

## Session Recap

**Session Topic:** SAS® Visual Analytics Explorer  
**Session Date:** 17Nov14  
**Recording:** <http://support.sas.com/training/us/lw/lwrecord.hsql?date=17Nov14&cocode=19884>

This session recap includes the Q&A from the session. Additional information and links to more detailed content are included.

Don't forget to [register](#) for additional Ask the Expert: SAS Visual Analytics sessions.

SAS Visual Analytics Toolkit	
	<ul style="list-style-type: none"> <li>▪ <a href="#">Product Overview</a></li> <li>▪ <a href="#">Getting Started Resources</a></li> <li>▪ <a href="#">Try the software yourself</a></li> <li>▪ <a href="#">Community</a></li> <li>▪ <a href="#">Free Video Tutorials</a></li> <li>▪ <a href="#">Documentation</a></li> <li>▪ <a href="#">Training</a></li> </ul>

<b>Question:</b>	<i>Is there a way to create stacked bars when I group items in a bar chart?</i>	
<b>Answer:</b>	Yes. On the <b>Properties</b> tab, you can change the <b>Grouping style</b> property to <b>Stack</b> so that the values of the grouping variable are displayed as segments of each bar.	
<b>Additional Information:</b>	This option is enabled if a data item is assigned to the <b>Group</b> role or if multiple measures are assigned to the <b>Measures</b> role.	
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Working with Bar Charts</a></li> </ul>	 <b>Videos</b> <ul style="list-style-type: none"> <li>• <a href="#">Create a Bar Chart</a></li> </ul>	 <b>Technical Papers</b> <ul style="list-style-type: none"> <li>• <a href="#">Discussion: Stacked and grouped bar chart</a></li> </ul>

<b>Question:</b>	<i>On a geo map, can you fine tune the zoom controls? Going in one level goes in too far. I'd like to be able to zoom in to a view between the default zoom lines.</i>	
<b>Answer:</b>	There is not a way to fine tune the zoom controls. You can zoom on the map using any of the following controls: <ul style="list-style-type: none"> <li>• Click the zoom bar to select your zoom level.</li> <li>• Press the + and – buttons on the zoom bar.</li> <li>• Scroll the mouse wheel to zoom in or zoom out at the location of the cursor.</li> </ul>	
<b>Additional Information:</b>	Clicking the middle of the map pan control  ( <b>Reset</b> ) will resize the map to show a majority of your data.	
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Working with Geo Maps</a></li> </ul>	 <b>Videos</b>	 <b>Technical Papers</b> <ul style="list-style-type: none"> <li>• <a href="#">More Than a Map: Location Intelligence with SAS Visual Analytics</a></li> <li>• <a href="#">The Forest and the Trees: See it All With SAS Visual Analytics Explorer</a></li> </ul>

<b>Question:</b>	<i>On a geo map, can you make it show only one state – not show any of the surrounding ones?</i>	
<b>Answer:</b>	You can apply a local or global filter to the geo map visualization to limit the data shown to one state, and use the map navigation control to zoom in and focus on that state. The surrounding states will still be shown on the map, but not contain any data values.	
<b>Additional Information:</b>		
 <b>Online Documentation</b>	 <b>Videos</b>	 <b>Technical Papers</b>
		<ul style="list-style-type: none"> <li>• <a href="#">More Than a Map: Location Intelligence with SAS Visual Analytics</a></li> </ul>

<b>Question:</b>	<i>I have an exploration that has hundreds of visualizations. Is there a way for me to search for a particular type of visualization? For a visualization that uses a specific data item?</i>	
<b>Answer:</b>	<p>Using the <b>Manage Visualizations</b> window enables you to manage all of your visualizations together. Each visualization is represented by a thumbnail image or by an icon of the visualization type if the visualization has not been displayed in the current session. You can use this window to filter the available visualizations by clicking  (<b>Additional search options</b>) and then selecting your filter parameters.</p>  <p>You can filter either on the visualization type or on the data items that are used in each visualization. Only the matching visualizations will appear in the <b>Available</b> list.</p>	
<b>Additional Information:</b>	To open the Manage Visualizations window, select <b>View</b> ⇒ <b>Manage Visualizations</b> from the menu bar or click  ( <b>Manage visualizations</b> ) ⇒ <b>Manage Visualizations</b> on the Dock panel.	
 <b>Online Documentation</b>	 <b>Videos</b>	 <b>Technical Papers</b>
<ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Working with Visualizations</a></li> </ul>		

<b>Question:</b>	<i>Is it possible to change the confidence interval for a forecast?</i>	
<b>Answer:</b>	Yes. On the <b>Properties</b> tab, you can change the <b>Confidence</b> property to specify the degree of confidence for the confidence band. The options are: 80%, 85%, 90%, 95% (default), and 99%.	
<b>Additional Information:</b>		
 <b>Online Documentation</b>	 <b>Videos</b>	 <b>Technical Papers</b>
<ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Working with Line Charts</a></li> <li>• <a href="#">User's Guide: Add Forecasting to an Existing Visualization</a></li> </ul>		<ul style="list-style-type: none"> <li>• <a href="#">The Desert and the Dunes: Finding Oases and Avoiding Mirages with SAS Visual Analytics</a></li> </ul>

