

Oracle® Fusion Middleware

Basics Guide for Oracle Business Intelligence

11g Release 1 (11.1.1)

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Introduction to Oracle Business Intelligence that explains how to get started building reports.

Oracle Fusion Middleware Basics Guide for Oracle Business Intelligence, 11g Release 1 (11.1.1)

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Preface

Basics Guide for Oracle Business Intelligence explains how to use Oracle Business Intelligence Enterprise Edition to analyze data by creating and editing reports and dashboards

Topics

- [Audience](#)
- [Documentation Accessibility](#)
- [Related Documents](#)
- [Conventions](#)

Audience

Basics Guide for Oracle Business Intelligence is intended for anyone who plans to use Oracle BI Enterprise Edition, to create, manage, and organize analyses and who run, share, and interact with analyses. It also includes users who view analyses on a mobile device.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Related Documents

See the Oracle Business Intelligence documentation library for a list of related Oracle Business Intelligence documents, especially *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition*.

In addition:

- Go to the Oracle Learning Library for Oracle Business Intelligence-related online training resources.

- Go to the Product Information Center support note (Article ID 1267009.1) on My Oracle Support at <https://support.oracle.com>.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Part I

Introducing Oracle Business Intelligence Enterprise Edition

This part introduces you to Oracle BI Enterprise Edition.

Chapters:

- [Getting Started with Oracle Business Intelligence Enterprise Edition](#)

Getting Started with Oracle Business Intelligence Enterprise Edition

This section describes how to get started with Oracle BI Enterprise Edition.

Topics:

- [About Oracle BI Enterprise Edition](#)
- [Roadmap for Users](#)
- [Accessing Oracle BI Enterprise Edition](#)
- [Finding and Exploring Existing Content](#)
- [Analyzing and Interacting with Information for Insight](#)
- [Using Oracle BI Enterprise Edition on Mobile Devices](#)
- [Top Tasks for Oracle BI Enterprise Edition](#)

About Oracle BI Enterprise Edition

Oracle BI Enterprise Edition (sometimes simply referred to as Oracle Business Intelligence) provides a full range of business intelligence capabilities that enable you to:

- Collect up-to-date data from your organization.
- Present the data in easy-to-understand formats (such as tables and graphs).
- Deliver data in a timely fashion to the employees in your organization.

These capabilities enable your organization to make better decisions, take informed actions, and implement more-efficient business processes.

See the Oracle Business Intelligence documentation library for a list of related Oracle Business Intelligence documents, especially *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition*.

Roadmap for Users

Oracle BI Enterprise Edition offers features for different kinds of users who perform various tasks. The largest user population is end users who create analyses and dashboards to enable them to glean important information about their business.

Task	User	More Information
Access Oracle BI Enterprise Edition.	All	Accessing Oracle BI Enterprise Edition
Create analyses that show the data in views on dashboards. Share these analyses with co-workers, clients, and business partners.	Content developers	Creating Your First Analysis
Filter the data in the analyses.	Content developers	Creating Filters for Columns
Add views to the analysis.	Content developers	Adding Views
Add interactivity to the analysis.	Content developers	Adding Interactivity to Analyses
Create prompts to drive the display of data in the analyses on dashboard pages.	Content developers	Creating Prompts
Build interactive dashboards for users to analyze data.	Content developers	Creating Your First Dashboard
Find and explore content.	Content developers and content consumers	Finding and Exploring Existing Content
Analyze information for insight.	Content consumers	Analyzing and Interacting with Information for Insight

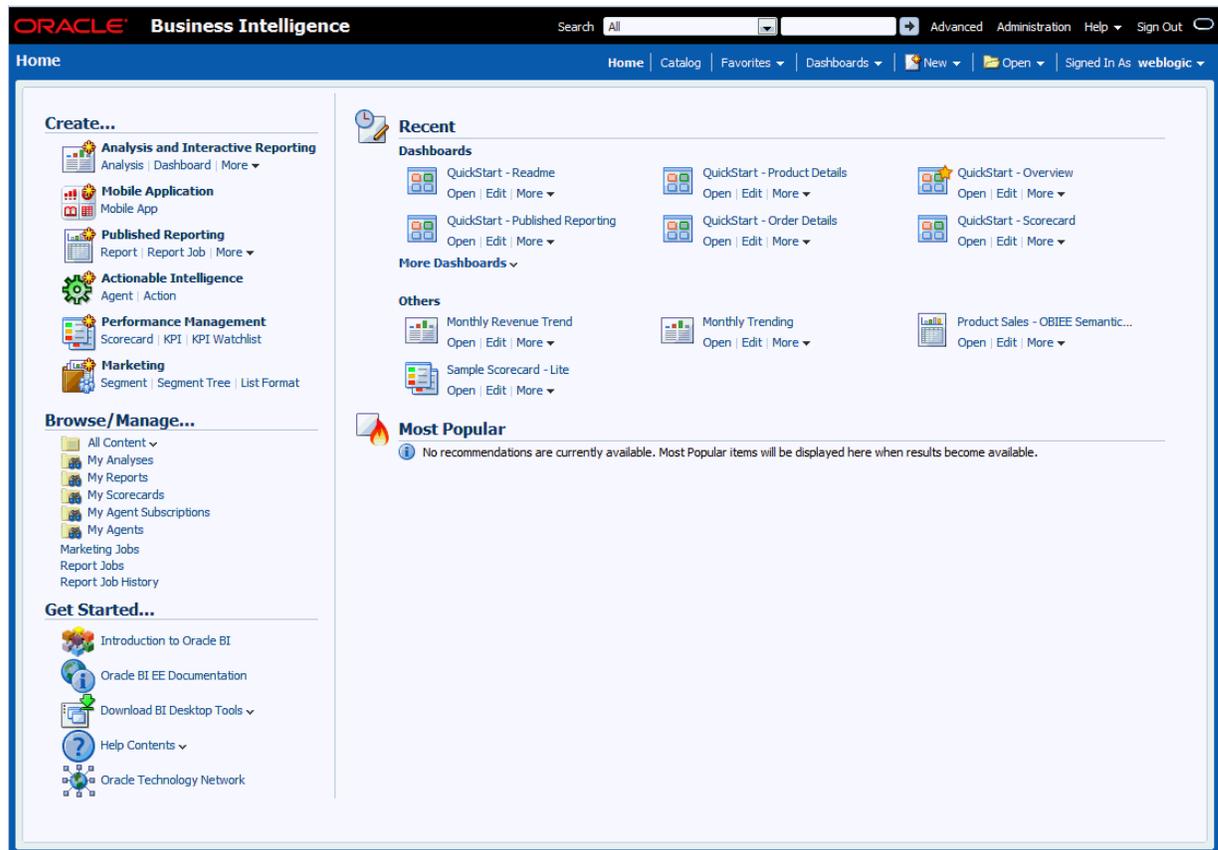
Accessing Oracle BI Enterprise Edition

To access Oracle BI Enterprise Edition, you use a URL, a user ID, and a password that have been provided by your organization.

When you sign in to Oracle BI Enterprise Edition for the first time, you see one of the following:

- Your personal dashboard, named My Dashboard.
- The Home page.
- A dashboard specific to your job function (for example, Call Center representative)

From these pages, you can access the various features for which you have the appropriate privileges.



Finding and Exploring Existing Content



Video

You can find the analyses, dashboards, and other things that you access frequently on the Home page. If you cannot find what you are looking for, enter the name of the item in the Search box at the top of the page. Or click the **Catalog** link to explore all available content. For example, you might want to find the Sales Forecast analysis that you edited yesterday.

To find and explore existing content:

- On the Home page, explore the objects that are listed under the Dashboards, Recent, and Favorites headings.
- In the Search box at the top of the page, enter the name of the object that you want to find.
- Click the Catalog link to display the Catalog page where you can see lists of objects and search for objects.

Analyzing and Interacting with Information for Insight

You use Oracle BI Enterprise Edition to create analyses of your data. When an analysis is built, you can share it with others, who then interact with the data and analyze the data for insight. By focusing on the data values, users can glean important information about the state of the company or their products. For examples users can pivot the data. They can drill in the data to see greater detail.

Using Oracle BI Enterprise Edition on Mobile Devices

You can easily access Oracle BI Enterprise Edition analyses and dashboards through Oracle Business Intelligence Mobile. You see the same content, and it is optimized for viewing on your mobile device. You can install Oracle Business Intelligence Mobile on your mobile device from Apple's App Store or from the Google Play store.

For information about using Oracle BI Enterprise Edition on mobile devices, see the Oracle Business Intelligence Mobile Help system that is available from within the mobile application.

Top Tasks for Oracle BI Enterprise Edition

The following list provides the top tasks for analyzing:

- [Accessing Oracle BI Enterprise Edition](#)
- [Finding and Exploring Existing Content](#)  Video
- [Creating Your First Analysis](#)  Video
- [Adding and Removing Columns in Analyses](#)  Video
- [Adding Interactivity to Analyses](#)  Video
- [Setting Properties for Columns](#)  Video
- [Formatting Columns](#)  Video
- [Exporting Content from Analyses and Dashboards](#)  Video
- [Editing the Formula for a Column](#)  Video
- [Adding Views](#)  Video
- [Editing Views](#)  Video
- [Sorting Values in Views](#)  Video
- [Creating Your First Dashboard](#)  Video
- [Adding Content to Dashboard Pages](#)  Video
- [Preparing to Print Dashboards](#)  Video
- [Creating Filters for Columns](#)  Video
- [Creating Groups and Calculated Items](#)  Video
- [Creating Column Prompts](#)  Video
- [Adding Prompts to Dashboard Pages](#)  Video
- [Searching the Catalog](#)  Video
- [Adding Objects to Favorites](#)  Video
- [Setting Preferences](#)  Video
- [Assigning Permissions to Objects](#)  Video

Part II

Reporting Data in Oracle Business Intelligence Enterprise Edition

This part explains how to work with reports of data in Oracle BI Enterprise Edition.

- [Creating Analyses](#)
- [Viewing Data in Different Ways](#)
- [Building Dashboards](#)
- [Filtering and Selecting Data for Analyses](#)
- [Prompting in Analyses and Dashboards](#)
- [Making Analyses Interactive](#)
- [Accessing and Organizing Catalog Content](#)

Creating Analyses

This section describes how to create an [analysis](#) for Oracle BI Enterprise Edition.

Topics:

- [Typical Workflow for Creating Analyses](#)
- [Creating Your First Analysis](#)
- [Adding and Removing Columns in Analyses](#)
- [Saving Analyses](#)
- [Adding Interactivity to Analyses](#)
- [Applying Formatting to Objects](#)
- [Setting Properties for Columns](#)
- [Formatting Columns](#)
- [Exporting Content from Analyses and Dashboards](#)
- [Editing Formulas or Calculated Measures](#)
- [Setting Properties for Analyses](#)
- [Setting Preferences](#)
- [Importing Formatting from Another Analysis](#)
- [Combining Columns to Display Data Differently](#)
- [Advanced Techniques: Examining the Logical SQL Statements for Analyses](#)
- [Advanced Techniques: Referencing Stored Values in Variables](#)

For more detailed information about creating analyses, see *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition*.

Typical Workflow for Creating Analyses

To start creating analyses, refer to the typical workflow described in the following table:

Task	Description	More Information
Create an analysis	Select and arrange columns that you want to use in an analysis.	Creating Your First Analysis
Add and remove columns in an analysis	Modify the analysis by adding and removing columns.	Adding and Removing Columns in Analyses

Task	Description	More Information
Format columns	Specify formatting such as font, alignment, and borders for columns.	Formatting Columns
Set properties for columns	Specify properties such as heading and value formats, display of data, and conditional formatting.	Setting Properties for Columns
Work with the data in the analysis.	Add formulas and calculated measures to the analysis.	Editing Formulas or Calculated Measures
Affect the values of data in the analysis.	Specify filters, selection steps, groups, and calculated items for the analysis.	Filtering and Selecting Data for Analyses
Save an analysis	Save an analysis for your personal use or share it with other users.	Saving Analyses

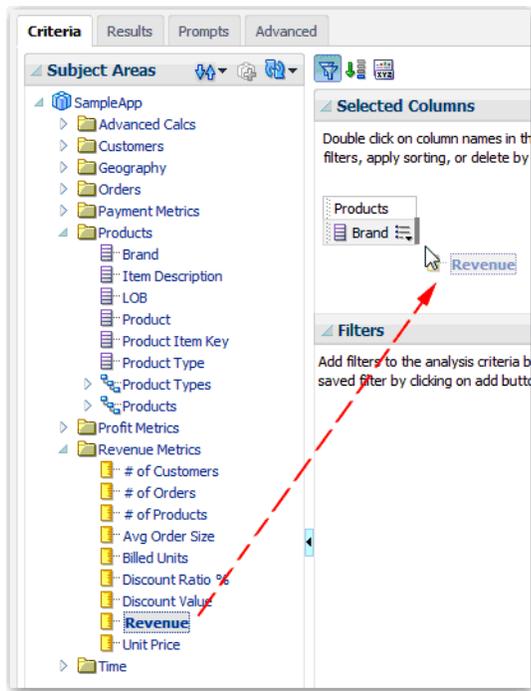
Creating Your First Analysis



You can quickly create an [analysis](#), which provides answers to business questions by querying against your organization's data. For example, you can select the SampleApp subject area and drag and drop the Brand and Revenue columns to the Selected Columns pane.

To quickly create an analysis:

1. On the Home page, click **New** then select **Analysis**.
2. Drag and drop the columns that you want to include in the analysis from the Subject Areas pane to the Selected Columns pane.



3. Click the Results tab to analyze returned data and answer business questions. The results of the analysis are displayed in a table or pivot table.



Adding and Removing Columns in Analyses



Video

Columns contain the individual pieces of data that an [analysis](#) returns. You manage columns in the Selected Columns pane of the Criteria tab in the Analysis editor. In the pane, you can reorder the columns to affect their display in the analysis, combine the results of analyses, and remove columns from the criteria.

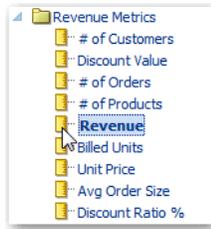
Columns have names that indicate the types of information that they contain, such as Account or Revenue. For example, you can add a Revenue column to a Sales Results analysis.

To add a column:

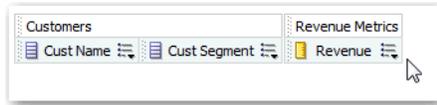
1. Open the analysis for editing.
2. Optionally in the Subject Area pane, click **Sort Subject Area**, then select **A to Z** to sort in ascending order. Select **Z to A** to sort in descending order. Select **Sort in Saved Order** to return the list order to its original state.
3. Optionally in the Subject Area pane, ensure that you see the most recent columns. If you have administrator privileges, then click **Refresh Display** and select the appropriate option.

Option	Description
Refresh Display	Refreshes the subject area without refreshing the Oracle Business Intelligence server cache. Select this option when the subject area does not contain the columns that you expect to see.
Reload Server Metadata	Reloads the subject area's metadata when you know the administrator has built new metadata in the repository. Select this option when you refresh the display, and still the subject area display does not contain the columns that you expect to see.

4. Move a column from the Subject Area pane on the Analysis editor: Criteria tab to the Selected Columns pane by using one of the following methods:
 - Select a column from the Subject Area pane.

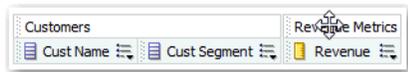


Drag and drop the column to any position within the columns on the Selected Columns pane.



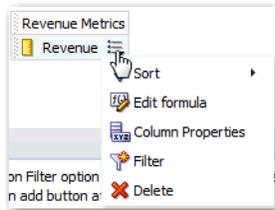
Tip: To select multiple non-contiguous columns, press and hold the Ctrl key, click each column to include, then drag the columns to the Selected Columns pane.

- Double click on the column in the Subject Area pane.
5. To change the order of the column, use the crosshairs on the column to drag and drop the column to a different position.



To remove a column:

1. Open the analysis for editing.
2. In the Selected Columns pane, click **Options** beside the column name.



3. Click **Delete**.

To remove all the columns, click **Remove all columns from criteria**. Note that you are not to confirm the removal, and there is no undo available for this option.

Tip: Instead of removing columns, you can hide a column whose appearance adds no value to the analysis. For information, see [Setting Properties for Columns](#).

Saving Analyses

After you create an analysis, you can save it for future use. For example, you can save the Brand Revenue analysis in the Shared Folders folder. As a result, all the brand managers with access to the folder can see it.

To save an analysis:

1. Open the analysis for editing.
2. Make the appropriate edits.
3. Click **Save Analysis** to display the dialog to save the analysis.
4. In the Save As dialog, select a folder and specify a name and optional description for the analysis. If you want other people to be able to see the analysis, then save the analysis in a folder under the Shared Folders folder. If you only want it for yourself, then save the analysis in My Folders.

When you click **Refresh Display** at the bottom of the pane, the analysis is listed under the folder in which you saved it.

5. Click **OK**.

Adding Interactivity to Analyses

Video

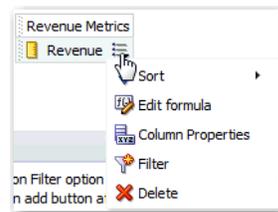
In analyses, views that display data are not static. You can make views dynamic by specifying the interactions that are available to those who left-click in a view or right-click to display a popup menu. The default primary interaction is a left-click that drills down to detail in the data, if data is hierarchical.

Other interactions are available as options on a right-click popup menu. These interactions can include displaying a web page and linking views such that one view drives changes to data in one or more other views. You can also specify that no interactions are available.

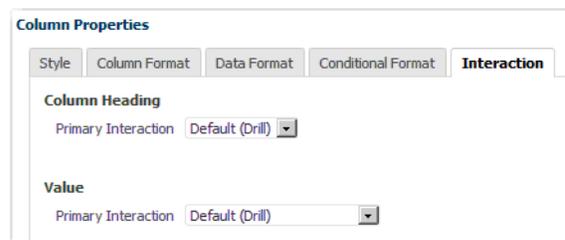
For example, you can specify the default primary interaction (the left-click action) for the Region column as **Drill**. This enables you to drill down to information by state by left-clicking in the column.

To add interactivity to an analysis:

1. Open the analysis for editing.
2. In the Selected Columns pane, click **Options** beside the column name.

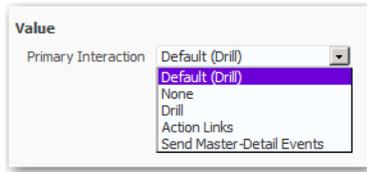


3. Click the Interaction tab in the Column Properties dialog.



The default primary interaction for column headings and values is **Drill**, which enables users to drill down to more detailed information.

- (Optional) Select an interaction from the drop-down menu in the Column Heading section.

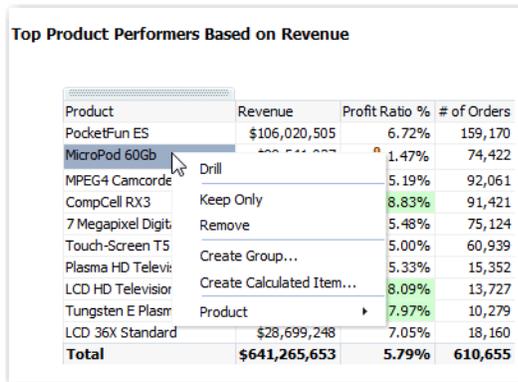


- (Optional) Select an interaction from the drop-down menu in the Values section.
The following table shows available primary interaction choices:

Interaction	Action	More information
None	Disables all interactions on the column.	None
Drill (Default)	Displays a deeper level of detailed content if the data is hierarchical. If no hierarchy is configured for the column, then drilling is not enabled.	Drilling in Results
Action Links	Opens a web page or navigates to supporting BI content.	Adding Actions to Analyses
Send Master-Detail Events	Links views such that one view drives changes in one or more other views.	Linking Views in Master-Detail Relationships

- Click **OK**.

You can specify the interactions that are available at runtime when you right-click on a dashboard column or data cell. The following figure shows an example of interactions available when you right-click on a product name in the Products column. This column is in a Top Product Performers Based on Revenue table:

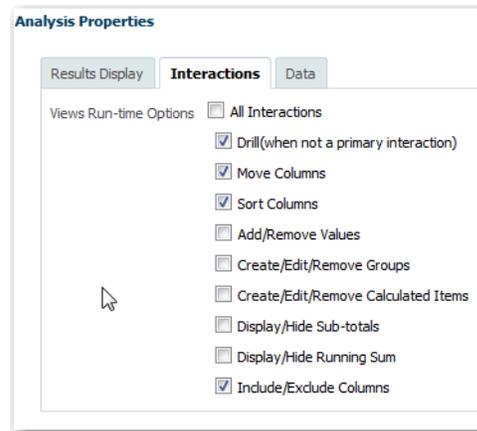


Of the selections shown, you can set **Drill**, **Create Group**, and **Create Calculated Item**.

To specify the interactions that are available when you right-click in a pivot table, table, treemap, or trellis view:

- Open the analysis for editing.
- Click on either the Analysis editor: Criteria tab or Analysis editor: Results tab.
- Click **Edit Analysis Properties** on the toolbar.

- Click the Interactions tab of the Analysis Properties dialog.



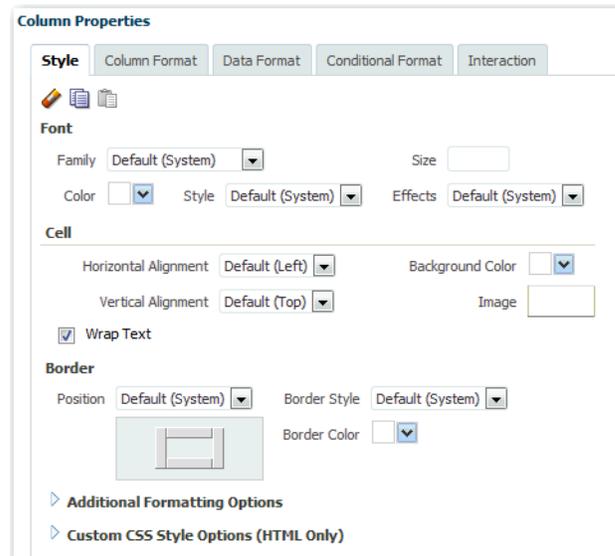
- Select the appropriate interactions from the list.
- Click OK.

Applying Formatting to Objects

You can apply basic formatting to values in many types of objects including columns, views, and sections on dashboard pages. For example, you might want region names in a column to be displayed as Arial 14 point and red. You might also want state names to be displayed as Calibri 12 point and blue.

To apply formatting to an object:

- For the object, open the dialog that controls formatting for values. For example, open the Style tab of the Column Properties dialog.



- Select one or more options to specify how you want the object to be formatted. For example, specify font family and color.
- At the top of the dialog, click **Clear Cell Format** to remove the specifications that you have made and to return the settings to the values that they had when

defaults were last saved. To format multiple objects in the same way, click **Copy Cell Format**, then paste the formatting to the appropriate place.

4. Click **OK**.

Setting Properties for Columns

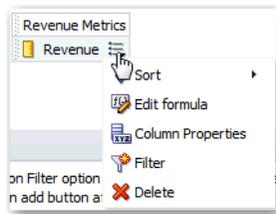


Video

When you build an analysis, you can edit properties for columns to control factors such as their appearance, data display, and layout. For example, you can specify that values in the Revenue column are displayed with two decimal places and a dollar sign.

To apply formatting to a column

1. Open the analysis for editing.
2. In the Selected Columns pane, click **Options** beside the column name.

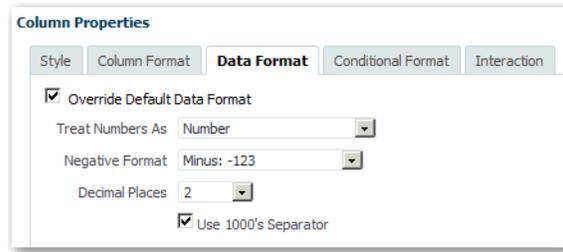


3. To format the headings and values of the column, click the Column Format tab and select the appropriate options. The following table describes some of these formatting options.

Field	Description
Hide	Click to hide the column in the analysis. You can hide columns whose appearance adds no value to the analysis. Hidden columns do not affect the aggregation of the values. For example, you want to build an analysis that includes only customers located in Illinois. To build the proper filter, you must include the column called Customers.State. Because you added this column for filtering purposes only and its appearance adds no value to the analysis, you can hide this column.
Custom Headings	Click to enable you to enter your own values in the Folder Heading and Column Heading fields. You can reference variables and format the heading values. These values identify the column in the analysis. For more information, see Advanced Techniques: Referencing Stored Values in Variables .
Value Suppression	Use the buttons in this area to affect the display of repeating data values for the column. When the same value occurs in multiple consecutive rows, you can specify to show that value only once. This specification can make it easier to see the relationships in the data. For example, suppose that one column lists customer names and another column lists the regions that those customers are in. The region data could be repeated for each customer row. If you specify to not display repeated values, then the distinctions in that data can be more apparent.

4. To override the default display of data for the column, click the Data Format tab and select the appropriate options. Override the default only if you want the value to differ for this column.

The options that display on this tab depend upon the data type (text, numeric, or date) of the column. For example, if the data type is numeric, then you can add the thousands separator to the values.



For information on formatting text data, see [Formatting Text Data](#).

5. To apply formatting to the column, see [Formatting Columns](#).
6. To specify how to interact with values in the column, see [Adding Interactivity to Analyses](#).
7. (Optional) If you have the appropriate privileges and want to save the formatting for this column as the default formatting, then click one of the **Save as System-wide Default** options.

Option	Purpose
Restore column property defaults	Returns the property values for the column back to the last saved default values.
Save as the system-wide default for <i>this column</i>	Save the properties as the systemwide default for this column in all analyses in which it is used.
Save as the system-wide default for this data type	Save the properties as the systemwide default for all columns that have the same data type as this column.

You cannot save and restore the settings on the Conditional Format tab.

A value such as Default (System) for an option indicates that formatting can change. The column acquires whatever is currently set as the default value for the system. The ability to set a system-wide default can provide consistency and save time within your organization. For example, suppose that your organization had decided to use Arial as the font family for all text columns in all analyses. Suppose that a decision is later made to switch to Times New Roman for all text columns. You can simply save Times New Roman as the system-wide default for text columns. All existing analyses that contain text columns in which the font family is specified as Default (Arial) are updated automatically.

Specify a specific value, such as Arial, only when you are certain that you want that value rather than the system default value. Best practice is to change the default value rather than overriding the default with specific values.

8. Click **OK**.

Formatting Text Data

You use the Column Properties: Data Format tab to override the default display of data for the column. The options on the tab differ depending on the data type. For the text data type, the tab includes the **Treat Text As** and **Custom Text Format** fields. From the **Treat Text As** list, you can select to display the values as plain text, HTML, or a

link. Based on your choice, the "Custom Text Format" field displays the applicable HTML string used to display the data.

If you select **Custom Text Format**, then you can write HTML calls that provide formatting. You can also enter any valid HTML string, including JavaScript, VBScript, and so on. The first character must be the at sign (@). This character enables devices that are incapable of displaying the custom format to display the data in the appropriate default format.

For example, the following sample HTML code sets the width and height of a column in tables and pivot tables. In the example, the text `html` enclosed in brackets (`[html]`) means to use HTML. The at sign character represents the dynamic contents of the column.

```
@[html]<span style="width:200px; height:50px>@</span>
```

Formatting Columns

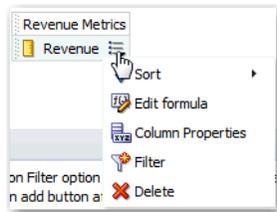


Video

When you create an analysis, you can edit properties for columns to control their appearance and layout. You can also specify formatting to apply only if the contents of the column meet certain conditions. For example, you can specify that values that exceed \$1 million in the Revenue column are displayed with a green background.

To apply formatting to a column:

1. Open the analysis for editing.
2. In the Selected Columns pane, click **Options** beside the column name.



3. To specify how you want each cell and its contents to be displayed in the analysis, click the **Style** tab. Apply cosmetic formatting such as font type to the column, as described in [Applying Formatting to Objects](#).

On the **Style** tab, a setting of **Default (System)** for an option indicates that formatting can change. The column acquires whatever is currently set as the default value for the system. Each property has only one default setting at a time.

4. To specify that the values in the column are displayed in a certain way based on certain criteria, click the **Conditional Format** tab. The conditional formats can include colors, fonts, images, and so on, for the data and for the cell that contains the data.
5. On the **Conditional Format** tab, click the **Add Condition** button.
6. Select a column. The **New Condition** dialog is displayed.

The screenshot shows a 'New Condition' dialog box with the following fields and controls:

- Column:** Brand
- Operator:** is equal to / is in
- Value:** (empty text field)
- Buttons:** Add More Options (with a dropdown arrow), Clear All

7. Select an operator such as **is equal to** or **is greater than**.
8. Specify a value for the operator by either entering a value (such as 1000000) or by selecting a value from the list.
9. (Optional) Click **Add More Options** to add a SQL expression or a variable to the condition.
10. Specify the formatting to apply when the condition is true, as described in [Applying Formatting to Objects](#).
11. Include additional conditional formats by clicking **Add Condition** and repeating the steps to specify a condition.
12. Click **OK**.

Exporting Content from Analyses and Dashboards



Video

Topics:

- [Exporting the Results of Analyses](#)
- [Exporting Dashboards and Dashboard Pages](#)
- [Tips for Exporting](#)

Exporting the Results of Analyses

You can export an [analysis](#) to various formats, including Microsoft Office application formats such as Excel and to Adobe PDF. For example, you can export a Stock Control analysis, so that a supplier can view the results in Microsoft Excel.

To export the results of an analysis:

1. Open the analysis for editing.
2. Click **Export this Analysis**.
3. Select the appropriate option. For example, select to export to a PDF file, an Excel spreadsheet, or a Powerpoint presentation. Select **Data** to export data as a comma-separated or tab-delimited list of values in a file. You can then open the file in an application such as Excel. Select **Web Archive** to export as an MHT file that you can display in a browser.

You can also export an analysis from a dashboard page by clicking **Export** below the analysis. The **Export** link is available if the dashboard designer included the link.

Exporting Dashboards and Dashboard Pages

You can export an entire dashboard or a single dashboard page to Microsoft Excel 2007+. When you export to Excel, the state of the dashboard (such as prompts or drills) is maintained.

For example, you can export the dashboard page that contains the Brand Revenue analysis. This enables brand managers to review this data in Microsoft Excel.

To export a dashboard or a dashboard page:

1. Open the dashboard or dashboard page that you want to export.
2. On the Dashboard page toolbar, click **Page Options**, select **Export to Excel**, and then either **Export Current Page** or **Export Entire Dashboard**.

The File Download dialog is displayed, where you can open or save the dashboard or dashboard page as a spreadsheet file.

Note: You can export an entire dashboard or a single dashboard page to Microsoft Excel 2007+. When you export to Excel, the state of the dashboard (such as prompts or drills) is maintained.

When you export the entire dashboard:

- Each page is included on its own sheet in an Excel workbook.
 - Each sheet is given the name of its corresponding dashboard page.
-
-

Tips for Exporting

As you export analyses, dashboards, and dashboard pages, keep the following tips in mind:

- By default, the **Value Suppression** option in the "Column Properties dialog: Column Format tab" determines whether cells in tables or pivot tables that span rows and cells that span columns are repeated when exporting to Excel (rather than always repeated). Do not suppress values when exporting to Excel if those who use the Excel spreadsheets want to manipulate the data.
 - If **Value Suppression** is set to **Suppress**, then cells that span rows and cells that span columns are not repeated. For example, in a table that has Year and Month values, Year is displayed only once for Month values. This value suppression is useful if you want to simply view data in Excel spreadsheets.
 - If **Value Suppression** is set to **Repeat**, then cells that span rows and cells that span columns are repeated. For example, in a table that has Year and Month values, Year is repeated for all Month values.
- By default, rows are split across page breaks rather than kept together when exporting to PDF.
- Action links are not included in exported formats, for example, Excel and PDF.
- While you can export directly to an Excel format, you might notice greater performance during the export of large numbers of rows if you export first to CSV, then import that file into Excel.

Editing Formulas or Calculated Measures

Topics:

- [Editing the Formula for a Column](#)
- [Editing Calculated Measures](#)

Editing the Formula for a Column

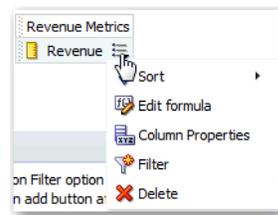


You can edit the formulas for attribute columns and measure columns when you specify the criteria for an [analysis](#). This editing affects the column only in the context of the analysis and does not modify the formula of the original column in the subject area.

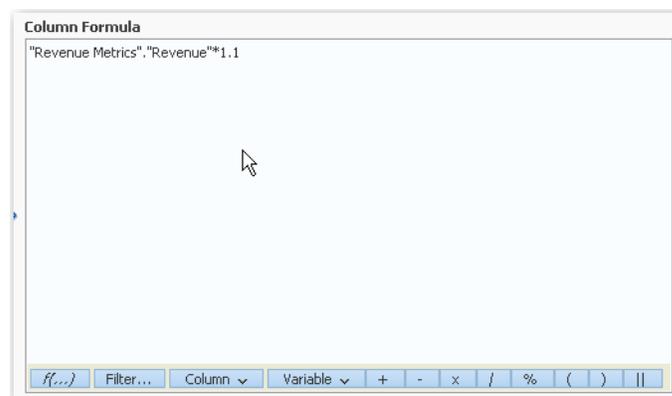
A column formula specifies what the column values represent. In its most basic form, such as "Revenue Metrics"."Revenue", a column takes the data from the data source as is. You can edit the formula to add functions, conditional expressions, and so on. This editing enables you to present analysis results in a variety of ways. For example, you can edit the formula of a Revenue column to display values after a 10% increase in revenue. You can do this by setting the formula to (Revenue*1.1).

To edit the formula for a column:

1. Open the analysis for editing.
2. In the Selected Columns pane, click **Options** beside the column name.



3. Select **Edit Formula**.
4. On the Column Formula tab of the Edit Column Formula dialog, enter a formula in the Column Formula pane.



By default, the name of the column on the Selected Columns pane displays in the Column Formula pane.

- You can use the operator and character buttons on the bottom of the Column Formula pane to help build the formula.
 - You can use the **f(...)** button to display the Insert Function dialog that enables you to include a function in the column formula. For example, you can build a formula based on a SQL function, such as RANK("Sales Measures"."Dollars"). For information about SQL functions, see [Expression Editor Reference](#).
 - You can use the **Filter...** button to display the Insert Filter dialog that enables you to include a filter expression in the column formula. Start the filter expression with at least one measure column. Include a Boolean expression that contains no measure columns or nested queries.

For example, you can build a formula that uses the SQL FILTER function to filter the data, such as FILTER("Sales Measures"."Dollars" USING ("Markets"."Region" = 'EASTERN REGION')).
 - You can use the Variable button to include a variable in the formula. For information, see [Advanced Techniques: Referencing Stored Values in Variables](#).
5. (Optional) In the Subject Area pane, double-click a column to replace the column name in the Column Formula pane. This action creates a new formula.
 6. (Optional) Click the Bins tab to perform "binning," which enables you to combine values for the column into sets. For example, suppose that the Region column has a value EASTERN. You can specify "My Home Region" instead as the text that displays for that value in a view. Binning differs from groups in that groups enable the view to display each member in the group.

Click **Add Bin** to display the dialog for creating a filter expression to display as a CASE statement in the column's formula. You can combine multiple values or ranges of values from a given column into bins. When you add and name the bins, all instances of the various values that comprise the bin in the result set values are replaced by the bin name. Aggregations are performed accordingly as well. For example, you can specify that all values over \$10M are displayed as "My10M."]]

Note: The Bins tab is not affected by the button bar in the Formula area in the Formula tab. However, if you create a CASE statement using the Bins tab, the button bar is hidden when you click the Column Formula tab. You must clear all bins to display the button bar.

