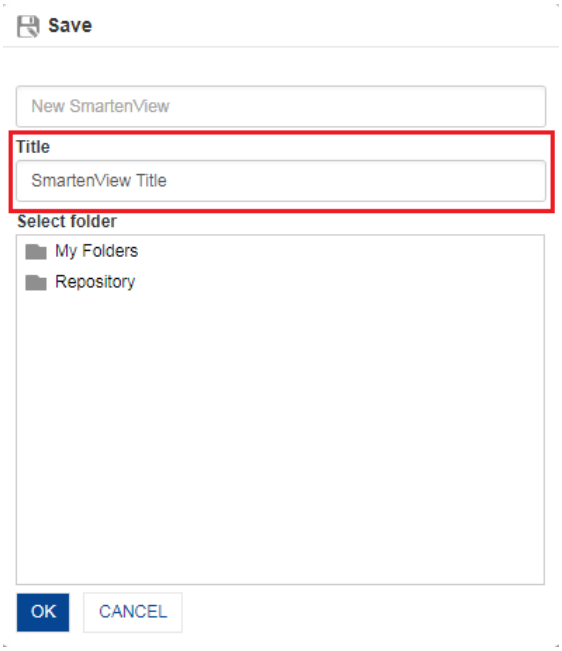
OPERATIONS ON A CHART—THE SAVE DIALOG BOX

5. Specify a name for the SmartenView in the New SmartenView field.



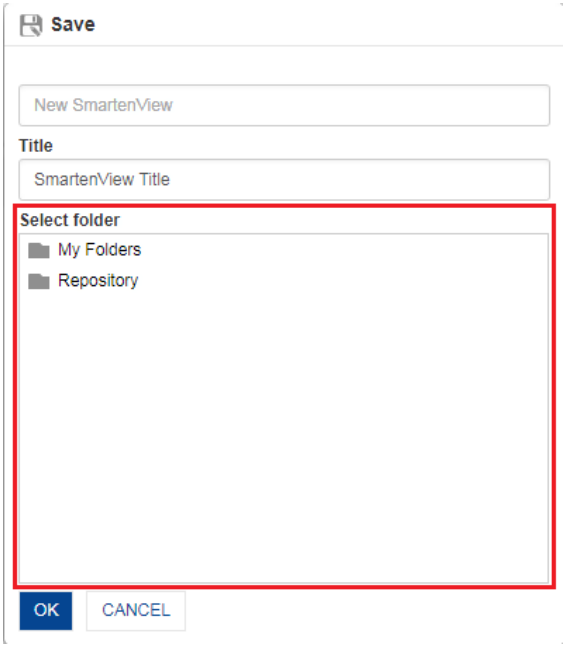
OPERATIONS ON A CHART—SPECIFY A NAME FOR THE SMARTENVIEW

6. Specify a title for the SmartenView in the **Title** field.



OPERATIONS ON A CHART—SPECIFYING A TITLE

7. Select the folder from the **Select Folder** section in which you want to save the SmartenView.



OPERATIONS ON A CHART—SELECTING THE FOLDER

8. Click **OK**.

5.5.10.2 Save As

You can use this option to save a copy of an existing SmartenView with a new name.

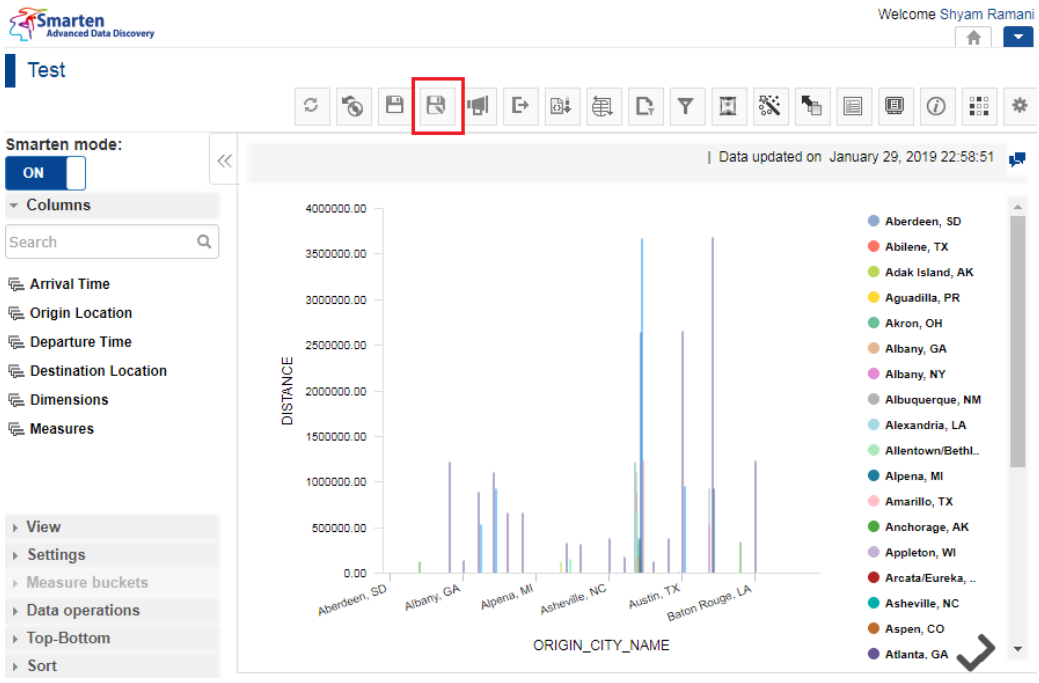
About this task

Use this task to save a copy of an existing SmartenView.

Procedure

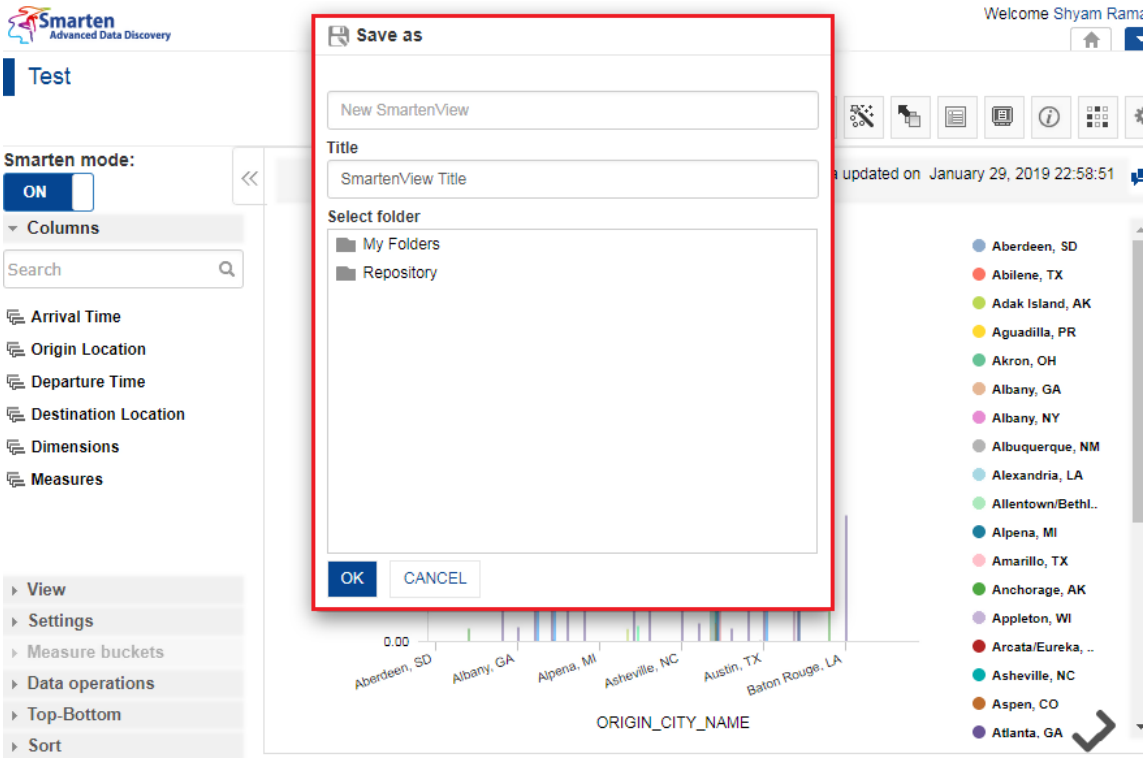
1. Open the existing SmartenView you want to save.
2. Click the Save As icon.

   Note: The Save As icon is available only for existing SmartenView.



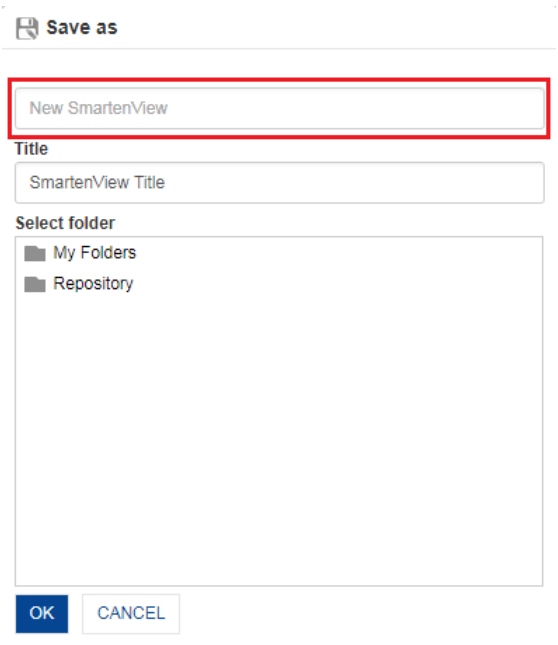
OPERATIONS ON A CHART—THE SAVE AS ICON

The system displays the **Save As** dialog box.



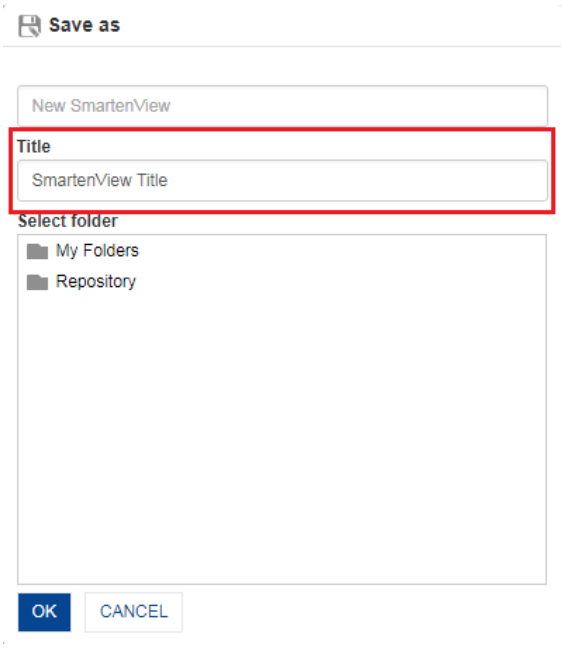
OPERATIONS ON A CHART—THE SAVE AS DIALOG BOX

3. Specify a name for the SmartenView in the New SmartenView field.



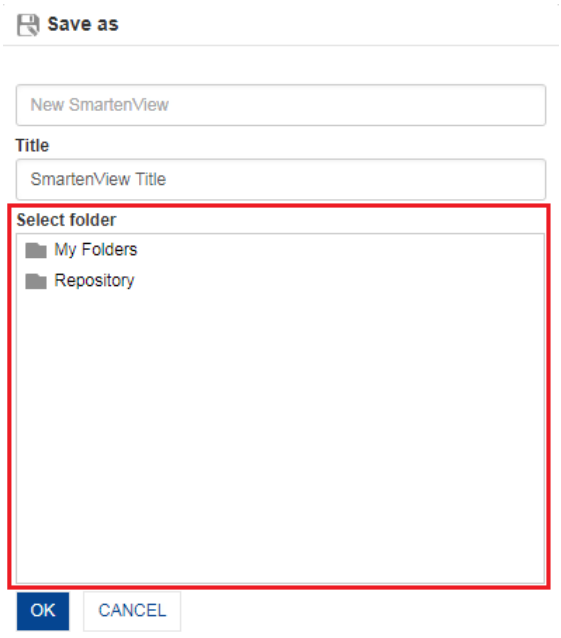
OPERATIONS ON A CHART—SPECIFY A NAME FOR THE SMARTENVIEW

4. Specify a title for the SmartenView in the **Title** field.



OPERATIONS ON A CHART—SPECIFYING A TITLE

5. Select the folder from the **Select Folder** section in which you want to save the SmartenView.



OPERATIONS ON A CHART—SELECTING THE FOLDER

6. Click **OK**.

5.5.11 Refresh

This option is used to update SmartenView data from its source cube or dataset.

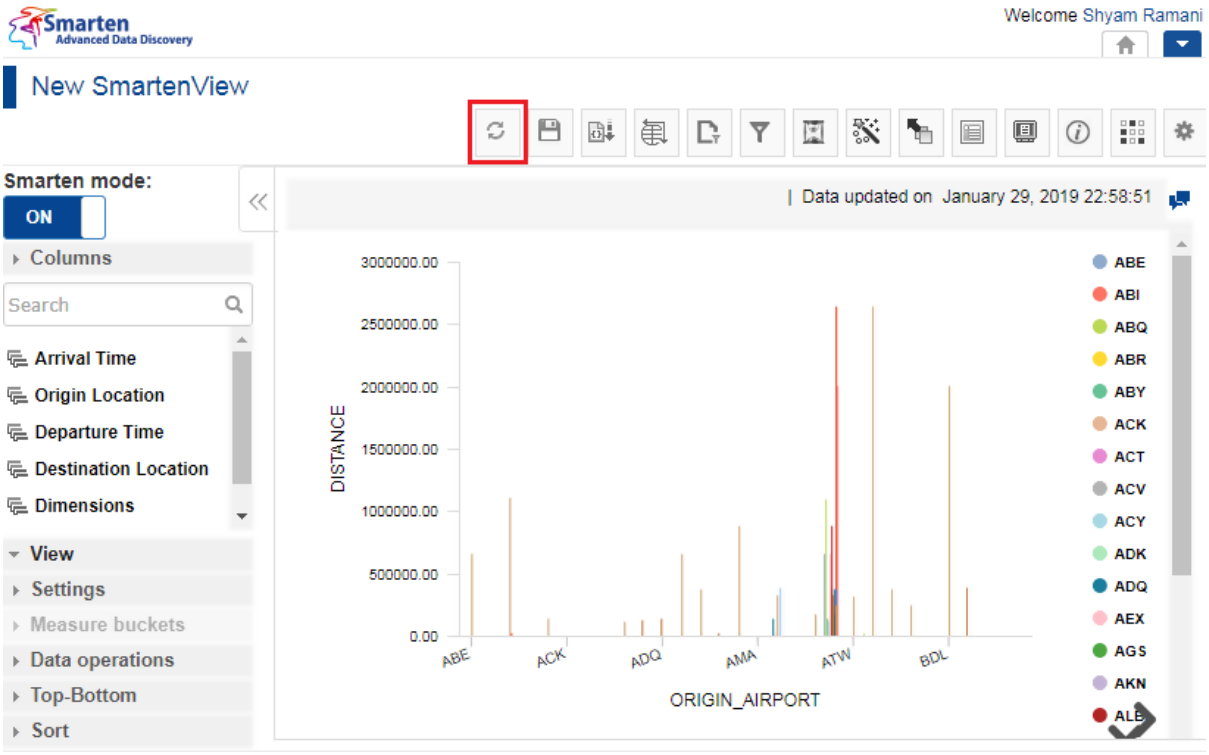
About this task

Use this task to refresh the data used for a SmartenView.

Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.

3. Make the required changes in the SmartenView.
4. Click the Refresh icon.



OPERATIONS ON A CHART—THE REFRESH ICON

The system refreshes the data.

5.5.12 Page Filters

Page filters are applied on the cube or dataset data and are backend filters.

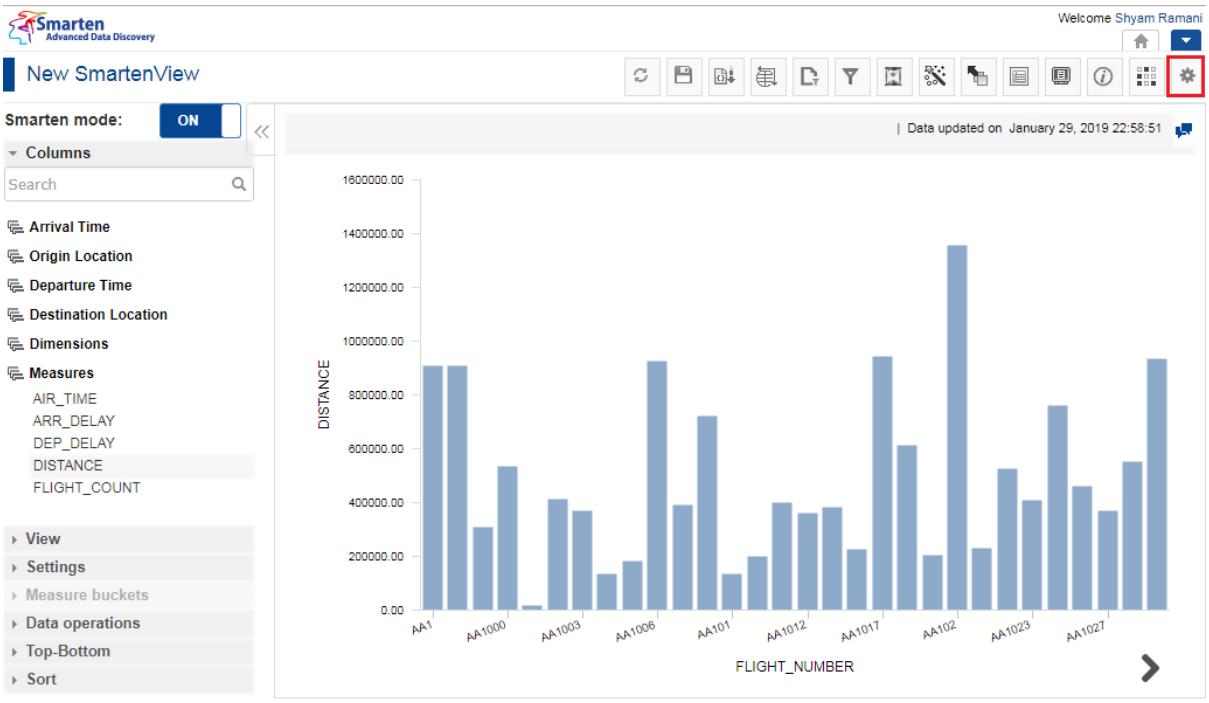
Reference: **Concept Manual > Filters and Expressions**

About this task

Use this task to manage page filters on a chart for SmartenView.

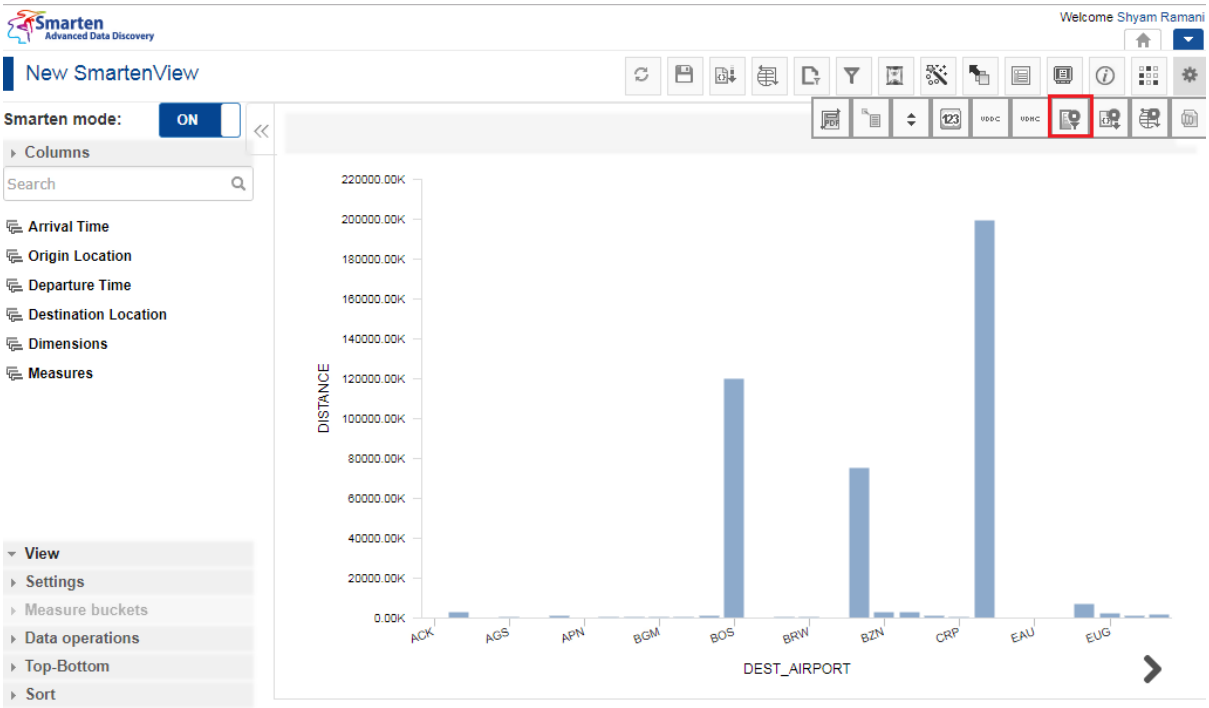
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Settings icon on the toolbar.



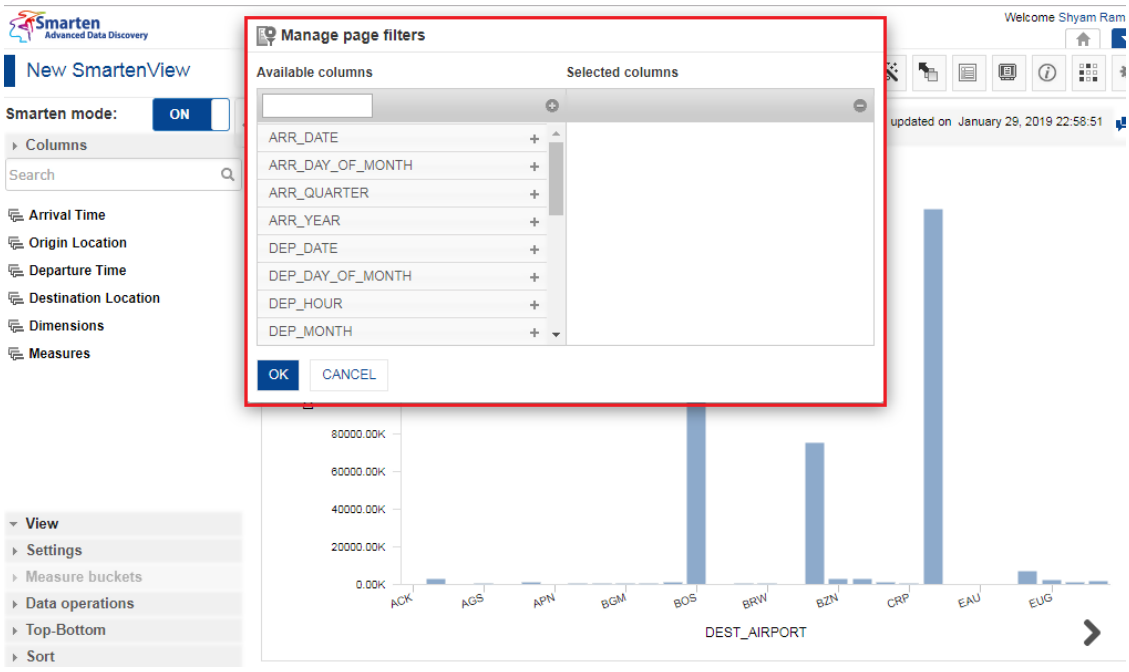
OPERATIONS ON A CHART—THE SETTINGS ICON

4. Click the Manage page filters icon.



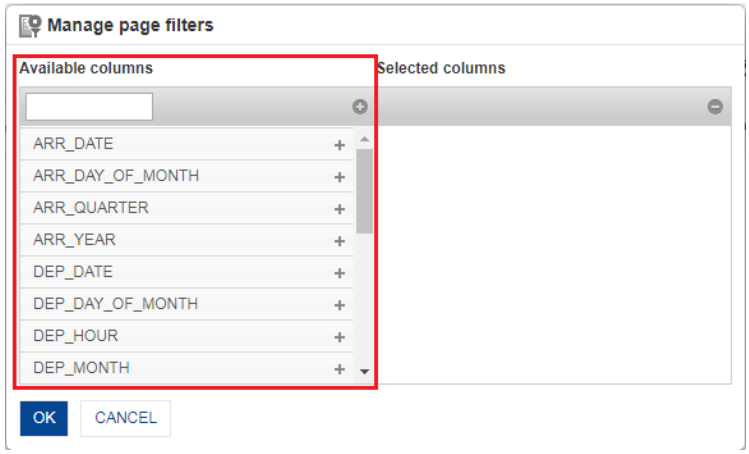
OPERATIONS ON A CHART—THE MANAGE PAGE FILTER OPTION

The system displays the **Manage page filters** dialog box.



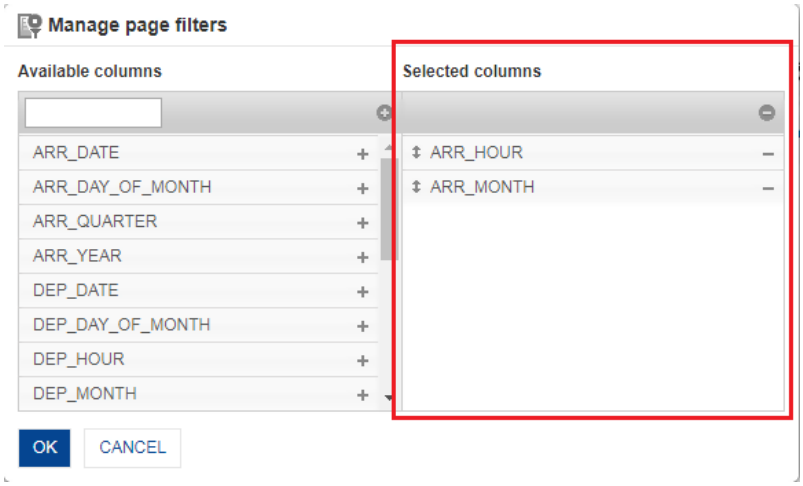
OPERATIONS ON A CHART—THE MANAGE PAGE FILTER DIALOG BOX

5. Click the Add icon adjacent to the column you want to select from the **Available columns** section.



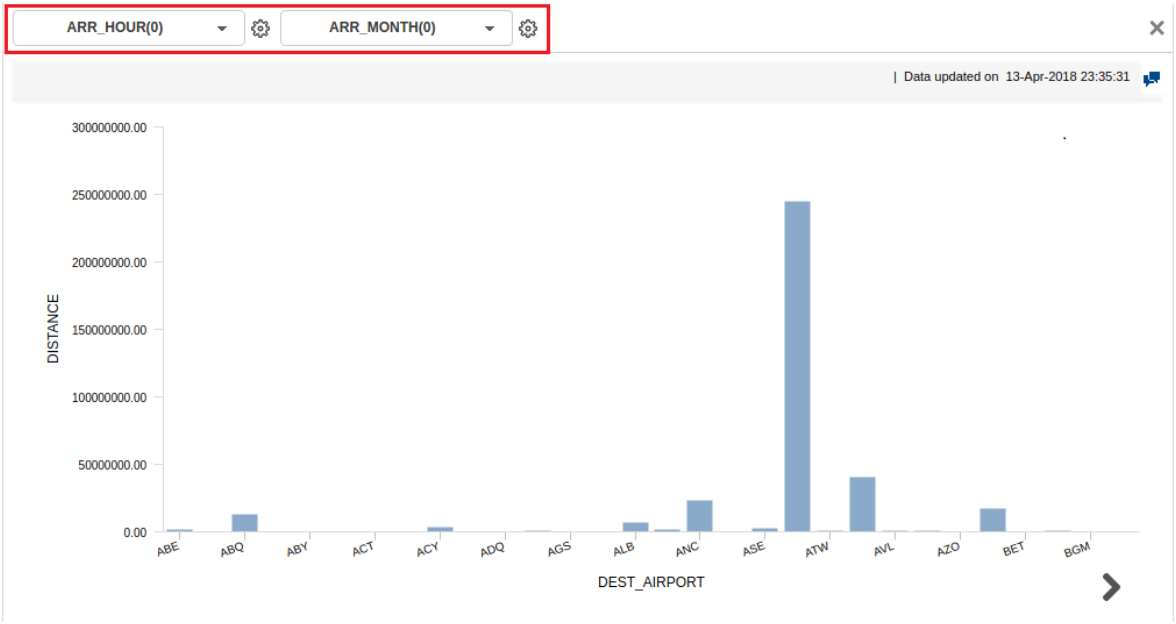
OPERATIONS ON A CHART—SELECTING THE COLUMNS

The selected columns are available in the **Selected columns** section.