**Question:** *What is scenario analysis and how do you implement it?*

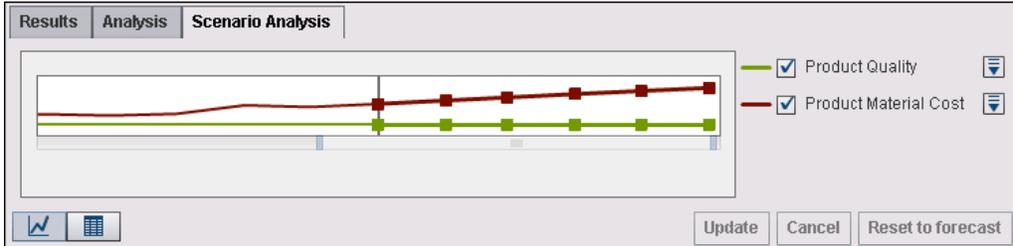
**Answer:**

Scenario analysis determines the effect on the forecast due to changes made in the underlying factors. If the forecast for a line chart contains underlying factors, then you can apply scenario analysis to explore hypothetical scenarios.

To apply scenario analysis:

- (1) Click the **Scenario Analysis** tab in the details section. For each measure assigned as an underlying factor, a line displays the values of the measure, and a series of points enables you to set the future values for the measure.

For example, Product Quality and Product Material Cost were found to influence the forecast of Product Sale:



- (2) Use the check box beside each measure to choose which measures are used in the scenario analysis.
- (3) For each measure used in the scenario analysis, set the future data values.
- (4) Click **Update** to apply the scenario to the forecast. The forecast is updated to show the results of the scenario. The original forecast is displayed as an additional line that is labeled **(Baseline)**.



**Additional Information:**

To remove the scenario analysis from a forecast, click **Reset to forecast** on the **Scenario Analysis** tab.



**Online Documentation**

- [User's Guide: Apply Scenario Analysis to a Forecast](#)



**Videos**

- [Create a Forecast and Use Scenario Analysis](#)
- [Getting Started with SAS Visual Analytics](#)
- [SAS Visual Analytics for Higher Education](#)



**Technical Papers**

- [The Desert and the Dunes: Finding Oases and Avoiding Mirages with SAS Visual Analytics](#)
- [The Forest and the Trees: See it All With SAS Visual Analytics Explorer](#)
- [Unlock the Power of SAS Visual Analytics Starting with Multiple Microsoft Excel Files](#)

<b>Question:</b>	<i>Is there a way to change the forecasted values for my underlying factors?</i>	
<b>Answer:</b>	<p>Yes. You can use the <b>Scenario Analysis</b> tab in the details section to set future data values for the underlying factors. You can set the future values using any of the following methods:</p> <ul style="list-style-type: none"> <li>• Drag each data point upward or downward on the line plot on the <b>Scenario Analysis</b> tab. To select the accuracy of the points, click  by the measure name and select <b>Snap interval</b>.</li> <li>• Enter the value for each data point by right-clicking the data point and selecting <b>Set point value</b>.</li> <li>• Set all of the values for the measure by right-clicking a data point and selecting <b>Set series values</b>. The Change future values window enables you to set all of the values to a specific value or to adjust future values relative to the most recently observed value of the measure.</li> </ul> <div data-bbox="430 478 847 861" style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p><b>Change future values</b> <span style="float: right;">✕</span></p> <p>Change all future values of Product Material Cost.</p> <p><input type="radio"/> Set all values to: <input style="width: 100px;" type="text" value="261869"/></p> <p>Adjust series values</p> <p><input checked="" type="radio"/> By percentage: <input style="width: 80px;" type="text"/> %</p> <p><input type="radio"/> By constant value: <input style="width: 80px;" type="text"/></p> <p style="text-align: right;"><input type="button" value="OK"/> <input type="button" value="Cancel"/></p> </div>	
<b>Additional Information:</b>	<p>To reset any data point to its original value, right-click the data point and select <b>Reset point</b>.          To reset all of the data points for a measure, right-click any data point and select <b>Reset entire series</b>.</p>	
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Apply Scenario Analysis to a Forecast</a></li> </ul>	 <b>Videos</b> <ul style="list-style-type: none"> <li>• <a href="#">Create a Forecast and Use Scenario Analysis</a></li> <li>• <a href="#">Getting Started with SAS Visual Analytics</a></li> <li>• <a href="#">SAS Visual Analytics for Higher Education</a></li> </ul>	 <b>Technical Papers</b> <ul style="list-style-type: none"> <li>• <a href="#">The Desert and the Dunes: Finding Oases and Avoiding Mirages with SAS Visual Analytics</a></li> <li>• <a href="#">The Forest and the Trees: See it All With SAS Visual Analytics Explorer</a></li> <li>• <a href="#">Unlock the Power of SAS Visual Analytics Starting with Multiple Microsoft Excel Files</a></li> </ul>