7. Click **OK**. On the Analysis editor: Results tab, the column displays its values with the formula applied.

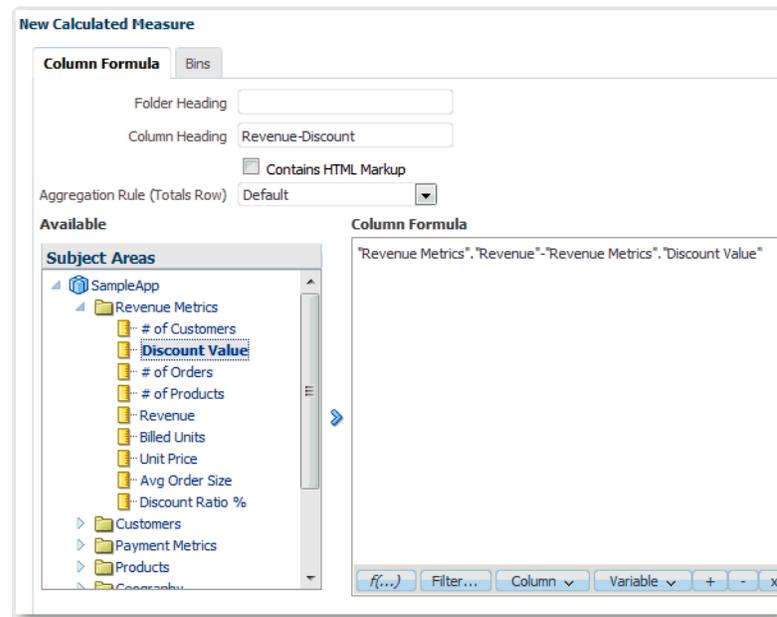
Brand	Revenue	Revenue*1.10
BizTech	318,100,000	349,910,000
FunPod	322,000,000	354,200,000
HomeView	159,900,000	175,890,000

Editing Calculated Measures

You can use calculated measures that are derived from other measures and created by using formulas. For example, you might need to find the value after discounts are taken off the revenue. You create a calculated measure that subtracts the Discounted Amount from the Revenue value.

To create a calculated measure for an analysis:

1. Open the analysis for editing.
2. On the Analysis editor: Results tab, click **New Calculated Measure** on the toolbar to display the dialog.



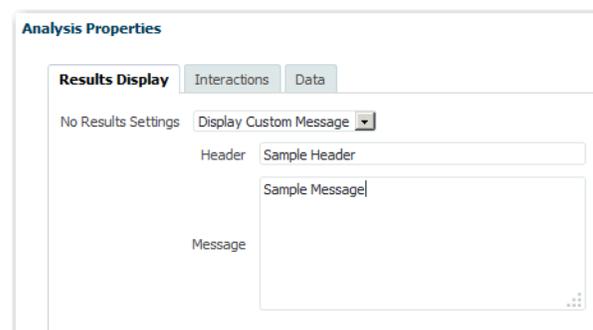
3. Edit the formula for the calculated measure as described in [Editing the Formula for a Column](#).
4. Click OK.

Setting Properties for Analyses

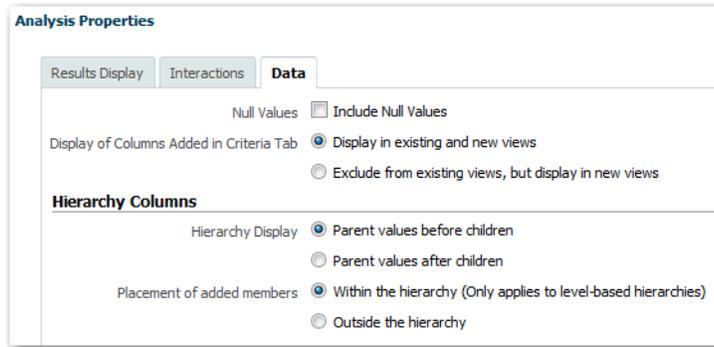
You can set the properties of an analysis to specify how results are displayed and how data is handled. You can also set which actions are available when users right-click in a pivot table, table, treemap, or trellis view. For example, you can create a custom message for the Brand Revenue analysis. This message could display when a filter on the Revenue column is too restrictive and no results are displayed.

To set properties for an analysis:

1. Open the analysis for editing.
2. In the Criteria tab toolbar or the Results tab toolbar, select **Edit Analysis Properties** to display the Analysis Properties dialog.



3. On the Results Display tab, specify the appropriate options. For example, select **No Results Settings** to specify the default or custom message that is displayed if no results are returned from an analysis. You might see the message, for example, if you have a very restrictive filter placed on the columns in the analysis. You do not see the custom message if you simply create the analysis and include no columns.
4. In the dialog, click the Interactions tab.
5. Specify which actions (for example, **Drill**) are available when you right-click in a pivot table, table, graph, treemap, or trellis view.
6. In the dialog, click the Data tab to specify how data is handled in the analysis.



7. On the Data tab, specify the appropriate options. The following table describes some of the fields.

Field	Description
Include Null Values	Specifies whether to display null values in the analysis when the entire row or column contains all nulls. Selecting this box turns off null suppression for all views. This suppression applies to the entire edge (that is, the row and column axis) of the analysis.
Display of Columns Added in Criteria Tab	Specifies how columns are added to an analysis from the Criteria tab <i>after</i> displaying the analysis results: <ul style="list-style-type: none"> ■ Display in existing and new views ■ Exclude from existing views, but display in new views

8. Click **OK**.

Setting Preferences



While working with Oracle BI Enterprise Edition, you can set account preferences. For example, you might specify a Sales Dashboard for your starting page Sales Dashboard and Pacific Standard Time for your time zone. By specifying a starting page, you can access Oracle BI Enterprise Edition and get working with your dashboard right away.

To set preferences:

1. In the global header, click **Signed In As *username*** and select **My Account**.
2. Use the tabs of the My Account dialog to specify preferences, such as your starting page, locale, and time zone.
3. Click **OK** to save your changes.

Importing Formatting from Another Analysis

Topics:

- [About Applying Formatting from Columns](#)
- [About Applying Formatting from Views](#)
- [About Applying Formatting from Containers](#)
- [Importing Formatting from a Saved Analysis to a Target Analysis](#)

You can import formatting from a saved analysis and its views to format new or existing analyses. For example, suppose that you have applied different colors to the Store, City, and Product columns of the Last Year's Brand Revenue analysis. You can import formatting from that analysis to apply colors to the This Year's Brand Revenue-2013 analysis.

You apply formatting by using the **Import Formatting** button. The following table describes the locations of the **Import Formatting** button and the outcome when you click the button:

Location	Application
Compound Layout toolbar	Applies formatting to all applicable views in the layout.
View editor toolbar	Applies formatting only to the view that you are editing.

The following table describes the views from which you can import formatting:

View Type	Action
Narrative	Imports only the text font color.
Pivot table, table, and trellis	Imports formatting for the columns, green bar specifications, sub-totals and grand totals, and section properties.
Static text	Imports only the text font color.
Title	Imports formatting for the title, logo, subtitle, start time, and help URL.
View Selector	Imports only the caption formatting.

Formatting is applied slightly differently depending on whether you import formatting applied to columns, views, or view containers in the Compound Layout.

About Applying Formatting from Columns

Applying formatting from columns works best for views when the saved analysis has the same number of columns as the target column. For a single column, formatting is applied to all columns in the tables, pivot tables, and trellises of the target analysis.

For multiple columns, formatting is applied from left to right for column headings and values. Suppose the number of columns in the target analysis is greater than the number in the saved analysis. Then, the closest column's format is repeated in the subsequent columns.

For example, suppose that the saved analysis contains four columns formatted with the following colors in this order: red, green, blue, and yellow. In the target analysis, its six columns would acquire these colors in the following order: red, green, blue, yellow, yellow, yellow.

About Applying Formatting from Views

Formatting is applied to a view only if a view of that type exists in the target analysis. The imported formatting applies to all views of that type in the target analysis.

For example, suppose that a saved analysis contains a table with custom formatting. If you import that formatting into a target analysis that contains three tables, then all three tables inherit that formatting.

About Applying Formatting from Containers

In the Compound Layout, you can specify formatting properties such as background color, borders, and padding to view containers. Suppose you import that container formatting. The views in the target analysis inherit the exact container formatting properties as the views in the saved analysis.

The layout of the views in the two analyses are not required to be exactly the same. If the target analysis contains more views than the source analysis, then extra views inherit the imported formatting.

For example, suppose that a saved analysis contains two tables that are stacked on top of each other in the Compound Layout. Suppose that the target analysis contains four tables that are laid out two by two. The source analysis has only one layout column of two table views. The two tables in each of the first and second layout columns of the target analysis inherit the applied formatting.

Importing Formatting from a Saved Analysis to a Target Analysis

You can import formatting from one analysis to another. For example, suppose you have an analysis that contains one column. You have applied formatting to that Revenue column such as font family, horizontal alignment, and background color. You can save the analysis and use it as a template. You can apply it to the same formatting to all columns in a view in another analysis.

To use a saved analysis to modify the appearance of another analysis:

1. Open the analysis for editing.
2. Display the target analysis in the Analysis editor: Results tab, or edit the view.
3. Click **Import formatting from another analysis** on the toolbar.
4. In the Select Analysis dialog, navigate to the saved analysis.
5. Click **OK**.

Combining Columns to Display Data Differently

You can combine columns based on set operations such as Union or Intersect. By combining columns, you create a column for displaying the data in a different way. For example, you can combine a Region column with a City column and create a column named Regions and Cities.

The analysis must meet certain criteria if you want to use set operations:

- The number and data types of the columns must be the same.
- You cannot use hierarchical columns, selection steps, or groups when you combine criteria.

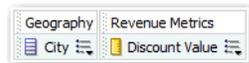
To combine columns based on set operations:

1. Open the analysis for editing.
2. On the Analysis Editor: Criteria tab, in the Selected Columns pane toolbar, click **Combine results based on union, intersection, and difference operations**.

The Set Operations area is displayed in the Selected Columns pane. Note the boxes with the dotted line borders. These boxes indicate the kind of column that you must combine with those that you have previously included in the analysis.



3. In the Subject Areas pane, select the columns to combine with the original columns. Note that the dotted line borders and contents have been replaced.



4. In the Result Columns area on the Set Operations pane, click on the **Union** button and select a set operation. The following table describes the operations.

Operation	Description
Union	Specifies that only nonduplicate rows from all columns are returned.
Union All	Specifies that rows from all columns, including duplicate rows, are returned.
Intersect	Specifies that only rows common to all columns are returned.
Minus	Specifies that only rows from the first column that are not in the second column are returned.

5. Click the **Result Columns** link. The Selected Columns pane shows the newly combined columns.
6. To rename the heading of the column:
 - a. Click the **Options** button for the column.
 - b. Select **Column Properties**.
 - c. Select **Column Format**.
 - d. Ensure that **Custom Headings** is selected.
 - e. In the **Column Heading** box, enter the new heading.
 - f. Click **OK**.
7. Click the Results tab to view the columns in a table view.

Advanced Techniques: Examining the Logical SQL Statements for Analyses

You can examine the logical SQL to see the XML code and logical SQL statement that is generated for an analysis. You can optionally create an analysis based on that SQL statement using the Advanced tab of the Analysis editor.

Before using the Advanced tab, keep in mind that this tab is only for advanced users and developers who have the appropriate responsibilities to access the Advanced tab. You must understand advanced SQL statements and have expertise working with the

metadata for analyses. You must also understand the content and structure of the underlying data sources.

To examine the SQL statement that is generated for an analysis:

1. Open the analysis for editing.
2. Click the Analysis editor: Advanced tab.
3. Use the read-only box in the SQL Issued area to examine and copy the SQL statement that is used for executing the analysis.
4. Click **New Analysis** to create an analysis based on the SQL code.

Advanced Techniques: Referencing Stored Values in Variables

Topics:

- [About Session Variables](#)
- [About Repository Variables](#)
- [About Presentation Variables](#)
- [About Request Variables](#)
- [About Global Variables](#)
- [Creating Global Variables](#)
- [Syntax for Referencing Variables](#)

You can reference stored values in variables in several areas of Oracle BI Enterprise Edition, including in analyses, dashboards, and actions. For example, suppose that you wanted to create an analysis whose title displays the current user's name. You can do this by referencing a variable. You can use five types of variables: session, repository, presentation, request, and global.

About Session Variables

A session variable is a variable that is initialized at login time for each user. When a user begins a session, Oracle BI Enterprise Edition creates a new instance of a session variable and initializes it. There are as many instances of a session variable as there are active sessions on Oracle BI Enterprise Edition. Each instance of a session variable can be initialized to a different value.

There are two types of session variables, as described in the following table.

Type	Description
System	<p>A session variable used by Oracle BI Enterprise Edition for specific purposes.</p> <p>System session variables have reserved names that cannot be used for other kinds of variables (such as static or dynamic repository variables and non-system session variables).</p>
Non-system	<p>A system variable that the administrator creates and names. For example, the administrator might create a SalesRegion non-system variable that initializes the name of a user's sales region.</p> <p>The administrator creates non-system variables using the Oracle BI Administration Tool.</p>

About Repository Variables

A repository variable is a variable that has a single value at any point in time. A static repository variable has values that persist and do not change until the administrator changes it. A dynamic repository variable has values that are refreshed by data returned from queries.

About Presentation Variables

A presentation variable is a variable that you can create as part of the process of creating one of the types of dashboard prompts that is described in the following table.

Type	Description
Column prompt	<p>A presentation variable created as part of a column prompt is associated with a column, and the values that it can take come from the column values.</p> <p>To create a presentation variable as part of a column prompt, in the New Prompt dialog, you must select Presentation Variable in the Set a variable field. Enter a name for the variable in the Variable Name field.</p> <p>For information on working with column prompts, see Creating Column Prompts.</p>
Variable prompt	<p>A presentation variable created as part of a variable prompt is not associated with any column, and you define the values that it can take.</p> <p>To create a presentation variable as part of a variable prompt, in the New Prompt dialog, you must select Presentation Variable in the Prompt for field. Enter a name for the variable in the Variable Name field.</p> <p>For information on working with variable prompts, see Creating Variable Prompts.</p>

The value of a presentation variable is populated by the column or variable prompt with which it was created. That is, each time a user selects one or more values in the column or variable prompt, the value of the presentation variable is set to the value or values that the user selects.

About Request Variables

A request variable enables you to override the value of a session variable but only for the duration of a database request initiated from a column prompt. You can create a request variable as part of the process of creating a column prompt.

A request variable that is created as part of a column prompt is associated with a column, and the values that it can take come from the column values.

To create a request variable as part of a column prompt, in the New Prompt dialog, you must select **Request Variable** in the **Set a variable** field. Enter the name of the session variable to override in the **Variable Name** field.

The value of a request variable is populated by the column prompt with which it was created. That is, each time a user selects a value in the column prompt, the value of the request variable is set to the value that the user selects. The value, however, is in effect only from the time the user presses the **Go** button for the prompt until the analysis results are returned to the dashboard.

Note: Only string and numeric request variables support multiple values. All other data types pass only the first value.

About Global Variables

A global variable is a column created by combining a specific data type with a value. The value can be a Date, Date and Time, Number, Text, and Time. The global variable is evaluated at the time the analysis is executed, and the value of the global variable is substituted appropriately. Only users with the BIAdvancedContentAuthor role can manage (add, edit, and delete) global variables.

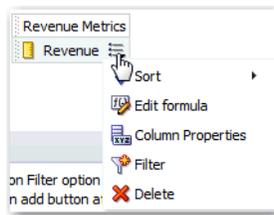
You create a global value during the process of creating an analysis by using the Edit Column Formula dialog. The global variable is then saved in the catalog and made available to all other analyses within a specific tenant system.

Creating Global Variables

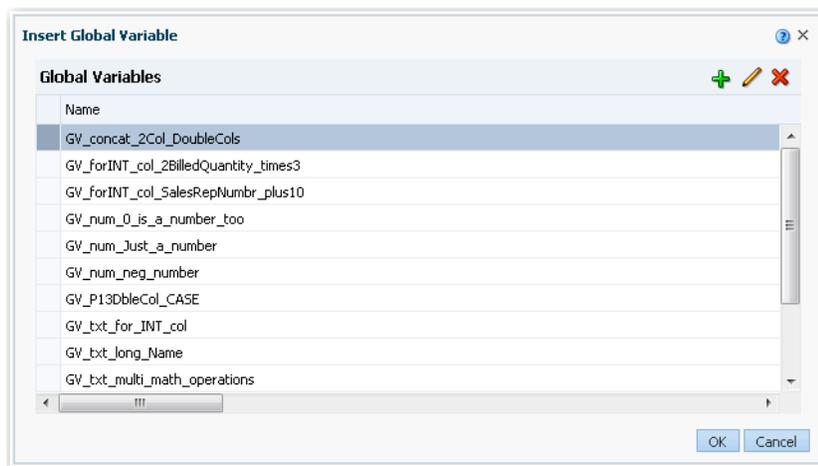
You can save a calculation as a global variable then reuse it in different analyses.

To create a global variable:

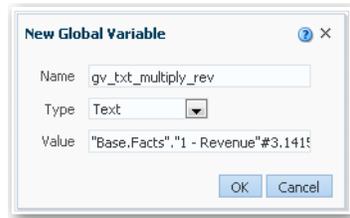
1. Open the analysis for editing.
2. In the Selected Columns pane, click **Options** beside the column name.



3. Select **Edit Formula** to display the Column Formula tab. You can create a custom header for the global variable by using this tab.
4. Click **Variable** and select **Global** to display the Insert Global Variable dialog.



5. Click **Add New Global Variable** to display the New Global Variable dialog.



6. Enter the value for the **Name**. For example, `gv_region`, `date_and_time_global_variable`, or `rev_eastern_region_calc_gv`. See [Syntax for Referencing Variables](#) for syntax requirements.

Note: The name for a global variable must be fully qualified when referencing the variable, and therefore is prefixed by the text "global.variables". For example, a global variable set to calculate revenue is displayed in the Column Formula dialog as follows:

```
"Base Facts"."1- Revenue"*@{global.variables.gv_qualified}
```

7. Enter values for the **Type** and **Value**.

Note: If you are selecting "Date and Time" as the data type, then enter the value as in the following example: 03/25/2004 12:00:00 AM

If you are entering an expression or a calculation as a value, then you must use the Text data type, as in the following example: "Base Facts"."1- Revenue"*3.1415

8. Click **OK**. The new global variable is added to the Insert Global Variable dialog.
9. Select the new global variable that you just created, and click **OK**. The Edit Column Formula dialog is displayed with the global variable inserted in the Column Formula pane. The **Custom Headings** check box is automatically selected.
10. Enter a new name for the column to which you have assigned a global variable to more accurately reflect the variable.
11. Click **OK**.

Syntax for Referencing Variables

You can reference variables in analyses and dashboards. How you reference a variable depends on the task that you are performing. For tasks where you are presented with fields in a dialog, you must specify only the type and name of the variable (not the full syntax), for example, referencing a variable in a filter definition.

For other tasks, such as referencing a variable in a title view, you specify the variable syntax. The syntax that you use depends on the type of variable as described in the following table.

Type	Syntax	Example
Session	<pre>@{biServer.variables['NQ_SESSION.variablename']}</pre> <p>where <i>variablename</i> is the name of the session variable, for example DISPLAYNAME.</p>	<pre>@{biServer.variables['NQ_SESSION.USER']}</pre>
Repository	<pre>@{biServer.variables.variablename}</pre> <p>or</p> <pre>@{biServer.variables['variablename']}</pre> <p>where <i>variablename</i> is the name of the repository variable, for example, prime_begin</p>	<pre>@{biServer.variables.prime_begin}</pre> <p>or</p> <pre>@{biServer.variables['prime_begin']}</pre>
Presentation or request	<pre>@{variables.variablename}[format][defaultvalue]</pre> <p>or</p> <pre>@{scope.variables['variablename']}</pre> <p>where:</p> <p><i>variablename</i> is the name of the presentation or request variable, for example, MyFavoriteRegion.</p> <p>(optional) <i>format</i> is a format mask dependent on the data type of the variable, for example ###0, MM/DD/YY hh:mm:ss. (Note that the format is not applied to the default value.)</p> <p>(optional) <i>defaultvalue</i> is a constant or variable reference indicating a value to be used if the variable referenced by <i>variablename</i> is not populated.</p> <p><i>scope</i> identifies the qualifiers for the variable. You must specify the scope when a variable is used at multiple levels (analyses, dashboard pages, and dashboards) and you want to access a specific value. (If you do not specify the scope, then the order of precedence is analyses, dashboard pages, and dashboards.)</p> <p>Note: When using a dashboard prompt with a presentation variable that can have multiple values, the syntax differs depending on the column type. Multiple values are formatted into comma-separated values and therefore, any format clause is applied to each value before being joined by commas.</p>	<pre>@{variables.MyFavoriteRegion}{EASTERN REGION}</pre> <p>or</p> <pre>@{MyFavoriteRegion}</pre> <p>or</p> <pre>@{dashboard.variables['MyFavoriteRegion']}</pre> <p>or</p> <pre>@{myNumVar}[#,##0]{1000}</pre> <p>or</p> <pre>@{variables.MyOwnTimestamp}[YY-MM-DD hh:mm:ss]{}</pre> <p>or</p> <pre>@{myTextVar}{A, B, C}</pre>

Type	Syntax	Example
Global	<code>@{global.variables.variablename}</code> where <i>variablename</i> is the name of the global variable, for example, <i>gv_region</i> . When referencing a global variable, you must use the fully qualified name as indicated in the example. Note: The naming convention for global variables must conform to EMCA Scripting language specifications for JavaScript. The name must not exceed 200 characters, nor contain embedded spaces, reserved words, and special characters. If you are unfamiliar with JavaScripting language requirements, consult a third party reference	<code>@{global.variables.gv_date_n_time}</code>

You can also reference variables in expressions. The guidelines for referencing variables in expressions are described in the following sections.

Session Variables

The guidelines for referencing session variables in expressions are:

- Include the session variable as an argument of the VALUEOF function.
- Enclose the variable name in double quotes.
- Precede the session variable by NQ_SESSION and a period.
- Enclose both the NQ_SESSION portion and the session variable name in parentheses.

For example:

```
"Market"."Region"=VALUEOF(NQ_SESSION."SalesRegion")
```

Repository Variables

The guidelines for referencing repository variables in expressions are:

- Include the repository variable as an argument of the VALUEOF function.
- Enclose the variable name in double quotes.
- Refer to a static repository variable by name.
- Refer to a dynamic repository variable by its fully qualified name.

For example:

```
CASE WHEN "Hour" >= VALUEOF("prime_begin") AND "Hour" < VALUEOF("prime_end") THEN 'Prime Time' WHEN ... ELSE...END
```

Presentation Variables

When referencing a presentation variable, use this syntax:

```
@{variablename}{defaultvalue}
```

where *variablename* is the name of the presentation variable and *defaultvalue* (optional) is a constant or variable reference indicating a value to be used if the variable referenced by *variablename* is not populated.

To type-cast (that is, convert) the variable to a string, enclose the entire syntax in single quotes, for example:

```
'@{user.displayName}'
```

If the @ sign is not followed by a {, then it is treated as an @ sign. When using a presentation variable that can have multiple values, the syntax differs depending on the column type.

Use the following syntax in SQL for the specified column type in order to generate valid SQL statements:

- Text — (@{variablename}['@']{defaultvalue})
- Numeric — (@{variablename}{defaultvalue})
- Date-time — (@{variablename}{timestamp 'defaultvalue'})
- Date (only the date) — (@{variablename}{date 'defaultvalue'})
- Time (only the time) — (@{variablename}{time 'defaultvalue'})

For example:

```
"Market"."Region"=VALUEOF (NQ_SESSION."SalesRegion")
```

Viewing Data in Different Ways

This section describes how to view data in different ways by adding views to analyses.

Topics:

- [Typical Workflow for Viewing Data in Different Ways](#)
- [About Views](#)
- [Adding Views](#)
- [Editing Views](#)
- [Editing Various Types of Views](#)
- [Graphing Data in Analyses](#)
- [Saving Views](#)
- [Rearranging Views](#)
- [Refreshing the Results in Views](#)
- [Printing Views](#)
- [Changing Print Options for Views](#)
- [Previewing How Views Are Displayed on Dashboards](#)
- [Removing Views](#)
- [Sorting Values in Views](#)
- [Clearing Sorts in Views](#)
- [Drilling in Results](#)
- [Resizing Rows and Columns in Views](#)
- [Suppressing Null Values in Views](#)
- [Assembling Views for Display](#)
- [Linking Views in Master-Detail Relationships](#)
- [Modifying the Layout of Data in Views](#)
- [About Drop Targets in the Layout Pane](#)

For more detailed information about adding views to analyses, see *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition*.

Typical Workflow for Viewing Data in Different Ways

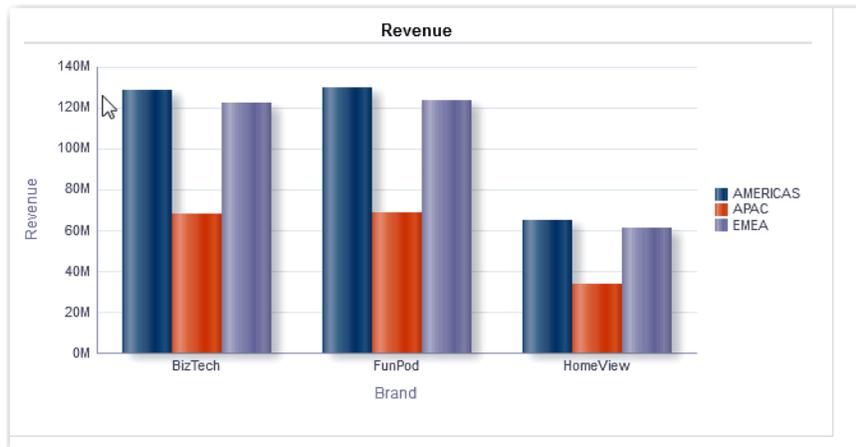
To start adding views to analyses to view data in different ways, refer to the typical workflow described in the following table:

Task	Description	More Information
Create an analysis	Select and arrange columns that you want to use in an analysis.	Creating Your First Analysis
Add a view	Add views to an analysis to visualize data in different ways.	Adding Views
Edit a view	Use the editor that is available for each type of view to edit that view.	Editing Views
Remove a view	Delete a view from a compound layout or from an analysis.	Removing Views
Save a view	Save a view by saving the analysis.	Saving Views
Print a view	Print a single view or group of views in printable HTML or printable PDF.	Printing Views

About Views

A [view](#) is a visualization that helps communicate an outcome. Views enable you to look at results of analyses in meaningful, intuitive ways. Views give you different ways of looking at your data to help you discover patterns, trends, outliers, and other interesting characteristics of your data.

You can add a variety of views to the results, such as graphs and pivot tables that allow drilling down to more detailed information, explanatory text, a list of filters that were used to limit the results, and more. For example, you can include a bar graph view of revenue.



Adding Views



[Video](#)

By default when you create an [analysis](#), you see either a table or pivot table [view](#), depending on the columns that you selected. You can add other views to the analysis to enable you to visualize the data in different ways. For example, you can analyze trends for your Sales Forecast analysis by creating a new view and selecting **Recommended Visualization** and the **Analyzing Trends** option.

To add a view:

1. Open the analysis for editing.
2. On the Results tab, click **New View**, then select one of the following options.

Option	Description
Best Visualization	Oracle BI Enterprise Edition automatically creates the most appropriate view based on the data in the analysis.
Recommended Visualization for	Select the kind of analysis that you want to perform and Oracle BI Enterprise Edition recommends the best views for that purpose and your data. For example, select Analyzing Trends or Comparing Explicit Results .
<i>View Type</i>	You select the desired view type, such as Pivot Table or Gauge .

The view is added the current compound layout.

3. To format the container for the views in the analysis, click **Format Container**.
4. Complete the fields in the Format Container dialog to specify options such as alignment, colors, and borders.
5. Click **OK**.
6. Click **Save Analysis**.

Editing Views

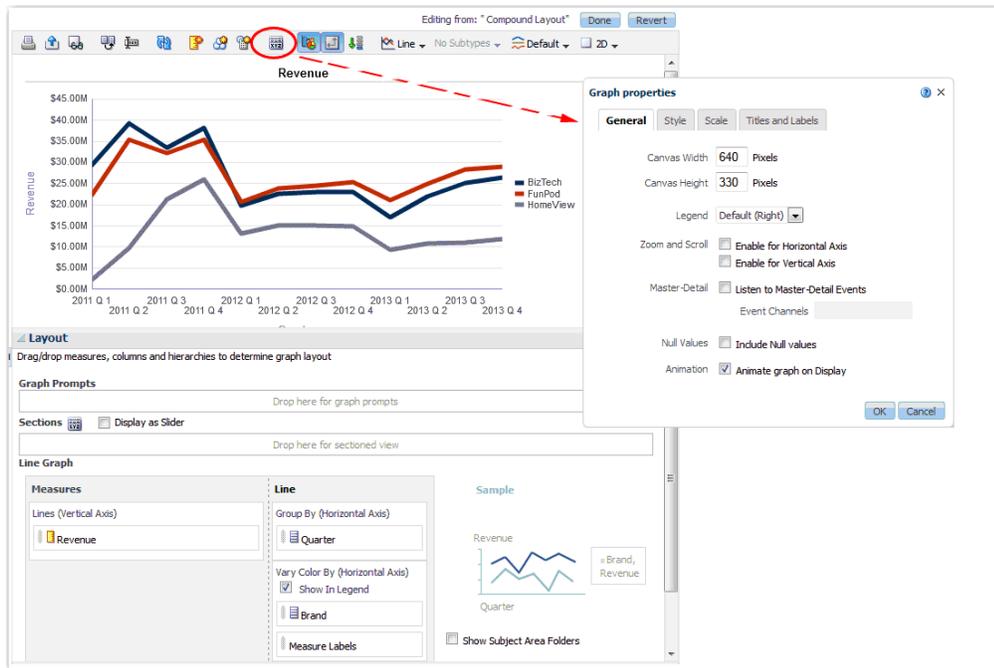
Video

Each type of view has its own editor. The editors include both common functionality across views and view-specific functionality. For example, you can edit a graph in a Brand Revenue analysis in the Graph editor to show the legend.

The following procedure provides general information on editing views. For more information, see [Editing Various Types of Views](#) and [Graphing Data in Analyses](#).

To edit a view:

1. Open the analysis for editing.
2. Click the Analysis editor: Results tab.
3. To edit the view, click **Edit View**.
4. In the view editor (such as the Graph editor) make the appropriate edits, such as showing the legend.



5. To affect the display of data in the view, see [Modifying the Layout of Data in Views](#). You can perform tasks such as dragging and dropping columns.
6. Associate data views such that one view drives changes in one or more other views. For information, see [Linking Views in Master-Detail Relationships](#).
7. Drag and drop named groups and named calculated items from the Catalog pane to the view. For information, see [Manipulating Members Using Groups and Calculated Items](#).
8. To customize the selection of data in the view, see [Refining Selections of Data](#).
9. Click **Done**.
10. To save the view, see [Saving Views](#).

Editing Various Types of Views

Topics:

- [Editing Table and Pivot Table Views](#)
- [Editing Gauge Views](#)
- [Editing Performance Tile Views](#)
- [Editing Trellis Views](#)
- [Editing Treemap Views](#)
- [Editing Narrative Views](#)
- [About Editing Non-Data Views](#)

Editing Table and Pivot Table Views

Two common views for analyzing and displaying data are the table and pivot table. For example, you can edit a pivot table in the analysis and place Brand on the row

edge to display its corresponding Revenue data for each Quarter and Region. You can include a table and a pivot table side-by-side in a compound layout.

The screenshot shows a software window titled "Brand Revenue in Table and Pivot Table Views". It contains two side-by-side views of the same data: a standard Table on the left and a Pivot Table on the right. Both views display revenue data for three brands (BizTech, FunPod, HomeView) across four quarters (2011 Q 1 to 2013 Q 1) for three regions (AMERICAS, APAC, EMEA). The Pivot Table view has a different column structure, with Revenue grouped by Region.

Quarter	Region	Brand	Revenue	
2011 Q 1	AMERICAS	BizTech	\$11,645,428.23	
		FunPod	\$8,843,580.33	
		HomeView	\$857,347.11	
	APAC	BizTech	\$6,349,188.84	
		FunPod	\$4,878,733.21	
		HomeView	\$421,786.94	
	EMEA	BizTech	\$11,252,556.27	
		FunPod	\$8,516,320.93	
		HomeView	\$811,010.51	
2011 Q 2	AMERICAS	BizTech	\$15,961,085.17	
		FunPod	\$14,250,184.37	
		HomeView	\$4,006,234.54	
	APAC	BizTech	\$8,323,016.53	
		FunPod	\$7,459,796.18	
		HomeView	\$2,072,521.07	
	EMEA	BizTech	\$14,988,891.73	
		FunPod	\$13,579,147.13	
		HomeView	\$3,676,637.59	
2011 Q 3	AMERICAS	BizTech	\$13,530,397.30	
		FunPod	\$13,091,639.22	
		HomeView	\$8,596,068.76	
	APAC	BizTech	\$7,066,661.36	
		FunPod	\$6,799,599.22	
		HomeView	\$4,380,851.91	
	2011 Q 4	AMERICAS	BizTech	\$15,263,089.30
			FunPod	\$14,114,596.08
			HomeView	\$10,540,349.59
APAC		BizTech	\$8,061,133.27	
		FunPod	\$7,661,871.39	
		HomeView	\$5,224,840.08	
EMEA		BizTech	\$14,782,751.95	
		FunPod	\$13,617,122.29	
		HomeView	\$10,238,772.23	
2012 Q 1	AMERICAS	BizTech	\$7,982,425.01	
		FunPod	\$8,335,174.46	
		HomeView	\$5,262,063.24	
	APAC	BizTech	\$4,248,702.87	
		FunPod	\$4,428,307.35	
		HomeView	\$2,780,112.85	
	EMEA	BizTech	\$7,410,923.33	
		FunPod	\$7,766,619.80	
		HomeView	\$5,049,320.09	
2012 Q 2	AMERICAS	BizTech	\$9,020,570.44	
		FunPod	\$9,695,602.19	
		HomeView	\$6,025,253.19	
	APAC	BizTech	\$4,819,684.75	
		FunPod	\$5,021,379.44	
		HomeView	\$3,381,181.60	
	EMEA	BizTech	\$8,610,199.31	
		FunPod	\$9,093,043.75	
		HomeView	\$5,638,455.41	
2012 Q 3	AMERICAS	BizTech	\$9,113,882.29	
		FunPod	\$9,917,779.81	
		HomeView	\$6,225,545.43	
	APAC	BizTech	\$5,068,110.57	
		FunPod	\$5,177,948.44	
		HomeView	\$3,193,102.10	
	EMEA	BizTech	\$8,818,200.61	
		FunPod	\$9,306,563.90	
		HomeView	\$5,542,629.33	
2012 Q 4	AMERICAS	BizTech	\$9,483,122.26	
		FunPod	\$10,151,443.54	
		HomeView	\$6,087,138.14	
	APAC	BizTech	\$4,863,501.81	
		FunPod	\$5,472,364.77	
		HomeView	\$3,045,603.45	
	EMEA	BizTech	\$8,660,676.75	
		FunPod	\$9,633,772.55	
		HomeView	\$5,669,595.17	
2013 Q 1	AMERICAS	BizTech	\$6,755,709.76	
		FunPod	\$8,444,604.16	
		HomeView	\$3,816,075.84	

To edit a table or pivot table view:

1. Open the analysis for editing.
2. Click the Analysis Editor: Results tab.
3. Click **View Properties** to edit properties. You can set properties such as the following ones:
 - The method to be used to browse data — either scrolling or paging controls.
 - The display of headings for the columns and the view.
 - Formatting preferences such as size and colors.
 - Green bar styling. Setting this property shows alternating rows or columns in a light green color, which is the default color that you can change.
4. Click **OK** to dismiss the dialog.
5. Click **Edit View** to display the Table View editor.
6. For a pivot table view, click the **Graph Pivoted Results** button on the toolbar to display the results of the pivot table in a graph view, which is displayed alongside the pivot table. The two views are fully linked, which means that changes made to one view are automatically reflected in the other.
7. Click **Done**.
8. To specify sorting in the view, see [Sorting Values in Views](#).