OPERATIONS ON A CHART—THE ADD RANK DIALOG BOX

6. Click **OK**.
   The selected columns are available as page filters.



OPERATIONS ON A CHART—PAGE FILTER CRITERIA

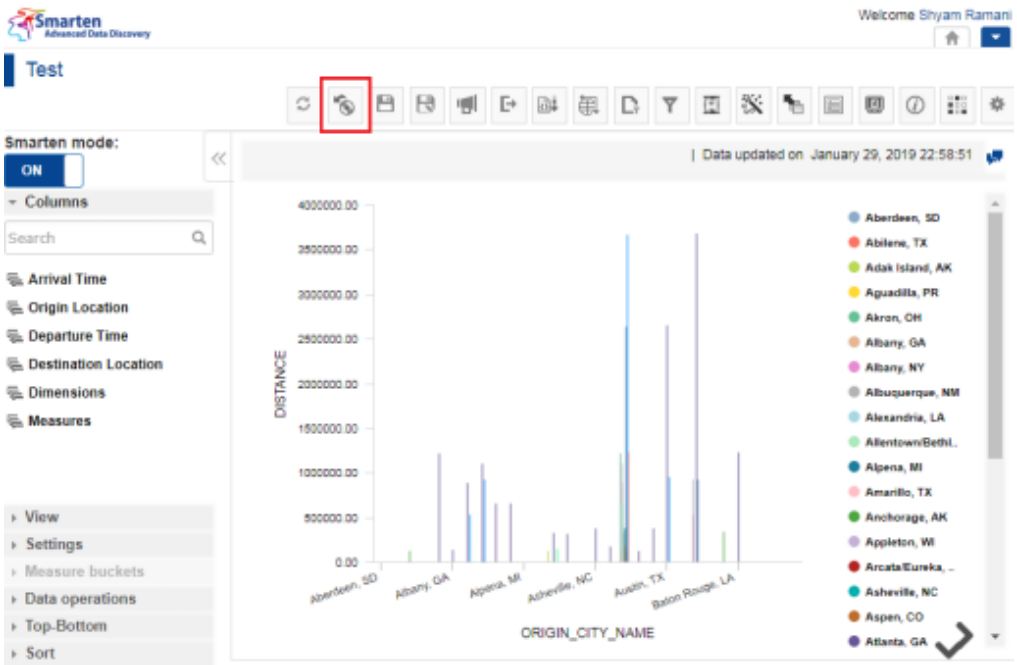
7. Select the values from the page filter criteria to filter the data based on the selected values.

5.5.13 Restore

This option is used to restore chart in Smarten. Restore will restore the chart settings as per the last saved version. It will not query source data.

Procedure

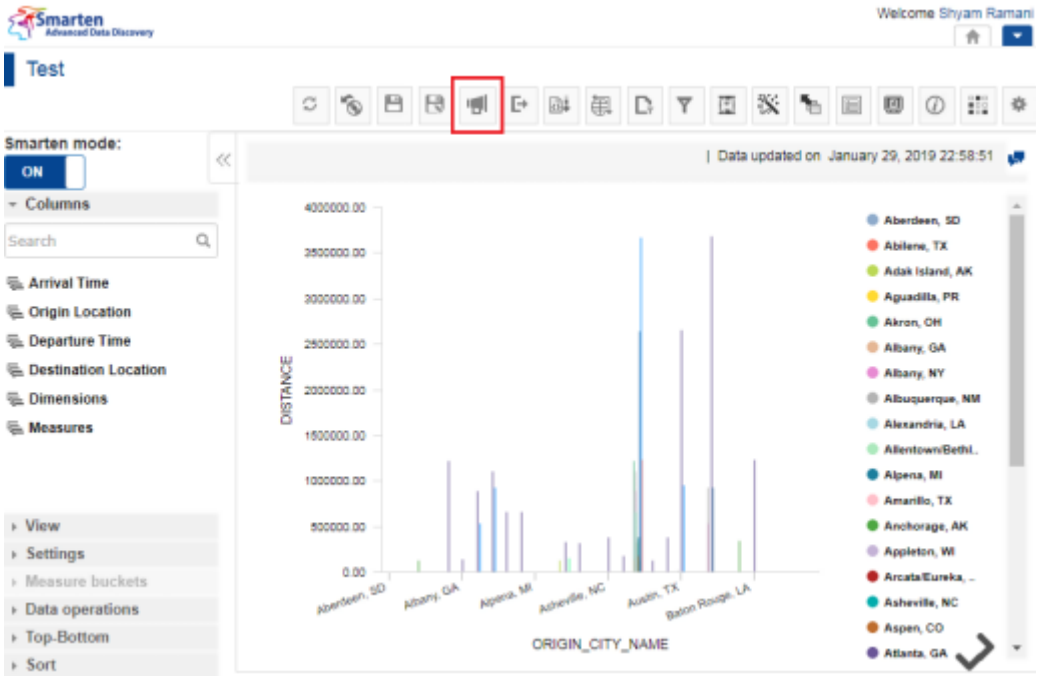
1. In the **Repository**, open chart.
2. The system displays the chart.
   In the SmartenView Toolbar, click **Restore**.



SMARTENVIEW: RESTORE ICON

5.5.14 Publish Now

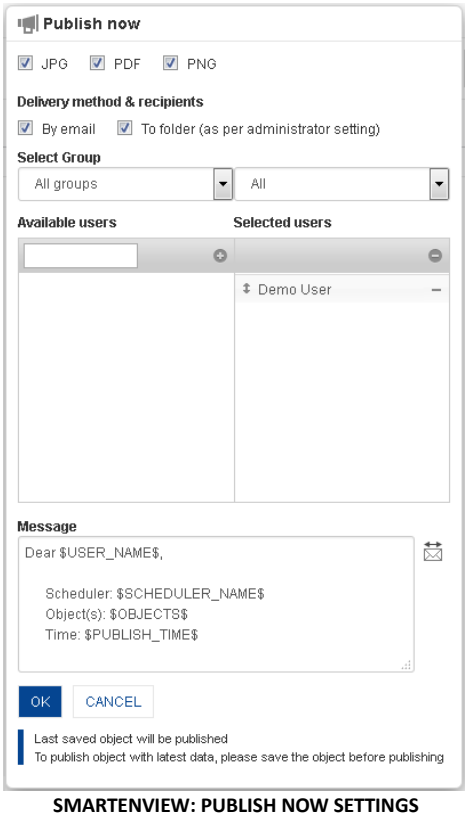
This option is used to define the chart publish settings. It is visible only after saving the chart.



SMARTENVIEW: PUBLISH NOW ICON

Procedure

1. In the **Repository**, open chart.
   The system displays the chart.
2. In the SmartenView Toolbar, click **Publish now**.
   The system displays the **Publish now** dialog box.



SMARTENVIEW: PUBLISH NOW SETTINGS

3. In the **Publish now** dialog box, select the checkbox to choose the output type (JPG, PNG or PDF).
4. In the **Delivery method & recipients** section, select the checkbox(es) (by email and to folder).
5. In the **Select group** section, select the group from the drop-down list.
   The system displays the list of users in the **Available users** column according to the group selected.
6. In the **Available users** column, select the users. System displays list of users as per access rights policy defined by Administrator.
   The system displays the selected users in the **Selected users** column.
7. In the **Message box**, enter the message.
8. Click **OK**.

5.5.15 Viewing Object Information for a Chart

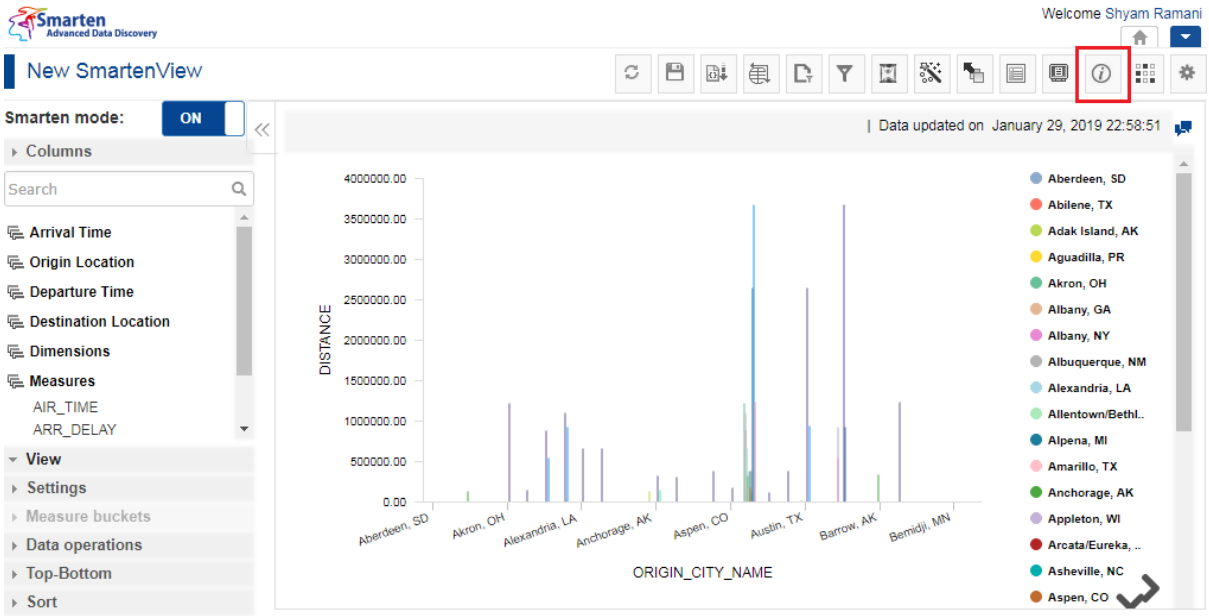
You can view information about the SmartenView, such as a name of the SmartenView, the title of the SmartenView, name of the user who created it, name of the dataset or cube, and others.

About this task

Use this task to view dimensions that contain the highest and lowest values in a chart.

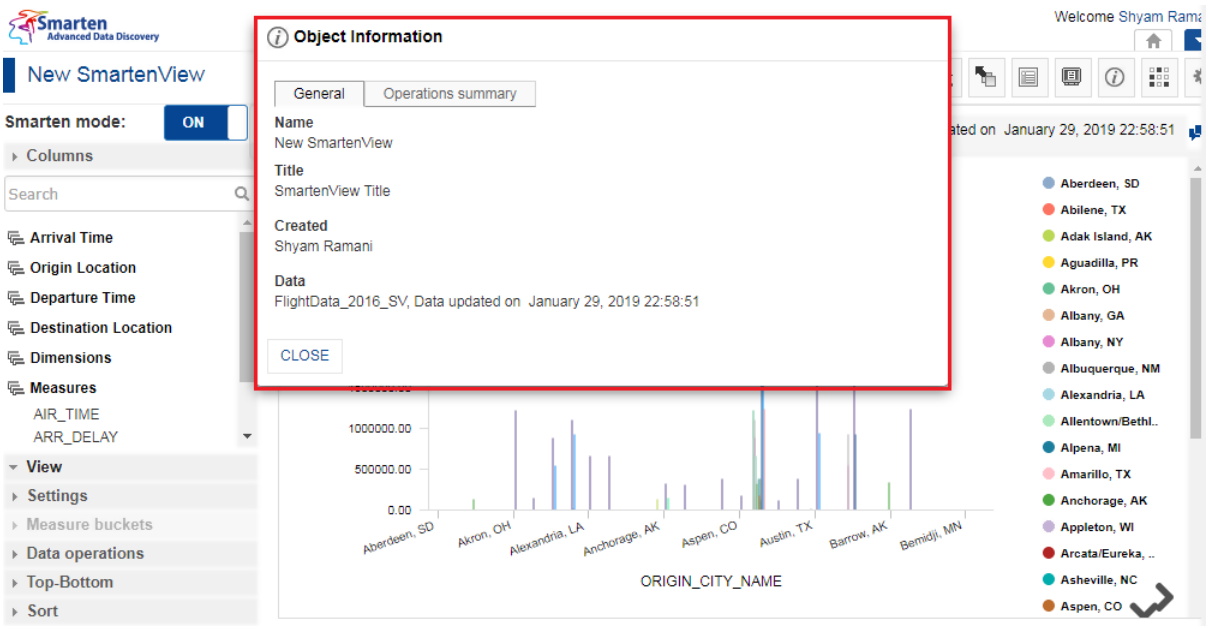
Procedure

1. Select the dataset or cube you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Object information option on the toolbar.



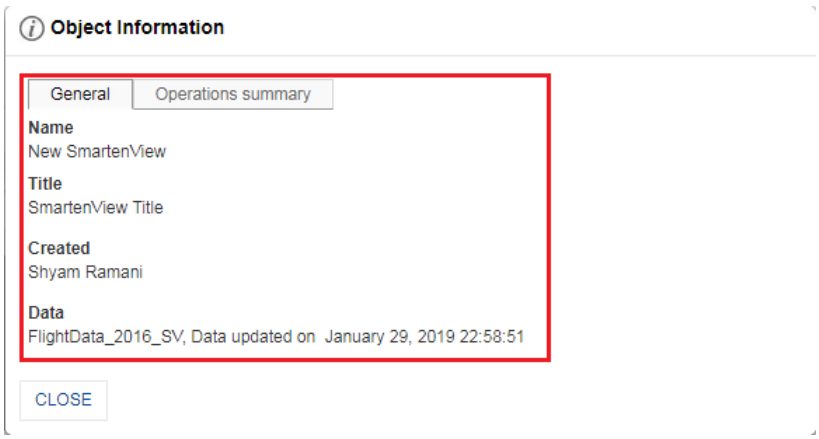
OBJECT INFORMATION—THE OBJECT INFORMATION OPTION

The system displays the **Object Information** dialog box.



OBJECT INFORMATION—THE OBJECT INFORMATION DIALOG BOX

4. Click the **General** tab to view general information about the dataset. The following information is displayed:
   - **Name**: Name of the SmartenView.
   - **Title**: Title of the SmartenView.
   - **Created**: Name of the user who created the SmartenView.
   - **Data**: Name of the dataset or cube and the time it was last updated.