<b>Question:</b>	<i>I notice that sometimes I have the option to add a fit line to a heat map and other times I do not. Why?</i>	
<b>Answer:</b>	A heat map can use category or measure data items for the <b>X axis</b> and <b>Y axis</b> roles. Fit lines are not available if a category data item is assigned to one of those roles.	
<b>Additional Information:</b>	Fit lines are not available if your heat map contains hierarchies.	
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Working with Heat Maps</a></li> </ul>	 <b>Videos</b> <ul style="list-style-type: none"> <li>• <a href="#">Create a Heat Map</a></li> </ul>	 <b>Technical Papers</b> <ul style="list-style-type: none"> <li>• <a href="#">The Desert and the Dunes: Finding Oases and Avoiding Mirages with SAS Visual Analytics</a></li> </ul>

<b>Question:</b>	<i>Whenever I try to create a scatter plot, I always get a message that says that I have too many data values. Why is this happening?</i>	
<b>Answer:</b>	<p>Some of the visualizations in SAS Visual Analytics Explorer have limits to the number of data value that they can display. The limit values are affected by the <b>Visualization data threshold</b> setting in the Preferences window.</p> <ul style="list-style-type: none"> <li>• For a scatter plot that contains two measures that are not grouped, the default threshold is 40,000. If the data values exceed this number, the scatter plot is converted to a heat map.</li> <li>• For a scatter plot that contains two measures that are grouped, the default threshold is 40,000. If the data values exceed this number, an error message appears.</li> <li>• For a scatter plot that contains three or more measures that are not grouped, the default threshold is 80,000 divided by the number of measures. If the data values exceed this number, the scatter plot is converted to a correlation matrix.</li> <li>• For a scatter plot that contains three or more measures that are grouped, the default threshold is 80,000 divided by the number of measures. If the data values exceed this number, an error message appears.</li> </ul>	
<b>Additional Information:</b>	In addition to the data thresholds that are set by the Preferences window, there are server data limits that can be set by the system administrator. For more information about server data limits, see “Manage High-Cardinality Data” in the <i>SAS Visual Analytics: Administration Guide</i> .	
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User’s Guide: Data Limits for SAS Visual Analytics Explorer</a></li> <li>• <a href="#">User’s Guide: Specifying Your Preferences for the Explorer</a></li> <li>• <a href="#">SAS Visual Analytics: Administration Guide</a></li> </ul>	 <b>Videos</b> <ul style="list-style-type: none"> <li>• <a href="#">Create a Scatter Plot</a></li> </ul>	 <b>Technical Papers</b>

<b>Question:</b>	<i>Sometimes I try to switch my geo map to display regions instead of bubbles. The option is there, but when I select it, it still shows bubbles. Why is this happening? How can I see regions?</i>	
<b>Answer:</b>	The <b>Regions</b> map style is not available for custom geographic roles.	
<b>Additional Information:</b>		
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User’s Guide: Working with Geo Maps</a></li> </ul>	 <b>Videos</b> <ul style="list-style-type: none"> <li>• <a href="#">Create a Geo Map</a></li> </ul>	 <b>Technical Papers</b> <ul style="list-style-type: none"> <li>• <a href="#">More Than a Map: Location Intelligence with SAS Visual Analytics</a></li> </ul>

<b>Question:</b>	<i>When I create a geographic data item using the predefined categories, sometimes I get a note that tells me that there were some data items that did not match. Why is this happening?</i>	
<b>Answer:</b>	For predefined geographic roles, the values of your geography data items must match the lookup values that are used by SAS Visual Analytics. To view the lookup values, see <a href="http://support.sas.com/va64geo">http://support.sas.com/va64geo</a> .	
<b>Additional Information:</b>		
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User’s Guide: Defining a Geography Data Item</a></li> </ul>	 <b>Videos</b>	 <b>Technical Papers</b> <ul style="list-style-type: none"> <li>• <a href="#">More Than a Map: Location Intelligence with SAS Visual Analytics</a></li> <li>• <a href="#">Discussion: About Geomap</a></li> </ul>

<b>Question:</b>	<i>Which visualizations support hierarchies?</i>	
<b>Answer:</b>	The following visualizations enable you use the drill-down functionality of hierarchies: <ul style="list-style-type: none"> <li>• Crosstab</li> <li>• Bar chart</li> <li>• Line chart</li> <li>• Bubble plot</li> <li>• Network diagram</li> <li>• Box plot</li> <li>• Heat map</li> <li>• Geo map</li> <li>• Treemap</li> </ul>	
<b>Additional Information:</b>		
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Working with Visualizations</a></li> </ul>	 <b>Videos</b>	 <b>Technical Papers</b>

<b>Question:</b>	<i>I'm trying to change the placement of my totals in a crosstab, but the option is unavailable. Why?</i>	
<b>Answer:</b>	You probably have <b>Indented</b> selected on the <b>Properties</b> tab. For the indented layout, totals are always placed before the axis headings.	
<b>Additional Information:</b>		
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Working with Crosstabs</a></li> </ul>	 <b>Videos</b>	 <b>Technical Papers</b>

**Question:** *What is the difference between a calculated data item and an aggregated measure?*

**Answer:**

A calculated data item performs calculations on unaggregated data. The calculation expression is evaluated for each row in the data source before aggregations are performed. For example, you can create a new calculated data item Profit that subtracts Product Cost of Sale from Product Sale.

```
( Product Sale - Product Cost of Sa... )
```