- To drill in the data in the view, see [Drilling in Results](#).

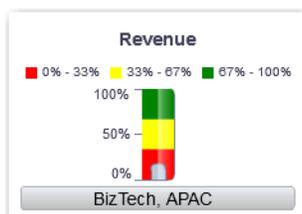
Editing Gauge Views

You can use gauge views to graphically compare performance to goals. Due to their compact size, gauges can be more effective than graphs for showing a single data value. Results show as dial, bar, or bulb gauges. For example, you can use a gauge to see whether Actual Revenue falls within predefined limits for a brand.

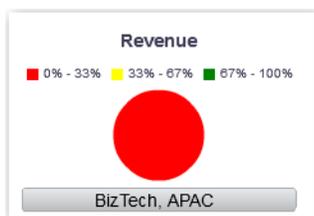
The following figure shows a dial gauge:



The following figure shows a bar gauge:



The following figure shows a bulb gauge:



To edit a gauge view:

- Open the analysis for editing.
- Click the Analysis Editor: Results tab.
- Click **View Properties** to perform tasks such as the following:
 - Specify the number of rows of gauges to display and placement of labels in **Gauges per Row**.
 - Change the width and height of gauges and the appearance of titles and labels.
 - Specify the scale of gauge limits and tick marks. For example, you can specify a custom gauge limit. You can specify a static value such as 1000 as either an actual value or as a percentage. The value that you specify depends on the range of data points. You must ensure that the maximum gauge limit is more than the maximum data point. Do so to ensure that all data points are displayed on the gauge.

- Specify the marker type for a dial gauge, such as Needle, Line or Fill.
- 4. Click **OK** to dismiss the dialog.
- 5. Click **Edit View** to display the Gauge View editor.
- 6. Click the **Gauge Type** button on the toolbar to select the type of gauge, such as bulb or dial.
- 7. Define thresholds for the gauge, as described in [Setting Thresholds](#).
- 8. Click **Done**.

Setting Thresholds

You can set thresholds for display in gauges and funnel graphs. Each threshold has a high and a low and is associated with a color in which the range identified by the threshold is displayed in the gauge, such as green for acceptable, yellow for warning, and red for critical.

To set thresholds:

1. Click **Edit View** to display the view editor
2. In the Settings pane, select either **High values are desirable** or **Low values are desirable**. For example selecting **High values are desirable** lists the statuses in order from the most desirable indicator (such as Excellent) at the top to the least desirable indicator (such as Warning) at the bottom. Generally with columns such as Revenue, high values are desirable. With columns such as Expenses, low values are desirable.
3. In the Threshold list, specify the data values that highlight a particular range of values. The values must be between the minimum and maximum values set for the view's limits. The range that a threshold identifies is filled with a color that differs from the color of other ranges.

To specify a data value, you can enter a static value directly in a Threshold field, or you can click **Threshold Options** to set the value based on a measure column, a variable expression, or the results of a SQL query. Select **Dynamic** to enable the system to determine the threshold value.

4. Enter the labels for the ranges in the Status area. Select **Threshold Values** to use the current threshold values as the label for the range. Select **Specify Label** to use text that you specify as the label for the range, such as Excellent.

Editing Performance Tile Views

Performance tile views focus on a single piece of aggregate of data. By default, the first measure in the analysis on the Criteria tab is selected as the performance tile measure. You must set up aggregation and filters on the Criteria tab to ensure that the correct measure value is displayed in the tile. To change this measure, edit the performance tile view. To include additional performance tile views for each measure in an analysis, add a separate view for each measure.

For example, you might want to edit a performance tile view to use Revenue as the measure. You can specify that the values and labels utilize the available space. The following figure shows performance tiles on a dashboard page:

Revenue	Billed Units	Avg Order Size	# of Orders	# of Products
\$800M	11M	\$758	1M	674

To edit a performance tile view:

1. Open the analysis for editing.
2. Click the Analysis Editor: Results tab.
3. Click **View Properties** to edit properties. You can set the following kinds of properties:

- Related to the size of the tile.
- That control the appearance of the tile, such as the background and border colors. You can apply conditional formatting to the tile.
- That abbreviate the value on the tile.

A performance tile can show a value using its measure's default formatting or the value can be abbreviated to the nearest thousand, million, and so on.

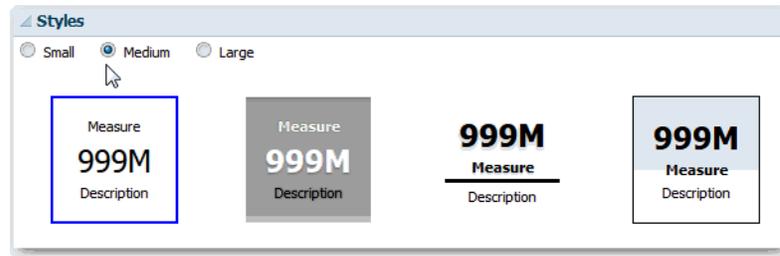
Examples of formatting are shown in the following table:

Default Formatting	Abbreviated Value
123,456.50	123K
123,456,789.50	123M
123,456,789,123.50	123B

4. Click one of the following buttons to align the performance tile label:

Button	Description
Fixed positions	Sets (or "fixes") the positions of the labels. The label text is displayed in fixed positions. This option is recommended for layouts with multiple performance tiles (of the same size) in a row, where you want to ensure visual consistency by rendering text anchored at the same height despite variations in content.
Utilize available space	Evenly spaces the label text on the performance tile vertically. The label text utilizes all available space on the performance tile. Note that when you have multiple tiles placed beside each other, the labels might be displayed at different heights and look uneven based on the varying label content.

5. Click **OK** to dismiss the dialog.
6. Click **Edit View** to display the Performance Tile editor.
7. In the Styles pane, change the tile size to **Small**, **Medium**, or **Large**.

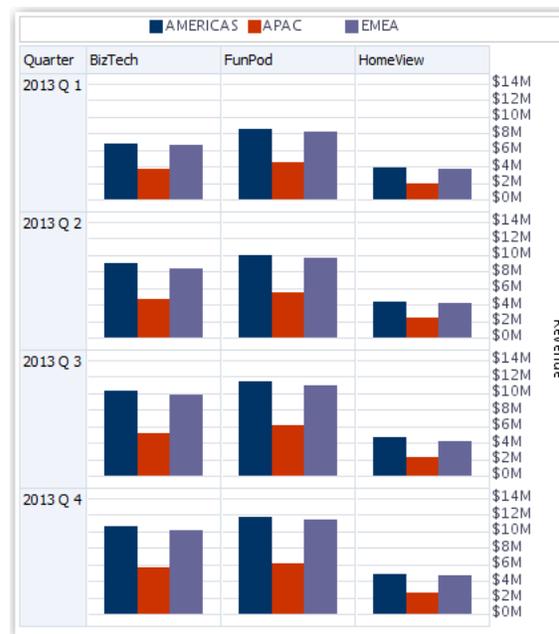


8. Select a themed (or stylized) tile located below the **Tile Size** option buttons to change the theme for the performance tile.
9. Click **Done**.

Editing Trellis Views

A trellis view is a type of graph view that displays a grid of multiple graphs, one in each data cell. A trellis view can be simple or advanced. A simple trellis displays a core inner graph multiplied across row sets and column sets, rendering many small multiples that are ideal for comparing and contrasting. An advanced trellis displays a grid of small spark graphs that are ideal for monitoring trends and spotting patterns in a data set. For more information, see [About Simple Trellis Versus Advanced Trellis](#).

The following figure shows a simple trellis view:



The trellis view, also referred to as a trellis graph, is the same as a pivot table—with one major exception: the data cells within the trellis contain graphs. Whereas a stand-alone graph type such as a single bar graph or a single scatter graph works on its own, the trellis graph works only by displaying a grid of nested graphs, known as inner graphs. So a bar-graph trellis view is actually comprised of multiple bar graphs.

To edit a trellis view:

1. Open the analysis for editing.
2. Click the Analysis Editor: Results tab.

3. Click **View Properties** to edit properties. You can set the following kinds of properties:
 - Related to the grid canvas, such as legend location (simple trellis views only).
 - Related to graph size for the visualizations that are included in the trellis.
 - That specify the method to be used to browse data — either scrolling or paging controls.
 - That control the appearance of the trellis's grid and its visualizations, such as various style choices and the way that legends are displayed.
 - That control the type of scale and the appearance of scale markers for each of the trellis's visualizations (simple trellis views only).
 - That control the display of titles and labels (simple trellis views only).
4. Click **OK** to dismiss the dialog.
5. Click **Edit View** to display the Trellis editor.
6. In the Layout pane:
 - a. Drag and drop columns into the Columns and Rows fields to specify how data is arranged in the trellis.
 - b. Select the type of graph you want to display for each of the cells in the trellis.
 - c. Drag and drop columns to indicate how to color the graphs.
7. To specify sorting in the view, see [Sorting Values in Views](#).
8. Click **Done**.

About the Functions of Trellis Views

For the most part, a trellis view behaves like a pivot table. The main difference between a trellis and a pivot table is the way the data cells are displayed. In the row and column label cells of a trellis, you can:

- Right-click to hide or move measure labels.
- Right-click to sort data.
- Drag to reposition rows and columns.

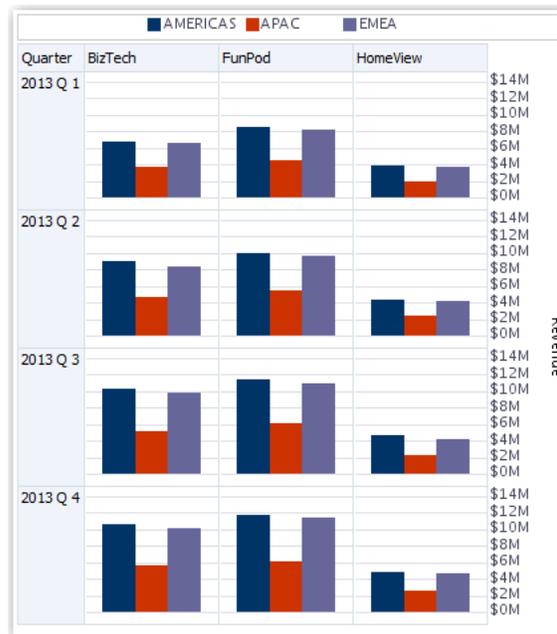
In the data cells of a trellis, you can hover the mouse pointer to display related contextual information. Numeric data cells in a trellis behave the same as numeric data cells in a pivot table. The ways in which the behavior of a trellis view differs from the behavior of a pivot table are the following:

- **Graph data cells** — There is no right-click functionality for the data cells in simple trellises, nor drilling in trellis graph data cells (left-click functionality).
- **Microchart data cells** — When you hover the cursor over the data cells in spark graphs, you are shown contextual information (such as first, last, minimum, and maximum values) that otherwise is not displayed as it is in a pivot table view.

About Simple Trellis Versus Advanced Trellis

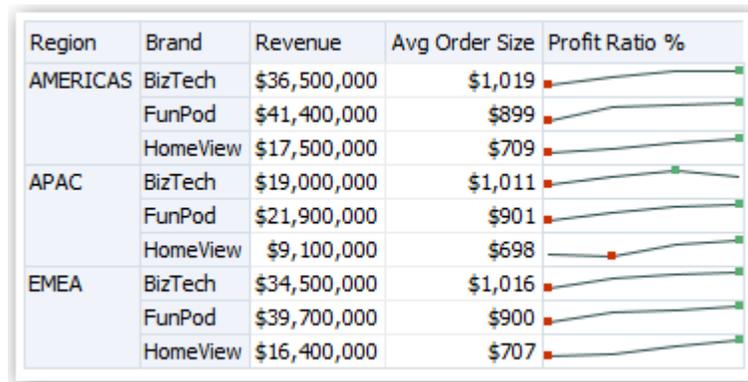
A trellis view has one of two types: Simple Trellis and Advanced Trellis. The Simple Trellis displays a single type of inner visualization, for example, all bar graphs. The inner visualization always uses a common axis, so that all inner graphs are viewed on the same scale. Having a common axis makes all graph markers easy to compare across rows and columns.

The following figure shows a simple trellis view:



The Advanced Trellis accommodates the display of multiple visualization types within its grid. An advanced trellis that illustrates sales trends might show a grid that contains numbers in the cells of one column (revenue, for example). Another column alongside the numbers column displays Spark Line graphs in its cells. Next to that column, a different microchart might be displayed, such as a column of Spark Bar graphs that visualize a different measure, such as unit totals.

The following figure shows an advanced trellis view:



Each measure that is visualized is assigned a different inner graph type. Each cell of the grid is scaled independently.

Think of an advanced trellis as a pivot table with spark graphs inside its data cells. But, for each measure that you add, you can optionally associate a dimension and render it as a microchart visualization. This makes an advanced trellis very different from a simple trellis. In a simple trellis, all of the measures are rendered in the same visualization, along with additional dimensions.

Design Considerations for Trellis Views and Microcharts

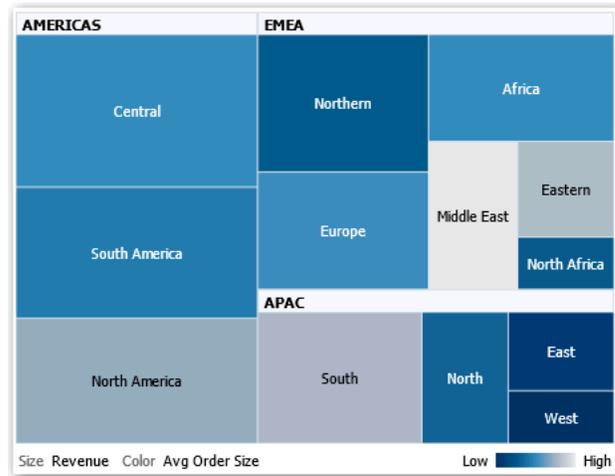
Consider the following ideas when designing content displayed in trellis views:

- For comparisons, select the Simple Trellis.
- For trend analysis, select the Advanced Trellis.
- Make the inner graphs that comprise a trellis readable and not too dense. A trellis view is not especially useful for displaying multiple series or multiple groups. If you cannot easily target a data point with the mouse (to display a tooltip), then the inner graph is likely too dense to be readable.
- For the Simple Trellis:
 - Designing a simple trellis is like designing a pivot table, except that the total number of cells that can be rendered is much less for a trellis.
 - The main difference between designing a simple trellis and designing a pivot table is that for a trellis, one or two of the dimensions can be associated with the visualization. You add many fewer dimensions to the outer edge.
 - Design the trellis with a small number of outer-edge dimensions. The entire graph series should be visible at once (for easy comparison of like to like) with no need to scroll. If you must show additional dimensionality, then consider adding the dimensions to the graph prompt.
 - When determining which data to show in column headers and which to show in row headers, ensure that the column headers show one or two dimensions (each dimension with a small number of members).
- For the Advanced Trellis:
 - A common use case for an advanced trellis is to show trend graphs alongside numeric values, in a compressed form. So a typical advanced trellis contains a combination of spark graphs alongside number representations of the same measure.
 - Ideally, include no dimensions in the column headers. Include the measure in the column headers.
 - The dimensionality typically associated with a spark graph is time. Because a spark graph includes no visible labels, it is important that the data visualized is intrinsically ordered. For example, a spark graph that visualizes regions is meaningless, because the ordering of the regions (which would be the specific bars, in a Spark Bar graph) is not intuitive.
 - Just as when designing pivot tables, you generally display time on the horizontal axis, with the other dimensions displayed on the vertical axis. The eye then scans from left to right to see how the dimensionality changes over time.
- Hierarchical columns do not work well with the Simple Trellis. When a hierarchical column is displayed on the outer edge, parents and children (such as Year and Quarter) are shown by default using a common axis scale. However, because Year and Quarter have different magnitudes, the markers in child graphs might be extremely small and hard to read against the parent scale. (Hierarchical columns do work well with the Advanced Trellis, because each data cell is a different scale.)

Editing Treemap Views

Treemaps organize hierarchical data by grouping the data into rectangles (known as tiles). Treemaps display tiles based on the size of one measure and the color of the second measure. The following figure shows an example of a treemap view. The country names are grouped by region and area. This treemap shows the correlation of

revenue for a country (based on average order size) across different regions for an area.



By default, the first measure of the analysis in the Criteria tab is selected as the Size By measure, and the second measure is selected as the Color By measure. If there is only one measure in the analysis, this measure is the default for both Size By and Color By options. Additionally, the Style element defaults to Percentile Binning with "quartile" as the value for the number of bins.

Treemaps have the following characteristics:

- Tiles are colored by percentile bins or continuously.
- First Group By dimension is displayed as the group (header) label.
- The order of the Group By dimensions implies the nesting order within the treemap. The last dimension in the Group By is the lowest level and this dimension name is displayed as the tile label. If the label is too long to fit on the tile, then it is truncated. Full values for the labels display in the tooltip.

To edit a treemap view:

1. Open the analysis for editing.
2. Click the Analysis Editor: Results tab.
3. Click **View Properties**. You can set properties such as the following ones:
 - The size of the treemap.
 - Whether a legend is to be displayed to show the continuous color variations or binning for the treemap tiles.
 - The background color and fill of the legend.
 - The border colors of the groups and tiles.
4. Click **OK** to dismiss the dialog.
5. Click **Edit View** to display the treemap view editor.
6. In the Layout pane, select the **Percentile Binning** or **Continuous Color Fill** options to change the color palette of the view.

Style	Description
Percentile Binning	<p>Specify that the color of the tiles within the treemap is displayed as a percentile bin. In the Bins list, select the number of bins to display in the treemap. You can select an integer, Quartile (4), or Decile (10). Values range from 2 to 12. The number of bins selected corresponds to the number of colors in the treemap.</p> <p>For example: You create a treemap for Region and Area. You specify Revenue as the Size By measure and Avg Order Size as the Color By measure. Then, you select Percentile Binning as the Style with 4 (Quartile) bins. The First Quartile represents those areas within the region that are under performing for the average order size by revenue.</p> <p>The Binning Properties area displays the percentage for the bin based on a total of 100% and is calculated based on the number of bins selected. Each percentage is color-coded and corresponds to the Color selection.</p>
Continuous Color Fill	<p>Specify that the tiles within the treemap are displayed as a gradient color scheme. The low value gradient color is the minimum value for the selected Color By measure. The high value gradient color is the maximum value for the selected Color By measure.</p>

7. Change the measures and attribute and hierarchal (excluding skip-level) columns to visualize the new data in more meaningful ways by using **Group By**, **Size By**, and **Color By** options.
8. Click **Done**.

Editing Narrative Views

A narrative view displays data results as one or more paragraphs of text. You use a narrative view to provide information such as context, explanatory text, or extended descriptions along with column values. You can perform various tasks in the narrative view editor:

- Type a sentence with placeholders for each column in the results.
- Specify how rows are separated.
- Apply cosmetic formatting to the fonts used in the narrative view, or import the font formatting from a previously saved view.
- Add references to variables.

To edit a narrative view:

1. Open the analysis for editing.
2. Click the Analysis Editor: Results tab.
3. Click **Edit View** to display the narrative view editor.
4. In the **Prefix** field, enter the header for the narrative. This text is displayed at the beginning of the narrative.
5. In the **Narrative** box, enter the narrative text that is displayed for each row in the results. You can include both text and column values. Include a line break code at the end of this field to force each line of text and values onto its own line.

To include column values, use an at sign (@), optionally followed by a number. Use an at sign by itself to indicate the first column. If you include multiple at

signs, then the first occurrence of the sign corresponds to the first column, the second occurrence corresponds to the second column, and so on.

Use @*n* to include the results from the designated column in the narrative. For example, @1 inserts the results from the first column in the analysis, and @3 inserts the results of the third column.

For example, for an analysis that returns the region name in the second column, specify @2 to include the following values in the view: East Region and West Region.

6. In the **Row separator** field, enter a row separator for each line from the Narrative field that contains values. For example you might enter a string of plus signs (+) between each line.
7. In the **Rows to display** field, enter the number of rows from the column to return. For example, enter 5 to display values from the first 5 rows of the column. For a hierarchical column, you can use selection steps to display hierarchy levels with the hierarchical column. For example, create a step to select members based on hierarchy and add members of the specified level. A hierarchy level is considered a row.
8. In the **Postfix** field, enter the footer for the narrative. Ensure that the narrative ends in a line break, or that the footer begins with a line break.
9. Click **Done**.

About Editing Non-Data Views

You often edit views that display data, such as tables, graphs, and gauges. You can also include the following types of views in analyses and dashboards:

- [About Column Selector Views](#)
- [About Filters Views](#)
- [About Selection Steps Views](#)
- [About Static Text Views](#)
- [About Title Views](#)
- [About View Selector Views](#)

About Column Selector Views

A column selector view is a set of drop-down lists that contain pre-selected columns. Users can dynamically select columns and change the data that is displayed in the views of the analysis.

One drop-down list can be attached to each column in the analysis, and multiple columns can be attached to each drop-down list. Updates that you make in the column selector view affect all the data views in the analysis.

You add columns to drop-down lists from the Subject Areas pane. When you add columns in this way, they are not added to the Criteria tab for the analysis. Instead, when you display the Criteria tab, you see that the column is now referred to as a "Column Group" with the default column for the list specified also. The default column is the one on which you created the drop-down list.

About Filters Views

A filters view displays the filters in effect for an analysis. Filters, like selection steps, allow you to constrain an analysis to obtain results that answer a particular question. Filters are applied before the query is aggregated. For information, see [Creating Filters for Columns](#).

About Selection Steps Views

A selection steps view displays the selection steps in effect for the analysis. Selection steps, like filters, enable you to obtain results that answer particular questions. Selection steps are applied after the query is aggregated.

You cannot modify selection steps from this view editor. To modify the selection steps, exit the Selection Steps editor and use the Selection Steps pane. For information, see [Refining Selections of Data](#).

About Static Text Views

A static text view adds static text to be displayed with the analysis results. You can include variables in a static text view, as shown in the following example. For information, see [Advanced Techniques: Referencing Stored Values in Variables](#).

```
[u] Static Text View [/u][br/]
Region: @{variables.myFavoriteRegion} - Year:
@{variables.myFavoriteYear}[br/]
System Time: @{system.currentTime}[dddd,MMMM dd,yyyy][br/]
Product Version: @{system.productVersion}[br/]
[br/]
```

About Title Views

A title view displays a title, a subtitle, a logo, and timestamps to the results. If you do not specify a title, then the name of the saved analysis is used as the title. For unsaved analyses, the **Title** text box is blank. You can reference variables in the text fields of the Title editor.

About View Selector Views

A view selector view enables users to select a specific view of the results from among the saved views for an analysis. When placed on a dashboard, the view selector is displayed as a list from which users can choose the view that they want to display below the selector.

Generally, you include views in the view selector that are not being displayed in the Compound Layout view. For example, you might create a table, graph, gauge, and view selector view for an analysis, but include only the table and view selector view on the Compound Layout view. When the analysis is displayed on a dashboard page, users can select the graph or gauge view from the view selector view.

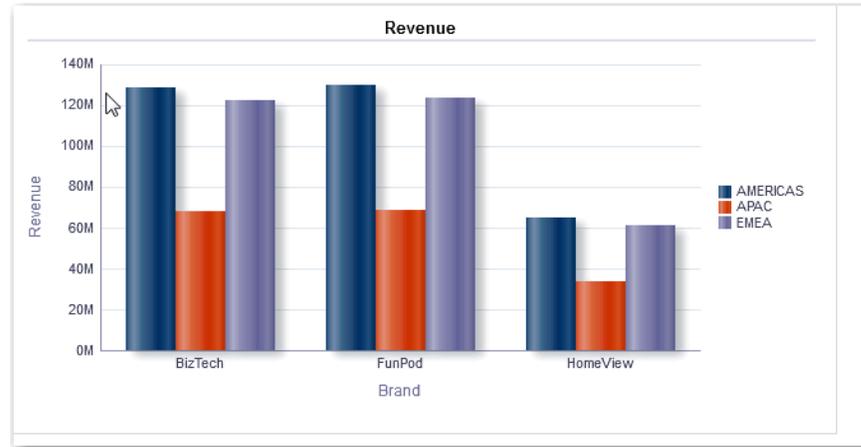
Graphing Data in Analyses

Topics:

- [Editing Graph Views](#)
- [Zooming and Scrolling in Graphs](#)
- [Formatting the Visual Appearance of Graphs](#)
- [Limiting Data Displayed in Graphs and Gauges](#)

Editing Graph Views

You can use graphs of various types for analyzing and displaying data. For example, in the Brand Revenue analysis, you can edit a bar graph to compare the product revenue for three different regions. The following figure shows a bar graph view on a dashboard page:



To edit a graph view:

1. Open the analysis for editing.
2. Click the Analysis Editor: Results tab.
3. Click **View Properties** to edit properties. You can set the following kinds of properties:
 - Related to the graph canvas, such as legend location.
 - That control the appearance of the graph, such as the style.
 - For axis limits and tick marks.
 - That control the display of titles and labels for the graph.
4. On the Scale tab of the properties dialog, select **Click to edit Scale Markers** to display the Scale Markers dialog. Define scale markers, which are accenting lines or shaded background ranges that mark key points, thresholds, ranges, and so on in a graph. The following table describes the two types of scale markers:

Type	Description
Line	A line that is drawn across the graph at a specified position on the scale
Range	A shaded background area that is displayed behind the graph.

You can apply line or range scale markers on one or more axes depending on the type of graph.

5. Click **OK** to dismiss the dialog.
6. Click **Edit View** to display the Graph editor.
7. Use various toolbar buttons to affect the display of the graph, as described in the following table:

Button	Description
Type	Includes bar, line, and pie.
Subtype	Includes vertical or horizontal, depending on the graph type.
Style	Available choices for style depend on the graph type.
Effect	Either a 2D or 3D effect.

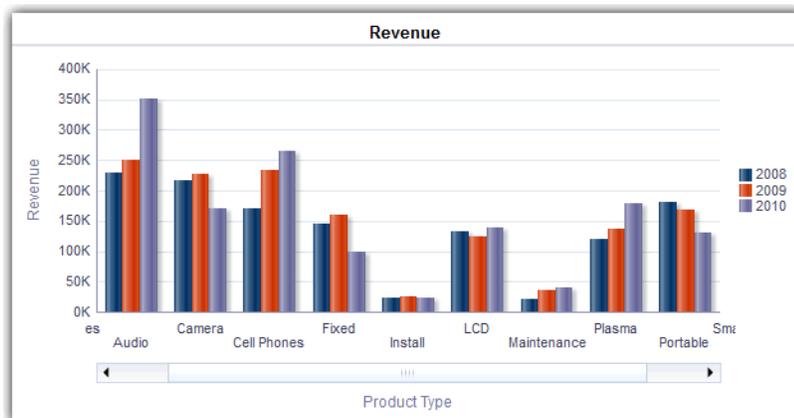
8. Define thresholds for a funnel graph, as described in [Setting Thresholds](#).
9. To drill in data in the view, see [Drilling in Results](#).
10. Click **Done**.

Zooming and Scrolling in Graphs

If zooming and scrolling has been enabled for a graph, then the graph includes a Zoom icon. The Zoom icon enables you to zoom in and out of a graph's plot area using its axes. After you zoom in on an axis, you can scroll the axis. Enable zooming and scrolling with the General tab of the Graph Properties dialog.

For example, while viewing a graph in results of a Brand Revenue analysis, you can zoom in on the Product Type axis. Doing so enables you to scroll the axis and view more data by product type.

To zoom and scroll in a graph, hover the mouse cursor over the graph to reveal the **Zoom** button and click **Zoom**. If only one axis is enabled, select **Zoom In** or **Zoom Out**.



If both axes of the graph are enabled for zooming and scrolling:

- Select **Horizontal Axis**, then either **Zoom In** or **Zoom Out**.
A zoom and scroll slider is displayed on the X axis.
To unzoom the X axis, select **Actual Size**.
- Select **Vertical Axis**, then either **Zoom In** or **Zoom Out**.
A zoom and scroll slider is displayed on the Y axis.
To unzoom the Y axis, select **Actual Size**.
- To unzoom both the X and Y axes, select **Actual Size**.

(Optional) To use other zoom features:

- Use **Zoom** to zoom in and out incrementally.
- Drag the scroll thumb on an axis to dynamically scroll the graph, revealing portions of the graph that are out of view.
- Click the scroll buttons on an axis to scroll left and right (on the X axis), or up and down (on the Y axis).
- Use the resize handles to zoom in and out on an axis.

Formatting the Visual Appearance of Graphs

You can format the visual appearance of graphs based on two settings:

- The position of the graph elements (such as lines or bars in a line-bar graph or slices in a pie graph).
- Conditions applied to columns.

Formatting Graphs Based on Position

Positional formatting enables you to customize the appearance of a graph based on the position of graph elements; that is, the numeric sequence in which graph elements (for example, bars) are displayed in a group. A group is determined by the attribute columns that are displayed in the Group By drop target area. (For information on drop target areas, see [About Drop Targets in the Layout Pane](#).)

You can format the visual appearance of a graph based on position in terms of its color, line width, and line symbols. You cannot use positional formatting with waterfall graphs.

Formatting Graphs Based on Columns

Conditional formatting enables you to customize the appearance of a graph based on conditions applied to columns. The formatting is applied to the column values that meet the condition.

You can specify a color in which to display graph data based upon a specific column value, or range of column values that meet the condition specified for the column. For example:

- Conditionally changing the color of a graph based on specific column values.
You want to create a bar graph to compare sales between two beverages, Lemonade and Cola. When creating a bar graph, you specify two conditions, one where the bar representing Lemonade sales is yellow and another where the bar representing Cola sales is blue.
- Conditionally changing the color of a graph based on a range of column values.
A sales manager wants to create a bar graph to compare sales for all representatives across two sales bands. When creating a bar graph the sales manager specifies two conditions, one where the bar is red for all sales representatives with sales less than \$250,000, and another where the bar is green for all sales representatives with sales greater than \$250,000.

To format the appearance of a graph:

1. Click **Edit Graph Properties** on the toolbar of the graph editor.
2. Click the Style tab of the Graph Properties dialog.
3. Click **Style and Conditional Formatting**.

4. Click the Style Formatting tab to format the appearance of a graph based on the position of the graph elements. To add a custom formatted position:
 - a. Select the tab for the graph element (for example, bar) to which you want to add a custom formatted position.
 - b. Click **Add new position**. A new position entry is displayed in the Custom Formatted Positions table.
 - c. Specify the formatting. For example, to select the color to be applied to the position, click the down arrow next to the **Color** box to access the Color Selector dialog. (Note that the formatting options depend on the element.)

Note: If you specify 0 for the width of a line, then the legend marker changes from the default line marker to symbol markers for the line and for other lines in the graph. For example, the symbol markers are shown as the legend markers for all the lines in the graph.

5. Click the Conditional Formatting tab to format the appearance of a graph based on a condition that is applied to columns. To add a condition to a column:
 - a. Click **Add Condition Format** and select the column to which you want to apply a condition.
 - b. Select the operator and enter a column value, or a range of column values for this condition.
 - c. Click **OK**.
 - d. To select the color to be applied to column values when the condition is met, click the down arrow next to the **Color** box to display the Color Selector dialog.
6. Click **OK**.

Rules for Applying Conditional Formats in Graphs

The following rules apply for building and using conditions in graphs:

- You can create conditions only from columns that are being used by the graph.
- When format conditions conflict with each other, conflicting conditions are prioritized in the following order:
 1. Conditional formatting on attributes.
 2. Conditional formatting on measures
 3. Style formatting based on the positions of graph elements.
- When a user drills on a graph that has conditional formatting applied, the following rules apply:
 - A conditional format based on measures is not carried to the next level. (It does not make sense to carry the conditional format to a different level; for example if, in a geographic hierarchy, from Region to City.)
 - A conditional format based on attributes is carried to the next graph if it has not been drilled on.

For example, if you had the conditional format "Lemonade = Blue" and only drill on years, then "Lemonade = Blue" stays in place.

- Conditional formatting is not supported on subtotals and totals for waterfall graphs.

Graph Exceptions for Conditional Formatting on Columns

The following table lists the graph exceptions that apply to conditional formatting based on columns.

Graph Type	Exception
Line	Only symbol formatting is allowed for the line.
Line-Bar	
Radar	
Time Series Line	
Pareto	Formatting is applied only to the bars, not to the Pareto line.

Limiting Data Displayed in Graphs and Gauges

Topics:

- [Defining Section Sliders in Graphs and Gauges](#)
- [Using Section Sliders in Graphs and Gauges](#)

You can limit the data that is shown in graphs or gauges using section sliders. A section slider displays members of one or more attribute or hierarchical columns as values on a rectangular bar. The slider also provides mechanisms to select a value for that column such as increase and decrease buttons. The play button sequentially moves through the slider values.



Defining Section Sliders in Graphs and Gauges

You can define a section slider to limit the data that is shown in a graph or gauge. For example, you can limit the data that is shown in a graph to the a specific quarter in the year 2013.

To define a section slider:

1. Open the analysis for editing.
2. Click the Analysis Editor: Results tab.
3. Create the graph or gauge.
4. Click **Edit View** on the graph or gauge view.
5. In the Layout pane, drag columns to the Sections drop target.
6. Select **Display as Slider**.
7. Click **Section properties**.
8. Specify the maximum number of values to display in the section slider, then click **OK**.
9. To close the editor, click **Done**.
10. To save the changes, click **Save Analysis**.

Using Section Sliders in Graphs and Gauges

To use a section slider in a graph or gauge:

- Move the slider thumb to the desired value.
- Click the decrease button to move the slider thumb to the left.
- Click the increase button to move the slider thumb to the right.
- To sequentially move the slider through all the values, click the play button.

The play button changes to a pause button that enables you to stop on a particular value.

The data in the graph or gauge is limited by the current value indicated by the slider thumb.

Saving Views

You can save a view that you are working with at any time. To save a view, you must save the new or existing [analysis](#). For example, you can create a Brand Revenue analysis, edit its table view, and decide to save it for the first time.

To save a view, click **Save Analysis** or **Save As** in the toolbar of the Results tab in the Analysis editor.

Rearranging Views

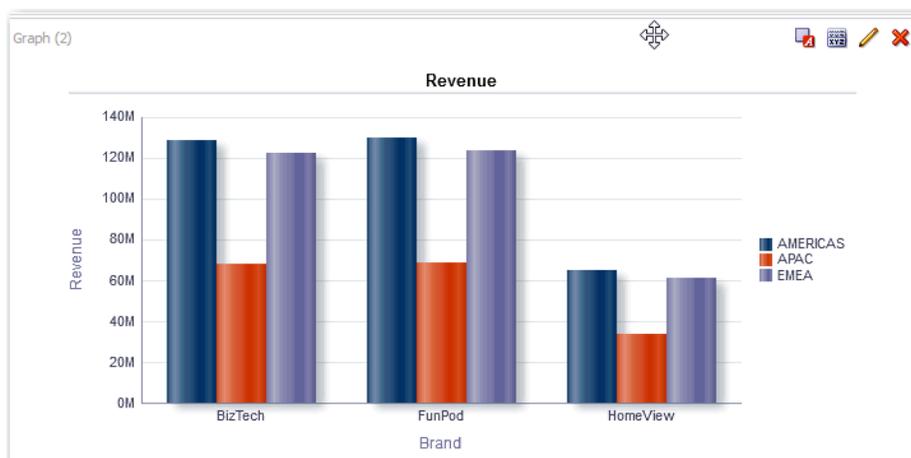
You can rearrange a view as follows:

- Alongside the boundary of another view.
- To the outer boundary of the compound layout. The view is displayed across the length or breadth of the compound layout.

For example, you can rearrange the views in the Brand Revenue analysis. You can arrange the bar graph of Projected Revenue to be displayed before the line graph of Actual Revenue.