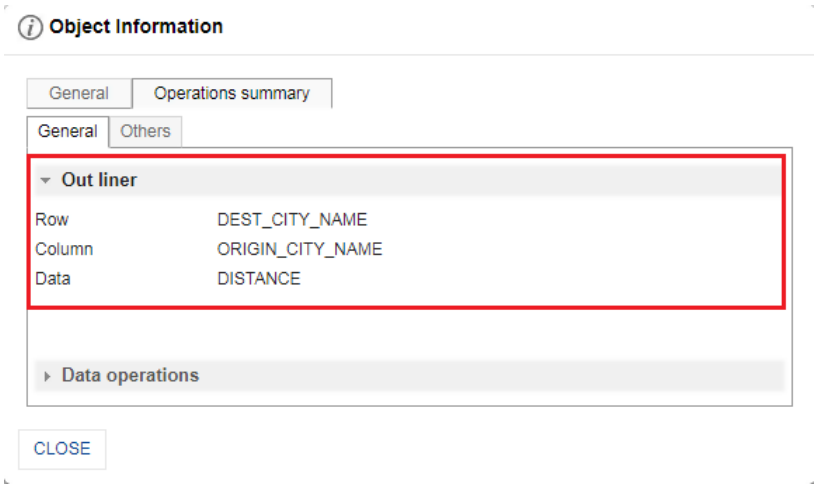


OBJECT INFORMATION—THE GENERAL TAB

5. Click the **Operations summary** tab.

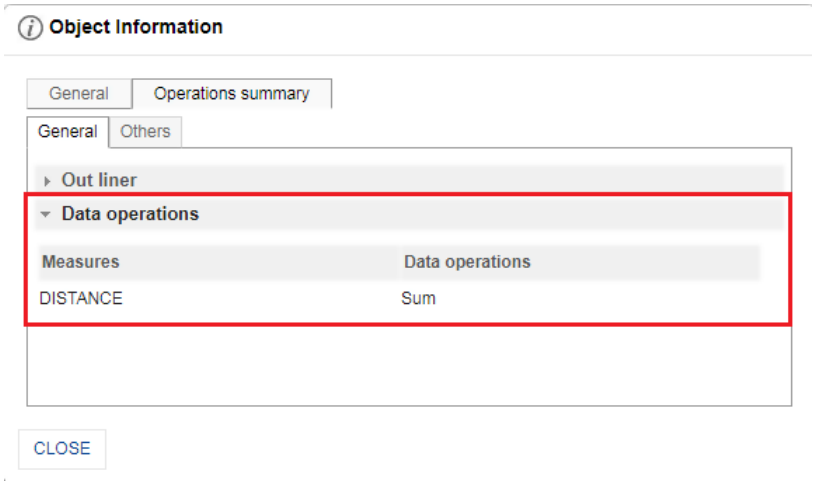
   The **Operations Summary** tab contains two tabs: **General** and **Others**. The **General** tab contains the **Outliner** and **Data operations** sections.

   Information about the columns added to outliner is displayed within the Outliner tab.



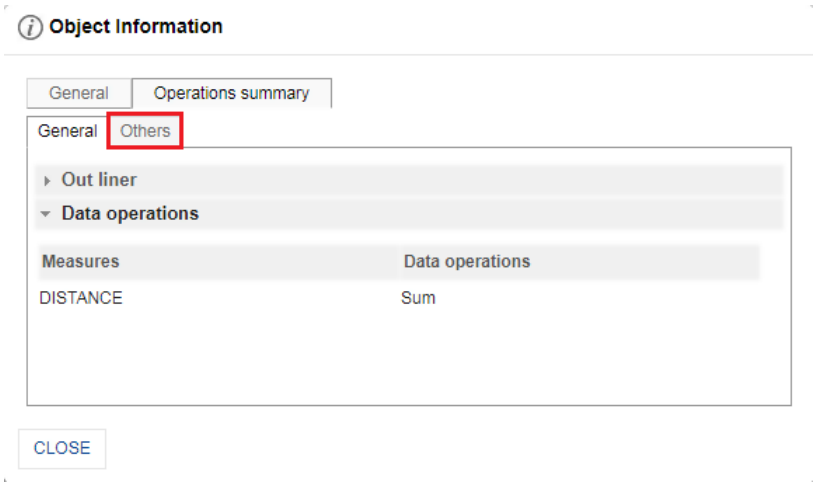
OPERATIONS SUMMARY—THE OUTLINER SUMMARY

6. Click the **Data operations** tab to view information about data operations applied to the chart.



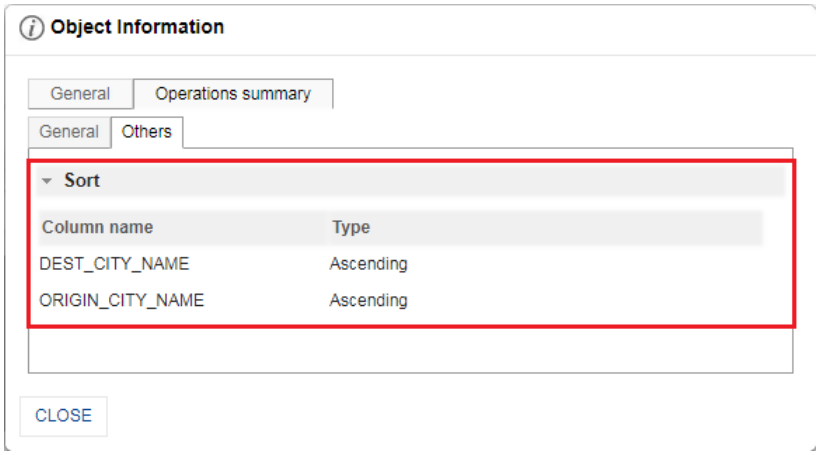
OBJECT INFORMATION—DATA OPERATIONS INFORMATION

7. Click the **Others** tab.



OBJECT INFORMATION—THE OTHERS TAB

8. Information about the type of sort applied on various columns.



OBJECT INFORMATION—THE OTHERS TAB

9. Click **CLOSE**.

5.5.16 Configuring PDF Setup

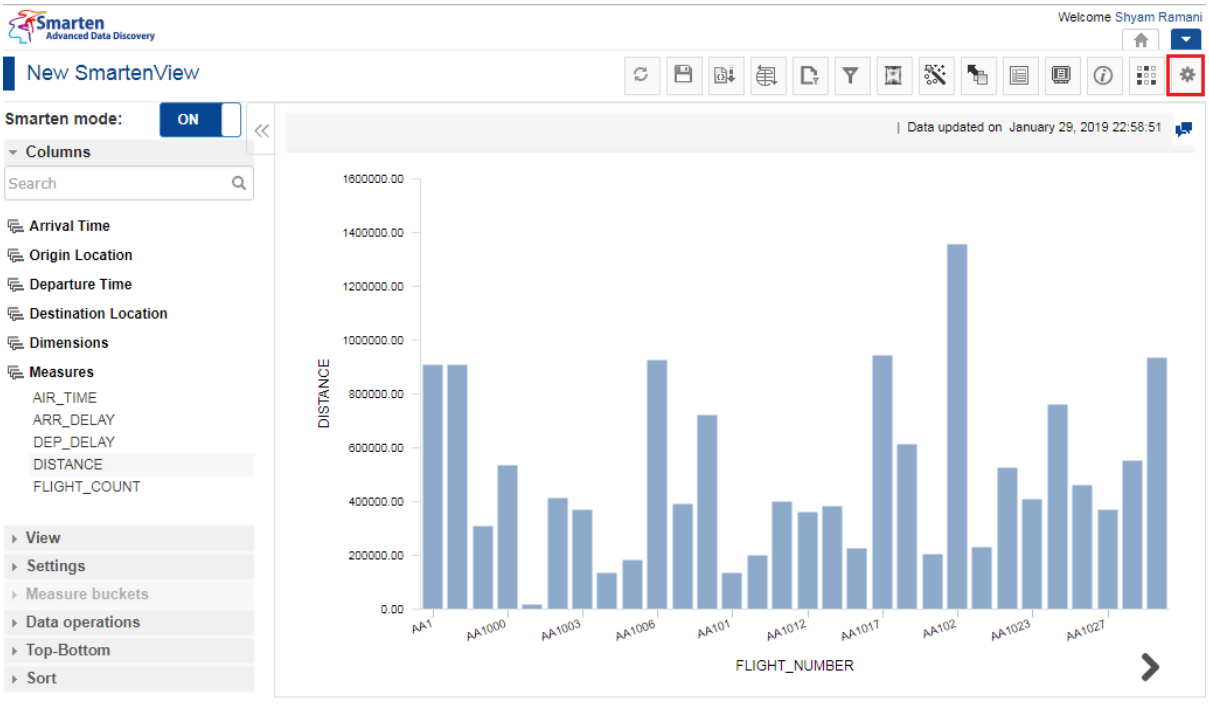
You can specify various settings for a PDF page, such as margin, size of the page, footer, and header.

About this task

Use this task to set configuration for a PDF page of a chart for SmartenView.

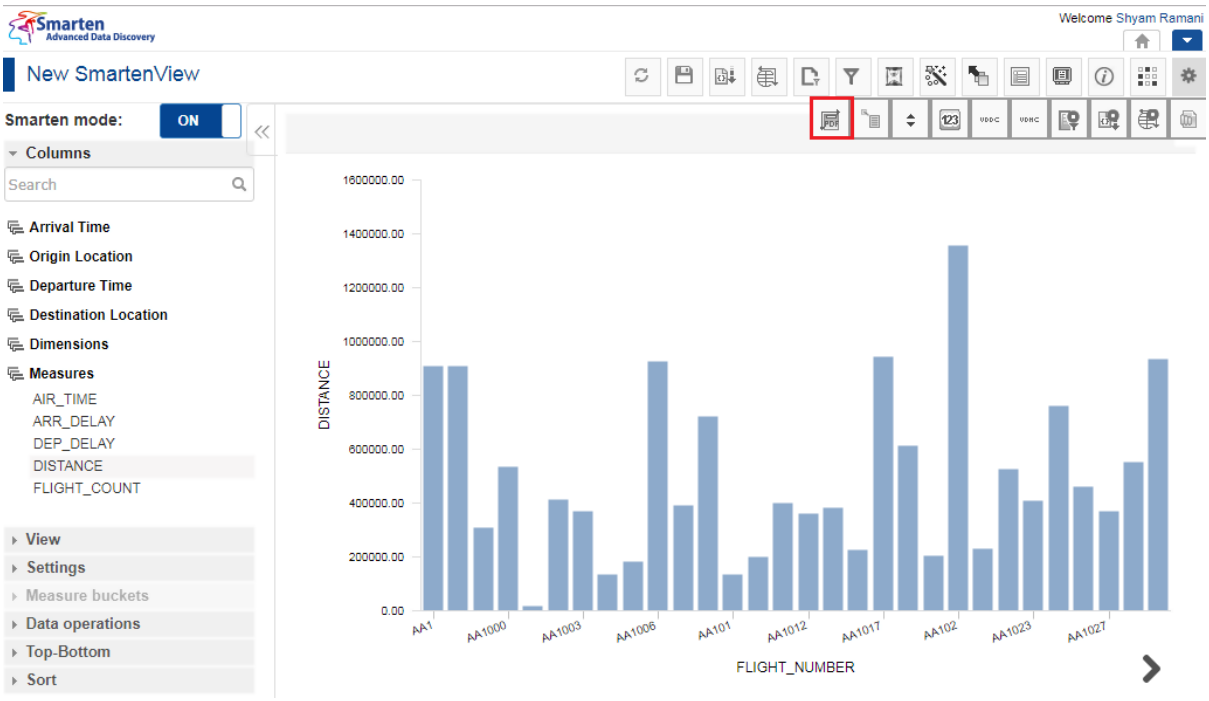
Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Settings icon on the toolbar.



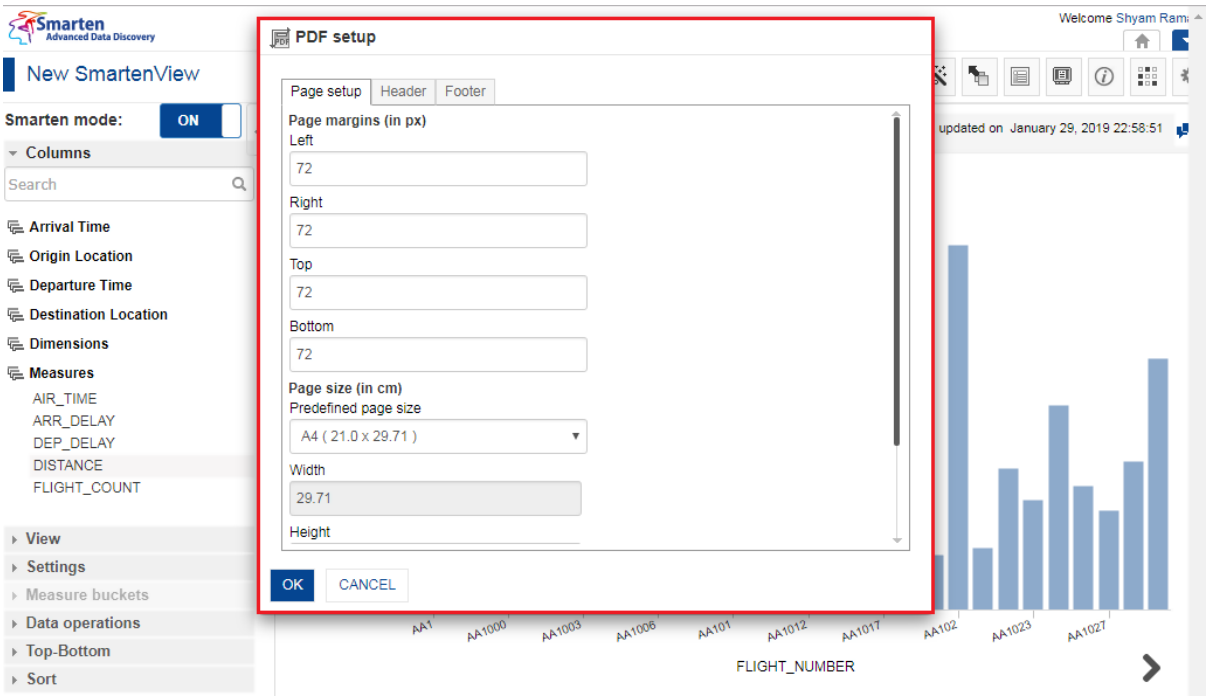
PDF PAGE SETUP—THE SETTINGS ICON

4. Click the PDF Setup icon.



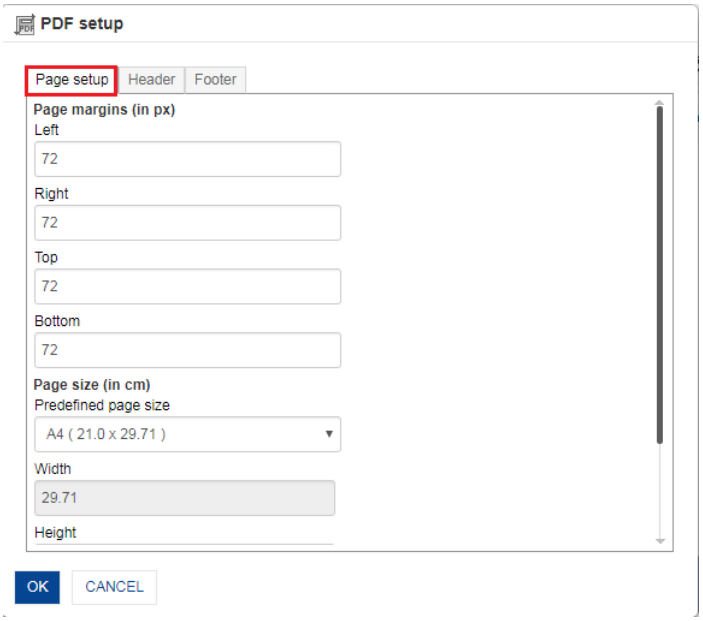
OPERATIONS ON A CHART—THE PDF SETUP OPTION

The system displays the **PDF setup** dialog box.