Aggregated measures enable you to calculate new data items by using aggregated values. Aggregations are evaluated as part of the calculation expression. For each data item in your expression, you can select the aggregation type and the context for the aggregation. For example, you can create a new aggregated measure that looks at total product sale by group as a ratio of total product sales for all orders (ratio of total sales).

```
( Sum _ByGroup_ ( Product Sale ) / Sum _ForAll_ ( Product Sale ) )
```

In visualizations, the calculations will adjust based on the data items assigned to the visualization. For example, here is a crosstab that displays the ratio of total sales by continent:

Facility Continent	Ratio of Total Sales
Africa	0.04
Asia	0.03
Europe	0.19
North America	0.59
Oceania	0.02
South America	0.12

Here is a crosstab that displays the ratio of total sales (same aggregated measure) by product line:

Product Line	Ratio of Total Sales
Bead	0.07
Figurine	0.22
Game	0.21
Gift	0.08
Kiosk	0.07
Plush	0.20
Promo	0.07
Store	0.07

**Additional Information:**

For aggregated measures, you need to select an aggregation context for each aggregated operator in your expression. The following aggregation context values are available:

- **ByGroup** calculates the aggregation for each subset of the data item that is used in a visualization.
- **ForAll** calculates the aggregation for the entire data item (after filtering).

You can edit a calculated item or an aggregated measure by right-clicking the data item in the **Data** pane and selecting **Edit**. You can delete a calculated item or an aggregated measure by right-clicking the data item in the **Data** pane and selecting **Delete**.



**Online Documentation**

- [User's Guide: Creating Calculated Data Items](#)
- [User's Guide: Creating Aggregated Measures](#)
- [User's Guide: Editing a Calculated, Aggregated, or Derived Data Item](#)
- [User's Guide: Deleting a Calculated, Aggregated, or Derived Data Item](#)



**Videos**

- [Create Calculated Data Items](#)
- [Create Aggregated Measures in Explorer](#)



**Technical Papers**

- [Discussion: Analytics designer calculated item in a report](#)
- [Discussion: How to calculate the weighted average in SAS Visual Analytics in six easy steps](#)

<b>Question:</b>	<i>Which visualizations can use aggregated measures?</i>	
<b>Answer:</b>	Aggregated measures can be used in the following visualization types: <ul style="list-style-type: none"> <li>• Automatic chart</li> <li>• Crosstab</li> <li>• Bar chart</li> <li>• Line chart</li> <li>• Bubble plot (for grouped bubble plots only)</li> <li>• Geo map</li> <li>• Treemap</li> </ul>	
<b>Additional Information:</b>		
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Creating Aggregated Measures</a></li> </ul>	 <b>Videos</b>	 <b>Technical Papers</b>

<b>Question:</b>	<i>I have a crosstab that shows the average grade for different groups of students. Is there a way for me to display a missing value if a specific group has fewer than two students?</i>										
<b>Answer:</b>	Yes, you can create a new aggregated measure using an <b>IF ... ELSE</b> operator, which returns different values depending on whether the condition is true. Here is an example of the calculation: <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <pre> IF ( Count _ByGroup_ ( Test ) &lt; 2 ) RETURN Missing ELSE Avg _ByGroup_ ( Test ) </pre> </div> Using the result in a crosstab displays the following: <table border="1" style="margin: 10px 0;"> <thead> <tr> <th>Gender</th> <th>Number of Scores</th> <th>Average Test Score</th> </tr> </thead> <tbody> <tr> <td>F</td> <td>1</td> <td>.</td> </tr> <tr> <td>M</td> <td>8</td> <td>74.63</td> </tr> </tbody> </table>		Gender	Number of Scores	Average Test Score	F	1	.	M	8	74.63
Gender	Number of Scores	Average Test Score									
F	1	.									
M	8	74.63									
<b>Additional Information:</b>											
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Creating Calculated Data Items</a></li> <li>• <a href="#">User's Guide: Boolean Operators</a></li> </ul>	 <b>Videos</b>	 <b>Technical Papers</b>									