To rearrange a view:

1. Place the cursor just inside the top edge of the view that you want to rearrange.
2. Click and hold the left mouse button on the view. The view is displayed as a transparent, movable object.



3. Drag and drop the view to the position that you want. The view is displayed in a position marked by a blue bar (the drop target).

Refreshing the Results in Views

When you work with views that show results data, such as the table and pivot table, you can refresh the results of the current analysis. For example, you can add a filter in the Brand Revenue analysis. After doing so, you might want to see the effects of your change.

To refresh results in a view:

On the toolbar of the Analysis Editor: Results tab, click **Refresh the results of the current analysis**.

Printing Views

You can print views using HTML or Adobe PDF (Portable Document Format). For example, you can display and print the Brand Revenue analysis in a new browser window by selecting the **Printable HTML** option.

To print views:

1. To print a single view, click **Print this analysis** on the toolbar of the view's editor. To print a group of views that displayed in the Compound Layout, click **Print this analysis** on the toolbar of the Analysis Editor: Results tab.
2. Select **Printable HTML** or **Printable PDF**.
 - For HTML, a new browser window displays the view or views to print. From the File menu of the new browser window, select **Print**.
 - For PDF, an Adobe Acrobat window displays the view or views to print. Select the options in the window to save or print the file.

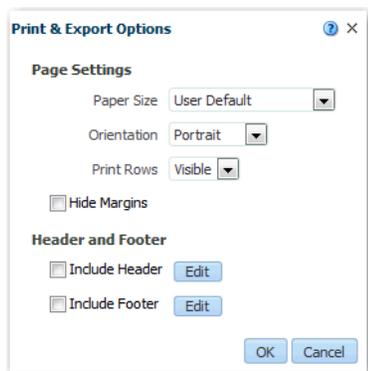
Changing Print Options for Views

You can specify settings for printing dashboard pages and views. For example, when printing the Revenue Dashboard that contains many views side-by-side on each page, you can set the Orientation to Landscape.

Note: The print selections that you specify apply to PDF output only. If you then print the PDF file on a local or network printer, then the print selections specified in the browser are in effect. For example, the selection for paper size for the browser is in effect.

To change print options for views:

1. On the toolbar of the Analysis Editor: Results tab, click **Print & Export Options**. The Print & Export Options dialog is displayed.



2. Specify the appropriate options on the dialog. For example, specify the paper size and orientation and whether to include a header and footer.
3. Click OK.

Previewing How Views Are Displayed on Dashboards

You can preview views to see how they are displayed on a [dashboard](#) page. For example, you can select **Show how results will look on a dashboard**. Doing so previews how results from a group of views are displayed in a dashboard.

To preview views:

1. If you want to preview a single view:
 - On the toolbar of the view's editor, click **Show how results will look on a dashboard**.
2. If you want to preview a group of views that is displayed in the Compound Layout:
 - On the toolbar of the Analysis Editor: Results tab, click the **Show how results will look on a dashboard**.
 - The dashboard preview is displayed in a new window. Prompts are displayed and applied in the preview.

Removing Views

You can remove a view from a compound layout or analysis. For example, you might find that the trellis view is not the best way to show the results of the Brand Revenue analysis. You can remove that trellis view.

To remove a view from a compound layout, click **Remove View from Compound Layout** on the view's toolbar. Removing a view from a compound layout does not remove it from the analysis.

To remove a view from an analysis, select the view, then click **Remove View from Analysis** in the Views pane on the Results tab. Removing a view from an analysis removes it from the analysis and any compound layout to which it was added.

Sorting Values in Views



You can sort values in table, graph, pivot table, and trellis views. You can sort on members, measures, and rows (where you see sideways triangles). You cannot sort on page or section edges.

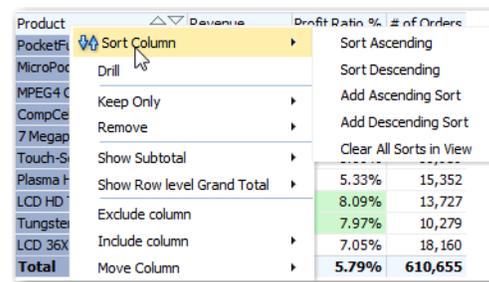
You can use many options to sort in views. For example, when you sort a column, you can select from the following options:

- **Sort Ascending** — Enables you to sort the values in the column by ascending order, as a first-level sort. For example, string values sort alphabetically A through Z, numbers sort lowest to highest, and dates sort earliest to latest.
- **Sort Descending** — Enables you to sort the values in the column by descending order, as a first-level sort.
- **Add Ascending Sort** — Specifies that an ascending sort for this column is added as another sort for the analysis.
- **Add Descending Sort** — Specifies that a descending sort for this column is added as another sort for the analysis.
- **Clear Sort** — Removes the sort specification for the specified column. This option works differently in the Selected Columns pane than in other places. If you make sort specifications in both the Selected Columns pane and in the view itself, then you return to the Selected Columns pane and click **Clear Sort**, only the sort that you specified in the Selected Columns pane is removed. A sort that you specified in the view remains.
- **Clear All Sorts in All Columns** — Removes all sort specifications that you have made. This option works differently in the Selected Columns pane than in other places, as described for **Clear Sort**.

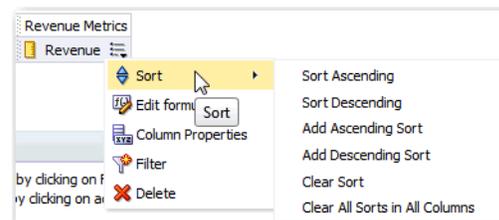
For example, in a table in the Brand Revenue analysis, you can select an ascending sort on the Revenue column. Doing so sorts revenue values from the lowest to highest.

You can sort values in the following ways:

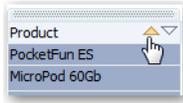
- Right-click in a view heading, click **Sort Column**, and select the appropriate option.



- From the Selected Columns pane of the Criteria tab, click **Options** beside a column, click **Sort**, and select the appropriate option.



You can also sort values in a view using the upwards and downward triangles that are found in column headings.



Clearing Sorts in Views

You can clear sorts that you have applied to columns in a view or analysis. For example, you can clear all sorts in the Time column of the Brand Revenue analysis.

To clear sorts that you have applied in a pivot table, table, or trellis, right-click in the view heading and click **Clear All Sorts in View**.

To clear sorts that you have applied to a column in an analysis:

1. Display the Selected Columns pane of the Criteria tab.
2. Click **Options** beside the column.
3. Select **Sort**, then **Clear Sort**.

When you clear sorts from the Criteria tab, you clear only the sorts that were defined from the Column Options menu. You do not clear the sorting done within a specific view.

To remove the primary sort from the column to which it now applies and apply it to the column whose button you just clicked, click a sort button in an unsorted column.

Drilling in Results

Topics:

- [About Drilling](#)
- [Drilling in Tables and Trellises](#)
- [Drilling in Graphs](#)

About Drilling

Many of the results that are displayed in views represent hierarchical data structures. The metadata specifies these hierarchies, and this enables you to access the different levels of detail within them. Drilling is a way to navigate through data in views quickly and easily.

- Drill down to display data in more detail, which displays more members.
- Drill up to display less data.

For example, in the results of the Brand Revenue analysis, you can drill for more data in the graph of Revenue by Product. To do this you can click on the MobilePhones data point. More data is displayed in the graph, such as the MobilePhones revenue per sales office for each of the last three years.

Drilling in Tables and Trellises

When you drill down in a table, pivot table, or trellis, the detail level data is added to the current data. For example, when you drill from a continent, the table displays data for the continent and for the countries in that continent.

To drill in an attribute column in tables, pivot tables, and trellises:

1. Hover over a value in a view.

The value is underlined.

Product Type	Product	Time	Revenue
Accessories	Bluetooth Adaptor	> Total	20,850,973
	MP3 Speakers System	> Total	3,185,098
Audio	MicroPod 60Gb	> Total	99,541,037
	SoundX Nano 4Gb	> Total	19,302,051
Camera	7 Megapixel Digital Camera	> Total	71,047,556
	MPEG4 Camcorder	> Total	94,471,826

2. Click the heading or member in which you want to drill.

More detail is added to the table or trellis.

Product Type	Item Description	Product
Accessories	8 X Zoom Optical LensBlack	Bluetooth Adaptor
	8 X Zoom Optical LensBlue	Bluetooth Adaptor
	8 X Zoom Optical LensPink	Bluetooth Adaptor
	8 X Zoom Optical LensSilver	Bluetooth Adaptor

To drill in a hierarchical column in tables, pivot tables, and trellises, click the **Expand** or **Collapse** icon beside a member.

You can also use the right-click menu to expand and collapse columns.

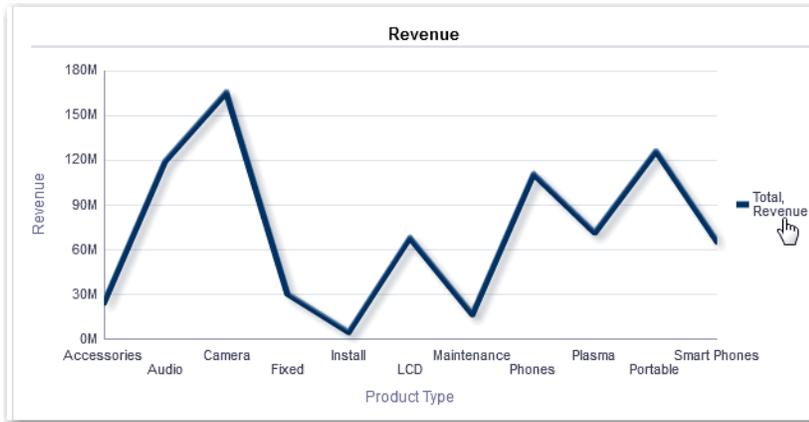
Time	Revenue
> Total	130,474
> Total	Expand
> Total	Keep Only
> Total	Remove
> Total	Keep Only Related ▶
> Total	Remove Related ▶
> Total	Add Related ▶
> Total	Create Group...
> Total	Create Calculated Item...
> Total	Time ▶

Drilling in Graphs

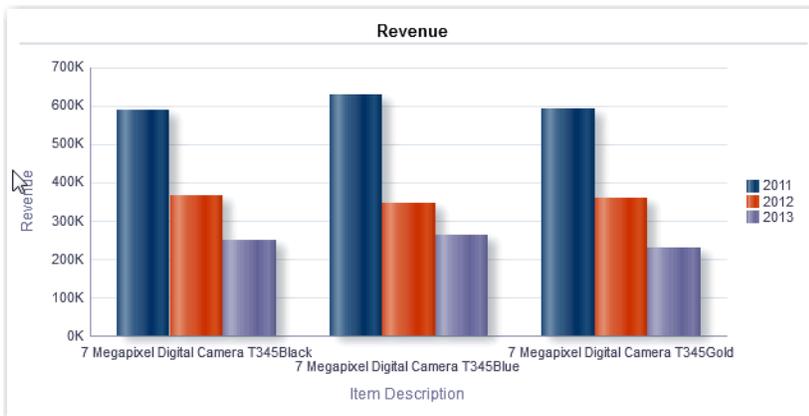
When you drill down in a graph, the detail level data replaces the current data. For example, when you drill down from a continent, the graph displays data for the countries in that continent, but not for the continent itself.

To drill in a graph:

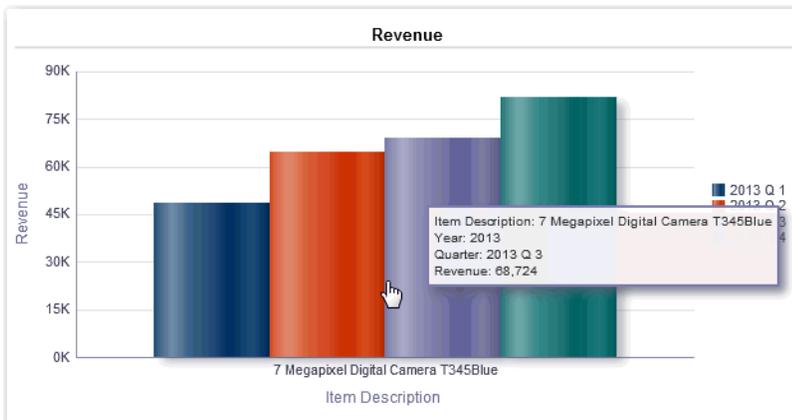
- Click a label on any axis or in the legend.



- Click on a data point.



More detail is shown in the graph.



Resizing Rows and Columns in Views

Topics:

- [Configuring for Resizing in Views](#)
- [Resizing in Views](#)

You can resize the row and column edges of table, pivot table, and advanced trellis views. For example, you can resize the Time column in a table of results of the Brand Revenue analysis.

Note that the resizing of rows and columns:

- Is not persisted if you resize rows and columns interactively. If you leave a table, then display it again, the interactive resizing is lost. If you set columns widths using properties, those widths are persisted.
- Is ignored if you export the view to PDF.

Configuring for Resizing in Views

You must configure views to use scrolling as the method for browsing data before resizing can occur.

To configure a table, pivot table, or trellis view to use scrolling:

1. On the view's toolbar, click **View Properties**.
2. Select **Fixed headers with scrolling content** in the properties dialog.
3. Click **OK**. The scroll bar is displayed on the view, and rows and columns can be resized.

Resizing in Views

To resize a row or column edge in a table view, pivot table view, or advanced trellis:

1. Hover the mouse pointer over the border of the column or row edge. A resize cursor is displayed.

Time	Revenue
> Total	24,036,071
> Total	118,843,088
> Total	165,519,382
> Total	30,094,995

2. Click and hold the mouse button down. A dotted line is displayed.

Time	Revenue
> Total	24,036,071
> Total	118,843,088
> Total	165,519,382
> Total	30,094,995
> Total	4,494,375

3. Drag the dotted line to the required size.
4. Release the mouse button. The row or column is resized.

Suppressing Null Values in Views



[Video](#)

You can select whether to include null values in an analysis when an entire row or column contains all null values. By default, null measure values are suppressed for all analyses. For example, you might decide to display null values in the Revenue column of a Sales analysis.

To suppress null values in views:

1. Display the Results tab for the analysis that includes the view.
2. Click **View Properties**.
3. Select the appropriate **Include Null Values** options for the view. For example, suppose that you want to turn off null suppression for both rows and columns in a pivot table. Select **Include rows with only Null values** and **Include columns with only Null values**.

This setting displays corresponding dimensions that have data, as well as null values. Note that if the view contains prompts or section edges, then they also inherit the null suppression value from either the row or column edge.

Note: Turning null suppression off might increase the volume of the data returned and impact performance. Contact your administrator for additional information.

If results for analyses that include null values are not as you expect, then contact your administrator. Verify that data in your sources is consistent.

Assembling Views for Display

You use a compound layout to assemble different views for display on a dashboard. The views are displayed in separate containers within a compound layout.

- You can create additional compound layouts to vary presentation of analyses. You can use different compound layouts for different dashboards or for different devices. For example, a Brand Revenue dashboard might have one compound layout that shows a table and a graph, and another that shows a pie chart.
- You can duplicate a compound layout as a shortcut to creating a new compound layout. Views from the original compound layout are preserved. You can add views in addition to views that are already there, and delete views you do not want. For example, suppose you have a duplicate compound layout for the Brand Revenue analysis. You can keep the table, graph, pie chart, and gauge views, and add a performance tile view.
- You can rename a view so that the name is more meaningful to you. For example, for a Brand Revenue analysis, suppose a western region now consists only of California. You can rename the Western Region compound layout to California.
- You can delete compound layouts that are no longer useful for you. For example, for a Brand Revenue analysis, you might not need views for the Western region. You can delete the compound layout that contains those views.

To create, duplicate, rename, or delete a compound layout:

1. Open the analysis for editing.
2. Click the Results tab.
3. To create a compound layout, on the toolbar of the Analysis Editor: Results tab, click on **Create Compound Layout**.

A compound layout tab is displayed with only a title view. You can add views as needed.
4. To duplicate a compound layout, on the toolbar of the Analysis Editor: Results tab, click on **Duplicate Compound Layout**.

A compound layout tab that contains the same views as the selected compound layout is displayed. You can add or delete views as needed.

5. To rename a compound layout, on the toolbar of the Analysis Editor: Results tab, click **Rename Compound Layout**.

On the Rename dialog, type a new name for the compound layout and click **OK**.

6. To delete a compound layout, on the toolbar of the Analysis Editor: Results tab, click on **Delete Compound Layout**.

The compound layout is removed.

Linking Views in Master-Detail Relationships

Topics

- [Defining Master Views](#)
- [Defining Detail Views](#)

You can link views such that one view drives changes in one or more other views. For example, you can link two views so that when you click a particular Region in a table, your selection affects a graph. The Region on the section slider or prompt in a graph and the data in the graph changes to reflect the Region that you clicked on the table.

You must define the two types of views to link:

- Master view – Drives data changes in one or more detail views.

The following types of views can be master views: funnel graph, gauge, graph, pivot table, table, and trellis. In a trellis view, only on the outer edges, can be master views, not the inner visualizations.

A master view can be the same analysis as the detail view or in a different analysis. A master view can update the data in one or more detail views.

A master view contains a master column, where you set up the interaction that sends master-detail events on a channel. A channel carries master-detail events to the detail view. The master column cannot be displayed on the page edge or section slider. It must be displayed in the body of the view.

- Detail view – Responds to master-detail events such as clicking on a value in a master view table.

The following types of views can be detail views: funnel graph, gauge, graph, pivot table, table, and trellis. In a trellis view, only the outer edge can be detail views, not the inner visualizations.

A detail view:

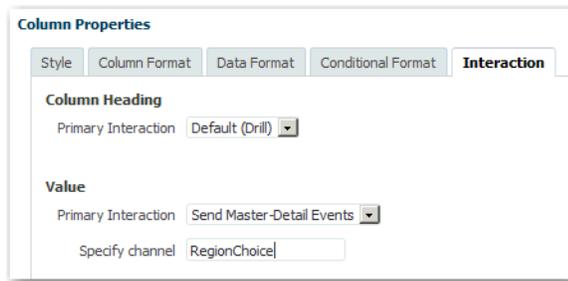
- Can listen for events from multiple master views
- Can be in the same analysis as the master view or in a different analysis
- Cannot act as a master view to another view

Defining Master Views

As part of the process of [Linking Views in Master-Detail Relationships](#), you define the master view that sends changes to the detail views.

To define a master view:

1. Open the analysis for editing.
2. For the column that is to be the master column, in the Criteria tab, click the **Options** button and select **Column Properties**.
3. On the Column Properties dialog, click the Interaction tab.
4. In the **Primary Interaction** box in the **Value** area, select **Send Master-Detail Events**.
5. In the **Specify channel** field, enter a name for the channel on which the master view sends master-detail events.



6. Click on the Analysis editor: Results tab to view the default table or pivot table view.
7. (Optional) Create a different view to be the master view.
8. Click **OK**.

Defining Detail Views

As part of the process of [Linking Views in Master-Detail Relationships](#), you define the detail views that receive changes from the master view.

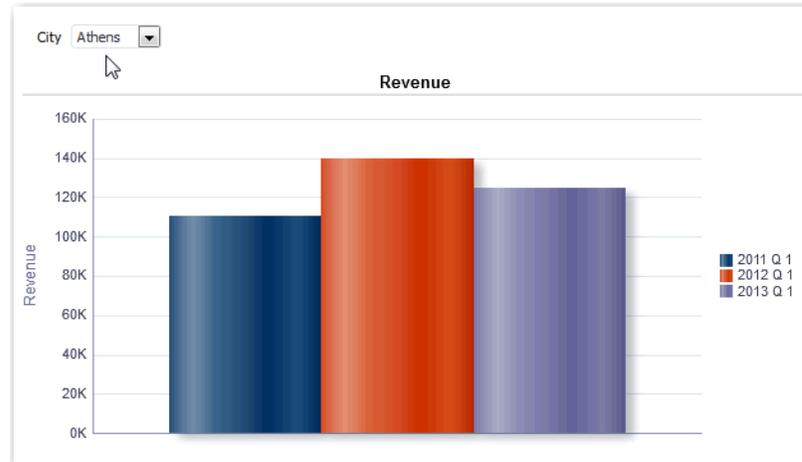
To define a detail view:

1. Open the analysis for editing.
2. Click on the Analysis editor: Results tab.
3. Create the view that you want to use as the detail view.
4. Edit the view.
5. Click the Property button on the toolbar of the view's editor. The view's property dialog is displayed.
6. Select **Listen to Master-Detail Events** on one of the following dialogs:
 - Gauge Properties dialog: General tab
 - Graph Properties dialog: General tab (for a graph or funnel graph)
 - Pivot Table Properties dialog: Style tab
 - Table Properties dialog: Style tab
7. In the **Event Channels** field, enter the name of the channel on which the detail view is to listen for master-detail events. The channel name is case-sensitive and must match exactly the channel name specified in the master view. Separate channels with commas, for example, channel a, channel b.
8. Click **OK**.

In the following example, a table view of a City Revenue analysis is linked to a bar graph through a master-detail relationship.

In the graph view, the City column is configured as the master view. The City column sends events to the graph view through the specified CityChoice channel.

The graph view has a prompt that enables users to choose a city. Data on the graph is displayed based on the city choice.



The graph is the detail view, with the City prompt listening for events from the table view on the specified CityChoice channel. Suppose the user clicks on a value in the City column in the table view. The prompt in the graph view is set to that city, and the graph is refreshed.

Modifying the Layout of Data in Views

Topics:

- [Adding and Rearranging Columns in Views](#)
- [Setting Properties for Sections of Data in Views](#)
- [Adding Totals to Tables and Pivot Tables](#)
- [Displaying Running Sums and Relative Values in Pivot Tables](#)

To modify the way that data is arranged in a view, you use the Layout pane. You perform tasks such as adding and rearranging columns and adding totals. For more information, see [About Drop Targets in the Layout Pane](#).

Adding and Rearranging Columns in Views

Topics

- [Adding Columns to Views](#)
- [Removing Columns from Views](#)
- [Rearranging Columns in Views](#)

Adding Columns to Views

To add a column to a view, use one of the following ways:

- Drag the column from the Subject Areas pane to the appropriate location in the view editor.
- Drag the column from the Subject Areas pane and drop it on a drop target on the Layout pane of the view's editor.

For example, suppose you want to include the Office column in a table of the Brand Revenue analysis. You can drag the Office column from the Subject Areas pane to a drop target after the Product column.

Removing Columns from Views

Removing a column from a particular view does not remove it from the underlying analysis or remove it from other views. If you want to remove the column from the analysis and all views, remove it using the Criteria tab.

To remove a column from a view:

1. Open the view for editing.
2. In the Columns and Measures section of the Layout pane, click **More Options**.
3. Select **Remove Column**.

Rearranging Columns in Views

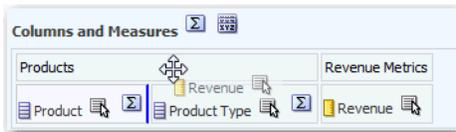
To rearrange table and pivot table columns in the view editor:

1. Open the view for editing.
2. Drag the column using the column handles and drop the column at a drop target.

Product Type	Brand	Revenue
Accessories	BizTech	24,036,071
Audio	BizTech	18,843,088
Camera	FunPod	65,519,382

To rearrange columns in the Layout pane:

1. Open the view for editing.
2. In the Layout pane, drag and drop the column to the required location.



Note: This procedure provides the most basic steps for using the Layout pane to rearrange columns. Many options are available for arranging columns in the Layout pane, as described in [About Drop Targets in the Layout Pane](#).

Setting Properties for Sections of Data in Views

You can specify properties for the view body (such as a pivot table) or drop target (such as a section). For example, you can set the background color to light green and insert a page break in a long table of revenue values. For information, see [About Drop Targets in the Layout Pane](#).

To set properties for view bodies and drop targets:

1. Open the view for editing.
2. In the view editor, display the Layout pane.
3. Click **Properties** next to the view body or drop target.
4. Set the appropriate properties. The following table describes some of the properties:

Property	Description
Insert Page Break	<p>Specifies whether to create a page break before the section, so that every time a value changes in the section drop target, the new section for that column is displayed on a new page. Page breaks are visible when you export an analysis to PDF. This is useful for data-driven detail analyses.</p> <p>You can select from the following:</p> <ul style="list-style-type: none"> ■ No Page Break — Do not break pages. ■ Innermost Column — Break at the innermost column, which inserts a page break between every section ■ Outermost Column — Break at the outermost column, which inserts a page break when the section label in the outermost column changes. <p>When the value of an outermost column changes, the value of the inner column is also considered changed. Therefore, setting page breaks at the innermost column inserts manual page breaks between every section.</p> <ul style="list-style-type: none"> ■ Folder.Column — For example, Markets.Region, or Products.Brand. Inserts a page break when the section label in the specified column changes. This option is available only when the Sections drop target contains a column.
Show Blank Rows	<p>Specifies whether to display rows that have no data in the section. Select this option to display all rows, even if a row is an empty text string and contains no value. Deselect the option to hide rows when there are no results to display.</p> <p>This option might be useful for example, to hide empty address lines.</p>
Maximum number of section slider values	<p>For graphs, specifies the maximum number of values to display on a section slider bar, but not to exceed the system maximum. The administrator configures the system maximum. If you enter a number that exceeds the system maximum, then it is ignored.</p> <p>For more information, see Defining Section Sliders in Graphs and Gauges.</p>

5. Click OK.

Adding Totals to Tables and Pivot Tables

In the Layout pane, you can add totals for columns in tables and pivot tables. You can position the totals at various locations in the view. You can add totals for columns that are displayed on the various edges. For each measure, the total uses the aggregation rule for that measure.

If you specify a total in the Rows or Columns drop target of a pivot table, then the totals that are displayed are the result of the columns that are specified in the Measures drop target. Total values are not displayed on the Columns or Rows edges of the pivot table but rather in the data in the center of the pivot table.

To add totals to a view:

1. Display the Layout pane for the view.
2. To add grand totals to the entire table, in the Columns and Measures drop target, click the **Totals** button, then click the location such as **Before**. For an entire pivot table, in the Rows or the Columns drop target, click **Totals**, then the location.
3. To turn on and off the totals that apply to all the values in the drop target, click the **Totals** button beside the drop target name, such as Sections. Then select the location for the total, such as **Before** the data items. A totals area is added to the view.
4. To specify custom text to insert into a total heading in tables and pivot tables, enter text in the **Caption** box. The following table describes the text to enter.

Text	Description
@	Displays the value of the data. Suppose a total is specified for the Region column, and you enter the following text into the Caption box for the total heading: - All values in the @ The total heading displays the following text for the Western Region: - All values in the Western Region
"@"	Displays the @ symbol.
"\"	Displays the double quote. The double quote syntax is not limited to a single character. In general, you can use a backslash escaped string inside double quotes. For example: "1234567890\\abc\\d\"x\"yz!@#\$\$%^&*()-+={ } [] ; : ' ? / > < , . ` ~" Is displayed as: 1234567890\abc\d"x"yz!@#\$\$%^&*()-+={ } [] ; : ' ? / > < , . ` ~
"\""	Displays the \ symbol.
\	Displays the \ symbol.

Displaying Running Sums and Relative Values in Pivot Tables

Topics

- [Displaying Running Sums for Measure Columns in Pivot Tables](#)
- [Displaying Relative Values for Measure Columns in Pivot Tables](#)

You can use the Layout pane to display running sums or the relative value of measure columns in pivot tables.

Displaying Running Sums for Measure Columns in Pivot Tables

In a pivot table, you can display numeric measures as running sums, where each consecutive cell for the measure displays the total of all previous cells for that measure. This option is a display feature only that has no effect on actual pivot table results.

Typically, running sums are displayed for duplicated attribute columns or for measure columns for which the option to show data as a percentage of the column has been selected, with the last value being 100 percent. For example, you can display a running sum and percentage, to view progress toward next year's revenue target of \$2 million.

Running sums apply to all totals. The running sum for each level of detail is computed separately.

Column headings are not affected when the running sum option is selected. You can format the column heading if you want it to indicate that the running sum option is in effect.

The following usage rules are in effect for running sums:

- A running sum is incompatible with the SQL RSUM function (the effect would be a running sum of the running sum).
- All running sums are reset with each new section. A running sum does not reset at a break within a section or continued across sections.
- If a measure does not display in a single column or in a single row, then the measure is summed left to right and then top to bottom. (The lower right cell contains the grand total.) A running sum does not reset with each row or column.

To display a running sum in a pivot table:

1. Open the pivot table view in the view editor.
2. In the Layout pane, in the Measures area, click **More Options** for the row or column to be summed.
3. Select **Display as Running Sum**.

Displaying Relative Values for Measure Columns in Pivot Tables

In a pivot table, you can dynamically convert a stored or calculated measure into a percent or an index. This shows the relative value of the item, compared to the total, without the need to explicitly create a calculated item for it. You can view the measure as a percentage between 0.00 and 100.00, or as an index between 0 and 1.

For example, if you are using a pivot table to examine sales by product, then you can duplicate the sales measure and view it as a percentage of the total. This enables you to see the actual sales, and the percentage of sales, that each product accounts for.

To display relative values for measure columns in pivot tables:

1. Open the pivot table in the view editor.
2. In the Layout pane, click **More Options** for the item that you want to show as a relative value.
3. (Optional) To duplicate the measure column, select **Duplicate Layer**. The item is displayed in the pivot table, with the same name.
4. Select **Show Data As**.
5. Select **Percent of** or **Index of**.
6. Select the appropriate value such as **Column**, **Row**, or **Section**.

The column is displayed in the pivot table view.

Product Type	Time	Revenue
Accessories	> Total	3.0%
Audio	> Total	14.9%
Camera	> Total	20.7%
Fixed	> Total	3.8%
Install	> Total	0.6%

7. To rename the column, click **More Options** then **Format Headings**. In the Edit Format dialog, enter a value in the **Caption** field.

About Drop Targets in the Layout Pane

Topics

- [About the Types of Drop Targets](#)
- [About the Excluded Drop Target](#)
- [About the Guidelines for Drop Targets for Various Views](#)

Each editor for a data view contains the Layout pane. The Layout pane is displayed slightly differently for each view type, such as graphs, performance tiles, and pivot tables. The Layout pane shows how the data in a view is laid out.

In the Layout pane, the columns in a data view are displayed in *drop targets*. Drop targets indicate where you can insert, move, or drop a column. They represent a valid position for a column. Each drop target has properties that you can set. You use drop targets to modify the way data is arranged in a data view by dragging and dropping columns to different targets within the view.

About the Types of Drop Targets

A data view can contain one or more of the following drop targets, depending on the type of view:

Target	Description
<view-type> Prompts	Provides an interactive result set that enables you to select the data to view. The values from the columns that are displayed in this drop target are used as the initial criteria. In a view, these values are displayed in a drop-down list for selection, which is often referred to as the "page edge."
Sections	Populates the areas that divide the view into sections. If you select the Display as Slider option in this drop target, then the values of the columns that are dropped in the Sections drop target are displayed as a section slider rather than as unique views.
<view-type> area	Simulates the plot area or the body of the view itself and assists you in seeing what the view looks like. You can drag and drop columns to and from this area.

In addition to the drop targets explained in the table, the Layout pane includes the Excluded drop target. (See [About the Excluded Drop Target](#).) The Layout pane includes other drop targets that are specific to the type of view. For example, the Layout pane for the radar graph includes a Radar Sections drop target that shows the columns values as points on each line along a radius of a circle.

About the Excluded Drop Target

To modify the layout of data, you must understand the Excluded drop target. A column in the Excluded drop target is not included in the view results but still remains as part of the analysis. A general rule is that a column is placed in the Excluded drop target for a view if it is not added explicitly to one or all views.

If you want a column that is in the Excluded drop target to be displayed in a view, then you can easily move it. Simply display the Layout pane for the view, and drag and drop the column from the Excluded drop target to the desired one.

Excluding columns differs from removing columns. You can use the **Remove Column** option from the **More Options** button in the Layout pane for a view to remove a column entirely from the analysis.

You place a column in the Excluded drop target after views have been created for the analysis in various ways. For example, you can select **Exclude Column** from the right-click menu of a view. Suppose that you are editing a view in its editor and you add a column to that view from the Subject Area pane. The column is placed in the Excluded drop target for all other views in the analysis.

About the Guidelines for Drop Targets for Various Views

As you modify the layout of views, bear the following guidelines in mind for drop targets in the Layout pane.

- [Drop Target Guidelines for Graphs and Funnel Graphs](#)
- [Drop Target Guidelines for Trellises](#)
- [Drop Target Guidelines for Treemaps](#)

Drop Target Guidelines for Graphs and Funnel Graphs

The following restrictions and guidelines apply to dragging columns from one drop target and dropping them in another in graphs and funnel graphs.

- A bubble graph requires at least three measures. Plot one measure on the horizontal axis, another measure on the vertical axis, and a third measure on the bubble size axis.
- A pareto graph can have only one measure.
If you drop another measure on the Measures drop target, then the measures are swapped; that is, the existing measure is replaced by the newly dropped measure and is moved automatically to the Excluded drop target.
- A time series line graph requires a single date or date-time data column to be selected on the horizontal axis. It has a single vertical axis, but supports multiple data series.
- A scatter graph requires at least two measures. For example, you can plot one measure column on the horizontal axis and another measure column on the vertical axis. These measures are plotted for values on the Group By axis.
- A funnel graph uses two measures but only one is required. If you do not select a second measure, then the first measure is used for the second measure. If you have selected two measures and then select a new measure, then the new measure replaces the measure currently in the Actual Measures drop target.
- A stacked bar graph requires at least two measures to allow comparison of values.

Drop Target Guidelines for Trellises

The following guidelines apply to working with drop targets in trellises:

- In advanced trellis views, measures comprise the innermost column headers of the trellis.
- When moving measures from the Color By drop target to or from the Group By drop target:
 - Dragging a single measure moves all the measures along with it. (This is known as sticky behavior.)

- Dragging a new measure into the view moves all existing measures to wherever you place the new measure.
- To place a measure on the non-measure edge of a visualization, or in the Rows target or Columns target, you must first convert the measure to an attribute column. For information, see [Editing the Formula for a Column](#).
- Attribute columns can be dragged out of the Measures drop target without causing the drop target or the measures inside it to move with the attributes.

Drop Target Guidelines for Treemaps

You use the Layout pane areas to visualize treemaps, which are constrained, hierarchical data. You can quickly spot trends and anomalies in large quantities of data and study individual values.

The Layout pane for treemaps is composed of the drop-target areas that are described in the following table:

Area	Guidelines
Prompts	Select an attribute or hierarchical column (excluding ragged and skip-level) by which to filter the treemap.
Sections	Select an attribute or hierarchical column (excluding ragged and skip-level) by which to section the treemap. For example, region that is grouped by year might be the container to display a treemap that is sized by revenue and colored by year-ago revenue.
Group By	Represents the top level of the hierarchical data that is sliced to produce or describe a container of aggregated values. The aggregated values display as tiles. The group area creates a header or group for the measure columns that are specified in the Size By and Color By areas. If more than one column of data is represented in the treemap, then a title bar is displayed for the grouping. For example, region that is grouped by year might be the container to display a treemap that is sized by revenue and colored by year-ago revenue. Region displays in the title bar.
Size By	Represents the distribution of the tiles within their parent. The size of the children is always equal to the size of the parent. Each rectangle's area is the aggregated value for the associated measure based on the applied filters (for example, prompted or filtered by region).
Color By	Represents a distribution of values across all of the tiles at the same level and adds additional scope to the analysis providing a "qualitative" perspective to the treemap.

Building Dashboards

This section describes how to build dashboards to provide personalized views of corporate and external information in Oracle BI Enterprise Edition.

Topics:

- [Typical Workflow for Building Dashboards](#)
- [Creating Your First Dashboard](#)
- [Editing Dashboards](#)
- [Adding and Deleting Pages in Dashboards](#)
- [Preparing to Print Dashboards](#)
- [Organizing Dashboard Pages in Briefing Books](#)
- [Improving the Time to Display Dashboard Pages with Default Selections](#)
- [Recalling Personalized Settings](#)
- [Linking to Dashboard Pages](#)

For more detailed information about building dashboards, see *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition*.