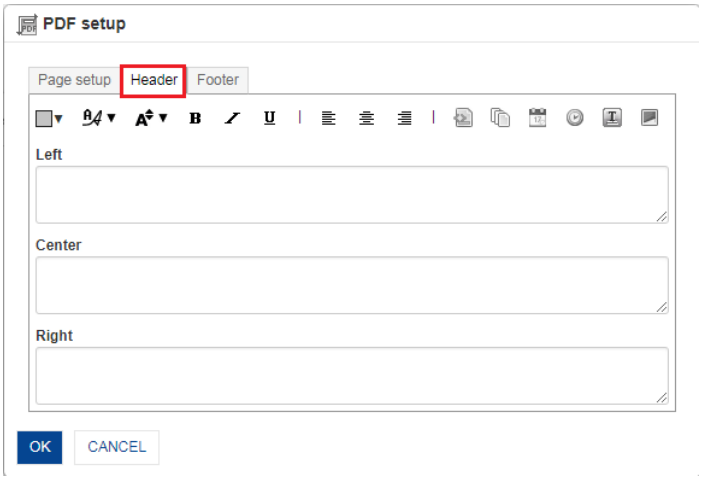
OPERATIONS ON A CHART—THE PDF SETUP DIALOG BOX

5. Click the **Page setup** tab.



PDF SETUP—THE PAGE SETUP TAB

6. Specify a value for the left margin in the **Left** field.
7. Specify a value for the right margin in the **Right** field.
8. Specify a value for the top margin in the **Top** field.
9. Specify a value for the bottom margin in the **Bottom** field.
10. Select an option from the **Page size** list to specify the size of the page.
11. If you have selected the **Custom** option from the list:
12. Specify a value for the width of the page in the **Width** field.
13. Specify a value for the height of the page in the **Height** field.
14. Select the **Portrait** or **Landscape** option to specify the orientation of the page.
15. Click the **Header** tab.



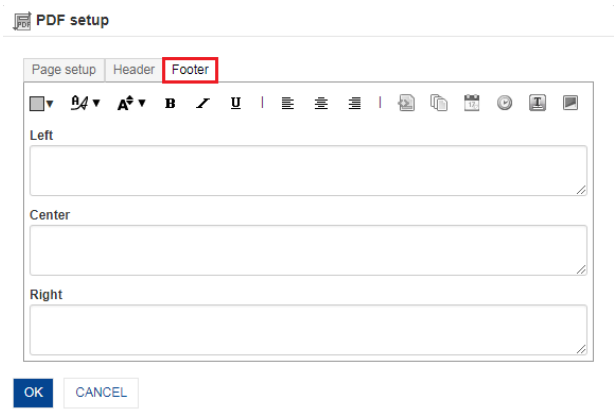
PDF SETUP—THE HEADER TAB

16. Enter values or variables required for left, center, and right sections of the header.

    You can select Page Number, Number of Pages, Date, Time, Object Title, and Image as a variable.

    You can also add custom text along with variables.

17. Click the **Footer** tab.



PDF SETUP—THE FOOTER TAB

18. Enter values or variables required for left, center, and right sections of the header.

    You can select Page Number, Number of Pages, Date, Time, Object Title, and Image as a variable.

    You can also add custom text along with variables.

19. Click **OK**.

5.5.17 SmartenView Properties

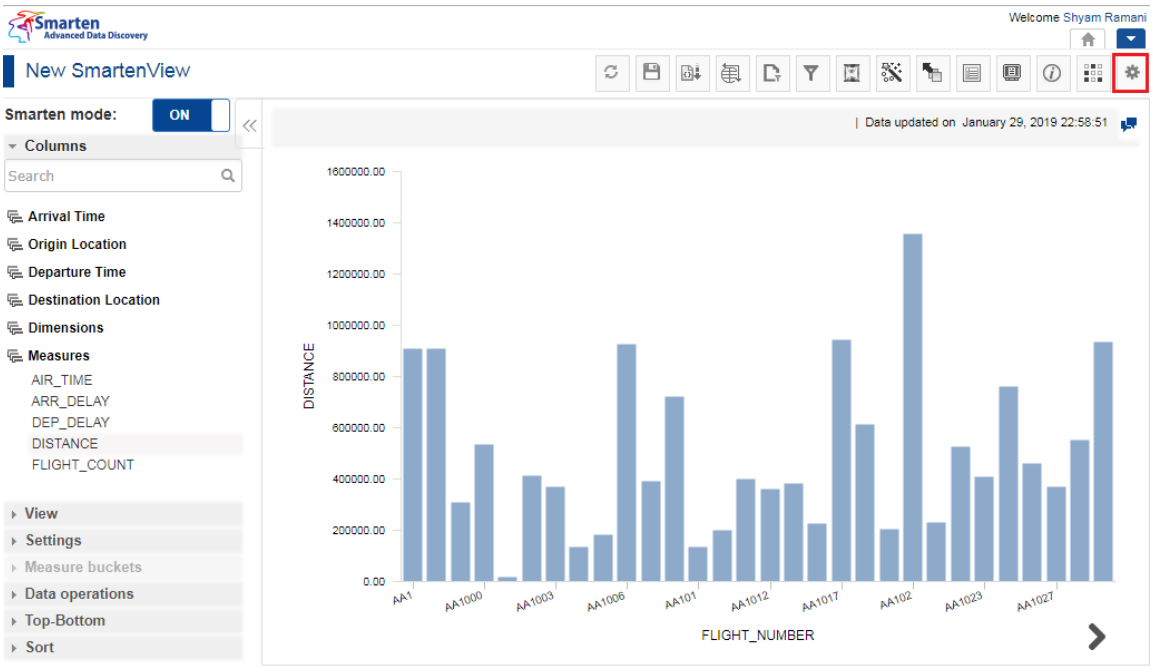
You can configure various properties in a SmartenView.

About this task

Use this task to configure graph properties in a SmartenView.

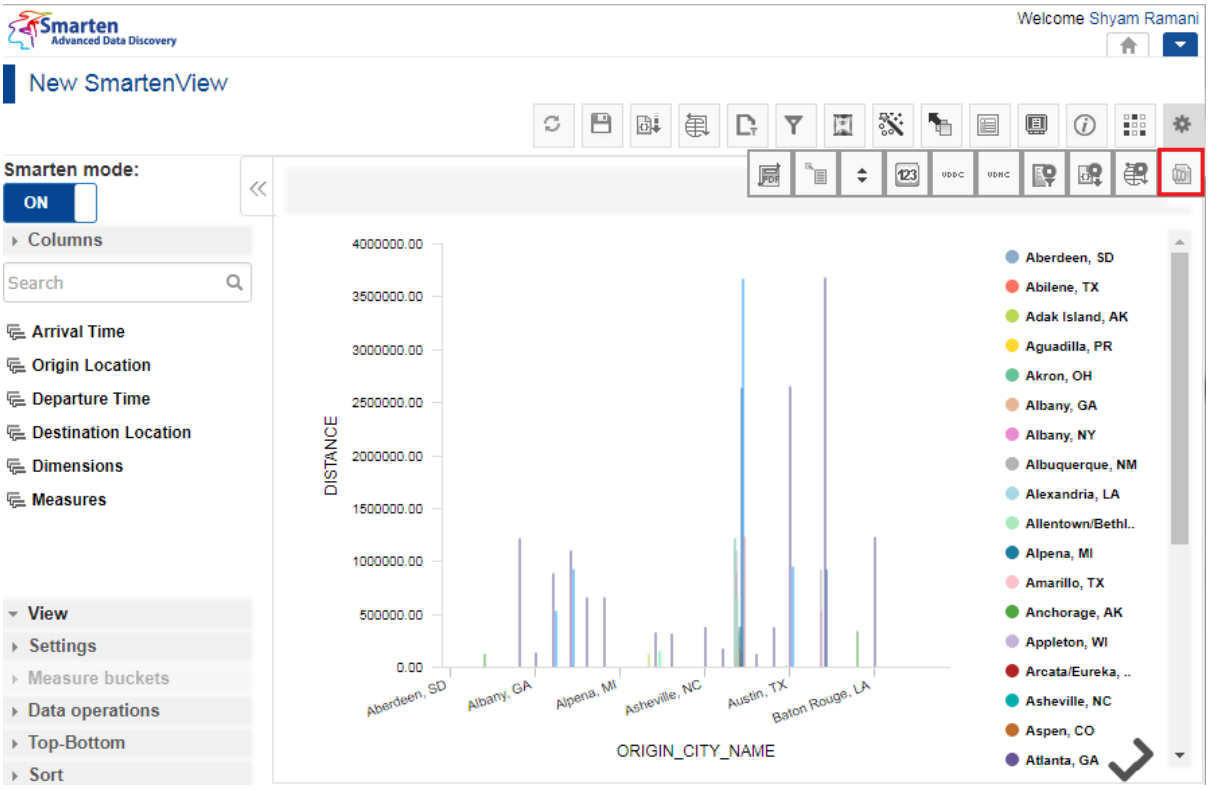
Procedure

1. Open the SmartenView for which you want to configure graph properties.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Settings icon on the toolbar.



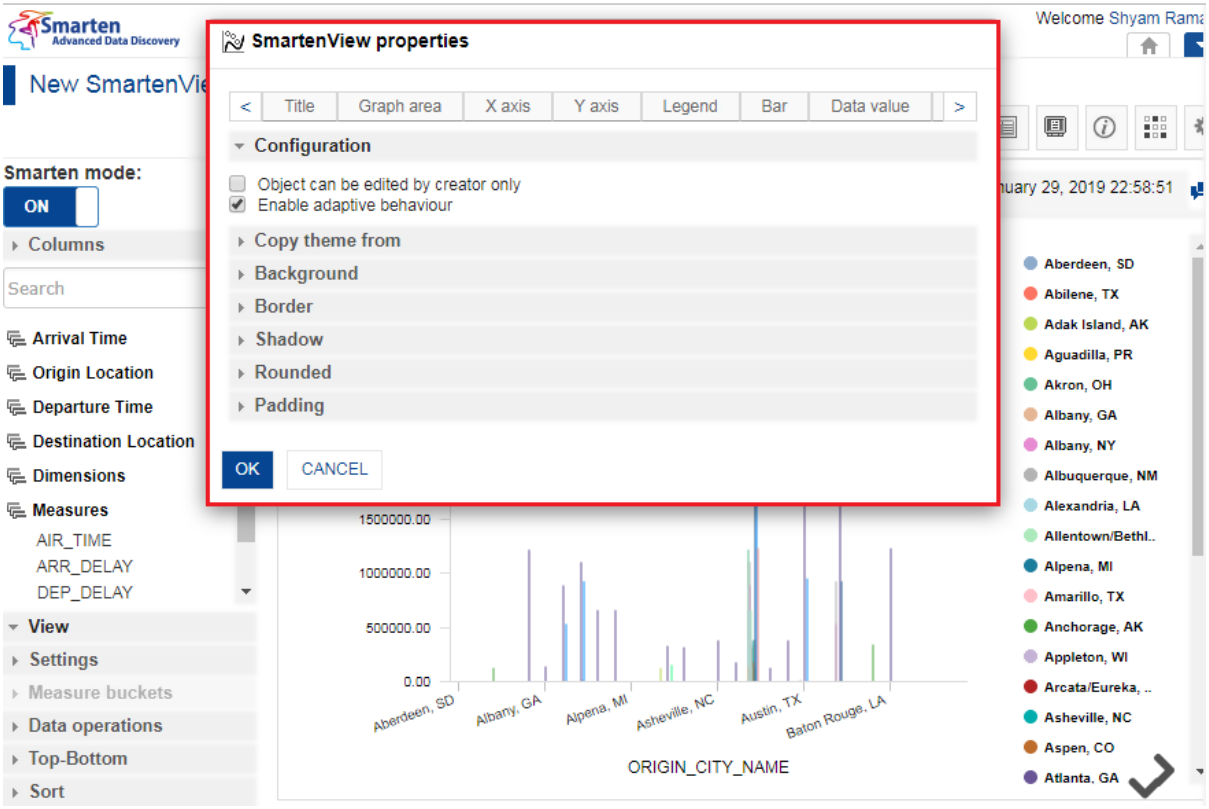
OPERATIONS ON A CHART—THE SETTINGS ICON

4. Click the Graph Properties icon.



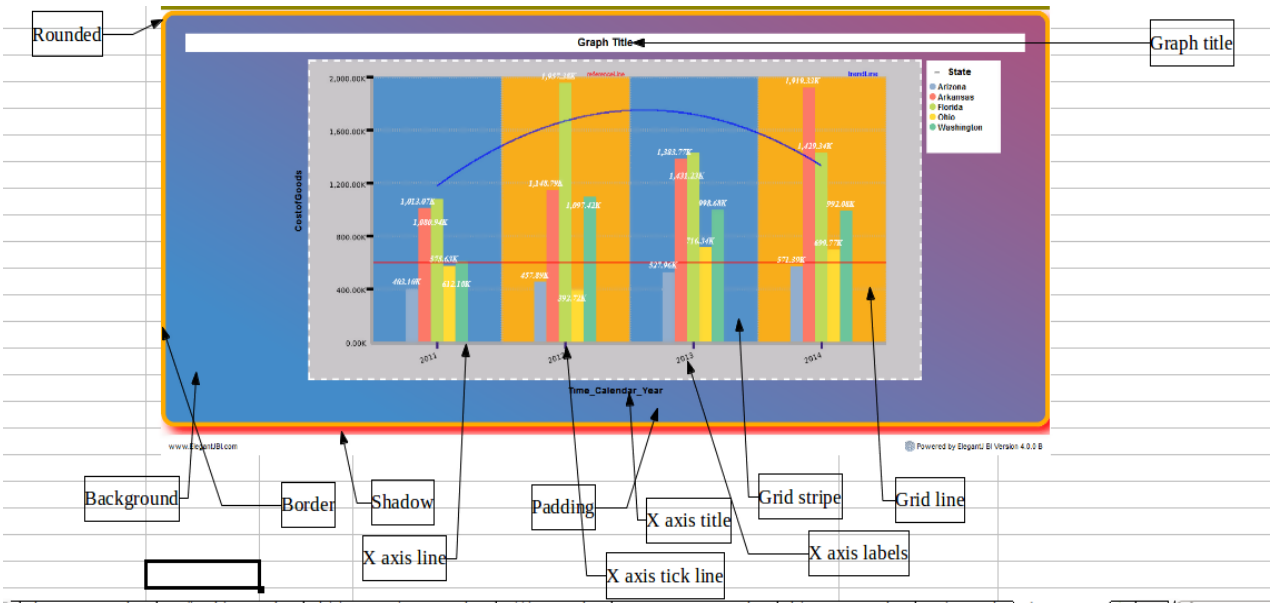
OPERATIONS ON A CHART—THE MANAGE PAGE FILTER OPTION

The system displays the **SmartenView properties** dialog box.