<b>Question:</b>	<i>Is there a way for me to change the color gradient range that is used in correlation matrices and heat maps?</i>	
<b>Answer:</b>	<p>For the correlation matrix, you can gradient colors by changing the <b>Color gradient</b> property on the <b>Properties</b> tab, but you cannot define a custom data range.</p> <p>The following visualization types enable you to customize the data range and the color gradient:</p> <ul style="list-style-type: none"> <li>• Bubble plot (with a continuous data item assigned to the <b>Color</b> role)</li> <li>• Network diagram (with the <b>Node Color</b> or <b>Link Color</b> role assigned)</li> <li>• Heat map</li> <li>• Geo map (with the <b>Color</b> role assigned)</li> <li>• Treemap (with the <b>Color</b> role assigned)</li> <li>• Word cloud (with the <b>Color</b> role assigned)</li> </ul> <p>To specify a custom color gradient, right-click the color gradient in the legend and select <b>Edit Color Gradient</b>. Then choose the color gradient from the drop-down list in the Edit Color Gradient window and click <b>OK</b>. You can also change the color gradient using the <b>Properties</b> tab.</p> <p>To specify a custom data range for a color gradient, right-click the color gradient in the legend and select <b>Configure Color Gradient</b>. In the Select Color Gradient window, clear the <b>Automatically adjust color range to data</b> check box. Use the <b>Lower</b>, <b>Inflection</b>, and <b>Upper</b> fields to customize the color gradient range and click <b>OK</b>. You can also specify a custom data range by clicking  (<b>Edit color gradient</b>) next to the <b>Color gradient</b> property on the <b>Properties</b> tab.</p>	
<b>Additional Information:</b>	<p>You can specify the midpoint as the inflection point (the point for the middle color in a three-color gradient) by selecting the <b>Use midpoint</b> check box.</p> <p>You can share data ranges and color gradients between visualizations by right-clicking the legend for the customized color gradient and selecting <b>Transfer Configuration</b>. In the Select Compatible Visualizations window, select the visualizations with which you would like to share the color gradient and click <b>OK</b>. All of the visualizations must support customized data ranges.</p> <p>To remove a customized or shared data range from a visualization, right-click the legend and select <b>Remove Custom Data Range</b>.</p>	
 <b>Online Documentation</b>	 <b>Videos</b>	 <b>Technical Papers</b>
<ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Working with Visualization Data Ranges and Color Gradients</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Create a Heat Map</a></li> <li>• <a href="#">Create a Geo Map</a></li> <li>• <a href="#">Create a Treemap</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">The Forest and the Trees: See it All With SAS Visual Analytics Explorer</a></li> </ul>

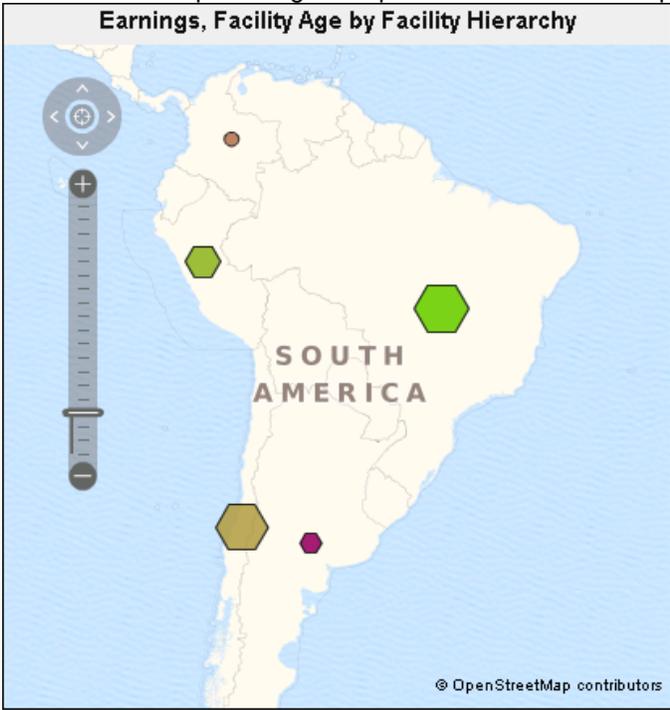
<b>Question:</b>	<i>Is there a way for me to change the aggregation for a measure in one visualization, not the entire exploration?</i>	
<b>Answer:</b>	<p>Yes, right-click the data item in the visualization that you would like to change and select <b>Aggregation</b> ⇒ <b>type of aggregation</b>. This aggregation is used only for the current visualization. All other visualizations that use this data item will use the default aggregation.</p>	
<b>Additional Information:</b>	<p>The following aggregation types are available:</p> <ul style="list-style-type: none"> <li>• Sum</li> <li>• Average</li> <li>• Maximum</li> <li>• Minimum</li> <li>• Count</li> <li>• Default</li> </ul>	
 <b>Online Documentation</b>	 <b>Videos</b>	 <b>Technical Papers</b>
<ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Managing Data Properties</a></li> </ul>		

<b>Question:</b>	<i>Is there an easy way to create a date hierarchy?</i>	
<b>Answer:</b>	<p>For date, time, and datetime data items, you can derive a hierarchy automatically by right-clicking a date, time, or datetime data item in the <b>Data</b> pane and selecting one of the following values:</p> <ul style="list-style-type: none"> <li>• <b>Create Date Hierarchy</b> creates a hierarchy with levels for year, quarter, month, and day.</li> <li>• <b>Create Date and Time Hierarchy</b> creates a hierarchy with levels for year, quarter, month, day, hour, minute, and second.</li> <li>• <b>Create Time Hierarchy</b> creates a hierarchy with levels for hour, minute, and second.</li> </ul> <p>Depending on the format of the data item, some of the levels might not be created.</p>	
<b>Additional Information:</b>	<p>New calculated items are created for each level in the hierarchy. By default, the new calculated items are hidden. You can edit a derived hierarchy by right-clicking the hierarchy in the <b>Data</b> pane and selecting <b>Edit</b>. You can delete a derived hierarchy by right-clicking the hierarchy in the <b>Data</b> pane and selecting <b>Delete</b>. If you delete a derived hierarchy, then a window appears that enables you to delete the calculated items associated with that hierarchy.</p>	
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Derive a Hierarchy from a Date, Time, or Datetime Data Item</a></li> <li>• <a href="#">User's Guide: Edit a Hierarchy</a></li> <li>• <a href="#">User's Guide: Delete a Hierarchy</a></li> </ul>	 <b>Videos</b>	 <b>Technical Papers</b>