Typical Workflow for Building Dashboards

To start building dashboards, refer to the typical workflow described in the following table:

Task	Description	More Information
Create multiple analyses	Build analyses on which you can create views that you display on a dashboard.	Creating Your First Analysis
Create a dashboard	Create a dashboard to display data from analysis.	Creating Your First Dashboard
Add content to a dashboard page	Add content to dashboard pages to display items such as views and prompts.	Adding Content to Dashboard Pages
Add prompts to dashboard pages	Add prompts to dashboard pages to drive the content on the pages.	Adding Prompts to Dashboard Pages
Add pages to a dashboard	Optionally add one or more pages to the dashboard to display the data in various ways.	Adding Pages to Dashboards

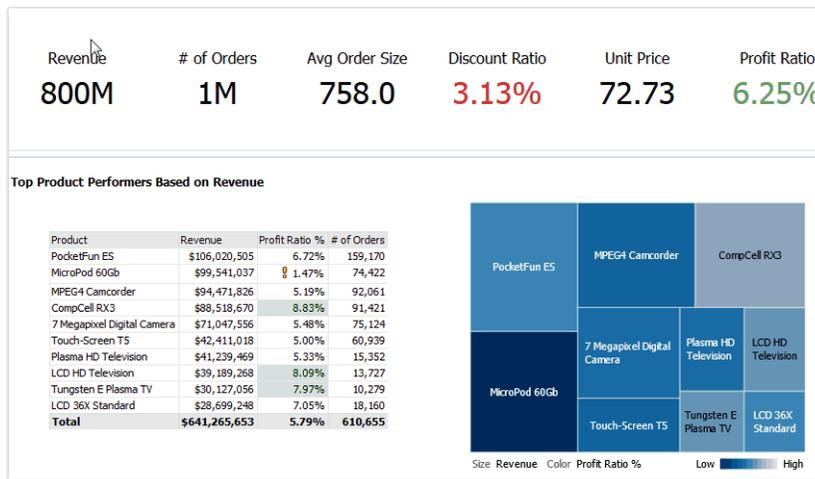
Task	Description	More Information
Recall personal settings for dashboards	Create customizations that enable you to view pages in their current state or with your favorite choices already selected.	Recalling Personalized Settings

Creating Your First Dashboard

 [Video](#)

You can create dashboards to provide personalized views of corporate and external information. A [dashboard](#) consists of one or more pages that display results of an [analysis](#).

For example, you can create a Sales Performance dashboard and add content to track your team's revenue. Suppose you create three views for an analysis: performance tile view, a table view, and treemap view. You can create a dashboard that displays these three views. You can include prompts on the dashboard to enable users to specify the values to display in the views.



To create a dashboard:

1. In the global header, click **New**, then select **Dashboard**.
2. In the New Dashboard dialog, enter a name and description for the dashboard.
3. Select whether to share a dashboard with others or to save it for your personal use:

Shared or Personal	Location
To share with others	<p>To share a dashboard with others and to not list the dashboard in the Dashboard menu in the global header, save the dashboard in any level (such as /Shared Folders/Sales/Eastern).</p> <p>To share a dashboard with others and to list the dashboard in the Dashboard menu in the global header., save the dashboard in the /Shared Folders/<i>first level subfolder</i>.</p> <p>If you specify a shared folder in which no dashboards have been saved, then a new Dashboards sub-folder is created automatically in the folder.</p> <p>For example, if you select a folder named /Shared Folders/Sales in which no dashboards have been saved, a new Dashboards folder is created. The Location entry changes to /Shared Folders/Sales/Dashboards. (A new Dashboards folder is not automatically created if you choose a folder at any other level.)</p>
To save for your personal use	Save the dashboard in the /MyFolders folder.

- Specify that you want to add content to the new dashboard now.
- Click **OK**.

The new dashboard, which contains one blank page, is displayed in the Dashboard builder for editing.

Editing Dashboards

You can edit dashboards to which you have appropriate permissions and privileges. You can add or delete dashboard pages, add content such as columns and sections, and edit properties and settings such as print options. For example, you can add content to a Sales Performance dashboard to track your team's progress by adding a Brand Revenue analysis from the catalog.

To edit an existing dashboard:

- Open the dashboard.
- Click **Page Options**, then select **Edit Dashboard**, if you have appropriate permissions and privileges. The Dashboard builder is displayed.
- Perform one or more of the following tasks, as described in the following table:

Task	More Information
Add content to a dashboard page	Adding Content to Dashboard Pages
Add a dashboard page	Adding Pages to Dashboards
Delete a dashboard page	Deleting Dashboard Pages

- Use the options on **Tools** in the toolbar of the Dashboard builder, as necessary, to perform the tasks that are described in the following table:

Task	More Information
Change properties	Changing the Properties of a Dashboard and Its Pages
Print	Preparing to Print Dashboards

Task	More Information
Add to briefing book	Adding Content to New or Existing Briefing Books
Customize a dashboard	Applying Saved Customizations

5. Perform one of the tasks that are described in the following table at any time:

Task	Action
Preview	View what the dashboard will look like when you save it.
Save	Save your changes.
Run	Exit the Dashboard builder and return to the Dashboard.

Tip: You can find your current location within Oracle BI content and the path that you have used to navigate Oracle BI content. You use breadcrumbs to return to a previous location. For example, you can navigate from the Dashboard editor to the dashboard's City Revenue tab in the Sales Performance dashboard. Then you can drill into revenue by postal code for each city.

For additional information, see [Adding and Deleting Pages in Dashboards](#).

Adding and Deleting Pages in Dashboards

Topics:

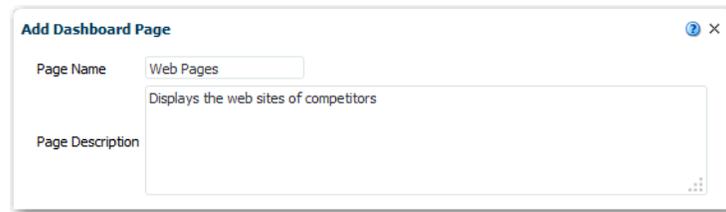
- [Adding Pages to Dashboards](#)
- [Adding Content to Dashboard Pages](#)
- [Changing the Properties of a Dashboard and Its Pages](#)
- [Changing the Properties of Objects Added to Dashboard Pages](#)
- [Deleting Objects on Dashboard Pages](#)
- [Deleting Dashboard Pages](#)

Adding Pages to Dashboards

You can add new pages to organize content of a dashboard. For example, you can first add a new dashboard page that contains regional sales data in a table and in a bar graph. Then, you can add another that contains links to various competitors' web sites.

To add a new page to a dashboard:

1. Open the dashboard for editing.
2. On the toolbar of the Dashboard builder, click **Add Dashboard Page**.
3. In the Add Dashboard Page dialog, enter a name and description for the page, and click **OK**.



The page is displayed as a new tab in the Dashboard builder.

4. Click **Save**.

After you add a new page, you can add content to it. See [Adding Content to Dashboard Pages](#).

Adding Content to Dashboard Pages



[Video](#)

You can add dashboard objects (any of the objects from the Dashboard objects pane) to dashboard pages. You can also add objects that you have saved in the catalog.

For example, you can add content to the newly created Sales Performance dashboard to track your team's progress. To do so, you can add a Brand Revenue analysis from the catalog.

To add content to a dashboard page:

1. Open the dashboard for editing.
2. Navigate to the page to which you want to add content.
3. In the Dashboard Builder, add each object that you want to include. To do so, select it in the Dashboard Objects pane or the Catalog pane and drag and drop it to the Page Layout area.

The following table describes some of the objects that you can add.

Object	Description
Column	Add a column to align content on a dashboard. You can create as many columns on a dashboard page as you need. You can place columns horizontally or vertically.
Section	Add sections within columns to hold the content for the page, such as action links and analyses. You can include as many sections as you need for a column.

4. Set the properties of each object, as appropriate by clicking **Properties**.
5. To enable users to specify values to display in views on the dashboard page, include prompts as described in [Adding Prompts to Dashboard Pages](#).
6. Click **Save**.

Changing the Properties of a Dashboard and Its Pages

You can change the style and description of the dashboard or specify links to include at the dashboard level by setting dashboard properties.

For example, you can specify the options that your team members have when they view the Brand Revenue analysis on a dashboard page. You might give them options to export, refresh, and print the analysis.

To change the properties of a dashboard and its pages:

1. Open the dashboard for editing.
2. Click **Tools** and select **Dashboard Properties**.
3. In the Dashboard Properties dialog, make the property changes that you want. The following table describes some of the properties.

Option	Description
Page Size	Specify whether you want the dashboard to fit content or fill the browser window.
Filters and Variables	Specify to embed dashboard prompts with default values.
Dashboard Report Links	Set the links to display with analyses on the dashboard: analyze, edit, refresh, print, export, or add to briefing book.
Prompts Apply Buttons	Specify whether to show or hide Reset buttons.
Dashboard Pages	Hide a dashboard page, show "Add to Briefing Book," or display a prompt before opening the dashboard page.

4. Click **OK**.
5. Click **Save**.

Changing the Properties of Objects Added to Dashboard Pages

You can change the properties of objects that have been added to a dashboard page. For example, you can change the column properties of the Brand Revenue analysis to specify the heading display in 14-point bold Helvetica font.

To change the properties of an object on a dashboard page:

1. Open the dashboard for editing.
2. Navigate to the page that contains the object.
3. Hover the mouse pointer over the object in the Page Layout area to display the object's toolbar and click **Properties**.

What is displayed depends on the type of object. For some objects, a properties dialog is displayed. For other objects, a menu of options is displayed.

4. Make the property changes that you want. The following table describes some properties that you can set:

Dialog	Action
Break	Add page and column breaks to the layout of a dashboard page.
Prompt Links	Specify whether to display the Edit link with a prompt. This link, which displays at runtime, enables users (with the proper privileges) to edit the prompt.

5. Click **Save**.

Deleting Objects on Dashboard Pages

If you add an object that you later decide that you do not want, then you can delete it. For example, you can delete last year's Brand Revenue analysis from the Sales Performance dashboard, to replace it with the current year's analysis.

To delete an object on a dashboard page:

1. Open the dashboard for editing.
2. Navigate to the page that contains the object to delete.
3. Hover the mouse pointer over the object in the Page Layout area to display the object's toolbar and click **Delete**.

Deleting Dashboard Pages

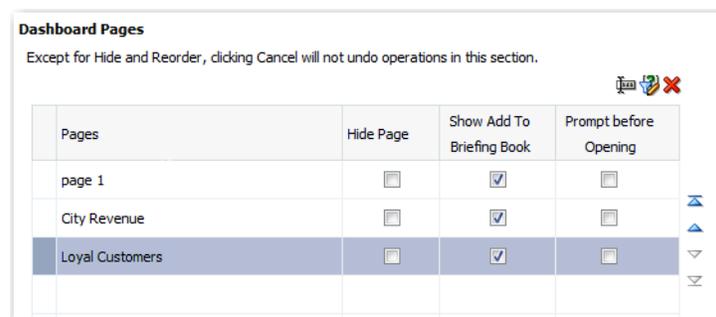
You can delete the current dashboard page, or one or more dashboard pages. For example, you can delete pages 2 and 3 from the Sales Performance dashboard. Doing so, you retain only the page with the most recent Brand Revenue analysis.

To delete the current dashboard page:

1. Open the dashboard for editing.
2. Navigate to the page to delete.
3. Click **Delete Current Page**.
4. Confirm the deletion.

To delete one or more dashboard pages:

1. Open the dashboard for editing.
2. Click **Tools** and select **Dashboard Properties**.
3. For each page to delete:
 - a. In the **Dashboard Pages** area of the dialog, select the page.
 - b. On the Dashboard Pages toolbar, click **Delete**.



- c. Confirm the deletion.
4. Click **OK**.

Preparing to Print Dashboards



Video

You typically view dashboards in electronic form. You can easily print a dashboard if you want to see its pages in PDF or HTML format. For example, you might print a

Stock Control dashboard page to use when visiting a supplier's factory because you know external computing devices are not permitted there.

To print a dashboard page:

1. Open the dashboard.
2. Navigate to the dashboard page to print.
3. Click **Page Options**, then select **Print**.
4. Select **Printable PDF** or **Printable HTML**.
5. Open Adobe Acrobat or a browser window and print from there.

Organizing Dashboard Pages in Briefing Books

Topics:

- [Adding Content to New or Existing Briefing Books](#)
- [Editing the Content of Briefing Books](#)
- [Downloading Briefing Books](#)
- [Adding a List of Briefing Books to a Dashboard Page](#)

Adding Content to New or Existing Briefing Books

You can add the content of dashboard pages or individual analyses to new or existing briefing books. A **briefing book** is a collection of static or updatable snapshots of dashboard pages and individual analyses. For example, you can add the contents of the Regional Revenue analysis to a briefing book each quarter. This process enables you to review quarterly snapshots of the data.

1. Open the dashboard.
2. Navigate to the page to add or that contains the analysis to add.
3. To add the contents of the dashboard page to a briefing book, click **Page Options** and select **Add To Briefing Book**.
4. To add the results of an individual analysis to a briefing book, edit the dashboard, select **Tools**, and select **Page Report Links**. Select the **Customize** option and click **Add to Briefing Book**.
5. In the Save Briefing Book Content dialog, click **Browse**.
6. In the Save As dialog, specify the appropriate location for the briefing book:

Location	Description
New briefing book	Specify the location in which to save the briefing book in the Save In field. Enter a name for the briefing book in the Name field. Optionally enter a description in the Description field, and click OK .
Existing briefing book	Select the briefing book and click OK .

7. In the Save Briefing Book Content dialog, complete the remaining fields as appropriate.

The screenshot shows a dialog box titled "Save Briefing Book Content". It contains the following fields and options:

- Portal Name: Regional Revenue
- Content Type:
 - Updatable
 - Snapshot
- Follow Briefing Book Navigation Links:
 - No
 - Yes
- Number of links to follow (5 max): 1
- Description: (Empty text area)
- Location: (Text field with a "Browse..." button)

8. Click **OK**.

Editing the Content of Briefing Books

You can edit briefing books to reorder content, delete content, and change the content type, navigation link properties, and content description. For example, you can edit a briefing book to change the content description to reflect the periods of Brand Revenue analysis data.

To edit a briefing book:

1. In the global header, click **Catalog** to display the Catalog page.
2. Navigate to the briefing book to edit and click **Edit**.
3. In the Edit Briefing Book dialog, to change content:
 - a. Select the content.
 - b. Click **Edit Page** to display the Page Properties dialog.
 - c. Change the content type, the number of navigation links to follow for updatable content, or the content description as needed.
 - d. Click **OK**.
4. To reorder content, select the content and then drag and drop it to the desired location.
5. To delete content, select the content and click **Delete**.
6. Click **OK**.

Downloading Briefing Books

You can:

- Download briefing books to your computer in MHTML format and then share them for offline viewing.
- Download briefing books in PDF format and print them. The PDF version of a briefing book contains an automatically generated table of contents.

For example, you can download a briefing book that contains all the Brand Revenue analyses for the year. After downloading, you can view the briefing book in Adobe Reader and print it in preparation for a sales presentation.

To download a briefing book:

1. In the global header, click **Catalog** to display the Catalog page.
2. Navigate to the briefing book to download.
3. Perform one of the following actions:
 - To download the briefing book in PDF format, click **PDF** and open or save the file.

Note: The Adobe Reader application is required to view or print a briefing book PDF file.

- To download the briefing book in MHTML format, click **Web Archive (.mht)** and open or save the file.

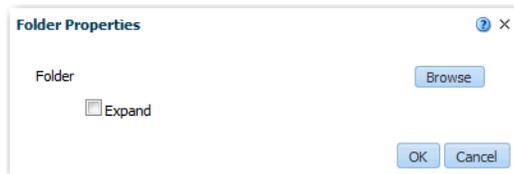
Downloaded briefing books are saved with an .mht file extension and can be opened in a browser. You can then email or share the briefing book.

Adding a List of Briefing Books to a Dashboard Page

You can add a list of briefing books to a dashboard page. For example, you can add a list of briefing books that contain Brand Revenue analyses to a Sales Performance dashboard page.

To add a list of briefing books to a dashboard page:

1. Open the dashboard for editing.
2. Navigate to the page to which you want to add a list of briefing books.
3. From the Dashboard Objects pane, drag and drop a folder object into a section.
4. Hover the mouse pointer over the folder object in the Page Layout area to display the object's toolbar and click **Properties**.



5. In the Folder Properties dialog, in the **Folder** field, enter the folder that contains the briefing books to list.
6. In the **Expand** box, specify whether to show an expanded view of the folder.
7. Click **OK** and click **Save** to save the dashboard.

Improving the Time to Display Dashboard Pages with Default Selections

Under certain circumstances, dashboard pages might take several moments to display in a browser. When the pages are displayed, they might not show the values that users had wanted to see in analyses based on the selection of prompts. You can enable users to specify prompt values (rather than using default prompt values) before analyses content is displayed on dashboard pages. This confirmation in displaying content initially improves the wait time for displaying the page with default prompt selections. The content of analyses is not displayed on the page until the user responds to prompts. Other objects (such as dashboard prompts, text, and so on) are displayed

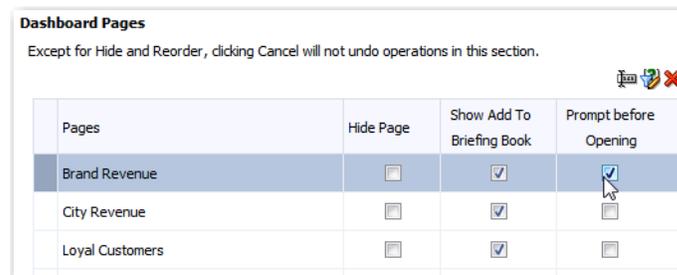
For example, you can prompt for which regions to include before displaying the Brand Revenue analysis on the Sales Performance dashboard page.

When you prompt users for values before displaying analyses, the following occurs:

- A message is displayed at the top of the page, which indicates that the page is not fully loaded. The message also instructs the user to select prompt values and click **Continue**. Clicking **Continue** displays the content on the page using the prompt values that the user specifies. If the user does not specify any prompt values, then the analysis is displayed with default prompt values.
- The page displays static information about the objects that have not yet been displayed. The information includes the object name, an icon that represents the object view, the view name, and the object description (if available).
- On the Page Options menu (displayed from **Page Options** on the Dashboard page toolbar), all options except **Edit Dashboard** are disabled.
- The **Apply** button on dashboard prompts is not displayed. Instead any prompt values are applied automatically when the user clicks **Continue**.

To improve the time to display a dashboard page:

1. Open the dashboard for editing.
2. Click **Tools** and select **Dashboard Properties**.
The Dashboard Properties dialog is displayed.
3. Locate the page in the Dashboard Pages area and select **Prompt before Opening**.



4. Click **OK**.
5. Click **Save**.

Recalling Personalized Settings

Topics:

- [Saving Customizations of Dashboard Pages](#)
- [Applying Saved Customizations](#)
- [Editing Saved Customizations](#)
- [Clearing the Current Customization](#)

As you work with dashboard pages, you frequently make the following types of settings:

- Filters
- Prompts

- Column sorts
- Drills in analyses
- Section expansion and collapse

These personalized settings are not saved when you close the dashboard. To have the ability to recall these personalized settings, you save the settings as a customization. Saved customizations enable you to save and view later dashboard pages in their current state with the most frequently used choices for items. By saving customizations, you need not make these choices manually each time that you access the dashboard page.

Saving Customizations of Dashboard Pages

You can save customization for use by you or by others who have author, but not a consumer, role. You can also specify whether the customization is to be the default customization for a dashboard page, for you or for others. For example, you can save a customization of the Sales Performance dashboard. The customization enables sales managers with permission to see a customized view of the Brand Revenue analysis.

To save a customization:

1. Open the dashboard.
2. Navigate to the page on which you want to save a customization.
3. Make your personalized settings.
4. Click **Page Options** and select **Save Current Customization**.
5. Enter a descriptive name for the customization in the dialog.
6. Specify for whom the customization is to be saved

For Whom	Action
For your personal use	Select ME .
For use by others	Select Others and click Set Permissions . Specify the author accounts that have permission to use the customization.

7. To assign a customization as default, select **Make this my default for this page**.
8. Click **OK**.

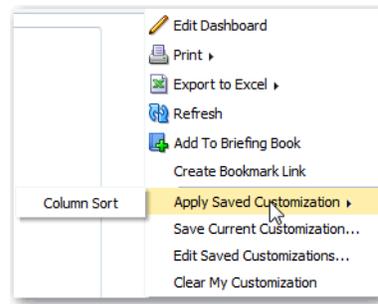
Applying Saved Customizations

You can apply customizations that you have saved for your own personal use. You can also apply customizations that have been saved by someone else for your use. For example, you can apply a shared Sales Team customization that was created for customized viewing of a Brand Revenue analysis by members of the sales team.

To apply a saved customization:

1. Open the dashboard for editing.
2. Navigate to the page that contains the customization to apply.
3. Click **Page Options** and select **Apply Saved Customization**.

Your personal saved customizations are shown, followed by shared saved customizations. Your current default customization is shown in bold.



4. Click a saved customization in the list to apply it to the dashboard page.

Editing Saved Customizations

You can rename and delete customizations and change which customization to use as your default. For example, you can change your default customization to one that you just saved for the Sales Performance dashboard.

To edit saved customizations:

1. Open the dashboard for editing.
2. Navigate to the page that contains the customization to edit.
3. Click **Page Options** and select **Edit Saved Customizations**.
4. Rename or delete customizations or change the default customization, as appropriate.
5. Click **OK**.

Clearing the Current Customization

You can clear the current customization if you decide that the choices for items such as filters, prompts, column sorts, drills in analyses, and section expansion and collapse are not what you want. For example, you can clear a customization that collapses the display of the Brand Revenue analysis.

To clear the current customization, click **Page Options** and select **Clear My Customization**. The current customization is cleared.

Linking to Dashboard Pages

Topics:

- [About Bookmark Links](#)
- [Creating Links to Dashboard Pages](#)

You can create links to dashboard pages so that you can easily enable other users to display those pages. For example, you can create a link to the Sales Performance dashboard and send the link to team members in an email.

About Bookmark Links

A bookmark link is a URL that captures the path to a dashboard page and all aspects of the page state. After you create a bookmark link, you can:

- Save the link as a bookmark so that you can return to the exact same page content at a later time.
- Copy and send the link to other users who then can view the exact same content that you are viewing. They can do this providing they have the same permissions as you and have access to the page.

When you create a bookmark link, the state of a dashboard page is saved in the catalog as a hidden bookmark object. The default number of days to save the object is 30.

Creating Links to Dashboard Pages

To create a link to a page in a dashboard:

1. Open the dashboard.
2. Navigate to the page for which you want to create the link.
3. From the Page Options menu, select **Create Bookmark Link**.

Note: You can drill in an analysis that has been set to replace the dashboard with the new results. You can do the replacement rather than showing the new results directly in the dashboard. In this case, the **Create Bookmark Link** option is displayed as a link below the new results. The option is not displayed on the Page Options menu.

The link is displayed in the Address Bar of the browser. If the link is a bookmark link, then you can save it as a bookmark or copy and send it to other users.

Filtering and Selecting Data for Analyses

This section describes how to filter and select data for analyses.

Topics:

- [Typical Workflow for Filtering and Selecting Data](#)
- [About Filters and Selection Steps](#)
- [Creating Filters for Columns](#)
- [Editing Filters for Columns](#)
- [Reusing Filters](#)
- [Using a Saved Analysis as a Filter](#)
- [Advanced Techniques: How Dashboard Prompts and Analysis Prompts Interact](#)
- [Refining Selections of Data](#)
- [Manipulating Members Using Groups and Calculated Items](#)

For more detailed information about filtering and selecting data for analysis, see *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition*.

Typical Workflow for Filtering and Selecting Data

To start filtering and selecting data to display in analyses, refer to the typical workflow described in the following table:

Task	Description	More Information
Create an analysis	Select and arrange columns that you want to use in an analysis.	Creating Your First Analysis
Create a filter	Limit the results that are displayed when an analysis runs.	Creating Filters for Columns
Edit a filter	Change the operator and values in a filter.	Editing Filters for Columns
Save a filter	Save filters in the catalog or with the analysis.	Saving Filters
Create a selection step	Select members, new groups, existing groups, new calculated items and conditions for displaying data.	Creating Selection Steps
Create a group	Group column values for display in an analysis.	Creating Groups and Calculated Items

Task	Description	More Information
Create a calculated item	Apply a function to column values to calculate a new value.	Creating Groups and Calculated Items

About Filters and Selection Steps

You use both filters and selection steps to limit the results that are displayed when an analysis is run. This means that the results answer a particular question. Together with the columns that you select for an analysis, filters and selection steps determine what the results contain. Based on the filters and selection steps, only those results that match the criteria are shown. For example, depending on the industry in which you work, you can use filters and selection steps to learn who are the top ten performers. You can also learn the dollar sales for a particular brand, and which are the most profitable customers.

Filters and selection steps are applied on a column-level basis and provide two methods for limiting the data in an analysis. A filter is always applied to a column before any selection steps are applied. Steps are applied in their specified order. Filters and selection steps differ in various ways:

- Filters are applied directly to columns before the query is aggregated. Filters affect the query and thus the resulting values for measures. For example, suppose that you have a list of members in which the aggregate sums to 100. Over time, more members meet the filter criteria and are filtered in, which increases the aggregate sum to 200.
- Selection steps are applied after the query is aggregated and affect only the members displayed, not the resulting aggregate values. For example, suppose that you have a list of members in which the aggregate sums to 100. If you remove one of the members using a selection step, then the aggregate sum remains at 100.

Selection steps are per column and cannot cross columns.

Another kind of filter, called a prompt, can apply to all items in a dashboard. Prompts can be used to complete selection steps and filters at runtime. For information, see [Prompting in Analyses and Dashboards](#).

About Prompted Filters

A prompted filter is a filter whose operator is set to **is prompted**. This operator is valid for a column that contains text, numbers, or dates. When you select the **is prompted** operator for a filter's column, you flag the column as ready to be filtered by a prompt. When a prompt is used, results include only records where the data in the column that is prompted matches the user's choices.

The **is prompted** operator is required for columns that are included in prompts where no prefiltered values are wanted.

For more information, see [Specifying Values for Filters and Advanced Techniques: How Dashboard Prompts and Analysis Prompts Interact](#).

Creating Filters for Columns



Video

Topics:

- [Creating Inline and Named Filters](#)

- [Specifying Values for Filters](#)
- [Saving Filters](#)

A [filter](#) limits the results that are displayed when an analysis is run. Together with the columns that you select for the [analysis](#), filters determine what the results contain. You specify filter criteria to display only the results that you want to show.

For more information, see [About Filters and Selection Steps](#).

Creating Inline and Named Filters

In most cases, you create and include a filter "inline" for use in only one analysis. You can also create a named filter to reuse the filter across all analyses and dashboards. Unless you want to reuse the filter, create an inline filter.

For example, as a sales consultant, you can filter the results that are shown in an existing Brand Revenue analysis. In this way, you can see revenue for only those brands for which you are responsible.

To create an inline filter from the Selected Columns pane on the Criteria tab:

1. Open the analysis for editing.
2. On the Selected Columns pane of the Criteria tab, click **Options** beside the column name and select **Filter**.

The New Filter dialog is displayed. See [Specifying Values for Filters](#).

To create an inline filter from the Filters pane on the Criteria tab:

1. Open the analysis for editing.
2. On the Filters pane of the Criteria tab, click **Create a filter for the current Subject Area**.
3. Select a column name from the menu.

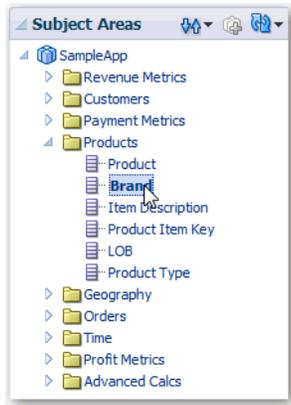
The New Filters dialog is displayed. See [Specifying Values for Filters](#).

To create a named filter:

1. On the toolbar, click **New** and select **Filter**.



2. On the Subject Area pane, double-click a column.



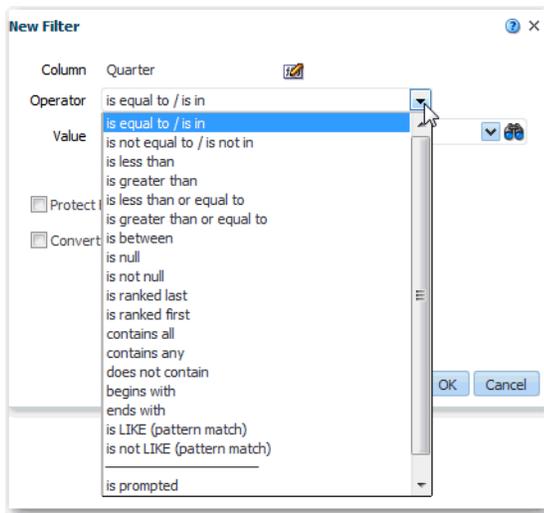
The New Filter dialog is displayed. See [Specifying Values for Filters](#).

Specifying Values for Filters

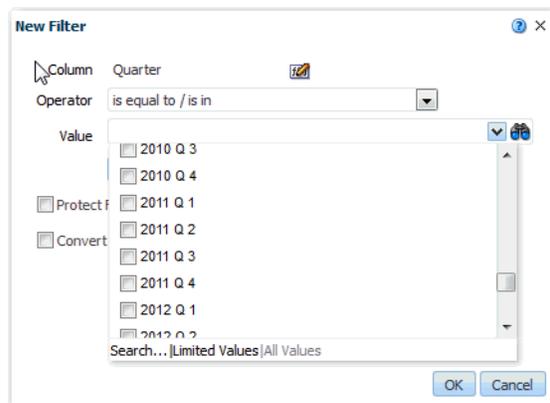
You can specify the values for a filter that displays in an analysis to only those values in which you are interested. For example, in the Brand Revenue analysis, a filter can limit the analysis results to only the first quarter values in three years. As a result, you can discover how revenue performed year-to-year in these quarters.

To specify values for a filter:

1. Complete one of the procedures as described in [Creating Filters for Columns](#).
2. In the New Filter dialog, select the appropriate operator such as **is equal to / is in**. See [About Prompted Filters](#) for information about the **is prompted** operator.



3. Select values from the list or click the **Search** icon to find more values from which to select.

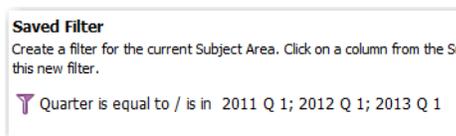


4. (Optional) Select **Protect Filter** to prevent prompts from overwriting the filter. For information, see [Editing Filters for Columns](#).
5. (Optional) Select **Convert this Filter to SQL**. For information, see [Editing Filters for Columns](#).
6. Click **OK**.

For inline filters, the filter is displayed in the Filters pane on the Criteria tab.



For named filters, the filter is displayed in the Saved Filters pane.



After specifying values, save the filter as named or inline, as described in [Saving Filters](#).

Saving Filters

When you create an inline filter in the Filters pane, you can optionally save the inline filter as a named filter. When you save an inline filter as a named filter, other people on your team can use this filter in a new analysis. You can also create a named filter as a standalone object from the global header.

For example, you can save a filter for the Quarter column in a shared folder in the catalog. As a result, your manager has access to that filter. Suppose that you save the filter that limits quarters to 2011 Q1, 2012 Q1, and 2013 Q1. Your manager can use this filter in a Product Revenue analysis to find how products performed only during these quarters.

To save an inline filter as a named filter:

1. On the Filters pane on the Criteria tab, click **More options** and select **Save Filters**.
2. Specify a folder in the Oracle BI Presentation Catalog.
3. Click **OK**.

To save a named filter:

1. On the toolbar, click **Save As**.
2. Specify a folder in the Oracle BI Presentation Catalog.
3. Click **OK**.

Editing Filters for Columns

You can edit an inline filter when you need to make changes to it. When you edit and save a named filter, the changes that you make to the filter propagate to wherever the filter is used. For example, you can edit the filter for the Quarter column to include data for the "2010 Q1" quarter. This data is propagated to every analysis where the filter is applied.

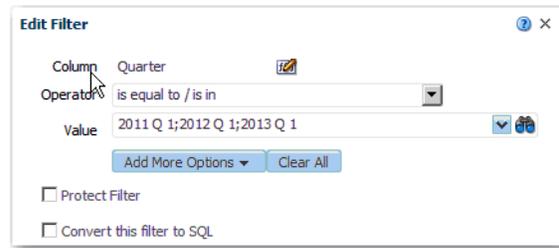
To edit an inline filter:

1. Display the Edit Filter dialog. For example, on the Saved Filter pane or in the Filters pane of the Criteria tab, hover the cursor over the filter. Click **Edit Filter**.



2. In the Edit Filter dialog, change the selection for any of the options that are described in the following table:

Option	Description
Operator	<p>Select an operator to apply to the values that are specified in the Value field. The Operator list is populated based on the function that you are performing (such as creating a filter or creating a dashboard prompt). It is also populated based on the type of column that you selected.</p> <p>For example, you can choose is greater than to use only values greater than the value that you select in the Value list. If you select 100,000 from the Value list, then the filter uses values from the column that are greater than 100,000. You can use this information in an analysis to focus on products that are performing best.</p>
Value	<p>Specify a value or values from the list that contains members of the column that you select. You can also enter the value into the field manually or search.</p> <p>For example, suppose that you want to edit a filter that you have created for the Products column of an analysis. The Value field contains a list of products from the column. Depending on the operator that you chose, you can select one or more products to include in the analysis.</p>
Protect Filter	Select this option to prevent prompts from overwriting the filter.
Convert this Filter to SQL	Select this option to convert the filter to a SQL WHERE clause that you can edit manually. After you convert a filter to SQL code, you can no longer view and edit the filter in the Edit Filter dialog.



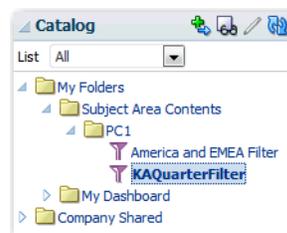
3. Click OK.

Reusing Filters

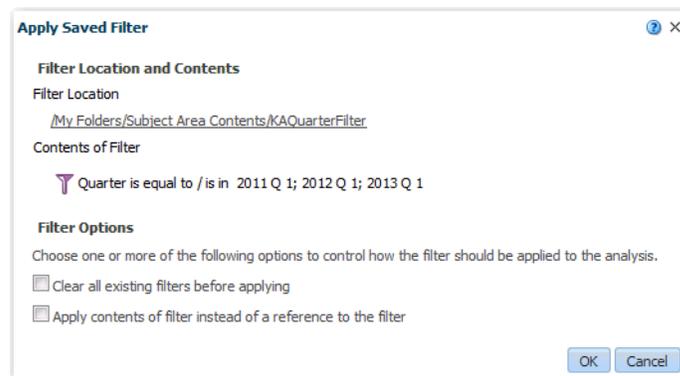
You can reuse a filter that you have saved as a named filter in the catalog. You can apply a saved filter to an existing analysis. For example, you can apply a filter for the Quarter column to the Brand Revenue analysis.

To reuse a named filter:

1. On the Catalog pane on the Criteria tab, select a named filter.
2. Click **Add More Options**.



The Apply Saved Filter dialog is displayed.



3. (Optional) Add the named filter in both or either of the following ways:

Option	Description
Clear all existing filters before applying	Select this option to remove all existing filters from the analysis before adding the saved filter.

Option	Description
Apply contents of filter instead of a reference to the filter	Select this option to add the filter as an inline filter. The filter is added to the Filters pane on the Criteria tab, where you can edit it. Any changes that you make to the filter are saved with the analysis, but not with the catalog. Deselect this option to add the filter as a named filter. The filter is added to the Filters pane on the Criteria tab, where you can view it but not edit it.