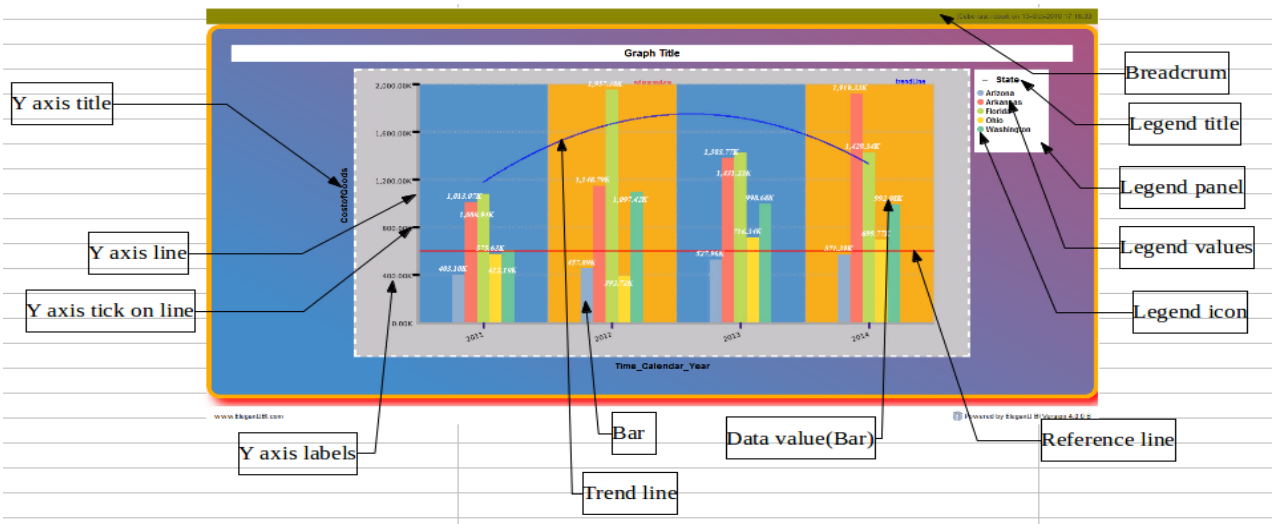


OPERATIONS ON A CHART—THE SMARTENVIEW PROPERTIES DIALOG BOX

5. You can configure various graph properties for SmartenView, and then click **OK**.
   Refer to the tables below for the options that you can configure:



TYPICAL GRAPH COMPONENTS—1



TYPICAL GRAPH COMPONENTS—2

SmartenView—General properties

Property	Option	Valid Values
Configuration	Object can be edited by creator only	Selected/Clear
	Enable adaptive behavior	Selected/Clear
Copy theme from	My folder Repository	Search box
Background	Visible	Selected/Clear

Property	Option	Valid Values
	Color	#000000 - #FFFFFF
	Transparent	Selected/Clear
	Image	.jpg, .png (image formats)
	Background repeat	Repeat/No repeat/Repeat X/Repeat Y
	Background position	Center/Left/Right/Top/Bottom
	Gradient ▪ Visible ▪ Style ▪ Angle ▪ Extent ▪ Color	 Selected/Clear Linear gradient 0–360 0–100 #000000 - #FFFFFF
Border	Visible	Selected/Clear
	All	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
	Left	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
	Right	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
	Top	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
	Bottom	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
Shadow	Left to right	-10–10
	Top to bottom	-10–10
	Fade	0–20

Property	Option	Valid Values
	Color	#000000 - #FFFFFF
Rounded	All	0–20
	Top left	0–20
	Top right	0–20
	Bottom left	0–20
	Bottom right	0–20
Padding	All	0–100%
	Top	0–100%
	Bottom	0–100%
	Left	0–100%
	Right	0–100%

SMARTENVIEW—GENERAL PROPERTIES

SmartenView—Title properties

Property	Option	Valid Values
Configuration	Visible	Selected/Clear
	Title	Any String Values
	Title Panel Position Adjust width to text	 Left/Center/Right Selected/Clear
Font and text	Name	System Fonts
	Style	B, I, U
	Size	8–25
	Color	#000000 - #FFFFFF
	Text transform	None/Uppercase/Lowercase/ Capitalize
	Letter spacing	-3–5

Property	Option	Valid Values
	Word spacing	-3–5
	Text alignment	Left/Center/Right/Justify
	Text shadow Visible Left to right Top to bottom Fade Color	 Selected/Clear -5–5 -5–5 0–5 #000000 - #FFFFFF
Background	Visible	Selected/Clear
	Color	#000000 - #FFFFFF
	Transparent	Selected/Clear
	Image	.jpg, .png (image formats)
	Background repeat	Repeat/No repeat/ Repeat X/Repeat Y
	Background position	Center/Left/Right/Top/Bottom
	Gradient Visible Style Angle Extent Color	 Selected/Clear Linear gradient 0–360 0–100 #000000 - #FFFFFF
Border	Visible	Selected/Clear
	All	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
	Left	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF

Property	Option	Valid Values
	Right	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
	Top	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
	Bottom	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
Shadow	Left to right	-10–10
	Top to bottom	-10–10
	Fade	0–20
	Color	#000000 - #FFFFFF
Rounded	All	0–20
	Top left	0–20
	Top right	0–20
	Bottom left	0–20
	Bottom right	0–20
Margin	All	0–100%
	Top	0–100%
	Bottom	0–100%
	Left	0–100%
	Right	0–100%
Padding	All	0–100%
	Top	0–100%

Property	Option	Valid Values
	Bottom	0–100%
	Left	0–100%
	Right	0–100%

SMARTENVIEW—TITLE PROPERTIES

SmartenView–Graph Area properties

Property	Option	Valid Values
Configuration	Graph 3D Effect ▪ Visible ▪ Angle ▪ Depth Pagination ▪ CategoryAxis pagination ▪ Legend pagination	 Selected/Clear 0–90 px 0–90 px -1 for no pagination -1 for no pagination
Background	Visible	Selected/Clear
	Color	#000000 - #FFFFFF
	Transparent	Selected/Clear
	Image	.jpg, .png (image formats)
	Background repeat	Repeat/No repeat/ Repeat X/Repeat Y
	Background position	Center/Left/Right/Top/Bottom
	Gradient ▪ Visible ▪ Style ▪ Angle ▪ Extent ▪ Color	 Selected/Clear Linear gradient 0–360 0–100 #000000 - #FFFFFF
Border	Visible	Selected/Clear

Property	Option	Valid Values
	All	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
	Left	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
	Right	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
	Top	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
	Bottom	Width: 0–10 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
Shadow	Left to right	-10–10
	Top to bottom	-10–10
	Fade	0–20
	Color	#000000 - #FFFFFF
Rounded	All	0–20
	Top left	0–20
	Top right	0–20
	Bottom left	0–20
	Bottom right	0–20
Margin	All	0–100%
Background grid		
Grid line	Visible	Selected/Clear
	Thickness	1–10
	Style	Solid/Dash/Dot

Property	Option	Valid Values
	Color	#000000 - #FFFFFF
Minor grid	Enable	Selected/Clear
Grid stripe	Visible	Selected/Clear
	Odd	#000000 - #FFFFFF
	Transparency	0–100%
Zoom		
Zoom though area selection	Enable	Selected/Clear Both/Horizontal/Vertical
Scrollbar	Enable	Selected/Clear

SMARTENVIEW—GRAPH AREA PROPERTIES

SmartenView—X-Axis properties

Property	Option	Valid Values
Title		
Configuration	Visible	Selected/Clear
	Title	Any String Values
Font and Text	Name	System Fonts
	Style	B, I, U
	Size	8–12
	Color	#000000 - #FFFFFF
	Text transform	None/Uppercase/Lowercase/ Capitalize
	Letter spacing	-3–5
	Word spacing	-3–5
	Text alignment	Left/Center/Right/Justify
	Text shadow ▪ Visible ▪ Left to right ▪ Top to bottom ▪ Fade ▪ Color	 Selected/Clear -5–5 -5–5 0–5 #000000 - #FFFFFF
Label		

Property	Option	Valid Values
Configuration	Visible	Selected/Clear
	Show all values	Selected/Clear
	Distance from axis line	0–10
	Stagger ▪ Enable ▪ Start from top ▪ Start from bottom	 Selected/Clear Selected/Clear Selected/Clear
	Rotation	-90–90
Font and Text	Name	System Fonts
	Style	B, I, U
	Size	8–25
	Color	#000000 - #FFFFFF
	Text transform	None/Uppercase/Lowercase/ Capitalize
	Characters limits	None/Auto/Custom
Date format		
Time format		
Line		
Configuration	Visible	Selected/Clear
	Thickness	0–10
	Style	None/Solid/Dash/Dot/Dashdot /Dashdotdot/
	Color	#000000 - #FFFFFF
	Position	Top/Bottom
Tick on axis	Visible	Selected/Clear
	Alignment	Left/Center
	Thickness	1–10
	Length	1–10
	Color	#000000 - #FFFFFF

SMARTENVIEW—X-AXIS PROPERTIES

SmartenView–Y-Axis properties

Property	Option	Valid Values
Title		

Property	Option	Valid Values
Configuration	Visible	Selected/Clear
	Title	Any String Values
	Title Panel ▪ Rotate Character	 0/90
Font and Text	Name	System Fonts
	Style	B, I, U
	Size	8–25
	Color	#000000 - #FFFFFF
	Text transform	None/Uppercase/Lowercase/ Capitalize
	Text shadow ▪ Visible ▪ Left to right ▪ Top to bottom ▪ Fade ▪ Color	 Selected/Clear -5–5 -5–5 0–5 #000000 - #FFFFFF
Label		
Configuration	Visible	Selected/Clear
	Maximum value	Auto/Custom
	Minimum value	Auto/Custom
	Distance from axis line	0–10
Font and Text	Name	System Fonts
	Style	B, I, U
	Size	8–25
	Color	#000000 - #FFFFFF
Number format	Comma separator	Selected/Clear

Property	Option	Valid Values
	Comma format	1, 234, 567/ 12, 34 , 567
	Digits after decimal point	0–5
	Adjusted digits Show suffix	0 --- 1/100000000Bn Selected/Clear
Line		
Configuration	Visible	Selected/Clear
	Thickness	0–10
	Style	None/Solid/Dash/Dot/Dashdot / Dashdotdot/Raised/Lowered
	Color	#000000 - #FFFFFF
	Position	Left/Right
Major tick	Visible	Selected/Clear
	Thickness	1–10
	Length	1–10
	Color	#000000 - #FFFFFF

SMARTENVIEW—Y-AXIS PROPERTIES

SmartenView – Legend properties

Property	Option	Valid Values
Panel		
Configuration	Visible	Selected/Clear
	Position	Top/Left/Right/Bottom
	Drill down	Selected/Clear
Background	Visible	Selected/Clear
	Color	#000000 - #FFFFFF
	Transparent	Selected/Clear

Property	Option	Valid Values
	Image	.jpg, .png (image formats)
	Background repeat	Repeat/No repeat/ Repeat X/ Repeat Y
	Background position	Center/Left/Right/Top/Bottom
	Transparency	None, 5–100
	Gradient ▪ Visible ▪ Style ▪ Angle ▪ Extent ▪ Color ▪ Transparent	 Selected/Clear Linear gradient 0–360 0– 100 #000000 - #FFFFFF Selected/Clear
Border	Visible	
	All	Width: 0–5 Style: None, Solid, Dash, Dot Color: #000000 - #FFFFFF
Shadow	Left to right	-10–10
	Top to bottom	-10–10
	Fade	0–20
	Color	#000000 - #FFFFFF
Margin	All	0–100%
	Top	0–100%
	Bottom	0–100%
	Left	0–100%
	Right	0–100%
Padding	All	0–100%
	Top	0–100%
	Bottom	0–100%
	Left	0–100%
	Right	0–100%

Property	Option	Valid Values
Values		
Configuration	Column	Free flow/1/2/3/4
	Order	Ascending/Descending
Font and Text	Name	System Fonts
	Style	B, I, U
	Size	8–25
	Color	#000000 - #FFFFFF
	Text transform	None/Uppercase/Lowercase/ Capitalize
	Characters limits	None/Auto/Custom
Date format		
Time format		
Icon		
Configuration	Width	0–20 screen units
Shape	Select shape	None, Square/Circle/,Triangle Up & Triangle Left, Triangle Right, Triangle Down, Diamond, Bubble
Border	Visible	Selected/Clear
	All	Width: 0–10 Style: None, Solid Color: #000000 - #FFFFFF