<b>Question:</b>	<i>Whenever I add a hierarchy to a bar chart and I drill down, the axes adjust to the data items shown in that level of the hierarchy. Is there a way that I can keep the same scale for each level?</i>	
<b>Answer:</b>	<p>By default, the axes of your visualizations adjust automatically to your data. If you change the data that is displayed by applying filters or ranks or by drilling down, then the data ranges and scaling of your axes will change to fit the data. You can lock the axes to retain the same data ranges and scaling by clicking  beside the axis heading.</p>	
<b>Additional Information:</b>	<p>To unlock an axis (re-enable automatic adjustments), click  beside the axis heading.</p> <p>For a locked axis, you can adjust the visible data range by dragging the scroll bar that appears over the axis tick marks or by right-clicking a measure heading and selecting <b>Set Visible Axis Range</b>.</p> <p>You can also transfer the axis settings to a compatible visualization by right-clicking the measure heading and selecting <b>Transfer Axis Settings</b>. From the Select Compatible Visualizations window, select the visualization to which you want to transfer the axis settings.</p>	
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Manage Visualization Axes</a></li> </ul>	 <b>Videos</b>	 <b>Technical Papers</b>

<b>Question:</b>	<i>Can I calculate a character data item?</i>	
<b>Answer:</b>	Yes, you can use calculated data items to create character values and date and time values. To create a calculated character data item, select <b>Data</b> ⇨ <b>New Calculated Data Item</b> . Select <b>Character</b> as the <b>Result type</b> and build an expression using character data items, character operators, or character values.	
<b>Additional Information:</b>	<p>The following character operators are available:</p> <p><b>Text (Simple) Operators</b></p> <ul style="list-style-type: none"> <li>• <b>Concatenate</b> appends the second input string to the first input string.</li> <li>• <b>Contains</b> specifies that a matching value must contain the specified string.</li> <li>• <b>EndsWith</b> specifies that a matching value must contain the specified string at the end of the value.</li> <li>• <b>Format</b> applies a SAS format to an input value.</li> <li>• <b>LowerCase</b> changes all of the characters in a text string to lowercase.</li> <li>• <b>NotContains</b> specifies that a matching value must not contain the specified string.</li> <li>• <b>StartsWith</b> specifies that a matching value must contain the specified string at the start of the value.</li> <li>• <b>UpCase</b> changes all of the characters in the text string to uppercase.</li> </ul> <p><b>Text (Advanced) Operators</b></p> <ul style="list-style-type: none"> <li>• <b>GetWord</b> returns a word from an input string where the words are separated by spaces, periods, or other special characters.</li> <li>• <b>RemoveBlanks</b> removes space characters from the input string.</li> <li>• <b>RemoveChars</b> removes all instances of a set of characters from the input string.</li> <li>• <b>RemoveWord</b> removes a word from an input string where the words are separated by spaces, periods, or other special characters.</li> <li>• <b>Replace</b> replaces a substring within the input string with a replacement string.</li> <li>• <b>ReplaceWord</b> replaces a word from an input string where the words are separated by spaces, periods, or other special characters.</li> <li>• <b>Reverse</b> reverses the order of the characters in the input string.</li> <li>• <b>Substring</b> returns a substring from the input string based on the position of the characters.</li> <li>• <b>Update</b> replaces a substring from the input string based on the position of the characters.</li> <li>• <b>URLDecode</b> removes URL encoding from the input string.</li> <li>• <b>URLEncode</b> applies URL encoding to the input string.</li> </ul>	
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Creating Calculated Data Items</a></li> <li>• <a href="#">User's Guide: Text (Simple) Operators</a></li> <li>• <a href="#">User's Guide: Text (Advanced) Operators</a></li> </ul>	 <b>Videos</b>	 <b>Technical Papers</b>

<b>Question:</b>	<i>Is there a setting that I can use so that every time I have a particular product line in a visualization it is associated with a specific color?</i>	
<b>Answer:</b>	You can assign specific colors to your category values to ensure that they are always represented with that color. To assign colors to category values, right-click a category data item in the <b>Data</b> pane and select <b>Colors</b> . For each category value to which you want to assign a color, select the value from the <b>Choose</b> drop-down list and click the color box to select a color. Click <b>Apply</b> to save the selection and click <b>OK</b> to apply the changes.	
<b>Additional Information:</b>	Assigned colors are used in visualizations where that data item is assigned to the <b>Group</b> role.	
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Managing Data Properties</a></li> </ul>	 <b>Videos</b> <ul style="list-style-type: none"> <li>• <a href="#">Assign Colors to Category Variables for Use in Visualizations</a></li> </ul>	 <b>Technical Papers</b> <ul style="list-style-type: none"> <li>• <a href="#">The Forest and the Trees: See it All With SAS Visual Analytics Explorer</a></li> </ul>