- Click **OK**.

Using a Saved Analysis as a Filter

You can create a filter based on the values that are returned by another analysis. You can use any saved analysis that returns a column of values to filter the matching column in an analysis. For example, you can create a filter that is based on the results of the Brand Revenue analysis.

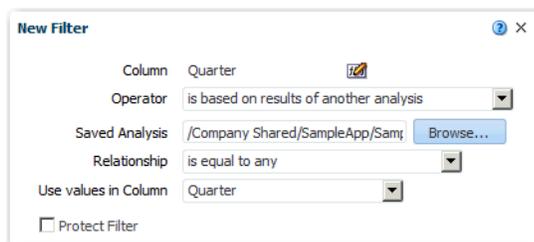
To create a filter based on the results of another saved analysis:

- Create or open a named filter or analysis to which you want to apply an inline filter.
- If you are working with a named filter, then locate the Saved Filter pane. From the Subject Areas pane, select the column for which you want to create a filter.

If you are working with an inline filter, then locate the Filters Pane. From the Filters Pane toolbar, click **Create a filter for the current Subject Area**. Select the column for which you want to create the filter.

The New Filter dialog is displayed.

- In the **Operator** field of the New Filter dialog, select **is based on the results of another analysis**.
- In the **Saved Analysis** field, enter the path to the analysis or click **Browse** to locate it.
- Select a column name from the **Use Values in Column** menu.
- In the Relationship field, select the appropriate relationship between the results and the column to be filtered.



- Click **OK**.

Advanced Techniques: How Dashboard Prompts and Analysis Prompts Interact

You can combine and wire prompts in various ways to create dashboards that enable users to quickly and easily request precise, meaningful data. Combining and wiring prompts enables you to specify how dashboard prompts interact with analysis prompts. Variable prompts cannot be combined or wired.

For example, you can create analysis A that contains information about the amount of product that is sold by region. To the Region column, add the Is protected option and then add a Region prompt. You can then create analysis B that contains information about sales person by region. You can also create analysis C that contains information about city by region. You then create and save a dashboard prompt for Region. You create a dashboard and add analyses A, B, and C and the Region dashboard prompt. When you run the dashboard, the dashboard prompt input drives only what is displayed in analyses B and C. In this scenario, analysis A does not use the Region value that is specified in the dashboard prompt. This is because you set analysis A's Region column filter value to Is protected. The only way that analysis A accepts a prompt value is if the user specifies a prompt value in Region A's prompt fields.

There are various ways that you can combine and wire prompts, as described in the following table.

Wiring Method	Description
Auto wiring	<p>The auto wiring functionality assumes that you intended to create a functioning prompt for the column and, therefore, activates and applies the prompt. Oracle BI Enterprise Edition applies the auto wiring method when you create an analysis and add a column prompt. This auto wiring method does not require the is prompted filter operator. Any unprotected filter can be used.</p> <p>Setting the filter operator to is prompted provides a more precise level of control between prompts and filters than the auto wiring method. For more information, see the "Filter operator is set to is prompted" row in this table.</p>
Constrained prompts	<p>Use this method with several columns in a prompt to constrain the user's prompt choice based on subsequent choices. Constrained prompts can be set up on the Prompt options dialog to specify which prompt narrows the choices. For example, suppose one column filters on region and the next column filters on city. Then, the city column can be constrained to show only cities in the selected region.</p>
Filter operator is set to is Prompted .	<p>Use this method to build complex prompts that interact with filters. When you use this method, you have full control over how the dashboard prompts, inline prompts, and filters apply to the embedded analysis.</p> <p>For information, see About Prompted Filters.</p>

Wiring Method	Description
Selection Steps Override with Prompts Option	<p>Use this method to use an analysis or dashboard column prompt to provide the data choices for a specific member selection step. Because you cannot use filters with hierarchical columns, selection steps are the only way that you can use prompts with hierarchical columns. Only one selection step per column selection step set can be overridden with a prompt. All selection steps before and after the overridden step are processed as specified.</p> <p>For more information about selections steps, see Refining Selections of Data. For more information about creating a prompt that works with selections, see Overriding a Selection Step with a Prompt.</p>
Protected versus Unprotected filters	<p>Use this method to determine whether the dashboard prompt can supply the inline prompt's value when the corresponding column's filter value is set to something other than Is prompted. The unprotected and protected filter settings can be used when a dashboard prompt and inline prompt reside on the same dashboard. Also, both prompts must have been created for the same column.</p> <p>When the column's filter value is unprotected, the dashboard prompt value determines the analysis' results. Suppose the filter value is set to something other than Is prompted (for example, Is equal to/is in) and the filter is set to protected filter. Then, the dashboard prompt cannot determine the report results.</p>

Refining Selections of Data

Topics:

- [Creating Selection Steps](#)
- [Editing Selection Steps](#)
- [Saving Selection Steps for Reuse](#)
- [Advanced Techniques: Creating Condition Steps](#)

As you specify which data members to include in an analysis, you create selections of data from the data source. Each selection specifies the criteria for a set of members for a particular column, such as Product or Geography. Each selection consists of one or more steps. A step is an instruction that affects the selection, such as add Product members whose values contain the text "ABC." The order in which steps are performed affects the selection of data. Each step acts incrementally on the results from previous steps, rather than acting on all the members for that column.

For more information, see [About Filters and Selection Steps](#).

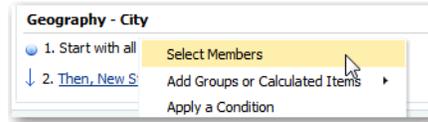
Creating Selection Steps

You create a [selection step](#) to provide the instructions for specifying the criteria for selections of data from the data source. When you add a column to an analysis, an implicit "Start with all members" step is added. The "all" implies all the members of the column after filters are applied.

For example, you can create a step to specify criteria for the following members in an Office column: Baltimore, Austin, and Athens.

To create a selection step for an analysis:

1. Open the analysis for editing.
2. Select the Criteria tab.
3. Display the Selection Steps pane by clicking **Show Selection Steps Pane** on the toolbar.
4. Click **Then, New Step**, and select the kind of step to create. For example, you can specify a list of selected members for the step.



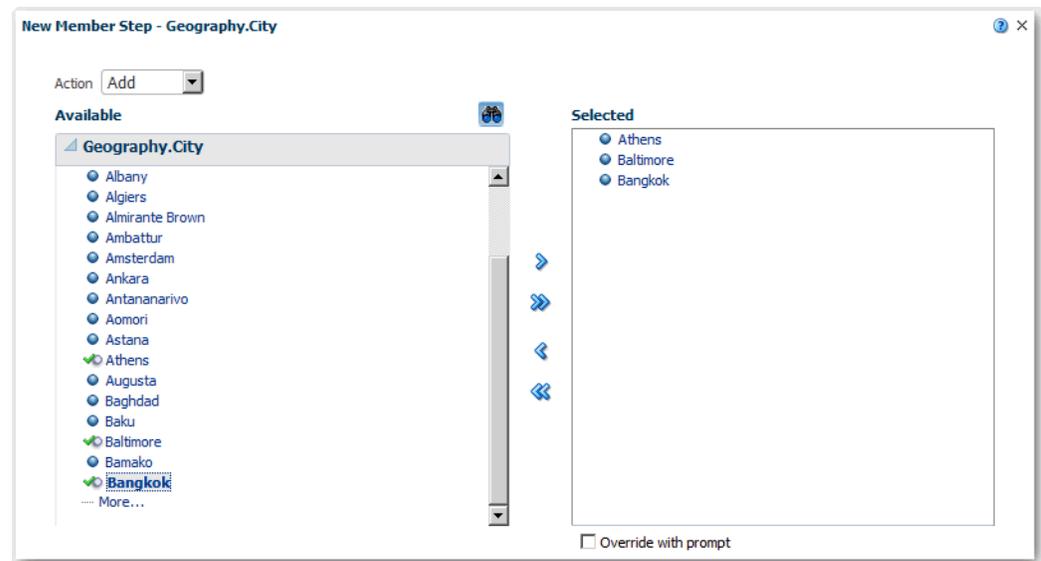
Depending on your selection, the New Member Step, New Select Existing Groups and Calculated Items, New Group, New Calculated Item, or New Condition Step dialog is displayed.

5. For a member step, select **Add**, **Keep Only**, or **Remove** from the **Action** list.

The following table describes what you can do with these options:

Option	Description
Add	Use this option to add the selected members to the selection.
Keep Only	Use this option to keep only the selected members and remove all others. For example, you can keep only the sales that are generated by a selected Sales Associate.
Remove	Use this option to remove the selected members from the selection. For example, you can remove the Eastern and Western regions from the selection.

6. If you are creating a member step, then move the members to include in the step from the Available area to the Selected area.



7. For a step that involves a group or calculated item, select an existing group or calculated item or create a new one.

- If you are creating a step that involves a condition, then select the appropriate condition type. For example, select $X \geq Y$ to correspond to something like Sales \geq Costs. For more information, see [Advanced Techniques: Creating Condition Steps](#).

Condition Type	
Condition Type	Example
Exception	
X >= value	Sales >= 10000
X >= Y	Sales >= Costs
X >= Y + 10	Sales >= Costs + 10
X >= Y - 5%	Sales >= Costs - 5%
X within 10 of Y	Sales within 10 of Costs
X not within 5% of Y	Sales not within 5% of Costs
X between 'min' and 'max' values	5000 <= Sales <= 10000
Top/Bottom	
Top 10 based on X	Top 10 based on Sales
Bottom 5% based on X	Bottom 5% based on Sales
Making up to 3% based on X	Making up to 3% based on Sales
Match	
Name contains 'abc'	Name contains 'abc'
All X values where Y = values	All Cars where Color = Red

- Specify the appropriate values for the condition such as the action, measure, and operator to use for the values of the column.
- Click **OK**.

Editing Selection Steps

You can edit existing selection steps. For example, you can edit a member step for the Offices column in the Brand Revenue analysis. You can add Augusta to the list of cities.

To edit a selection step for an analysis:

- Open the analysis for editing.
- Click on the Results tab.
- On the Selection Steps pane, hover the mouse pointer over the selection step that you want to edit.
- Click the pencil icon on the toolbar. A dialog is displayed to correspond to that type of selection step.
- Perform the appropriate edits. For example, add one or more members from the column to the step.
- Click **OK**.

To edit a selection step that has been saved as a group object:

- In the Catalog pane, navigate to the location of the saved object.
- On the Catalog pane toolbar, click **Edit**.
- In the Edit Group dialog, perform the appropriate edits.
- Click **OK**.

Saving Selection Steps for Reuse

If you have created a set of selection steps, then you can reuse them if you save them as a group in the catalog. For example, you can reuse the selection steps for the Offices

column as a group object. Doing this enables the set to be used inline with the Brand Revenue analysis.

Note: You can save a set of selection steps only if the set includes more than just a single Start With step in the list for a column. You cannot save a set of steps if one of the step includes a calculated item.

For more information about reusing groups, see [Reusing a Group or Calculated Item in an Analysis](#).

To save selection steps as a group object:

1. Open the analysis for editing.
2. On the Results tab, display the Selection Steps pane.
3. Click **Save Selection Steps** to the far right of the column name.

The Save Selection Steps dialog is displayed.

4. In the **Save In** field, specify a location where you want to save the selection steps. If you want to keep the filter for your personal use, then save it in */My Folders/subfolder*. If you want to share the filter with others, save it in */Shared Folders/subfolder*.
5. Enter a name for the saved selection steps.
6. Click **OK**.

The selection step is saved as an object in the catalog.

Advanced Techniques: Creating Condition Steps

The [Creating Selection Steps](#) section describes the general procedure for creating selection steps. One type of step that you can create is a condition step. You specify that members are selected from a column based on a condition. The condition can be one of various types including based on measures or on top/bottom values. This member list is dynamic and determined at runtime. For example, you can select the top 5% of members based on Brand Revenue.

To create a condition step:

1. Open the analysis for editing.
2. Select the Criteria tab.
3. Display the Selection Steps pane by clicking **Show Selection Steps Pane** on the toolbar.
4. Click **Then, New Step**, then select **Apply a Condition**.
5. In the New Condition Step dialog, select the type of condition to create, as described in the following table.

Type	Description
Exception	Select members using comparison values for measure columns. A sample condition is "Sales > Cost +10%."
Top/Bottom	Select the specified number of members after ranking the members by the specified measure column. You can specify an exact number of members or a percentage of the total members. Sample conditions are "Top 10 based on Sales" and "Top 5% based on cost."

Type	Description
Match	Select members based on matches with text strings and attribute values. A sample condition is "Name contains abc." This type is available only for columns that have a data type of string.
Time/Ordinal	Select members based on ranges of time and on hierarchical levels. A sample condition is "From July 2012 to December 2012." This type is available only for columns with a data type that relates to time.

Condition Type	Example
Exception	
X >= value	Sales >= 10000
X >= Y	Sales >= Costs
X >= Y + 10	Sales >= Costs + 10
X >= Y - 5%	Sales >= Costs - 5%
X within 10 of Y	Sales within 10 of Costs
X not within 5% of Y	Sales not within 5% of Costs
X between 'min' and 'max' values	5000 <= Sales <= 10000
Top/Bottom	
Top 10 based on X	Top 10 based on Sales
Bottom 5% based on X	Bottom 5% based on Sales
Making up to 3% based on X	Making up to 3% based on Sales
Match	
Name contains 'abc'	Name contains 'abc'
All X values where Y = values	All Cars where Color = Red

The components in this dialog differ slightly, depending on which type you select.

- In the **Action** box, select the type of action to create for the members. You can select to add the selected members to the selection, keep only the selected members and remove all others. Or, you can select to remove the selected members from the selection.
- In the box beside the action type, select the column for whose members you are creating the condition step.
- Enter the appropriate values for the various fields of the dialog. For example, select the **Operator** based on the type of condition. For example, select Within for the Exception type.
- Use the **Override with** box to specify whether an analysis prompt, a dashboard prompt, or a variable can override the values that you specify in this condition. Depending on what you are overriding, you can override certain values with a prompt, a presentation variable, a session variable, or a repository variable.

If you select a variable type, then enter the name of the variable in the field. For example, suppose that you have a column called EMPLOYEE_ID. You can specify USER as the session variable with which to override the value of that column. When a user signs in, the column value is set to his user name. For more information on variables, see [Advanced Techniques: Referencing Stored Values in Variables](#).

In a list of steps, specify that only one step in the list can be overridden by a prompt or presentation variable.

- In the **For** area, qualify all of the dimensions of the analysis other than the dimension whose members you want to select. Do this when creating condition steps of type Exception or Top/Bottom. For each dimension, you select which of its members to include. You can select specific members, or All, which specifies to aggregate the members when creating the condition. For example, suppose that

you are qualifying the Region dimension. You can select a specific region, such as East, whose value is used in the New Condition Step dialog condition. If you select All, then the values of all regions are aggregated and used in the condition.

You can use the **For** area to create a qualified data reference (QDR). A QDR is a qualifier that limits one or more of the dimensions to retrieve a single value for a measure column. A QDR is useful when you want to temporarily reference a measure column value without affecting the current status of the dimensions. The following is an example of a QDR:

```
Add members of Total Products (Rgd Sk Lvl) where "A - Sample Sales"."Base Facts"."1- Revenue", For: Cust Segments Hier: 'Active Singles', 'Baby Boomers' is greater than "A - Sample Sales"."Base Facts"."1- Revenue", For: Cust Segments"
```

When you specify a QDR, you can specify multiple members for limiting the dimensions. When you specify multiple members, the measure column value is aggregated using the default aggregation. For example, suppose that you want to create a condition for displaying those Regions in which Units is greater than 100. Suppose that you create a QDR for the Year dimension that specifies 2010 and 2011 and that the default aggregation is Sum. If the values for 2010 and 2011 for the Central region are 50 and 60 respectively, then both those years are displayed. Their sum exceeds the 100 units that was indicated.

11. Click OK.

Manipulating Members Using Groups and Calculated Items

Topics:

- [About Groups and Calculated Items](#)
- [Creating Groups and Calculated Items](#)
- [Editing Groups and Calculated Items](#)
- [Viewing Group Contents](#)
- [Saving Groups and Calculated Items](#)
- [Reusing a Group or Calculated Item in an Analysis](#)
- [Deleting Groups and Calculated Items](#)

About Groups and Calculated Items

You can create a group or calculated item as a way to display data in a table, pivot table, trellis, or graph. Groups and calculated items enable you to add new "members" to a column, when those members do not exist in the data source. These members are also known as "custom members."

Use a [group](#) to define members of a column, as a list of members or a set of selection steps that generate a list of members. A group is represented as a member.

A [calculated item](#) is a computation between members, which is represented as a single member that cannot be drilled. When you create a calculated item, you add a new member in which you have selected how to aggregate the item. You can aggregate using Sum or Average or custom formula.

Creating Groups and Calculated Items

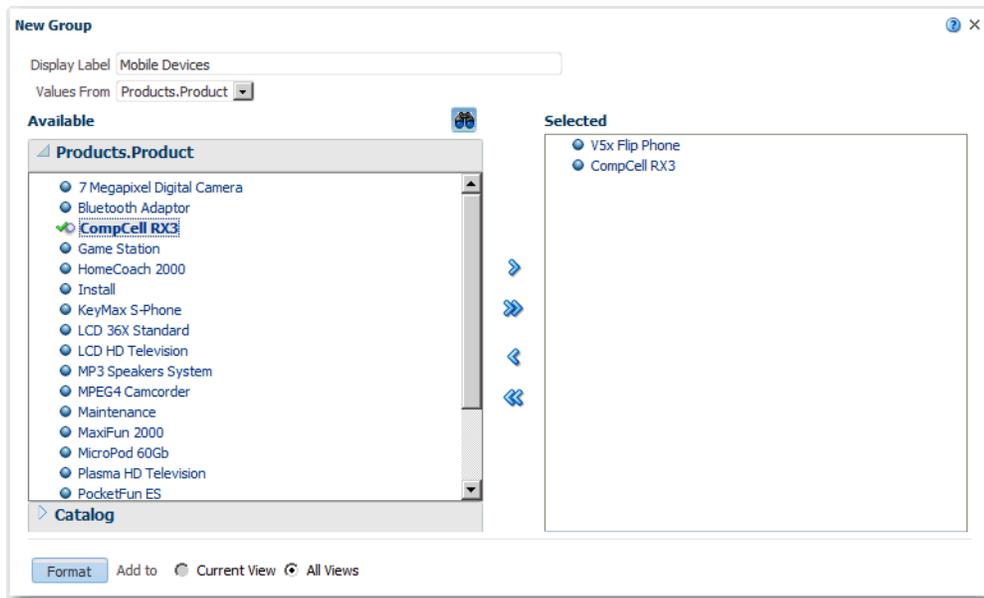
 [Video on Creating Groups](#)

 [Video on Creating Calculated Items](#)

Use a group or calculated item to add new "members" to a column. For example, you can review how much revenue was generated for mobile devices and compare that number to other product types. You can create a group called Mobile Devices for the Product column that includes Flip Phones and Smart Phones.

To create a group or calculated item for an analysis:

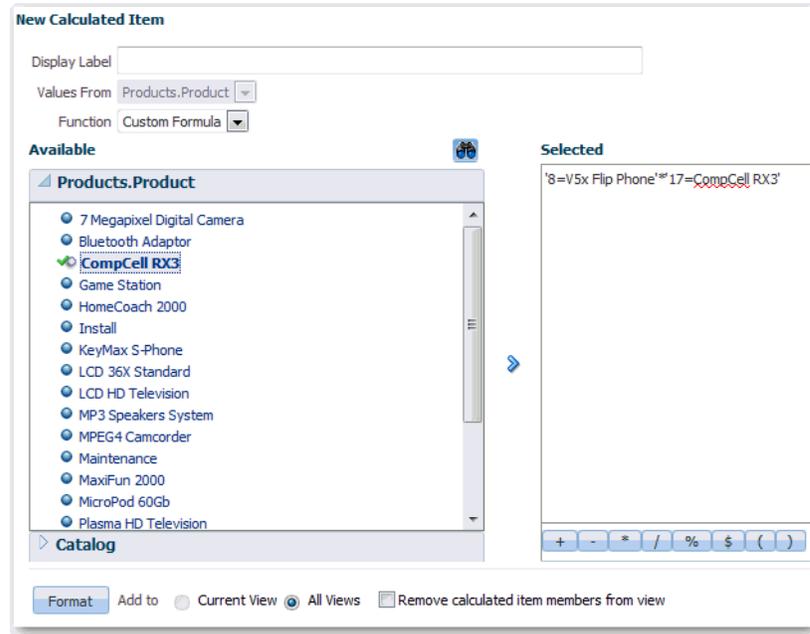
1. Open the analysis for editing.
2. On the toolbar of the Results tab, click **New Group** or **New Calculated Item**.
The New Group or New Calculated Item dialog is displayed.
3. Enter a value for **Display Label** for the group or calculated item when it is displayed in a view.
4. In the **Values From** list, select the column whose values you want to include in the group or calculated item.
5. If you are creating a calculated item, select the function for the calculated item.
6. Move the appropriate column values from the Available area to the Selected area.



7. For a calculated item with **Custom Formula** selected as the function, select mathematical operators to include in the function using the toolbar. You can also use these functions: Absolute, Ceiling, Floor, Round, and Sqrt.

A formula creates a dynamic custom grouping within the view. All measures referenced in a formula must be from the same column and must be present in the results. Formulas can be inserted into, or combined with, other calculated items.

Instead of specifying a named item for columns, you can specify \$n or \$-n. Here, *n* is an integer that indicates the item's row position. If you specify \$n, then the measure is taken from the *n*th row. If you specify \$-n, then the measure is taken from the *n*th to the last row.



- (Optional) If you are creating a calculated item, select **Remove calculated item members from view**.

Use this box to suppress the display of members that you have included in the calculated item in the view.

- Click **OK**.

By default, the new group or calculated item is created for all views in the analysis.

Editing Groups and Calculated Items

You can edit groups and calculated items through the Selection Steps pane or from the catalog pane. You can also edit groups and calculated items in a table, pivot table, or trellis. For example, you can edit a group to include the Game Station and Plasma Television members.

To edit a group or calculated item, use one of the following ways:

Location	Step
In the Selection Steps pane	Click the link to the group or calculated item and click Edit .
In the Catalog pane (if you saved it in the Catalog)	Select the object and click Edit .
In a table, pivot table, or trellis (on an outside edge)	Right-click the group or calculated item and select Edit Group or Edit Calculated Item .

Viewing Group Contents

You can view the contents of a group to verify that it contains the members that you want. For example, suppose you created a group of categories in a Product Category column. You can view the group contents to verify that it contains the appropriate categories.

To view the contents of a group:

1. Open the analysis for editing.
2. Click on the Analysis Editor: Results tab.
3. In the table view, right-click on the cell that contains the group.
4. Select **View Group Definition**. The View Group dialog is displayed.



5. Click **Close**.

Saving Groups and Calculated Items

You can save a group or calculated item as either an inline object (with an analysis) or as a named object (a standalone object). For example, you can save the Mobile Devices group as a named object in the catalog, for reuse in the Brand Revenue analysis.

To save a group or calculated item as an inline object:

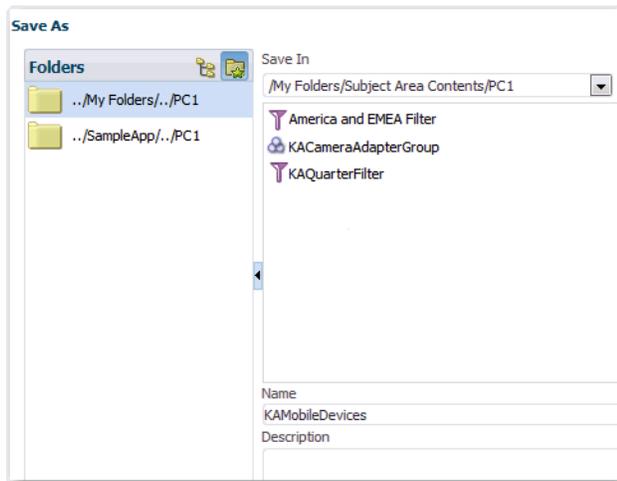
1. Create the group or calculated item, as described in [Creating Groups and Calculated Items](#).
2. To save the analysis and the group or calculated item that it contains, click **Save Analysis**.

The group or calculated item is saved as a part of the analysis.

To save a group or calculated item as a named object:

1. Create the group or calculated item, as described in [Creating Groups and Calculated Items](#).
2. On the Analysis Editor: Results tab, display the Selection Steps pane.
3. Click the link for the group or calculated item.
4. Select **Save Group As** or **Save Calculated Item As**.

The Save As dialog is displayed.



5. Enter a folder in the **Save In** field. If you want to save a group or calculated item for your own use, then save it in a */My Folders/subfolder*. If you want to share the group or calculated item with others, then save it in a */ Shared Folders/subfolder*.
6. Enter a group or calculated item name (required) and a description (optional).
7. Click **OK**.

The group or calculated item is saved in the catalog as an object.

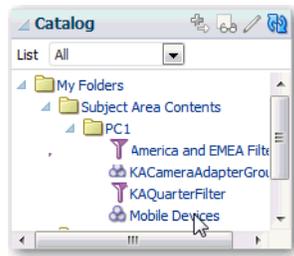
Reusing a Group or Calculated Item in an Analysis

You can add a group or calculated item to the same column on which it was created in another analysis. The group or calculated item can be either a list of members or a set of selection steps.

For example, you can display the Brand Revenue analysis and add the group members from the Mobile Devices group. The members of the Mobile Devices group are included as an "Add" step in the Selection Steps pane.

To reuse a group or calculated item from the Catalog pane:

1. On the Results tab, display an analysis containing the same column to which you want to apply the selections from a group or calculated item.
2. In the Catalog pane, select the group or calculated item.



3. On the toolbar of the Catalog pane, click **Add More Options**.
4. Select **Add** to add the group or calculated item itself. Select **Add Members** to add only the group or calculated item members.

To reuse a group or calculated item from the Edit Member Step dialog:

1. On the Results tab, display an analysis containing the same column to which you want to apply the selections from a group or calculated item.
2. Display the Selection Steps pane.
3. In the entry for the column you want, click the pencil icon.

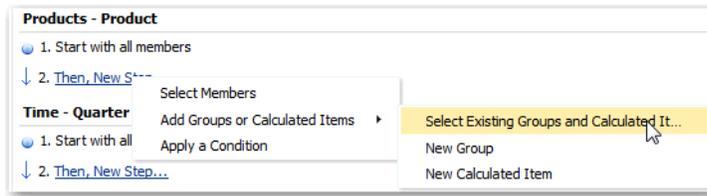
The Edit Member Step dialog is displayed.

4. From the Action menu, select **Start with Group or Calculated Item**.
5. Move the saved group or calculated item from the Available area to the Selected area.
6. Click **OK**.

To reuse a group or calculated item from the Selection Steps pane:

1. On the Results tab, display an analysis containing the same column to which you want to apply the selections from a group or calculated item.
2. On the Selection Steps pane select **Then, New Step** for the appropriate column.

3. Select **Add Groups or Calculated Items**.
4. Select **Select Existing Groups and Calculated Items**.



5. On the resulting dialog, select the group or calculated item from the Available area and move it to the Selected area.
6. Click **OK**.

Deleting Groups and Calculated Items

You can delete inline and named groups and calculated items. For example, suppose you no longer need the combination of Flip Phones and Smart Phones in the analysis. You can delete the Mobile Devices group.

To delete an inline group or calculated item:

1. On the Analysis Editor: Results tab, right-click on the cell that contains the group or calculated item that you want to delete.
2. Click **Remove**.

To delete a named group or calculated item:

1. On the global toolbar, click **Catalog**.
2. Locate the group or calculated item in the Catalog page.
3. Click **More** on the group or calculated item.
4. Select **Delete**.

Prompting in Analyses and Dashboards

This section describes how to create prompts to request values for display in analyses and dashboards.

Topics:

- [Typical Workflow for Prompting in Analyses and Dashboards](#)
- [Creating Prompts](#)
- [Editing Column Prompts](#)
- [Adding Prompts to Dashboard Pages](#)

For more detailed information about prompting in analyses and dashboards, see *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition*.

Typical Workflow for Prompting in Analyses and Dashboards

To start creating prompts to request values for display in analyses and dashboards, refer to the typical workflow described in the following table:

Tasks	Description	More Information
Create an analysis	Select and arrange columns that you want to use in an analysis.	Creating Your First Analysis
Create a column prompt	Create a prompt to filter the data that you see displayed.	Creating Column Prompts
Edit a prompt	Edit the prompt to change it in every place where it is used.	Editing Column Prompts
Add a column prompt to a dashboard page	Add a prompt to a new or existing dashboard.	Adding Prompts to Dashboard Pages

Creating Prompts

Topics:

- [Creating Column Prompts](#)
- [Creating Variable Prompts](#)
- [Overriding a Selection Step with a Prompt](#)

Creating Column Prompts



Video

A [prompt](#) enables you to filter the data that you see. A column prompt enables users viewing a [dashboard](#) to select a value for a column that affects what they see on the dashboard. Use the following procedure to create:

- A named column prompt that you can apply to one or more dashboards. For information, see [Adding Prompts to Dashboard Pages](#).
- An inline column prompt that is embedded in an analysis. For example, you can add a prompt to the Brand Revenue analysis so that the analysis can be reviewed for specific brands. You add a prompt directly to a column in the analysis (an inline prompt).

To create a column prompt:

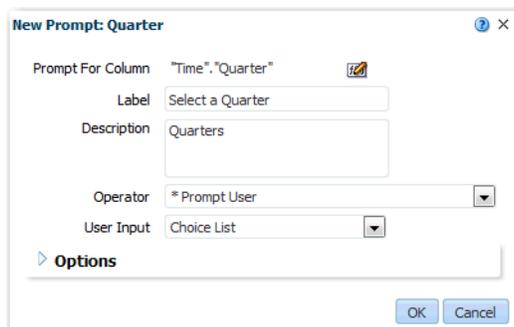
1. Open the analysis for editing.
2. On the Definition pane of the Prompts tab, click **New** to access the prompt type selection list. Select **Column Prompt** and select the appropriate column.
3. (Optional) Click **Edit Formula** to modify the column formula. For information, see [Editing the Formula for a Column](#).

Suppose that you added a SQL case statement to the analysis' column instance and you want to use that CASE statement within the prompt. You must specify the same SQL CASE statement in the prompt's column formula.

4. In the **Label** field, change the default label by entering a caption for the column filter prompt. The caption displays as the field label for the prompt. For example, "Select a currency."
5. In the **Description** field, enter a short description for the prompt. This description becomes tooltip text, which is displayed when the user hovers the mouse pointer over the prompt's label in the dashboard or analysis.
6. From the **Operator** list, select the operator to use, such as "is greater than." If you want the user to select the operator at runtime, then select the ***Prompt User** operator.

If you are creating a prompt that includes a group in the prompt's value selection list, then you must set the Operator to either **is equal to/is in** or **is not equal to/is not in**. For more information about groups, see [About Groups and Calculated Items](#).

7. In the **User Input** field, select how you want the prompt interface to ask the user for input. For example, prompt the user with a radio button to select only one prompt value.



8. Depending on the type of user input that you specified, enter the appropriate values in the **User Input Values** field. For example, select **Custom Values** to indicate that users can select from a list of prompt values that you created rather than the values supplied by the column.
9. Within the Options section, select prompt options to specify the display of list values and user interaction with the prompt. The prompt options vary depending on the user input type and list values type that you selected.

10. In the **Default selection** field, select the prompt value or values that users see initially. If you select a default type, then a field is displayed where you can either select specific values, or specify how you want the default values to be determined. For example, if you select SQL Results, you must then supply a SQL statement to generate the list of values
11. Click **OK**.
The new prompt is displayed in the Definition pane.
12. Click **Save Prompt** in the editor or save the analysis.
13. Use the arrow buttons in the Definition pane to reorder the selected prompt. Reordering the prompts controls the order in which the choices are displayed to users at runtime.
14. Select the type of layout you want on the prompts page by clicking **New Row** or **New Column** in the Definition pane. A row-based layout saves space because it organizes prompts horizontally. A column-based layout aligns prompts into neat columns. Click the boxes in the New Column or New Row column in the Definition table that correspond to where you want to add a new column or row to the prompts page.
15. Preview the prompt with sample data using the Display pane. Or click **Preview** (if available) in the Definition pane toolbar to view the prompt with actual prompt values.

For information on using column prompts with dashboards, see [Adding Prompts to Dashboard Pages](#).

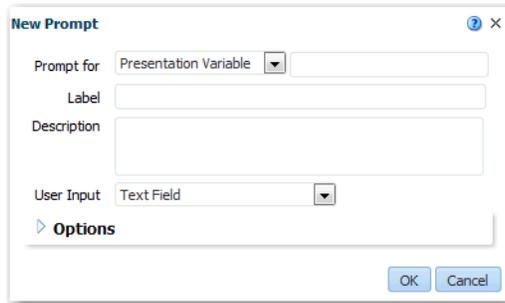
Creating Variable Prompts

A variable prompt enables the user to select a value that is specified in the variable prompt to display on the dashboard. A variable prompt is not dependent upon a column, but can still use a column. For example, you can use variable prompts to enable the user to specify existing data to perform sales projections. You might create a variable prompt called Sales Projections and specify the variable prompt values as 10, 20, and 30 percent. Then you create an analysis that contains the Region and Dollars columns. Within the Dollars column formula, you select the multiply operator and

insert the Sales Projection variable. When users run this analysis, they can select a percentage by which to recalculate the Dollars column.

To create a variable prompt:

1. Open the analysis for editing.
2. Display the Prompts tab.
3. On the Definition pane of the Prompts tab, click **New** then **Variable Prompt** to display the New Prompt dialog.



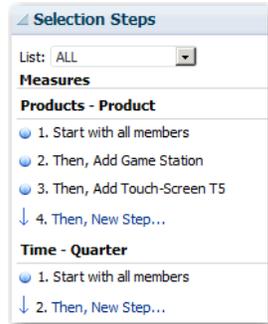
4. In the **Prompt for** field, select the variable type that you are creating and then enter the name of the variable. This variable name is the name that you add to the analysis or dashboard where you want the variable prompt's value specified by the user to display.
5. In the **Label** field, enter a caption for the variable filter prompt. The caption is displayed as the prompt's field label
6. In the **Description** field, enter a short description for the prompt. This description is displayed as tooltip text, which is displayed when the user hovers the mouse pointer over the prompt's label in the dashboard or analysis
7. In the **User Input** field, select how you want the prompt interface to ask the user for input. For example, prompt the user with a radio button to select only one prompt value.
8. If you selected either the **Choice List**, **Check boxes**, **Radio buttons**, and **List box** user input type, then you must also specify the prompt's list of values.
9. Within the **Options** section, select the prompt options. The prompt options vary depending on the user input type that you selected. The prompt options enable you to further specify how you want the user to interact with the prompt. For example, whether user input is required.
10. In the **Default selection** field, select the prompt value that users see initially. If you select a specific value, then the **Default Value** field is displayed in which you can enter a value.
11. Click **OK** to display the prompt is displayed in the Definition pane.
12. Save your changes.

Overriding a Selection Step with a Prompt

You can override a [selection step](#) with either a dashboard prompt or an inline prompt. For example, you can specify that the Products.Brand selection step be overridden with a column prompt specifying the BizTech and FunPod members.

To allow a selection step to be overridden by a column prompt:

1. Open the analysis for editing.
2. After you have specified the columns for the analysis, navigate to the Selection Steps pane by selecting **Show/Hide Selection Steps Pane**.
3. Specify the selection steps for the analysis.



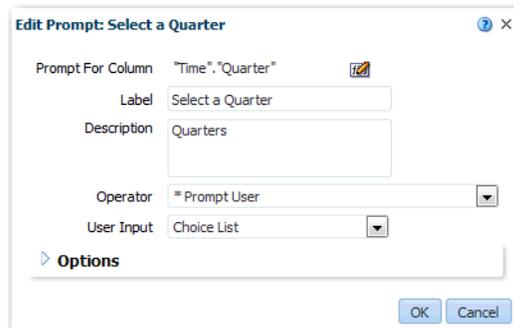
4. Determine which selection step you want to override with a column prompt and click **Edit**. The appropriate Edit Step dialog is displayed.
5. In the dialog, select **Override with prompt**, if it is available for that type of step.
6. Click **OK** and save the analysis.