SMARTENVIEW—LEGEND PROPERTIES

SmartenView—Bar properties

Property	Option		Valid values
Configuration	Type		Bar/Cylinder/Cone
	Corner radius		Any number value
	Bar width		0–100%
Bar Color	Auto		Auto/Custom/Show same color

	Color - total bar		#000000 - #FFFFFF
	Transparency		Any number value
Gradient	Visible		Selected/Clear
	Color		#000000 - #FFFFFF
	Transparent		Selected/Clear
Border	Visible		Selected/Clear
	All	width	0–10
		style	None/Solid/Dash/Dot
		color	#000000 - #FFFFFF

SMARTENVIEW—BAR GRAPH PROPERTIES

SmartenView—Data value properties

Property	Option	Valid Values
Point		
Configuration	Visible	Selected/Clear
	Position	Top/Center/Bottom
	Angle	-360 to 360
	Offset	-100 to 100
	Format text	$Y-AXIS_VALUE$ $X-AXIS_VALUE$ $Y-AXIS_TITLE$ $X-AXIS_TITLE$ $Z-AXIS_VALUE$ $Z-AXIS_TITLE$ $ROWS_VALUE(n)$ $ROWS_TITLE(n)$ $COLS_VALUE(n)$ $COLS_TITLE(n)$ $Geographic_Column$[map only] [n=0 - 4]

Property	Option	Valid Values
Font and Text	Name	System Fonts
	Style	B, I, U
	Size	8–25
	Color	#000000 - #FFFFFF
Mouse over		
Configuration	Enable mouse over text	Selected/Clear
	Format text	$Y-AXIS_VALUE$ $X-AXIS_VALUE$ $Y-AXIS_TITLE$ $X-AXIS_TITLE$ $Z-AXIS_VALUE$ $Z-AXIS_TITLE$ $ROWS_VALUE(n)$ $ROWS_TITLE(n)$ $COLS_VALUE(n)$ $COLS_TITLE(n)$ $Geographic_Column$[map only] [n=0 - 4]
Font and text	Name	System Fonts
	Style	B, I, U
	Size	8–25
	Color	#000000 - #FFFFFF
	Text transform	None/Uppercase/Lowercase/ Capitalize
	Letter spacing	-3–5
	Word spacing	-3–5

Property	Option	Valid Values
	Text shadow ▪ Visible ▪ Left to right ▪ Top to bottom ▪ Fade ▪ Color	 Selected/Clear -5–5 -5–5 0–5 #000000 - #FFFFFF
Background	Visible	Selected/Clear
	Color	#000000 - #FFFFFF
Border	Visible	Selected/Clear
	All	#000000 - #FFFFFF
Shadow	Left to right	-10–10
	Top to bottom	-10–10
	Fade	0–20
	Color	#000000 - #FFFFFF

SMARTENVIEW—DATA VALUE PROPERTIES

SmartenView—Reference line properties

Property	Valid Values
Label	Any String Values
Value	Numeric Value according to data
Line style	Solid/Dash/Dot
Line width	1–10
Line color	#000000 - #FFFFFF

SMARTENVIEW—REFERENCE LINE PROPERTIES

SmartenView—Trend line properties

Property	Valid Values
Name	Any String Values
Trend column	Column Values
Algorithm	Linear/Logarithmic / Exponential/Moving Average

Style	Solid/Dash/Dot
Thickness	1–10
Color	#000000 - #FFFFFF

SMARTENVIEW—TREND LINE PROPERTIES

SmartenView—Breadcrumb properties

Property	Valid Values
Font and Text	#000000 - #FFFFFF
Background ▪ Visible ▪ Color ▪ Transparent	 Selected/Clear #000000 - #FFFFFF Selected/Clear

SMARTENVIEW—BREADCRUMB PROPERTIES

SmartenView—Column labels properties

Property	Valid Values
Available Columns	List of columns selected in graph
Column display name	Any String Values

SMARTENVIEW—COLUMN LABELS PROPERTIES

SmartenView—Value selection properties

Property	Option	Valid Values
Font and Text	Name	System Fonts
	Style	B, I, U
	Size	8–72
	Color	#000000 - #FFFFFF
	Text Transform	None/Uppercase/Lowercase
	Letter spacing	-3 to 5
	Word spacing	-3 to 5

SMARTENVIEW—VALUE SELECTION PROPERTIES

5.5.18 Creating Custom Dimensions

Custom dimension value columns can be created by defining and applying mathematical formula on existing column values as per your needs. This is also known as **User Defined Header Columns (UDHC).**

Users can create new dimension value columns by performing various conditional statements, such as string, arithmetic, date, statistics, trigonometry, or using various arithmetic operators (such as +, -, /, etc.) or comparison operators (such as =, >, < etc.) on two or more existing Dimension columns.

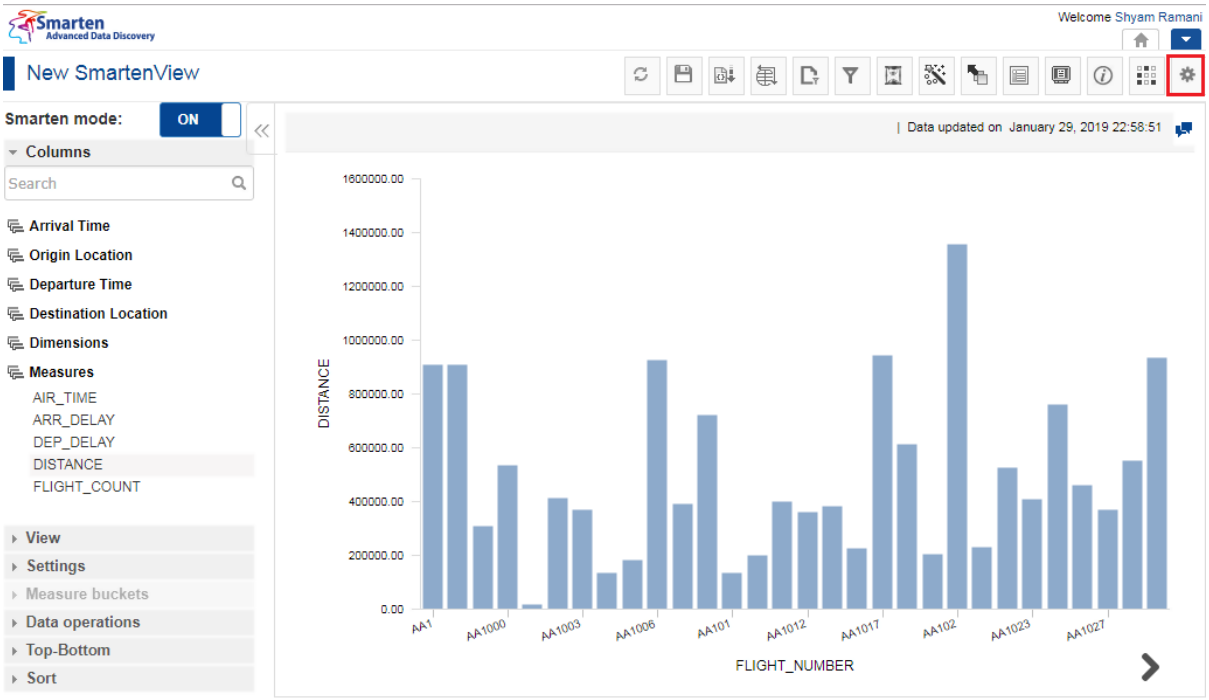
Reference: **Concept Manual > Analytic Functions > UDDC & UDHC > Custom Dimension Value**

About this task

Use this task to create custom dimensions for SmartenView.

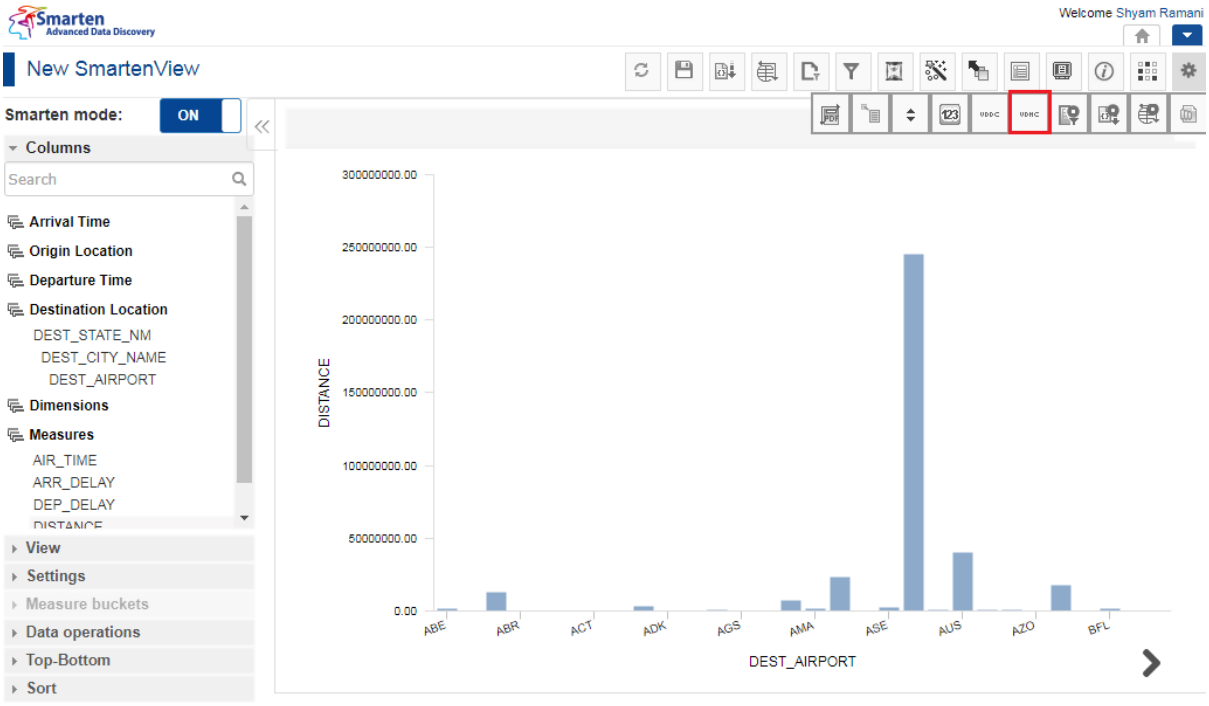
Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Settings icon on the toolbar.



OPERATIONS ON A CHART—THE SETTINGS ICON

4. Click the Manage UDHC icon.

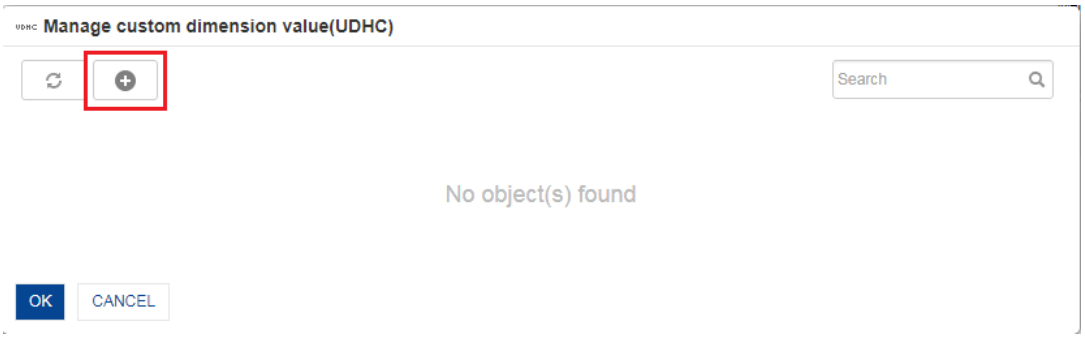


OPERATIONS ON A CHART—THE MANAGE UDHC ICON

The system displays the **Manage custom dimension value (UDHC)** dialog box.

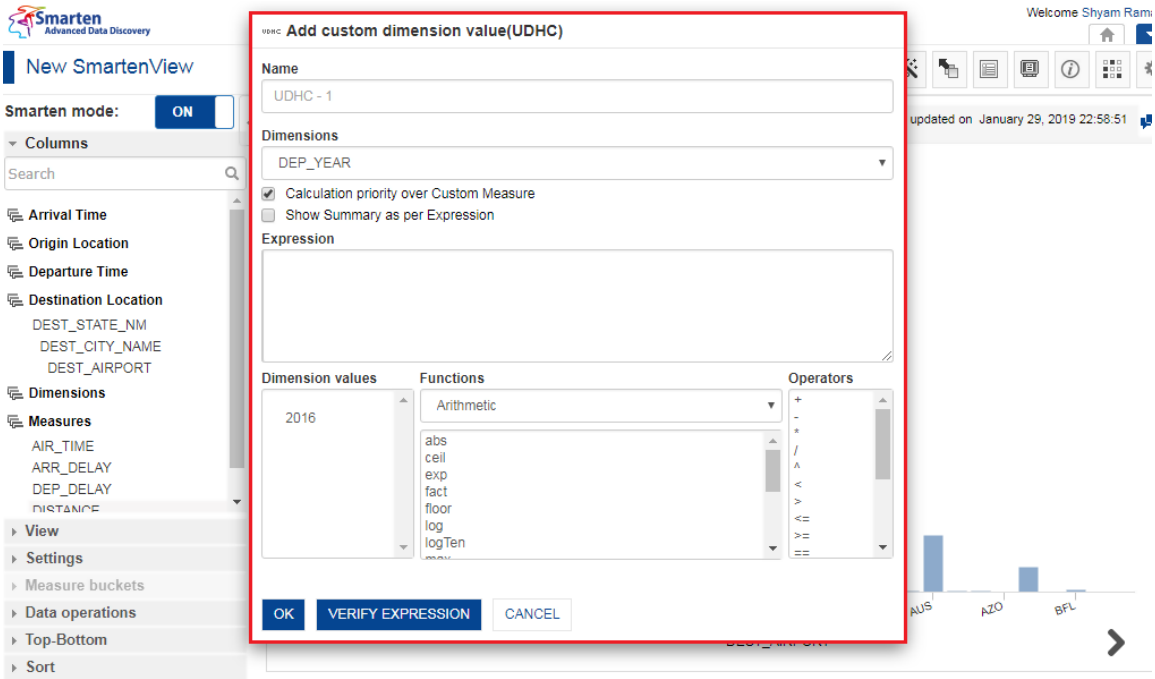
OPERATIONS ON A CHART—THE MANAGE CUSTOM DIMENSION VALUE DIALOG BOX

5. Click the Add icon.



OPERATIONS ON A CHART—THE ADD ICON

The system displays the **Add custom dimension value (UDHC)** dialog box.