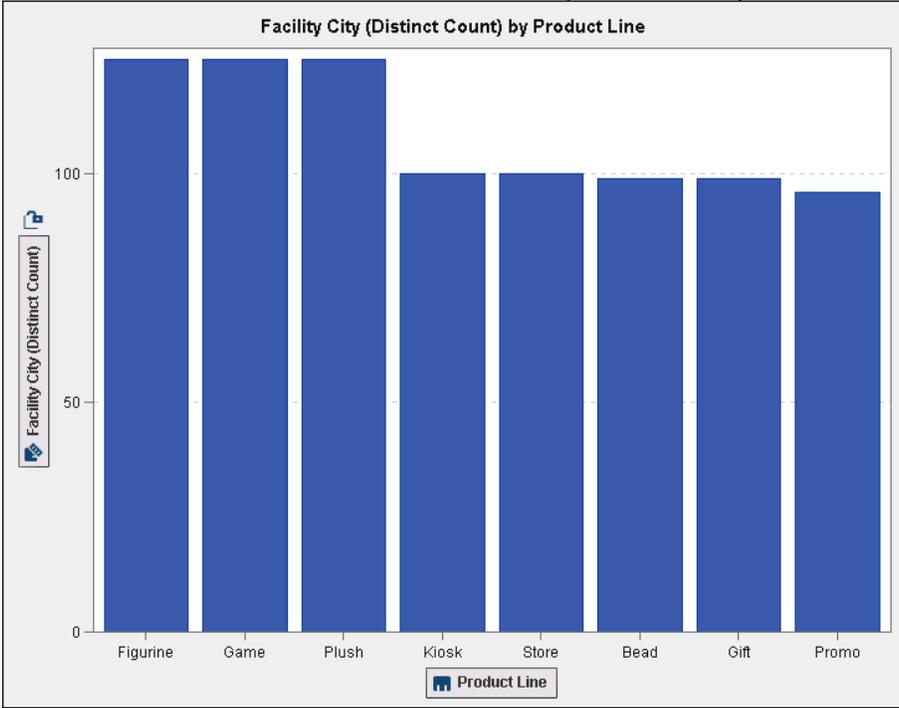
<b>Question:</b>	<i>Is there a way to distinguish between bubbles in my geo map that have negative values or positive values?</i>	
<b>Answer:</b>	<p>Yes. On the <b>Properties</b> tab, you can change the <b>Size scale</b> property to <b>Magnitude</b>, which specifies that the bubble sizes are scaled relative to zero and the greatest absolute value in your data. A negative value is displayed as a circle with a waving edge. For this scaling type, the difference in bubble sizes is proportional to the difference in absolute values.</p> <p>Here is an example of a geo map where the <b>Size scale</b> property is set to <b>Magnitude</b>:</p> 	
<b>Additional Information:</b>	<p>By default, the <b>Size scale</b> property is set to <b>Linear</b>, which specifies that the bubbles sizes are scaled relative to the minimum and maximum values in your data. A negative value is displayed as a smaller bubble than a positive value. For this scaling type, the difference in bubble sizes might not be proportional to the difference in values.</p> <p>Note: The <b>Size scale</b> property is available only for Bubble plots and the <b>Bubbles</b> map style for Geo maps.</p>	
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Working with Geo Maps</a></li> <li>• <a href="#">User's Guide: Working with Bubble Plots</a></li> </ul>	 <b>Videos</b> <ul style="list-style-type: none"> <li>• <a href="#">Create a Geo Map</a></li> </ul>	 <b>Technical Papers</b> <ul style="list-style-type: none"> <li>• <a href="#">More Than a Map: Location Intelligence with SAS Visual Analytics</a></li> </ul>

<b>Question:</b>	<i>I want to see data labels on my line chart, but they are all scrunched together and hard to read. Can I change that?</i>	
<b>Answer:</b>	<p>Yes. When <b>Show data labels</b> is selected on the <b>Properties</b> tab, Visual Analytics Explorer attempts to show all data labels in the line chart. Selecting <b>Thin data labels</b> on the <b>Properties</b> tab removes data labels as necessary to avoid overlap in the line chart. The thinning algorithm retains the labels for the local high points and low points on the line chart.</p>	
<b>Additional Information:</b>	<p>You can always view a data value as a data tip when you position the cursor over a data value.</p>	
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Working with Line Charts</a></li> </ul>	 <b>Videos</b>	 <b>Technical Papers</b>

**Question:** *How do I create a data item that contains the distinct values of one of my categories? How could I use that in a visualization?*

**Answer:** You can create a distinct count for a category data item by right-clicking the data item in the **Data** pane and selecting **Derive Distinct Count**. A distinct count displays the number of distinct values for the category that it is based on.

For example, you might derive the distinct count of a category that contains city names. If you create a bar chart using the derived item and a category that contains product lines, the bar chart will show the number of cities where each product line is produced:



Product Line	Facility City (Distinct Count)
Figurine	120
Game	120
Plush	120
Kiosk	100
Store	100
Bead	100
Gift	100
Promo	95

**Additional Information:** You can edit a derived data item by right-clicking the data item in the **Data** pane and selecting **Edit**. You can delete a derived data item by right-clicking the data item in the **Data** pane and selecting **Delete**.