Editing Column Prompts

You can edit a saved dashboard prompt or inline prompt, to propagate its changes to wherever the prompt is used. For example, you can edit the prompt for the Brand column to change the user input to a choice list. This change is propagated to the Brand Revenue analysis where the prompt is used.

To edit a prompt:

1. In the Definition pane on the Prompts tab, double-click to open the appropriate prompt.
2. Make the appropriate changes in the Edit Prompt window. For example, change the label for the prompt or change the user input to a choice list.



3. Click **OK**.
4. Click **Save Prompt**. The changes are propagated to wherever the prompt is used.

Adding Prompts to Dashboard Pages



You can add a prompt to a dashboard or dashboard page. For example, you can create a dashboard prompt for the Brand column. You add the prompt to the Sales Performance dashboard, to drive the content on the dashboard page. You add a filter for Brand that uses the "is prompted" operator to flag the column as ready to be filtered by a prompt. When the prompt is used, the results include only records where the data in the column that is prompted matches the user's choices.

For more information, see [About Prompted Filters](#).

To add a dashboard prompt to a dashboard page:

1. Open the dashboard for editing.
2. In the Dashboard builder's Catalog pane, locate and drag and drop an object such as an analysis onto a section in the dashboard page.
3. In the Dashboard builder's Catalog pane, locate and drag and drop the dashboard prompt onto a section in the dashboard page.

The dashboard prompt is added to the dashboard page.

4. To specify whether to include the prompt's **Apply** and **Reset** buttons on the dashboard page, in the toolbar of the Dashboard builder, click **Tools**. Then select **Prompts Buttons on Current Page** and either **Apply Buttons** or **Reset Buttons**, and one of the following options:

Option	Description
Use Prompt Setting	Uses the buttons as specified in the Prompt definition in the Prompt editor.
Show All Apply Buttons or Show All Reset Buttons	Shows the buttons for the prompts.
Hide All Apply Buttons or Hide All Reset Buttons	Hides the buttons for the prompts.

Note: These options apply to the dashboard page and override the settings for the **Apply** and **Reset** buttons for the prompt definition and dashboard properties with one exception. The settings are not overridden if the **Prompts Apply Button** and **Prompts Reset Button** fields on the Dashboard Properties dialog are set to **Use page settings**.

5. Click **Save** in the dashboard toolbar.
6. To preview the dashboard page, click **Preview** in the dashboard toolbar.

Making Analyses Interactive

This section describes how to make analyses interactive.

Topics:

- [Typical Workflow for Making Analyses Interactive](#)
- [Creating Named Actions for Reuse](#)
- [Creating Inline Actions](#)
- [Adding Actions to Analyses](#)
- [Adding Actions to Dashboard Pages](#)
- [Editing and Deleting Named Actions](#)
- [Editing and Deleting Actions and Action Links Added to Analyses](#)
- [Editing and Deleting Actions, Action Links, and Action Link Menus Added to Dashboard Pages](#)
- [Saving Inline Actions in Analyses to the Catalog](#)
- [Saving Inline Actions in Dashboards to the Catalog](#)
- [Verifying that Named Actions Run Properly](#)

For more detailed information about adding actions to analyses to make them interactive, see *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition*.

Typical Workflow for Making Analyses Interactive

To start making analyses interactive, refer to the typical workflow described in the following table:

Task	Description	More Information
Create an analysis	Select and arrange columns that you want to use in an analysis.	Creating Named Actions for Reuse
Create a named action	Create an action and save it to the catalog.	Creating Named Actions for Reuse
Create an inline action	Create an action and save it with an analysis.	Adding Actions to Analyses
Add an action to an analysis	Add an action to a column value in an analysis.	Adding Actions to Analyses

Task	Description	More Information
Add an action to a dashboard	Add an action or an action menu to a dashboard.	Adding Actions to Dashboard Pages
Check a named action	Test a named action by running it.	Verifying that Named Actions Run Properly

Creating Named Actions for Reuse

You can create an [action](#) that enables end users to navigate to related content and to web pages. You can include actions in an [analysis](#) and [dashboard](#) pages so that you can easily link to other BI content and web pages. Users run an action by clicking on an [action link](#) that is embedded within an analysis on column headings and column values. Users can also click on links in views such as graphs, and on grand totals within tables and pivot tables. For more information, see [Adding Actions to Analyses](#), [Adding Actions to Dashboard Pages](#), and [Adding Interactivity to Analyses](#).

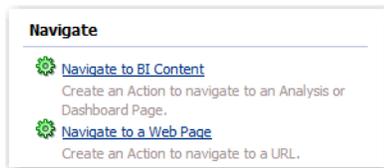
You create a named action so that you can save it in the [catalog](#) and reuse it. For example, you can create a named action called *Navigate to Company Home*. This action displays your company's home page. By saving this action in the catalog, you enable the action to be included on multiple pages in the Brand Revenue dashboard.

To create a named action:

1. In the global header, click **New**, then select **Action**.

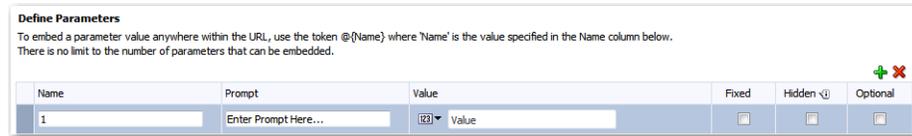


2. Select the type of action to create.



You can navigate either to BI Content or to a web page using a URL. If you navigate to BI content, the action that you create might display a graph of company revenue for selected brands. You can instead navigate to a web page, such as the home page of your company's web site.

3. Specify the navigation content. To navigate to BI Content, select an analysis or dashboard. To navigate to a web page, specify the URL of the page in the **URL** field.
4. (Optional) To embed a parameter value within the URL, click **Define Parameters** to display the Define Parameters list.
5. Click **Add Parameter**.
6. Specify the column values for the parameter. For example, you can embed a parameter value anywhere within the URL for a *Navigate to a Web Page* action. Enter the `@{Name}` value, where "Name" is the value specified in the Name column. You can embed any number of parameters.



You can define parameters that are fixed, hidden, or optional.

Type	Description
Fixed	A fixed parameter can be seen, but its value cannot be set by a user.
Hidden	A hidden parameter cannot be seen and its value cannot be set by a user. (Note that hidden does not mean that the parameter is secure.)
Optional	An optional parameter does not require a value in order for the action to be run.

Note: For actions that navigate to BI Content, parameters are automatically passed from the source to the target. When navigating from one analysis to another, if the source row of data contains a field with the same logical name as a field used in a filter on the target analysis, then the value of this field is passed as a parameter. Note that the operator on the filter should be set to **is prompted** or **is equal to / is in**.

- (optional) Click **Options** to display the Action Options dialog where you customize the information that is displayed when the action runs.



- Specify the customization that you want. The following table describes some of the fields.

Field	Description
Action Help Text	Specify the text of the dialog that is displayed to supply action parameter values. To embed a URL link within the text, use the token <code>@{URL}</code> . The URL link is substituted for the token

Field	Description
Link URL	<p>Specify to display a URL link below or within the text of the dialog to supply action parameter values. For example, you can display a link that navigates to a URL that provides more information about an action being run.</p> <p>If you embed the @{URL} token in the text, then the URL (or URL label, if provided) is displayed within the text. If you do not embed the token in the text, then the URL (or URL label, if provided) is displayed beneath the text.</p>

9. Click **OK**.
10. Click **Save Action**.
11. Specify the information for saving the action.

Creating Inline Actions

An inline action is an action that you define at the point of use and do not save by name in the catalog. Instead, you save the action as part of an analysis or dashboard page. For example, in the Brand Revenue analysis, you can save an inline action that contains an action link to an Opportunity Detail web site.

You create an inline action when you:

- Create an analysis and add a new action to a column heading, column value, or hierarchy level value using an action link.
For information, see [Adding Actions to Analyses](#).
- Edit a dashboard page and add a new action to the page using an action link or an action link menu.
For information, see [Adding Actions to Dashboard Pages](#).

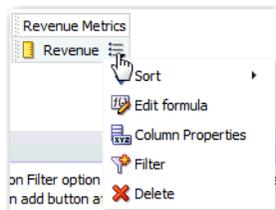
Adding Actions to Analyses

You can use an action link to add actions to a column heading, column value, or hierarchy level value in an analysis.

For example, you can edit the Brand Revenue analysis to add an action that features an action link. This link can enable sales consultants to navigate to an Opportunity Detail web site. The consultants can query the site for an opportunity by responding to a prompt for Opportunity Name or Opportunity ID.

To add an action to an analysis:

1. Open the analysis for editing.
2. On the **Criteria** tab, move the mouse pointer over the **Options** menu for a column and select **Column Properties**.



3. Click the Interaction tab in the Column Properties dialog.
4. In the Primary Interaction box in the Column Heading area or the Value area, select **Action Links** to display the Action Links area.

Link Text	Action	Show Link
Add Menu Action Links		

5. To add a new action:

If actions have been saved as systemwide defaults for the column or level, then click **Add Action Link** and select **New Action Link**.

If no actions have been saved as systemwide defaults for the column or level, then click **Add Action Link**.

The New Action Link dialog is displayed.
6. In the **Link Text** field, enter the text to display as the link to run the associated action.
7. Create or add the action as follows:

To create an inline action, click **Create New Action**, select the type of action, and specify the settings for the action.

To add a named action, click **Select existing action** and complete the Select Action dialog. Specify any associated parameters in the Edit Parameter Mapping dialog.
8. Click **OK** in the New Action Link dialog to add the action link to the **Action Links** area in the Interaction tab.
9. For each additional action link, repeat the previous steps.
10. Optionally select **Do not display in a popup if only one action link is available at runtime**. When only one action link is available at runtime, the action link is run immediately rather than being displayed in a menu for selection.
11. Select **Enable on Totals** when three things are true. The analysis contains a total or grand total. The associated column contains an action link. You want the action link to be applied to both the column and the total or grand total. This option does not apply to column heading action links and by default, this behavior is turned off.
12. Click **OK** to close the Column Properties dialog and save the analysis.

Adding Actions to Dashboard Pages

Topics

- [Adding Actions to Dashboard Pages Using Action Links](#)
- [Adding Actions to Dashboard Pages Using Action Link Menus](#)

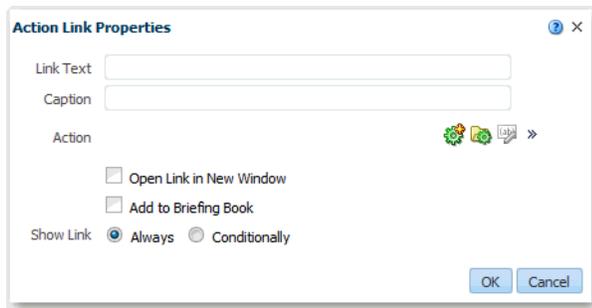
Adding Actions to Dashboard Pages Using Action Links

You can add actions to dashboard pages by adding to a section on the dashboard page an Action Link object to which you add an action. For a dashboard page that contains one or more action links, users can click a link to run the associated action. For

example, you can edit the Sales Performance dashboard page to add an action that features an action link. This link navigates to an external Opportunity Detail web site. Sales consultants can query the site for an opportunity by responding to a prompt for Opportunity Name or Opportunity ID.

To add an action to a dashboard page using an action link:

1. Open the dashboard page for editing.
2. From the Dashboard Objects pane, drag and drop an Action Link object on the dashboard page.
3. Click **Properties** for the Action Link object to display the Action Link Properties dialog.



4. Complete the fields in the dialog. The following table describes some of the fields.

Field	Description
Open Link in New Window	<p>Select this option to open the link in a new browser window or tab. Deselect this option to open the link in the same browser window or tab.</p> <p>For a named action for this action link, the default value for this component is determined by the definition of the named action. That is, by the value specified for the Open In New Window component in the Action Options dialog: Invoke Action tab. You can override this default value. The value that you set here ultimately determines whether to open the link in a new window or new tab.</p>
Add to Briefing Book	<p>Select this option to enable the action that is associated with the action link to be run in a briefing book. The number of briefing book navigation links to be followed must be greater than 0. A briefing book icon is displayed to the left of the action link on the dashboard page and in the briefing book. The icon indicates that you can run the action.</p> <p>You can set the number of briefing book navigation links to be followed. Use the Save Briefing Book Content dialog or in the Page Properties dialog.</p> <p>Deselect this option to prevent the action from being run in a briefing book.</p> <p>See Organizing Dashboard Pages in Briefing Books.</p>

5. Click **OK** in the Action Link Properties dialog.
6. Click **Save** on the Dashboard builder to save the dashboard page.

Adding Actions to Dashboard Pages Using Action Link Menus

You can add actions to dashboard pages by adding an action link menu object to a section on a page. You add action links to the action link menu object. For a dashboard page that contains an action link menu, users can select from the action link menu to run the action. For example, you can add an action link menu to a page in the Sales Performance dashboard. This menu can enable sales consultants to navigate to either an external Opportunity Detail web site or to an internal Brand Revenue dashboard page.

To add an action to a dashboard page using an action link menu:

1. Open the dashboard for editing.
2. From the Dashboard Objects pane, drag and drop an Action Link Menu object on the dashboard page.
3. Click **Properties** for the Action Link Menu object to display the Action Link Menu Properties dialog.

4. Add the action links to the menu:

Goal	Procedure
Add an action link that already exists on the page	Drag and drop the existing Action Link object onto the Action Link Menu object.
Add a new action link.	Click Add to display the Action Link Properties dialog and complete the dialog.
Reorder the list of action links and change the order of how they are displayed on the action link menu.	Use the arrows to the right of the list.

5. Click **OK** in the Action Link Menu Properties dialog.
6. On the Dashboard builder, click **Save** to save the dashboard page.

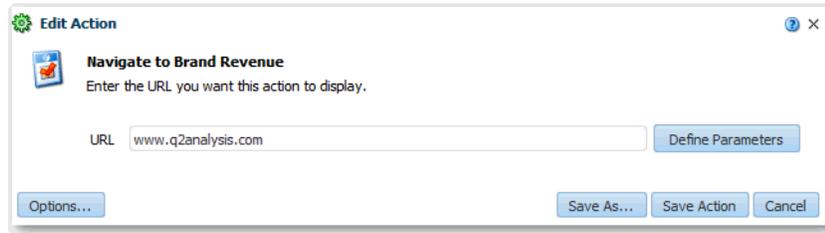
Editing and Deleting Named Actions

You can edit an existing named action. For example, you can edit the Navigate to Brand Revenue action in the Sales Performance dashboard to navigate to a newly created analysis.

To edit a named action:

1. Navigate to the action in the catalog.
2. Click **Edit**.

The Edit Action dialog is displayed.



3. Edit the action and click **OK**.
4. Click **Save Action**.

You can delete a named action. For example, you can delete an action that navigates to the analysis that you created for viewing revenue figures. You can do this when the analysis is obsolete and you want to replace it.

To delete a named action:

1. Navigate to the action in the catalog.
2. Click **More** and select **Delete**.

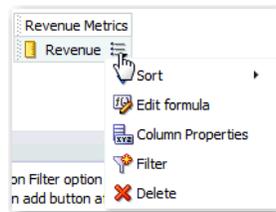
The named action is deleted.

Editing and Deleting Actions and Action Links Added to Analyses

You use action links as hot links that run actions. For example, you can create an action link called "Navigate to Brand Revenue." This link runs an action that navigates to an analysis that shows revenue figures in tables and graphs.

To edit an action and action link that have been added to an analysis:

1. Open the analysis for editing.
2. On the Criteria tab, move the mouse pointer over the **Options** menu for a column and select **Column Properties**.



3. Click the Interaction tab in the Column Properties dialog.
4. In the Action Links area, select the action to edit and click **Edit Action Link** to display the Edit Action Link dialog.



5. Make the appropriate changes to the action link.
6. Click **More** and select **Edit Action**.
7. Edit the action in the Edit Action dialog and click **OK**.

8. Click **OK** in the Edit Action Link dialog.
9. Click **OK** in the Column Properties dialog.
10. Click **Save Analysis**.

You can delete an inline action. For example, you can delete an action link that navigates to an obsolete analysis that shows revenue figures in tables and graphs.

1. Open the analysis for editing.
2. On the Criteria tab, move the mouse pointer over the **Options** menu for a column and select **Column Properties**.
3. Click the Interaction tab in the Column Properties dialog.
4. In the Action Links area, select the action link that you want to delete.



Link Text	Action	Show Link
Navigate to Brand Revenue	Brand Revenue	Always Enabled

5. Click **Delete**.
6. Click **OK** in the Column Properties dialog.

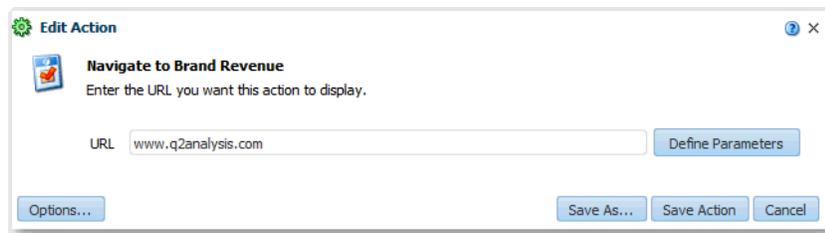
Editing and Deleting Actions, Action Links, and Action Link Menus Added to Dashboard Pages

You can edit actions, action links, and action link menus that you have added to dashboard pages. For example, you can edit an action in the Sales Performance dashboard that navigates to an updated URL for an Opportunity Detail site.

To edit an action, action link, or action link menu that has been added to a dashboard page:

1. Open the dashboard for editing.
2. If the action and action link are associated with an action link menu:
 - a. Click **Properties** for the Action Link Menu object to display the properties dialog.
 - b. Make the appropriate changes to the menu label and caption.
 - c. In the Action Links area, select the action to edit and click **Edit**.
3. If the action and action link are standalone, then click **Properties** for the Action Link object to which the action is associated. The properties dialog is displayed.
4. Make the appropriate changes to the action link.
5. Click **More** and select **Edit Action**.

The Edit Action dialog is displayed.



6. Edit the action and click **OK**.
7. Click **OK** in the Action Link Properties dialog, and in the Action Link Menu Properties dialog (if displayed).
8. Click **Save** to save the dashboard.

You can delete action links and action link menus that you have added to dashboard pages. For example, you can delete an action in the Sales Performance dashboard that navigates to a URL for a website that has been removed.

To delete action links and action link menus that you have added to a dashboard page:

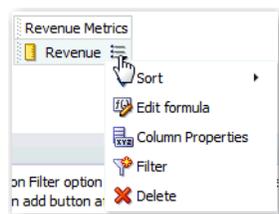
1. Open the dashboard for editing.
2. On the Action Link or Action Link Menu toolbar, click **Delete**.

Saving Inline Actions in Analyses to the Catalog

You can select an inline action in an analysis to be saved in the catalog. For example, in the Brand Revenue analysis, you can save an inline action in the catalog. When you save the action to the catalog, you can include it in other analyses and dashboard pages in the Sales Performance dashboard.

To save an inline action in an analysis:

1. Open the analysis for editing.
2. On the Criteria tab, move the mouse pointer over the **Options** menu for a column and select **Column Properties**.



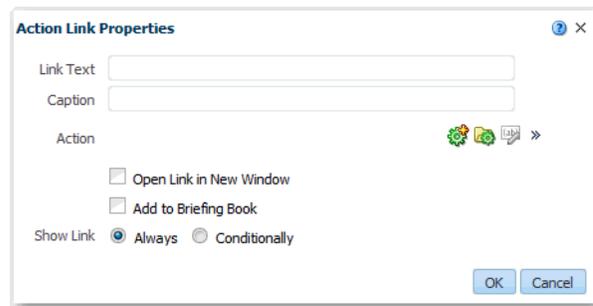
3. Click the Interaction tab in the Column Properties dialog.
4. In the Action Links area, select the action to save and click **Edit Action Link**. The Edit Action Link dialog is displayed.
5. Click **More** and select **Save Action As** to display the dialog to specify the save criteria.
6. Specify the save criteria and click **OK**.
7. Click **OK** in the Edit Action Link dialog.
8. Click **OK** in the Column Properties dialog.

Saving Inline Actions in Dashboards to the Catalog

You can select an inline action in a dashboard to be saved into the catalog. For example, in the Sales Performance dashboard, you can save an inline action in the catalog. When you save the action to the catalog, you can include it in the Brand Revenue analysis, which is not included in the dashboard.

To save an inline action in a dashboard to the catalog:

1. Open the dashboard for editing.
2. If the action and action link are associated with an action link menu:
 - a. Click **Properties** for the Action Link Menu object to display the properties dialog.



- b. Make the appropriate changes to the menu label and caption.
 - c. In the Action Links area, select the action to edit and click **Edit**.
3. If the action and action link are standalone, then click **Properties** for the Action Link object to which the action is associated. The properties dialog is displayed.
4. Click **More** and select **Save Action As** to display the dialog to specify the save criteria.
5. Specify the save criteria and click **OK**.
6. Click **OK** in the Action Link Properties dialog, and in the Action Link Menu Properties dialog (if displayed).
7. Click **Save** to save the dashboard.

Verifying that Named Actions Run Properly

After creating a named action, you can test it to ensure that it runs properly. For example, you can test the Navigate to Brand Revenue action. Test the action to ensure that it prompts users for the expected values. Also, test to see that it navigates to and displays appropriate data on the Brand Revenue dashboard page.

To test a named action by running it:

1. Navigate to the named action in the catalog.
2. Click **Execute**.
3. Respond to any request for more information or any confirmation prompt that is displayed.

Accessing and Organizing Catalog Content

This section describes how to access and organize content in the Oracle BI Presentation Catalog.

- [Typical Workflow for Managing Catalog Content](#)
- [Searching the Catalog](#)
- [Renaming Objects](#)
- [Accessing Favorite Objects Easily](#)
- [Accessing Properties for Objects](#)
- [Assigning Permissions to Objects](#)
- [Assigning Ownership of Objects](#)
- [Taking Ownership of Objects](#)

For more detailed information about managing objects in the catalog, see *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition*.

Typical Workflow for Managing Catalog Content

To start accessing and organizing content in the Oracle BI Presentation Catalog, refer to the typical workflow described in the following table:

Task	Description	More Information
Search the catalog	Search the catalog for an object to edit.	Searching the Catalog
Rename objects	Rename an object.	Renaming Objects
Access properties for objects	Access the properties of an object such as whether it is read-only.	Accessing Properties for Objects
Assign permissions to objects	Assign permissions to an object so that others can access it.	Assigning Permissions to Objects
Assign ownership of objects	Assign ownership of an object as appropriate.	Assigning Ownership of Objects

Searching the Catalog



Video

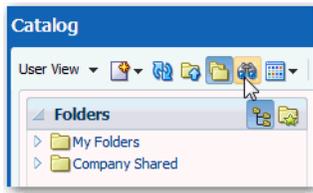
The [catalog](#) contains things that you or somebody else has defined and saved for future use (such as analyses and dashboards). You can search the catalog to find

something that you want to work with or change. For example, you can find the Brand Revenue analysis that you created last week. By doing so, you can change a bar graph to a line graph in that analysis.

You can use the Catalog page to view the business intelligence objects that are necessary to perform your day-to-day tasks. For example, a sales analyst must access an analysis that monitors the weekly sales of a specific brand of beverage in the Central and Eastern regions. The permissions set by the catalog administrator determine what tasks the analyst can perform on a piece of content and within the catalog.

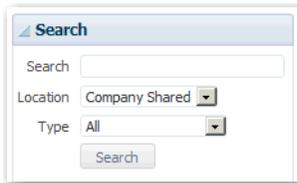
To search the catalog from the Catalog page:

1. In the global header, click **Catalog**.
2. On the Catalog page, click **Search** to display the Search pane.



3. In the Search pane, specify the search criteria.

Criterion	Description
Search	Specify the full or partial name of the object or folder to find. The search is case-insensitive. Enter an asterisk (*) in the search string to perform a wildcard search. The asterisk specifies zero or more alphanumeric characters within the name. For example, to search for objects that have the word "brand" in their name, specify br*
Location	Select the catalog folder to search, such as Shared Folders.
Type	Select the kind of object for which you are searching, such as Analysis or Dashboard.



4. To search for Hidden Items, select **Show Hidden Items**, which is located on the header of the Catalog page.
5. Click **Search**.

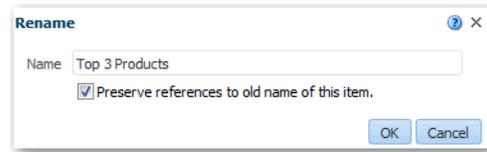
Folders or objects to which you have appropriate permissions and that satisfy the search criteria are displayed in the Catalog area.

Renaming Objects

You can rename objects to make the object name more meaningful to you. For example, you can change the "High Products" filter name to "Top 3 Products."

To rename an object:

1. In the global header, click **Catalog**.
2. In the Catalog page, search for the object that you want to rename. For more information, see [Searching the Catalog](#).
3. Click **More** and select **Rename**. The Rename dialog is displayed.



4. Type the new name of the object.
5. (Optional) Click **Preserve references to the old name of the item**.
Use this option to specify that existing references to the previous name of the object are maintained. This creates a shortcut with the old name that points to the renamed object in the catalog. If you do not select this option, then existing references break.

Note: This option is not available for all objects.

6. Click **OK**.

You can also rename views. For example, you can change the name of a view from "Sales Forecast 2014" to "Forecast 2014."

To rename a view:

1. Open the analysis for editing.
2. Click on the Results tab.
3. In the view, click **Edit View**.
4. In the toolbar of the view editor, click **Rename View**. The Rename View dialog is displayed.
5. Enter the new view name.
6. Click **OK**.

Accessing Favorite Objects Easily

Topics:

- [Adding Objects to Favorites](#)
- [Removing Objects from Favorites](#)

Adding Objects to Favorites



Video

You can bookmark as favorites the [catalog](#) objects that you view regularly or want to view again. For example, you might regularly view the Loyal Customers analysis in the catalog. You flag the analysis as a favorite.

To add an object to your favorites list by using the Home page or Catalog page:

1. In the global header, click **Catalog**.
2. In the Catalog page, search for the object that you want to mark as a favorite. For more information, see [Searching the Catalog](#).
3. Click **More**, then click **Add to Favorites**. The object is added to your favorites list.

Note: You can also add an object to your favorites list while viewing or editing the object. Open the object in its designated viewer or editor. Then, in the global header, hover the mouse pointer over **Favorites** and click **Add to Favorites**.

Removing Objects from Favorites



You can remove from your favorites list those objects that you no longer need to access regularly. For example, you can remove from your favorites list the previous year's Loyal Customers analysis that you no longer need to access regularly.

To remove an object from your favorites list by using the Home page or Catalog page:

1. In the global header, click **Catalog**.
2. In the Catalog page, search for the object that you want to remove as a favorite. For more information, see [Searching the Catalog](#).
3. Click **More**, then click **Remove from Favorites**. The object is removed from your favorites list.

Note: You can also remove an object from your favorites list in these ways:

- While viewing or editing the object. Open the object in its designated viewer or editor. Then, in the global header, hover the mouse pointer over **Favorites** and click **Remove from Favorites**.
 - Using the Manage Favorites dialog. In the global header, click the **Favorites** menu, click **Manage Favorites**, select the object, click **Delete** and **OK**.
-
-

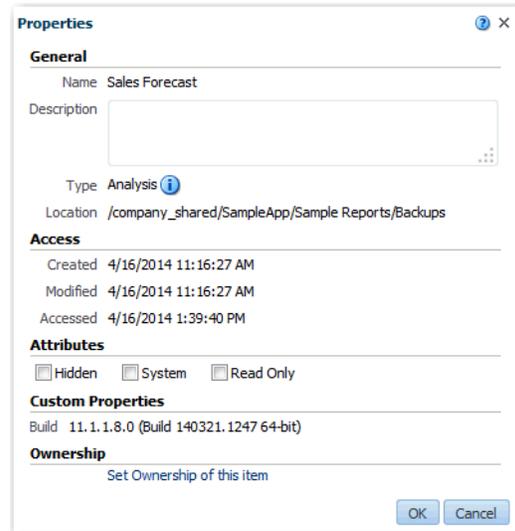
Accessing Properties for Objects

Administrative users can access the properties of any object or folder to perform tasks such as view system information or change access levels. Users can access and modify the properties of the objects that they create or own. For example, you might want to change the Brand Revenue analysis to be read-only so that other users cannot change it.

To access properties:

1. In the global header, click **Catalog**.
2. In the Catalog page, search for the object to which you want to access properties. For more information, see [Searching the Catalog](#).
3. In the Folders pane, select an object or folder.

4. Below the document, click **More** and then **Properties**, or click **Properties** in the Tasks pane.
5. Review or change the settings in the Properties dialog. For example, specify that the object is read-only. If you want to own the object, then see [Taking Ownership of Objects](#).



6. Click **OK**.

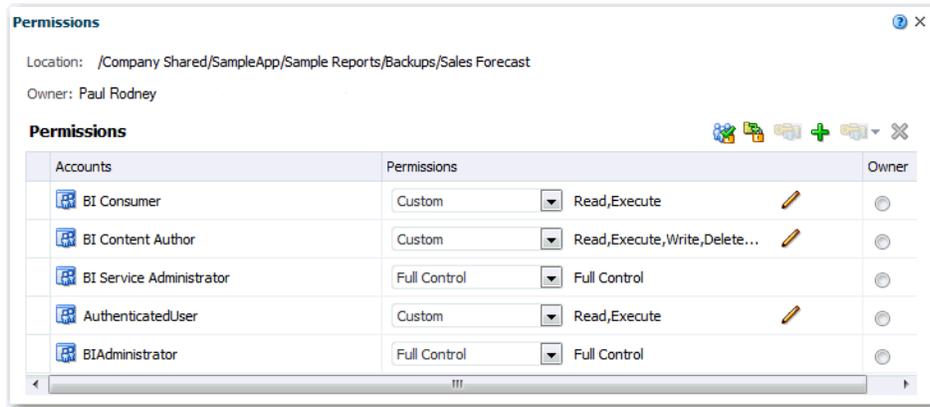
Assigning Permissions to Objects

Video

You can assign permissions to determine who can access folders or other catalog objects. The permissions that you can assign vary depending on the type of object with which you are working. To change permissions, you must have been granted the Change Permission privilege. For example, you might want to grant the Change Permission privilege to another sales consultant. This enables him to assign permissions to the Sales Forecast analysis.

To assign permissions to an object:

1. In the global header, click **Catalog**.
2. In the Catalog page, search for the object to which you want to assign permissions. For more information, see [Searching the Catalog](#).
3. Go to the Catalog area and locate an object or folder.
4. Select **More** and then **Permissions**, or go to the Tasks pane and click **Permissions**. The Permissions dialog is displayed.



- In the Permission dialog, click **Add users/roles** to access the Add Application Roles and Users dialog to add any required accounts.

The roles and users inherit permissions from the roles of which they are members. For example, you can grant Full Control permission to the BIAdministrator application role on the Sales Revenue analysis object. This enables any user or role with that role to have Full Control on the object. You can see the permissions that users and roles will have on objects (either granted directly or inherited). Click the **Click to see effective permissions** button in the Add Application Roles and Users dialog.

- In the Permissions dialog, click the **Permissions** list to select permissions. Most of the items that are displayed in the list are parent permissions and contain several child permissions.
- Optionally, to build a specific list of permissions, click **Custom**. This option gives the user authority to bypass any permissions set on the folder that prevent the user from accessing the object from the Catalog or a dashboard. This option does not change the permissions of the folder.

For example, you can grant users the Traverse permission for the /Shared Folders/Test folder. Then, they *can* access objects embedded in dashboards stored in the /Shared Folders/Test folder. Also, they can access embedded objects in dashboards stored in sub-folders, such as /Shared Folders/Test/Guest folder. However, users cannot access (meaning view, expand, or browse) the folder and sub-folders from the Catalog.

- Click **OK** twice.

You can also assign permissions to sections on dashboards, controlling which users have access to those sections. For example, you assign permissions for the Project Costs section of the dashboard to the BI administrator. You can restrict access to BI consumers to prevent unwanted changes.

To assign permissions to sections:

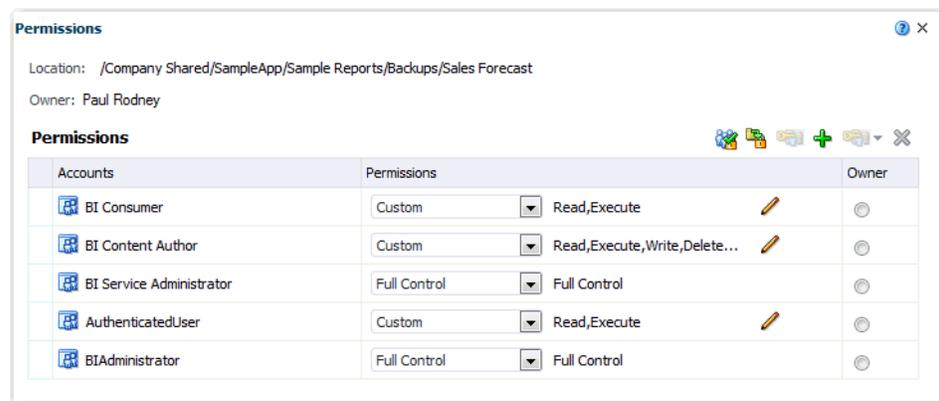
- Open a dashboard for editing.
- Select **Properties** in the section toolbar.
- Select **Permissions**.
- In the Permissions dialog, click the **Permissions** list to select permissions.
- Click **OK**.

Assigning Ownership of Objects

Ownership of an object can be granted by the user who created the object. Also, ownership of an object can be taken by a user who has been granted the proper privileges. For example, you can create a Brand Revenue analysis and grant ownership to a Regional Sales Analyst.

To assign ownership of an object:

1. In the global header, click **Catalog**.
2. In the Catalog page, search for the object to which you want to assign ownership. For more information, see [Searching the Catalog](#).
3. Go to the Catalog area and locate an object or folder.
4. Select **More** and then **Permissions**, or go to the Tasks pane and click **Permissions**
5. In the Permissions table, go to the **Owner** column and click to specify the owner.



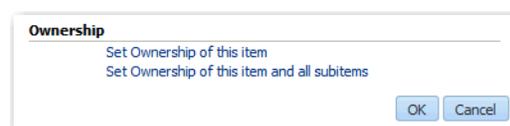
6. Click OK.

Taking Ownership of Objects

A user or a member of a role can take ownership of objects in a shared folder, if the user or member is assigned to the BIAdministrator role. For example, as a user who is a member of the Sales group, you might assign properties to the Sales Forecast analysis to mark yourself as owner of the object.

To take ownership of a shared folder or object:

1. In the global header, click **Catalog**.
2. In the Catalog page, search for the object that you want to take ownership of. For more information, see [Searching the Catalog](#).
3. Go to the Catalog area and locate an object or folder.
4. Select **More** and then **Properties**, or go to the Tasks pane and click **Properties**. Notice the Ownership area of the Properties dialog:



5. In the Ownership area, select whether to take ownership of only the object or of the object and its sub-objects.
6. Click **OK**.

Part III

Reference

This part provides reference information for Oracle BI Enterprise Edition.

Appendices:

- [Terminology](#)
- [Expression Editor Reference](#)
- [Accessibility](#)

Terminology

This section provides terminology that is used with Oracle BI Enterprise Edition.

Topics:

- [Oracle BI Enterprise Edition Terminology](#)

Oracle BI Enterprise Edition Terminology

The documentation for Oracle BI Enterprise Edition uses various terms when describing its features and functionality. It is important that you have a good understanding of these terms.