OPERATIONS ON A CHART—THE ADD CUSTOM DIMENSION VALUE DIALOG BOX

6. Specify a name for the measure in the **Name** field.
7. You can select the **Calculation priority over Custom Measure** option to override the priority of custom measure display value.
8. You can select the **Show Summary as per Expression** option to calculate the summary value of UDHC dimension based on the UDHC expression.
9. You can select values from the **Dimension values**, **Functions**, and **Operators** sections to create or edit an expression.
10. You can click the **VERIFY EXPRESSION** to verify the expression you have created.
11. Click **OK**.

5.5.19 Mapping Data Display Value

Data value / Display value mapping can display alternate text for specific field values. Displayed data names (column headings) can be changed based on data values. For example, if quarters are available as numbers 1 to 4 (e.g., 1 for Quarter1, 2 for Quarter2), the user can specify display value for the corresponding data values from the cube or dataset. Users can view the quarter names instead of quarter numbers for a user-friendly experience.

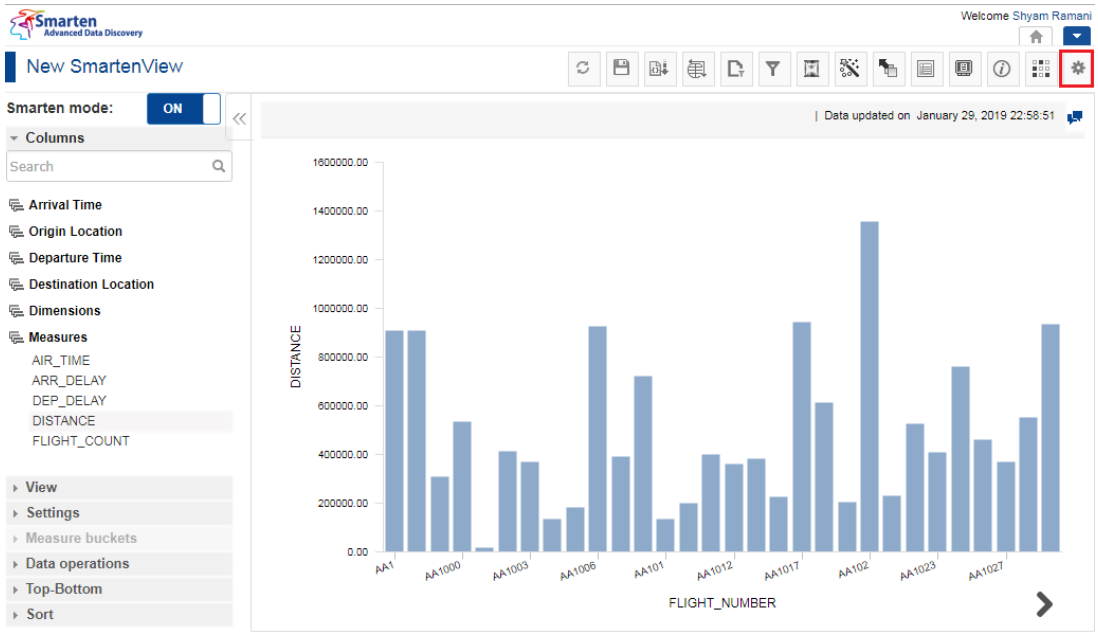
Reference: **Concept Manual > Analytics Functions > Data Value / Display Value Mapping**

About this task

Use this task to specify display value mapping for SmartenView.

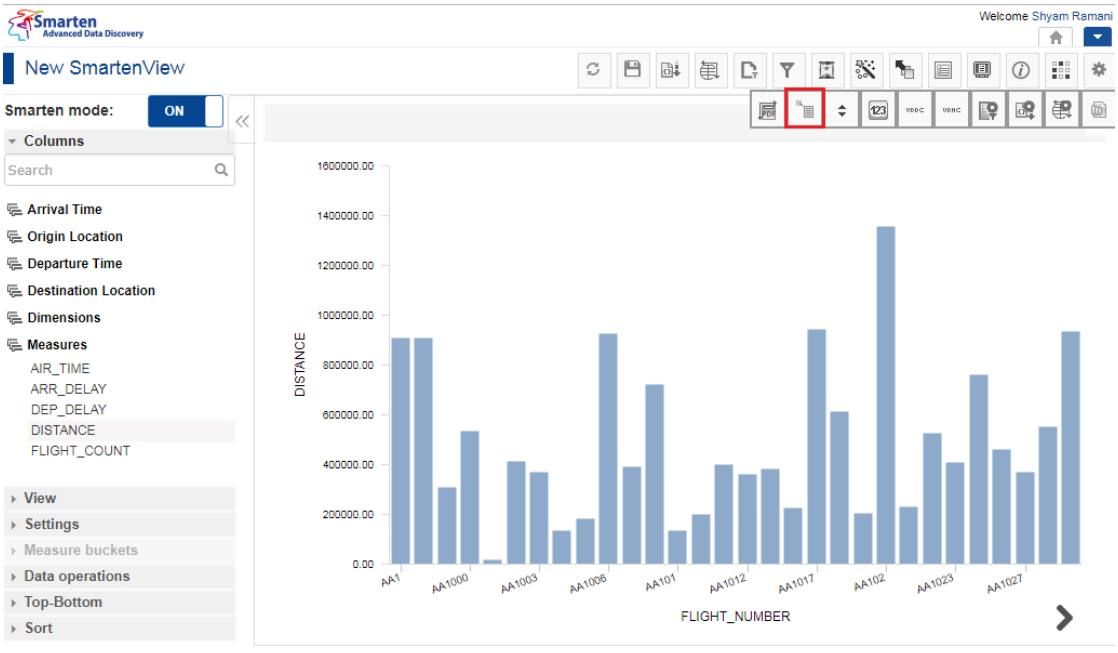
Procedure

1. Select the cube or dataset you want to use to generate a SmartenView.
2. Select the columns you want to use to generate a SmartenView.
3. Click the Settings icon on the toolbar.



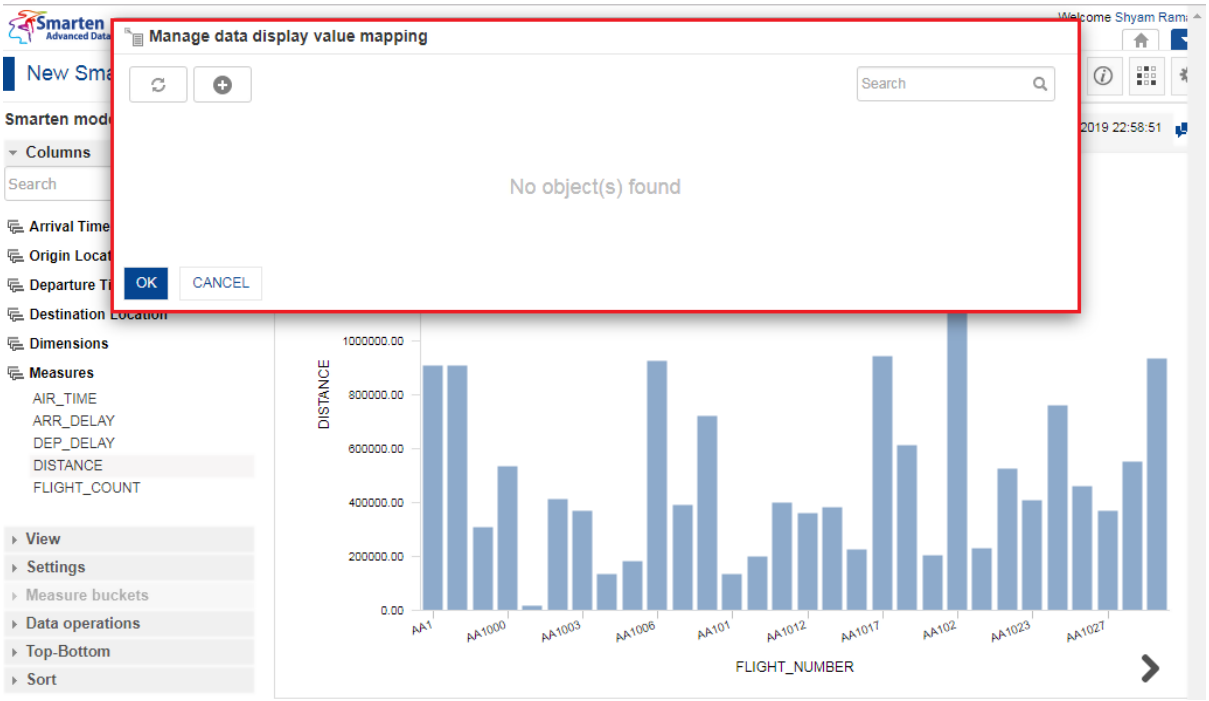
MANAGE DISPLAY NAME—THE SETTINGS ICON

4. Click the Manage data display icon.



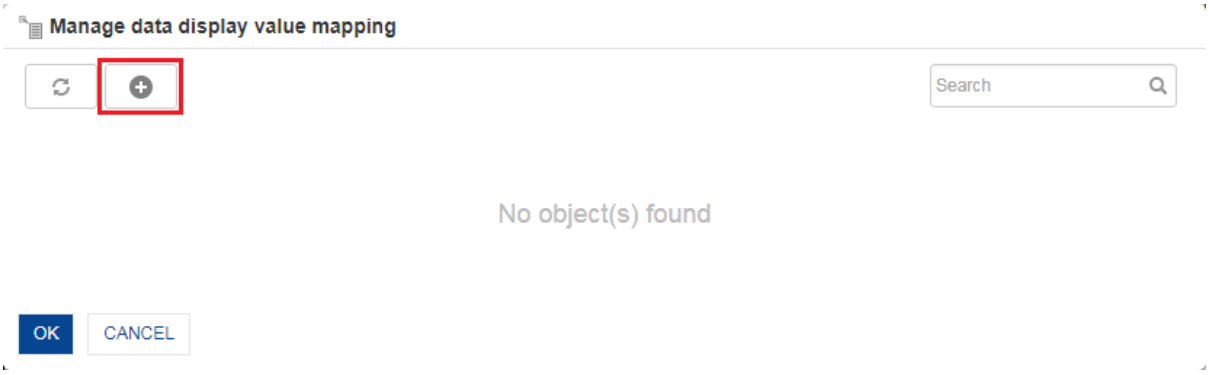
MANAGE DISPLAY NAME—THE MANAGE DISPLAY NAME ICON

The system displays the **Manage data display value mapping** dialog box.



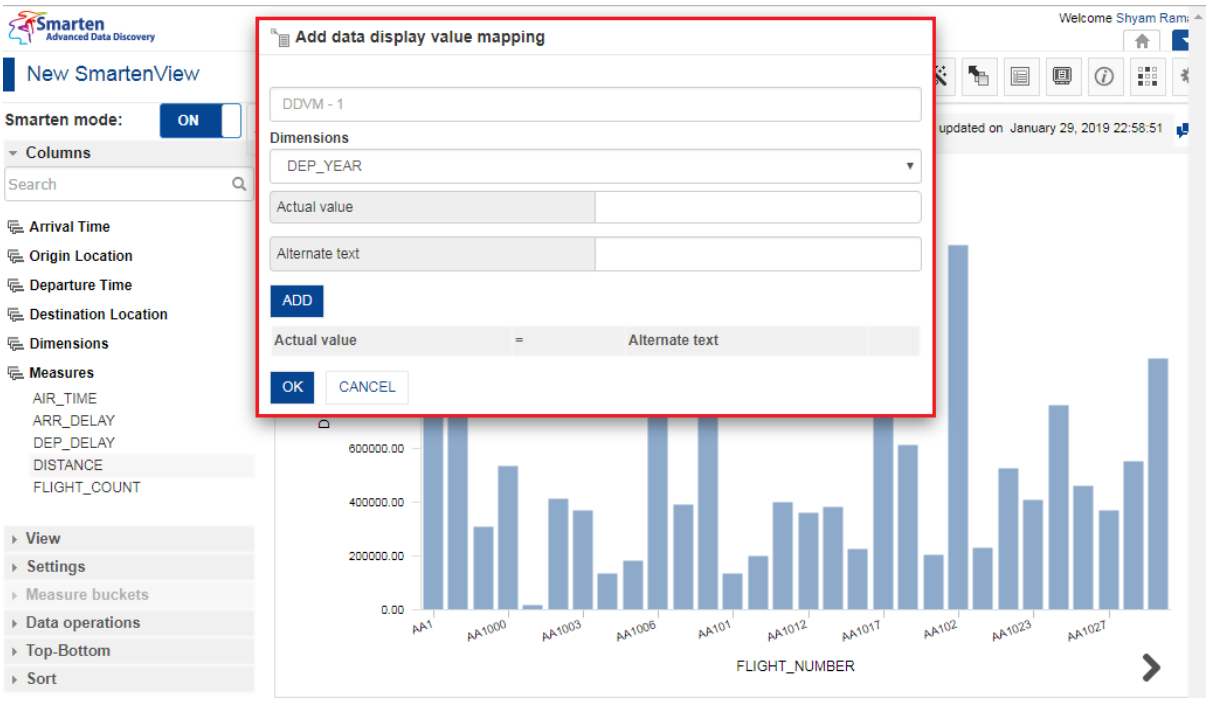
MANAGE DATA DISPLAY—THE MANAGE DATA DISPLAY VALUE MAPPING

5. Click the Add icon.



MANAGE DATA DISPLAY—THE ADD ICON

The system displays the **Add data display value mapping** dialog box.



MANAGE DATA DISPLAY—THE ADD DATA DISPLAY VALUE MAPPING DIALOG BOX

6. Specify a name for the mapping in the field.
7. Select an option from the **Dimensions** list to specify the column for which you want to add data display mapping.
8. Select a value for which you want to specify alternate text from the **Actual value** list.
9. Specify the alternate text for the value in the **Alternate text** field, and then click **ADD**.
10. You can repeat steps 7–9 to add more than one mapping, and then click **OK**.
11. Click **OK**.

6 Product and Support Information

Find more information about Smarten and its features at www.smarten.com
Support: support@smarten.com
Sales: sales@smarten.com
Feedback & Suggestions: support@smarten.com
Support & Knowledgebase Portal: support.smarten.com