 **Online Documentation**

- [User's Guide: Creating Derived Items](#)
- [User's Guide: Editing a Calculated, Aggregated, or Derived Data Item](#)
- [User's Guide: Delete a Calculated, Aggregated, or Derived Data Item](#)

 **Videos**

- [Create Aggregated Measures in Explorer](#)

 **Technical Papers**

<b>Question:</b>	<i>What types of derived data items can I create? Where can I use them?</i>	
<b>Answer:</b>	<p>Derived data items are aggregated measures that perform calculations for your data. You can create derived data items for categories and measures in your exploration.</p> <p>For categories, you can derive distinct counts by right-clicking the data item in the <b>Data</b> pane and selecting <b>Derive Distinct Count</b>.</p> <p>For measures, you can create derived items by right-clicking the data item in the <b>Data</b> pane and selecting <b>Create</b> ⇒ <i>[item-type]</i>. If you select a type that uses a date, you need to select the date data item that is used for calculations.</p> <p>For measures, you can create the following types of derived items:</p> <ul style="list-style-type: none"> <li>• <b>Difference from Previous Parallel Period</b> displays the difference between the value for the current time period and the value for the previous parallel time period within a larger time interval.</li> <li>• <b>Difference from Previous Period</b> displays the difference between the value for the current time period and the value for the previous time period.</li> <li>• <b>Percent Difference from Previous Parallel Period</b> displays the percentage difference between the value for the current time period and the value for the previous parallel time period within a larger time interval.</li> <li>• <b>Percent Difference from Previous Period</b> displays the percentage difference between the value for the current time period and the value for the previous time period.</li> <li>• <b>Percent of Subtotals</b> displays the percentage of the subtotal value for the measure on which it was based, for crosstabs only.</li> <li>• <b>Percent of Total</b> displays the percentage of the total value for the measure on which it was based.</li> <li>• <b>Period to Date</b> displays the aggregated value for the current time period and all of the previous time periods within a larger time interval.</li> <li>• <b>Year over Year Growth</b> displays the percentage difference between the current time period and an equivalent time period from the previous year.</li> <li>• <b>Year to Date</b> displays the aggregated value for the current time period and all of the previous time periods within the year.</li> <li>• <b>Year to Date Growth</b> displays the percentage difference between the year-to-date value for the current time period and the year-to-date value for the same time period of the previous year.</li> </ul> <p>Difference from Previous Parallel Period, Difference from Previous Period, Percent Difference from Previous Parallel Period, Percent Difference from Previous Period, Period to Date, Year over Year Growth, Year to Date, and Year to Date Growth derived items are not available if your data source does not contain a date data item that includes the year.</p> <p>Derived items can be used in the following visualization types:</p> <ul style="list-style-type: none"> <li>• Automatic chart</li> <li>• Crosstab</li> <li>• Bar chart</li> <li>• Line chart</li> <li>• Bubble plot (grouped bubble plots only)</li> <li>• Network diagram</li> <li>• Geo map</li> <li>• Treemap</li> </ul>	
<b>Additional Information:</b>	<p>You can edit a derived data item by right-clicking the data item in the <b>Data</b> pane and selecting <b>Edit</b>.</p> <p>You can delete a derived data item by right-clicking the data item in the <b>Data</b> pane and selecting <b>Delete</b>.</p>	
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Creating Derived Items</a></li> <li>• <a href="#">User's Guide: Editing a Calculated, Aggregated, or Derived Data Item</a></li> <li>• <a href="#">User's Guide: Delete a Calculated, Aggregated, or Derived Data Item</a></li> </ul>	 <b>Videos</b> <ul style="list-style-type: none"> <li>• <a href="#">Create Time Period Calculations</a></li> <li>• <a href="#">What's New in SAS Visual Analytics Explorer 6.3</a></li> </ul>	 <b>Technical Papers</b>

<b>Question:</b>	<i>Is there a way that we can create stacked bars on a dual axis bar-line chart?</i>	
<b>Answer:</b>	No, the dual axis bar-line chart does not support multiple measures for the bar or groups. Using SAS Visual Analytics Graph Builder, you can create a custom graph that overlays a line chart on a bar chart. Adding the Group role to the bar chart would enable you to group the bars based on a category data item. On the <b>Properties</b> tab, under the <b>Bar</b> properties, you can then change the <b>Grouping style</b> from <b>Cluster</b> to <b>Stack</b> .	
<b>Additional Information:</b>	The SAS Visual Analytics Graph Builder enables you to create graph objects, which then become available in SAS Visual Analytics Designer for use in reports.	
 <b>Online Documentation</b> <ul style="list-style-type: none"> <li>• <a href="#">User's Guide: Creating Custom Graph Objects</a></li> <li>• <a href="#">User's Guide: Modifying Custom Graph Objects</a></li> </ul>	 <b>Videos</b> <ul style="list-style-type: none"> <li>• <a href="#">Create a Custom Graph with the Graph Builder</a></li> </ul>	 <b>Technical Papers</b> <ul style="list-style-type: none"> <li>• <a href="#">Create Custom Graphs in SAS Visual Analytics Using SAS Visual Analytics Graph Builder</a></li> </ul>

If you have any questions, please contact:

SAS Education Customer Service  
1-800-333-7660  
[training@sas.com](mailto:training@sas.com)