Term	Definition
action	An action enables you to navigate to related content or a web page. You can include actions in analyses and dashboard pages. For example, you can use an action in the Brand Revenue analysis to enable sales consultants to navigate to an Opportunity Detail web site.
action link	An action link enables you to embed a link to an action in an analysis or dashboard page, that, when clicked, runs an associated action. For example, you can embed an action link in the Brand Revenue analysis to enable sales consultants to navigate to an Opportunity Detail web site.
analysis	An analysis provides answers to business questions by querying against your organization's data. Analyses enable you to explore and interact with information by visually presenting data in tables, graphs, pivot tables, and to save, organize, and share the results of analyses. For example, you can create a Brand Revenue analysis that shows data in views on a Sales Performance dashboard. You can share this analysis with co-workers, clients, and business partners.
application role	An application role comprises a set of privileges that determine what users can see and do in Oracle BI Enterprise Edition. In Oracle BI Enterprise Edition, you associate users or roles configured in your identity domain with one or more application roles. The users and roles inherit their privileges in Oracle BI Enterprise Edition from these application roles.
briefing book	You can store a static snapshot of dashboard pages or individual analyses in one or more briefing books. You can also configure a briefing book to refresh data when accessed. For example, as a sales representative, you can use a briefing book to collect a snapshot of a Sales Performance analysis each quarter.

Term	Definition
calculated item	A calculated item shows you a calculation between members, which is represented as a single member. A calculated item is useful when you want to view and manipulate a set of members as a single entity. For example, as a sales analyst, you can create a member in the Fulfillment by Quarter analysis that shows the average revenue for the Game Station and Plasma Television members.
calculated measure	Calculated measures are columns in fact tables that are based on expressions. For example, a calculated measure called Unit Price might be based on the expression Revenue / Billed Units.
catalog	The catalog contains things that you or somebody else has defined and saved for future use (such as analyses and dashboards). You can search the catalog to find something that you want to work with or change. For example, you might want to edit an analysis in a shared folder in the catalog.
column	<p>Similar to database columns, Oracle BI Enterprise Edition has the concept of a column. In Oracle BI Enterprise Edition, columns are used in different contexts. A column in an analysis is based on a column, a derived attribute, or a calculated measure.</p> <p>In an analysis, columns indicate the pieces of data that you want the analysis to return. You can use columns, along with filters and selection steps, to determine what analyses contain. Columns have names that indicate to you the types of information that they contain. For example, you can use columns named Account and Contact to present information in an analysis.</p>
dashboard	A dashboard shows information that is relevant to you and consists of one or more pages. Each page can present information in different ways, such as graphs, tables, and images. For example, as a sales representative, you can use a dashboard to see graphs of products sold in your territory.
derived attribute	Derived attributes are columns in dimension tables that are based on expressions. For example, a derived attribute called Full Address might combine information from the columns Street Address, City, State, and Postal Code.
dimension table	Dimension tables contain values that represent the business entities that you measure. A dimension table contains the columns that represent your dimensional attributes, such as places, offices, people, and products. For example, you might want to report dimensions such as Sales by Product Category for the Current Month.
fact table	Fact tables contain the numeric data that you use to measure business performance. A fact table contains numeric values such as revenue, number of units sold, and number of people hired.
filter	<p>Filters are the criteria that you apply to attribute and measure columns to limit the results that are displayed when an analysis is run. You can create inline or named filters. When you save a filter inside an individual content object, that object is saved "inline." You can save filters, groups, and calculated items inline. In addition to saving these objects inline, you can create individual named filters in the catalog that you can reuse in any analysis, dashboard, or dashboard page.</p> <p>For example, as a sales consultant, you can filter the results that are shown in an existing analysis to see revenue for only those brands for which you are responsible.</p>

Term	Definition
group	A group (also known as a "saved selection" in certain products) enables you to define the members of a column, as a list of members or a set of selection steps that generate a list of members. For example, as a sales analyst, you can review how much revenue was generated for mobile devices and compare that number to other product types. You can create a group called Mobile Devices for the Product column that includes Flip Phones and Smart Phones.
hierarchy	Hierarchies show relationships among groups of attribute columns in a dimension table. For example, days comprise months and months comprise quarters. Hierarchies enable drilling in analyses.
identity domain	The identity domain is the user information that provides authentication into Oracle BI Enterprise Edition. The identity domain also defines roles that groups of users can be members of.
join	Joins indicate relationships between one fact table and one dimension table. Every fact table must be joined to at least one dimension table, and the reverse.
level	Levels are components of hierarchies that either roll up or are rolled up from other levels. Hierarchies typically begin with a total level, then have child levels, working down to the lowest level. All levels, except the total level, must have at least one column.
measure	A measure is a column in a fact table that has an aggregation rule defined or is based on an expression that uses other measure columns. For example, you might want to measure business performance by Revenue and Units. Measures are calculated from data sources at query time.
Presentation Services	The collective term for features in Oracle Business Intelligence Enterprise Edition that enable you to present business intelligence data. These features include analyses, dashboards and a catalog to present the content.
prompt	Prompts are a type of filter that enable you to build and specify data values, or to choose specific data values to provide result sets for analyses included on a dashboard or dashboard page. A prompt expands or refines the existing dashboard and analysis filters. For example, you can use a prompt for Year to specify the year for which you want to see data in an analysis
selection step	As you specify which data members to include in an analysis, you create selections of data from the data source. Each selection specifies the criteria for a set of members for a particular column, such as Product or Geography, and consists of one or more steps. A step is where you specify an instruction that affects the selection, such as add Product members whose values contain the text "ABC." The order in which steps are performed affects the selection of data. Each of your steps acts incrementally on the results from previous steps, rather than acting on all the members for that column. For example, you can create a step to specify criteria for a set of members in a Sales Office column, which contains the members "Boston", "New York", and "San Francisco."
table	Similar to database tables, Oracle BI Enterprise Edition has the concept of a table and uses it in various contexts. When you model data, you create a dimension table or a fact table that includes source columns from one or more source tables. When you build an analysis, you can create a user-defined table view to display the data.

Term	Definition
time dimension	<p>Time dimensions enable time-series functions. These functions enable comparisons with previous time periods, enabling you to analyze data that spans multiple time periods.</p> <p>A time dimension is a group of the following related model objects:</p> <ul style="list-style-type: none">■ A time source table in the database that is populated with time data■ A time dimension table is based on the time source table■ A time hierarchy that defines the relationships between different time periods
variable	<p>Variables dynamically calculate and store values so that you can use those values in expressions. You can use variables in column expressions or in data filters.</p>
view	<p>A view is a visualization that helps communicate an outcome. A view enables you to look at results of analyses in meaningful, intuitive ways. You can add a variety of views to the results, such as graphs and pivot tables, that enable drilling down to more detailed information, explanatory text, a list of filters that were used to limit the results, and more. For example, you can analyze trends for the Sales Forecast analysis by creating a trellis view.</p>

Frequently Asked Questions for Oracle BI Enterprise Edition

This section provides answers to frequently asked questions for Oracle BI Enterprise Edition.

Topics:

- [Top FAQs for Analyses and Dashboards](#)
 - [How does Oracle BI Enterprise Edition differ from Oracle Business Intelligence Cloud Service?](#)
 - [When I want to save an object, where does the default location come from?](#)
 - [Can I enable other users to access my custom analyses and dashboards?](#)
 - [Can I make analyses and dashboards interact with prompts and other analyses?](#)
 - [I have interacted with a dashboard drilling and applying filters. How do I save the state of my dashboard and share the dashboard with others?](#)

About Accessibility Features

The accessibility features in Oracle BI Enterprise Edition aim to make navigating and using the software easier for persons with disabilities and for the aging population. The accessibility features support the use of standards-based assistive-technology hardware and software (such as Freedom Scientific JAWS). The accessibility features are grouped into these general categories:

- Features used by third-party assistive-technology products. These features center on providing a user interface that consists of standard HTML elements that can be easily interpreted by third-party assistive technology products.
- Accessibility mode, as described in [Changing to Accessibility Mode](#).
- Keyboard shortcuts and tab shortcuts that make it easier to navigate content for users with limited or no ability to use a mouse.
- Content design capabilities that make it possible for content creators to create content that supports users with accessibility needs. While Oracle BI Enterprise Edition provides accessibility mode that offers many features automatically, you as the designer must create content that meets the accessibility requirements of your user community.

Top FAQs for Analyses and Dashboards

How does Oracle BI Enterprise Edition differ from Oracle Business Intelligence Cloud Service?

If you have used both Oracle BI Enterprise Edition and Oracle BI Cloud Service, then you will notice that in some areas Oracle BI Cloud Service provides nearly identical features and functionality. These similarities enable you to become more productive more quickly using Oracle BI Cloud Service.

When I want to save an object, where does the default location come from?

You can save any object in any location. However, the **Save In** field in the Save dialog sometimes recommends the best location based on the object type that you are saving. For example, you should save filters, groups, and calculated items within a subject area folder so that these items are available when you build an analysis for the same subject area. If a subject area folder does not exist in your /My Folders or within /Shared Folders, then a subject area folder is created automatically. The **Save In** field defaults a save path to /My Folders/Subject Area Contents/<subject area>, however, the dialog's Folders area displays all instances of the subject area folder in the catalog.

You can save other objects such as analyses and prompts in any folder. Bear in mind the distinctions between shared and personal folders, when deciding whether to share the object that you are saving with other users.

Can I enable other users to access my custom analyses and dashboards?

Yes. You can enable other users to access your analyses and dashboards. You can give other users permissions to access the objects, as described in [Assigning Permissions to Objects](#). You can also move the objects to the Shared Folders folder.

Can I make analyses and dashboards interact with prompts and other analyses?

Yes, analyses and dashboards interact with prompts as described in [Advanced Techniques: How Dashboard Prompts and Analysis Prompts Interact](#). You can link views such that one view drives changes in one or more other views. For information, see [Linking Views in Master-Detail Relationships](#).

I have interacted with a dashboard drilling and applying filters. How do I save the state of my dashboard and share the dashboard with others?

You can save and get back the settings that you make on a dashboard, as described in [Recalling Personalized Settings](#). You can share dashboard pages with other users by sharing links to those pages. For information, see [Linking to Dashboard Pages](#).

This section provides information on accessibility features for Oracle BI Enterprise Edition.

Topics:

- [About Accessibility Features](#)
- [Changing to Accessibility Mode](#)
- [About Keyboard Shortcuts](#)
- [Navigating with Keystrokes](#)

About Accessibility Features

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Changing to Accessibility Mode

Accessibility mode makes the user interface more compatible with screen readers. Only features supported for users with disabilities are visible.

In accessibility mode:

- The Home page does not contain links for performing most editing functions, such as editing dashboards.
- Graphs are not displayed. They are converted to one or more annotated tables.

- Tables and pivot tables are displayed with internal annotations that enable screen readers to describe the contents of cells.
Refer to your assistive-technology documentation for table navigation shortcuts.
- You cannot use a mouse to modify the layout of a table or pivot table.
- Performance tiles and treemaps are displayed as pivot tables.
- The upper-left corner of each section on a dashboard page contains a collapse icon. This is true even if the section is marked as not collapsible in the Dashboard builder. The icon is the first element that receives focus when using a keyboard to navigate on a dashboard page.
- The **Page Options** button on a dashboard page is not available.
- If a dashboard page is refreshed, then the location of the focus is not preserved. You must press Tab to navigate through the focusable items.
- Trellis views displayed on dashboards are converted to pivot table views. Attribute columns of the inner graph are not included. Measure values are aggregated to the new grain of the pivot table views.

By default, accessibility mode is not enabled. You can decide whether to enable disability mode during sign in, or after sign in.

To enable accessibility mode after signing in:

1. Press Tab multiple times to navigate through the global header, until the focus is on your user name in the **Signed In As** area.
2. Press Enter, then Tab to highlight the **My Account** link.
3. Press Enter to display the My Account dialog.
4. Press Tab to select the My Account dialog: Preferences tab.
5. Press Tab to navigate through the fields on the tab until you read the **Accessibility Mode** options.
6. Use the arrow keys to select the **On** option.
7. Press Enter to save your changes and close the dialog.
8. Refresh the page to see it in accessibility mode.

About Keyboard Shortcuts

Oracle BI Enterprise Edition supports standard keyboard shortcuts that are used in many software applications. In addition, Oracle BI Enterprise Edition offers its own shortcuts. The following table describes general keyboard shortcuts for use with Oracle BI Enterprise Edition.

Keyboard Shortcut	Result
Control+Alt+G	Navigates to the first focusable element in the global header: the Skip to Content link. The link enables you to bypass the options on the global header and move to features on the main part of the Home page.
Control+Alt+D	Navigates to the Dashboards popup menu in the global header. You can then press Enter to display a menu from which you can select a dashboard to display.

Keyboard Shortcut	Result
Control+Alt+P	Navigates to the current dashboard page tab, if the tab is displayed. If there is only one page in the dashboard, then the page tab is not displayed.
Control+Shift+S	Navigates to the first focusable element in the next section. For a dashboard page, the first element is the collapse icon.
Control+Shift+U	Navigates to the first focusable element in the previous section. For a dashboard page, the first element is the collapse icon.
Tab	Navigates to the next focusable element.
Shift+Tab	Navigates to the previous focusable element.
Down Arrow	Navigates to the next menu option.
Up Arrow	Navigates to the previous menu option.
Enter	Triggers the activity, when the focus is on a link, image, or a button with an associated URL or activity.
Esc	Closes the menu that has the focus.

The following table describes keyboard shortcuts for navigating in dashboards in Oracle BI Enterprise Edition.

Keyboard Shortcut	Result
Alt + Up or Down Arrow	Opens drop-down and combo boxes.
Control + Up or Down Arrow	Shows the next or previous item in a combo box.

Note: If you use Freedom Scientific JAWS or other screen reader programs, then you must first disable the virtual PC cursor before using keystroke combinations to navigate the dashboard. You must enable the virtual PC cursor at other times, such as when navigating within table objects on a dashboard.

Navigating with Keystrokes

Topics:

- [Navigating on the Home Page](#)
- [Navigating in Dashboards](#)

Navigating on the Home Page

The Home page is displayed when you sign in to Oracle BI Enterprise Edition or navigate from a different location.

To navigate on the Home page with keystrokes:

1. Sign in to Oracle BI Enterprise Edition.
2. Press Control+Alt+G to display the **Skip to Content** link in the upper-left corner of the Home page.
3. Press one of the keys described in the following table.

Keyboard Shortcut	Result
Enter	Navigate to the default starting location on the Home page. This location is the first link in the upper-left corner under the global header.
Tab	Navigates to the first focusable element in the global header.

4. Continue to press Tab to navigate through the elements on the Home page.

Navigating in Dashboards

You can use keystrokes to navigate in dashboards. The following procedure describes one way to navigate a dashboard by using keyboard shortcuts. This procedure is an example; it does not include all keyboard shortcuts and options.

To navigate in dashboards with keystrokes:

1. Sign in to Oracle BI Enterprise Edition, then take the appropriate action as described in the following table:

Display	Action
If the Home page is displayed	Then use keystrokes to display the dashboard. Press Control+Alt+D to navigate to the Dashboards menu in the global header. Press Enter to display the menu. Press Tab or the arrow keys to navigate through the dashboard names. Press Enter on the name of the dashboard to display it Proceed to the next step.
If a dashboard is displayed	Then proceed to the next step.

2. Navigate to the dashboard page:
 - a. Press Control+Alt+G to display the **Skip to Content** link.
 - b. Press Tab multiple times to navigate through the global header. Find the tab that corresponds to the first page of the dashboard.

If there are no page tabs, then navigate to the first focusable element on the dashboard page.

Press Tab to move through the dashboard pages. After the last page, pressing Tab gives focus to the dashboard page menu.
 - c. Press Enter when the focus is on the appropriate page tab to open that page of the dashboard.
3. Press Control+Shift+S to navigate to the first focusable element in the next section: the collapse icon.
4. Press Tab to navigate to the next focusable element in the current section.
5. Press Control+Shift+S to navigate to the first focusable element in the next section.
6. While the section collapse and expand icon has focus, press Enter to collapse the current section.
7. To navigate in a table or pivot table:
 - a. Press Tab to select the table.

- b.** Press Tab to move through table headers and to select any menus that exist there.
- c.** When the table has focus, press the arrow keys to navigate among the columns and body cells of the table.

To access the drop-down menus in the header rows when a body cell has focus, press Tab. Press Enter to display the options for the menu in the first header row. Press Tab and use the arrow keys to highlight the options. Press Enter to select the desired option.

Expression Editor Reference

This section describes the Expression Elements that you can use in the Expression Editor.

Topics:

- [Data Model Objects](#)
- [SQL Operators](#)
- [Conditional Expressions](#)
- [Functions](#)
- [Constants](#)
- [Types](#)
- [Variables](#)

Data Model Objects

You can use data model objects in expressions, like time levels, dimension columns, and fact columns. To reference a data model object, use the syntax:

"Fact/Dimension Table Name"."Column Name"

For example: "Order Metrics"."Booked Amount"-"Order Metrics"."Fulfilled Amount"

The Expression Elements section only includes items that are relevant for your task, so not all fact tables and dimension tables might be listed. Similarly, time hierarchies are only included if the Time fact table is joined to the current table.

SQL Operators

SQL operators are used to specify comparisons between expressions.

Operator	Description
BETWEEN	Determines if a value is between two non-inclusive bounds. For example: <code>"COSTS"."UNIT_COST" BETWEEN 100.0 AND 5000.0</code> BETWEEN can be preceded with NOT to negate the condition.
IN	Determines if a value is present in a set of values. For example: <code>"COSTS"."UNIT_COST" IN (200, 600, 'A')</code>

Operator	Description
IS NULL	Determines if a value is null. For example: "PRODUCTS"."PROD_NAME" IS NULL
LIKE	Determines if a value matches all or part of a string. Often used with wildcard characters to indicate any character string match of zero or more characters (%) or a any single character match (_). For example: "PRODUCTS"."PROD_NAME" LIKE 'prod%'

Conditional Expressions

The conditional expressions described in this section are building blocks for creating expressions that convert a value from one form to another.

Notes:

- In CASE statements, AND has precedence over OR.
- Strings must be a single quotes.

Expression	Example	Description
CASE (If)	<pre> CASE WHEN score-par < 0 THEN 'Under Par' WHEN score-par = 0 THEN 'Par' WHEN score-par = 1 THEN 'Bogie' WHEN score-par = 2 THEN 'Double Bogey' ELSE 'Triple Bogey or Worse' END </pre>	<p>Evaluates each WHEN condition and if satisfied, assigns the value in the corresponding THEN expression.</p> <p>If none of the WHEN conditions are satisfied, it assigns the default value specified in the ELSE expression. If no ELSE expression is specified, the system automatically adds an ELSE NULL.</p>
CASE (Switch)	<pre> CASE Score-par WHEN -5 THEN 'Birdie on Par 6' WHEN -4 THEN 'Must be Tiger' WHEN -3 THEN 'Three under par' WHEN -2 THEN 'Two under par' WHEN -1 THEN 'Birdie' WHEN 0 THEN 'Par' WHEN 1 THEN 'Bogey' WHEN 2 THEN 'Double Bogey' ELSE 'Triple Bogey or Worse' END </pre>	<p>Also referred to as CASE (Lookup). The value of the first expression is examined, then the WHEN expressions. If the first expression matches any WHEN expression, it assigns the value in the corresponding THEN expression.</p> <p>If none of the WHEN expressions match, it assigns the default value specified in the ELSE expression. If no ELSE expression is specified, the system automatically adds an ELSE NULL.</p> <p>If the first expression matches an expression in multiple WHEN clauses, only the expression following the first match is assigned.</p>

Functions

Topics:

- [Aggregate Functions](#)
- [Calendar Functions](#)
- [Conversion Functions](#)
- [Display Functions](#)
- [Evaluate Functions](#)

- [Mathematical Functions](#)
- [String Functions](#)
- [System Functions](#)
- [Time Series Functions](#)

Aggregate Functions

Aggregate functions perform operations on multiple values to create summary results.

Function	Example	Description
Avg	Avg (Sales)	Calculates the average (mean) of a numeric set of values.
Count	Count (Products)	Determines the number of items with a non-null value.
First	First (Sales)	Selects the first non-null returned value of the expression argument. The <code>First</code> function operates at the most detailed level specified in your explicitly defined dimension.
Last	Last (Sales)	Selects the last non-null returned value of the expression.
Max	Max (Revenue)	Calculates the maximum value (highest numeric value) of the rows satisfying the numeric expression argument.
Median	Median (Sales)	Calculates the median (middle) value of the rows satisfying the numeric expression argument. When there are an even number of rows, the median is the mean of the two middle rows. This function always returns a double.
Min	Min (Revenue)	Calculates the minimum value (lowest numeric value) of the rows satisfying the numeric expression argument.
StdDev	StdDev (Sales) StdDev (DISTINCT Sales)	Returns the standard deviation for a set of values. The return type is always a double.
StdDev_Pop	StdDev_Pop (Sales) StdDev_Pop (DISTINCT Sales)	Returns the standard deviation for a set of values using the computational formula for population variance and standard deviation.
Sum	Sum (Revenue)	Calculates the sum obtained by adding up all values satisfying the numeric expression argument.

Calendar Functions

Calendar functions manipulate data of the data types `DATE` and `DATETIME` based on a calendar year.

Function	Example	Description
Current_Date	Current_Date	Returns the current date.
Current_Time	Current_Time (3)	Returns the current time to the specified number of digits of precision, for example: HH:MM:SS.SSS If no argument is specified, the function returns the default precision.

Function	Example	Description
Current_TimeStamp	Current_TimeStamp(3)	Returns the current date/timestamp to the specified number of digits of precision.
DayName	DayName(Order_Date)	Returns the name of the day of the week for a specified date expression.
DayOfMonth	DayOfMonth(Order_Date)	Returns the number corresponding to the day of the month for a specified date expression.
DayOfWeek	DayOfWeek(Order_Date)	Returns a number between 1 and 7 corresponding to the day of the week for a specified date expression. For example, 1 always corresponds to Sunday, 2 corresponds to Monday, and so on through to Saturday which returns 7.
DayOfYear	DayOfYear(Order_Date)	Returns the number (between 1 and 366) corresponding to the day of the year for a specified date expression.
Day_Of_Quarter	Day_Of_Quarter(Order_Date)	Returns a number (between 1 and 92) corresponding to the day of the quarter for the specified date expression.
Hour	Hour(Order_Time)	Returns a number (between 0 and 23) corresponding to the hour for a specified time expression. For example, 0 corresponds to 12 a.m. and 23 corresponds to 11 p.m.
Minute	Minute(Order_Time)	Returns a number (between 0 and 59) corresponding to the minute for a specified time expression.
Month	Month(Order_Time)	Returns the number (between 1 and 12) corresponding to the month for a specified date expression.
MonthName	MonthName(Order_Time)	Returns the name of the month for a specified date expression.
Month_Of_Quarter	Month_Of_Quarter(Order_Date)	Returns the number (between 1 and 3) corresponding to the month in the quarter for a specified date expression.
Now	Now()	Returns the current timestamp. The Now function is equivalent to the Current_Timestamp function.
Quater_Of_Year	Quarter_Of_Year(Order_Date)	Returns the number (between 1 and 4) corresponding to the quarter of the year for a specified date expression.
Second	Second(Order_Time)	Returns the number (between 0 and 59) corresponding to the seconds for a specified time expression.
TimeStampAdd	TimeStampAdd(SQL_TSI_MONTH, 12, Time."Order Date")	Adds a specified number of intervals to a timestamp, and returns a single timestamp. Interval options are: SQL_TSI_SECOND, SQL_TSI_MINUTE, SQL_TSI_HOUR, SQL_TSI_DAY, SQL_TSI_WEEK, SQL_TSI_MONTH, SQL_TSI_QUARTER, SQL_TSI_YEAR
TimeStampDiff	TimeStampDiff(SQL_TSI_MONTH, Time."Order Date", CURRENT_DATE)	Returns the total number of specified intervals between two timestamps. Use the same intervals as TimeStampAdd.
Week_Of_Quarter	Week_Of_Quarter(Order_Date)	Returns a number (between 1 and 13) corresponding to the week of the quarter for the specified date expression.
Week_Of_Year	Week_Of_Year(Order_Date)	Returns a number (between 1 and 53) corresponding to the week of the year for the specified date expression.
Year	Year(Order_Date)	Returns the year for the specified date expression.

Conversion Functions

Conversion functions convert a value from one form to another.

Function	Example	Description
Cast	<code>Cast(hiredate AS CHAR(40)) FROM employee</code>	Changes the data type of an expression or a null literal to another data type. For example, you can cast a customer_name (a data type of Char or Varchar) or birthdate (a datetime literal). Use Cast to change to a Date data type. Do not use ToDate.
IfNull	<code>IfNull(Sales, 0)</code>	Tests if an expression evaluates to a null value, and if it does, assigns the specified value to the expression.
IndexCol	<code>SELECT IndexCol(VALUEOF (NQ_SESSION.GEOGRAPHY_LEVEL), Country, State, City), Revenue FROM Sales</code>	Uses external information to return the appropriate column for the signed-in user to see.
NullIf	<code>SELECT e.last_name, NULLIF(e.job_id, j.job_id) "Old Job ID" FROM employees e, job_history j WHERE e.employee_id = j.employee_id ORDER BY last_name, "Old Job ID";</code>	Compares two expressions. If they are equal, then the function returns null. If they are not equal, then the function returns the first expression. You cannot specify the literal NULL for the first expression.
To_DateTime	<code>SELECT To_DateTime ('2009-03-0301:01:00', 'yyyy-mm-dd hh:mi:ss') FROM sales</code>	Converts string literals of dateTime format to a DateTime data type.

Display Functions

Display functions operate on the result set of a query.

Function	Example	Description
BottomN	<code>BottomN(Sales, 10)</code>	Returns the <i>n</i> lowest values of expression, ranked from lowest to highest.
Filter	<code>Filter(Sales USING Product = 'widgit')</code>	Computes the expression using the given preaggregate filter.
Mavg	<code>Mavg(Sales, 10)</code>	Calculates a moving average (mean) for the last <i>n</i> rows of data in the result set, inclusive of the current row.
Msum	<code>SELECT Month, Revenue, Msum(Revenue, 3) as 3_MO_SUM FROM Sales</code>	Calculates a moving sum for the last <i>n</i> rows of data, inclusive of the current row. The sum for the first row is equal to the numeric expression for the first row. The sum for the second row is calculated by taking the sum of the first two rows of data, and so on. When the <i>n</i> th row is reached, the sum is calculated based on the last <i>n</i> rows of data.
Ntile	<code>Ntile(Sales, 100)</code>	Determines the rank of a value in terms of a user-specified range. It returns integers to represent any range of ranks. The example shows a range from 1 to 100, with the lowest sale = 1 and the highest sale = 100.
Percentile	<code>Percentile(Sales)</code>	Calculates a percent rank for each value satisfying the numeric expression argument. The percentile rank ranges are from 0 (1st percentile) to 1 (100th percentile), inclusive.

Function	Example	Description
Rank	Rank(Sales)	Calculates the rank for each value satisfying the numeric expression argument. The highest number is assigned a rank of 1, and each successive rank is assigned the next consecutive integer (2, 3, 4,...). If certain values are equal, they are assigned the same rank (for example, 1, 1, 1, 4, 5, 5, 7...).
Rcount	SELECT month, profit, Rcount(profit) FROM sales WHERE profit > 200	Takes a set of records as input and counts the number of records encountered so far.
Rmax	SELECT month, profit, Rmax(profit) FROM sales	Takes a set of records as input and shows the maximum value based on records encountered so far. The specified data type must be one that can be ordered.
Rmin	SELECT month, profit, Rmin(profit) FROM sales	Takes a set of records as input and shows the minimum value based on records encountered so far. The specified data type must be one that can be ordered.
Rsum	SELECT month, revenue, Rsum(revenue) as RUNNING_SUM FROM sales	Calculates a running sum based on records encountered so far. The sum for the first row is equal to the numeric expression for the first row. The sum for the second row is calculated by taking the sum of the first two rows of data, and so on.
TopN	TopN(Sales, 10)	Returns the <i>n</i> highest values of expression, ranked from highest to lowest.

Evaluate Functions

Evaluate functions are database functions that can be used to pass through expressions to get advanced calculations.

Embedded database functions can require one or more columns. These columns are referenced by %1 ... %N within the function. The actual columns must be listed after the function.

Function	Example	Description
Evaluate	SELECT EVALUATE('instr(%1, %2)', address, 'Foster City') FROM employees	Passes the specified database function with optional referenced columns as parameters to the database for evaluation.
Evaluate_Aggr	EVALUATE_AGGR('REGR_SLOPE(%1, %2)', sales.quantity, market.marketkey)	Passes the specified database function with optional referenced columns as parameters to the database for evaluation. This function is intended for aggregate functions with a GROUP BY clause.

Mathematical Functions

The mathematical functions described in this section perform mathematical operations.

Function	Example	Description
Abs	Abs(Profit)	Calculates the absolute value of a numeric expression.

Function	Example	Description
Acos	Acos(1)	Calculates the arc cosine of a numeric expression.
Asin	Asin(1)	Calculates the arc sine of a numeric expression.
Atan	Atan(1)	Calculates the arc tangent of a numeric expression.
Atan2	Atan2(1, 2)	Calculates the arc tangent of y/x , where y is the first numeric expression and x is the second numeric expression.
Ceiling	Ceiling(Profit)	Rounds a noninteger numeric expression to the next highest integer. If the numeric expression evaluates to an integer, the CEILING function returns that integer.
Cos	Cos(1)	Calculates the cosine of a numeric expression.
Cot	Cot(1)	Calculates the cotangent of a numeric expression.
Degrees	Degrees(1)	Converts an expression from radians to degrees.
Exp	Exp(4)	Sends the value to the power specified.
ExtractBit	Int ExtractBit(1, 5)	Retrieves a bit at a particular position in an integer. It returns an integer of either 0 or 1 corresponding to the position of the bit.
Floor	Floor(Profit)	Rounds a noninteger numeric expression to the next lowest integer. If the numeric expression evaluates to an integer, the FLOOR function returns that integer.
Log	Log(1)	Calculates the natural logarithm of an expression.
Log10	Log10(1)	Calculates the base 10 logarithm of an expression.
Mod	Mod(10, 3)	Divides the first numeric expression by the second numeric expression and returns the remainder portion of the quotient.
Pi	Pi()	Returns the constant value of pi.
Power	Power(Profit, 2)	Takes the first numeric expression and raises it to the power specified in the second numeric expression.
Radians	Radians(30)	Converts an expression from degrees to radians.
Rand	Rand()	Returns a pseudo-random number between 0 and 1.
RandFromSeed	Rand(2)	Returns a pseudo-random number based on a seed value. For a given seed value, the same set of random numbers are generated.
Round	Round(2.166000, 2)	Rounds a numeric expression to n digits of precision.
Sign	Sign(Profit)	This function returns the following: <ul style="list-style-type: none"> ■ 1 if the numeric expression evaluates to a positive number ■ -1 if the numeric expression evaluates to a negative number ■ 0 if the numeric expression evaluates to zero
Sin	Sin(1)	Calculates the sine of a numeric expression.
Sqrt	Sqrt(7)	Calculates the square root of the numeric expression argument. The numeric expression must evaluate to a nonnegative number.
Tan	Tan(1)	Calculates the tangent of a numeric expression.

Function	Example	Description
Truncate	Truncate(45.12345, 2)	Truncates a decimal number to return a specified number of places from the decimal point.

String Functions

String functions perform various character manipulations. They operate on character strings.

Function	Example	Description
Ascii	Ascii('a')	Converts a single character string to its corresponding ASCII code, between 0 and 255. If the character expression evaluates to multiple characters, the ASCII code corresponding to the first character in the expression is returned.
Bit_Length	Bit_Length('abcdef')	Returns the length, in bits, of a specified string. Each Unicode character is 2 bytes in length (equal to 16 bits).
Char	Char(35)	Converts a numeric value between 0 and 255 to the character value corresponding to the ASCII code.
Char_Length	Char_Length(Customer_Name)	Returns the length, in number of characters, of a specified string. Leading and trailing blanks are not counted in the length of the string.
Concat	SELECT DISTINCT Concat ('abc', 'def') FROM employee	Concatenates two character strings.
Insert	SELECT Insert('123456', 2, 3, 'abcd') FROM table	Inserts a specified character string into a specified location in another character string.
Left	SELECT Left('123456', 3) FROM table	Returns a specified number of characters from the left of a string.
Length	Length(Customer_Name)	Returns the length, in number of characters, of a specified string. The length is returned excluding any trailing blank characters.
Locate	Locate('d' 'abcdef')	Returns the numeric position of a character string in another character string. If the character string is not found in the string being searched, the function returns a value of 0.
LocateN	Locate('d' 'abcdef', 3)	Like Locate, returns the numeric position of a character string in another character string. LocateN includes an integer argument that enables you to specify a starting position to begin the search.
Lower	Lower(Customer_Name)	Converts a character string to lowercase.
Octet_Length	Octet_Length('abcdef')	Returns the number of bytes of a specified string.
Position	Position('d', 'abcdef')	Returns the numeric position of <i>strExpr1</i> in a character expression. If <i>strExpr1</i> is not found, the function returns 0.
Repeat	Repeat('abc', 4)	Repeats a specified expression <i>n</i> times.
Replace	Replace('abcd1234', '123', 'zz')	Replaces one or more characters from a specified character expression with one or more other characters.

Function	Example	Description
Right	<code>SELECT Right('123456', 3) FROM table</code>	Returns a specified number of characters from the right of a string.
Space	<code>Space(2)</code>	Inserts blank spaces.
Substring	<code>Substring('abcdef' FROM 2)</code>	Creates a new string starting from a fixed number of characters into the original string.
SubstringN	<code>Substring('abcdef' FROM 2 FOR 3)</code>	Like Substring, creates a new string starting from a fixed number of characters into the original string. SubstringN includes an integer argument that enables you to specify the length of the new string, in number of characters.
TrimBoth	<code>Trim(BOTH '_' FROM '_abcdef_')</code>	Strips specified leading and trailing characters from a character string.
TrimLeading	<code>Trim(LEADING '_' FROM '_ abcdef')</code>	Strips specified leading characters from a character string.
TrimTrailing	<code>Trim(TRAILING '_' FROM 'abcdef_')</code>	Strips specified trailing characters from a character string.
Upper	<code>Upper(Customer_Name)</code>	Converts a character string to uppercase.

System Functions

The `USER` system function returns values relating to the session. It returns the user name you signed in with.

Time Series Functions

Time series functions are aggregate functions that operate on time dimensions. The time dimension members must be at or below the level of the function. Because of this, one or more columns that uniquely identify members at or below the given level must be projected in the query.

Function	Example	Description
Ago	<code>SELECT Year_ID, Ago(sales, year, 1)</code>	Calculates the aggregated value of a measure from the current time to a specified time period in the past. For example, <code>AGO</code> can produce sales for every month of the current quarter and the corresponding quarter-ago sales.
Periodrolling	<code>SELECT Month_ID, Periodrolling (monthly_sales, -1, 1)</code>	Computes the aggregate of a measure over the period starting x units of time and ending y units of time from the current time. For example, <code>PERIODROLLING</code> can compute sales for a period that starts at a quarter before and ends at a quarter after the current quarter.
ToDate	<code>SELECT Year_ID, Month_ID, ToDate (sales, year)</code>	Aggregates a measure from the beginning of a specified time period to the currently displayed time. For example, this function can calculate Year to Date sales.

Constants

You can use constants in expressions. Available constants include `Date`, `Time`, and `Timestamp`. See also [Current_Date](#), [Current_Time](#), and [Current_TimeStamp](#).

Constant	Example	Description
Date	DATE [2014-04-09]	Inserts a specific date.
Time	TIME [12:00:00]	Inserts a specific time.
TimeStamp	TIMESTAMP [2014-04-09 12:00:00]	Inserts a specific timestamp.

Types

You can use data types, such as CHAR, INT, and NUMERIC, in expressions. For example, you use types when creating CAST expressions that change the data type of an expression or a null literal to another data type.

Variables

You can use a [variable](#) in an expression.