

Oracle Business Intelligence Enterprise Edition (OBIEE)

12.2.1.1.0

Author User's Guide

Copyright © 2015, 2016, Oracle and/or its affiliates. All rights reserved.

Primary Author: Jenny Smalling

Contributors: Oracle Business Intelligence development, product management, and quality assurance teams

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Contents

Preface	xvii
Audience	xvii
Documentation Accessibility	xvii
Related Documentation and Other Resources	xvii
Conventions.....	xviii
 New Features for Oracle Business Intelligence Users	 xix
New Features for Oracle BI EE 12c (12.2.1)	xix
 1 Introducing Oracle Business Intelligence Enterprise Edition	
Introduction to Oracle BI Enterprise Edition.....	1-1
Where Do I Store and Manage Oracle BI EE Objects?	1-3
Signing In to Oracle BI Enterprise Edition.....	1-4
Signing Out of Oracle BI Enterprise Edition.....	1-5
Navigating Oracle BI Enterprise Edition.....	1-5
What Is the Oracle BI EE Home Page?.....	1-6
What Is the Oracle BI EE Global Header?	1-7
Where Can I Get Help or More Information?.....	1-9
About Privileges and Permissions	1-9
About Acting for Other Users.....	1-10
Acting for Other Users	1-10
Setting Preferences.....	1-10
Downloading BI Desktop Tools.....	1-11
Topics of Interest in Other Guides	1-12
System Requirements and Certification	1-12
How Does Oracle BI EE Interact with Other Products?.....	1-13
Integration of Oracle BI EE with Oracle BI Publisher	1-13
Integration of Oracle BI EE with Oracle BI Mobile App Designer	1-14
Integration of Oracle BI EEwith Oracle Business Intelligence Mobile	1-14
Integration of Oracle BI EE with Oracle Enterprise Performance Management System.....	1-14
Interaction of Oracle BI EE with Oracle BI Applications.....	1-15
Integration of Oracle BI EE with Microsoft Office.....	1-15

2 Creating Analyses

What Is an Analysis?	2-2
How Do I Work with an Analysis?	2-2
How Is an Analysis Processed?	2-2
How Can I Always See the Most Current Results of an Analysis?	2-2
What Are Subject Areas and Columns?	2-3
What Are the Types of Columns?	2-4
How Are Columns Indicated Visually?	2-6
Understanding the Double Column Feature	2-7
What Is the Analysis Editor?	2-8
Managing Panes in the Analysis Editor Tabs	2-9
What Is the Process for Constructing Analyses?	2-9
Creating New Analyses	2-10
Specifying the Criteria for Analyses	2-10
Understanding Null Suppression	2-13
Example 1: Adding a Filter to a Row Edge on a Measure When Null Values Are Included	2-14
Example 2: Adding a Filter to a Row Edge on a Measure When Null Values Are Included	2-15
Example 3: Adding a "Not Null" Filter to a Row Edge on a Measure When Null Values Are Included	2-16
Editing the Formula for a Column	2-17
Combining Columns Using Set Operations	2-18
Viewing Metadata Information from the Subject Areas Pane	2-21
Saving Columns to the Catalog	2-22
Changing the Sort Order of Subject Areas and Subject Area Folders	2-22
Where Else is the Subject Areas Sort Order Reflected?	2-23
Displaying the Results of Analyses	2-25
Creating Additional Compound Layouts	2-25
Alerting Users to No Data in the Results of Analyses	2-25
Adding Prompts to Analyses	2-26
Examining the Logical SQL Statements for Analyses	2-26
Saving Analyses	2-28
Creating Agents from Analyses	2-29
Editing Analyses	2-30
About Embedding an Analysis in a Dashboard	2-30
Working with Direct Database Requests	2-30
Setting Privileges for Direct Requests	2-30
Executing a Direct Database Request	2-31
Seeing the Results of Direct Database Requests	2-31
Using Variables	2-31
What Are Session Variables?	2-32

What Are Repository Variables?	2-32
What Are Presentation Variables?	2-33
What Are Request Variables?	2-33
What Are Global Variables?	2-34
Where Can I Reference Variables?	2-35
What Is the Syntax for Referencing Variables?	2-36
What Predefined Presentation Variables Are Available?	2-39
Example of Referencing a Variable in a Title View	2-42

4 Adding Views for Display in Dashboards

What Are Views?	4-2
What Types of Views Are Available?	4-2
What Types of Graphs Are Available?.....	4-6
What Types of Funnel Graphs Are Available?	4-8
What Types of Graphs Are Available to Trellis Views?	4-8
What Types of Gauges Are Available?	4-9
What Types of Logical SQL Views Are Available?	4-9
What Types of Waterfall Graph Formats Are Available?	4-10
Adding Views to the Results of Analyses	4-11
What Is the Recommended Visualizations Feature?	4-12
Editing Views	4-13
Editing Table and Pivot Table Views	4-15
Editing Graph Views	4-18
Editing Trellis Views.....	4-23
Editing Gauge Views	4-29
Editing Map Views.....	4-30
Editing Narrative Views.....	4-39
Editing Column Selector Views	4-40
Editing View Selector Views.....	4-41
Editing Legend Views.....	4-42
Editing Performance Tile Views.....	4-42
Editing Treemap Views	4-44
Editing Heat Matrix Views	4-48

Modifying the Layout of Data in Views.....	4-50
Modifying Values and Performing Write Back.....	4-66
About Modifying Values and Various Types of Users.....	4-66
Process for Write Back.....	4-67
Adding the Write-Back Capability to a Column.....	4-67
Adding the Write-Back Capability to a Table View.....	4-68
About the Modes for Write Back in Views.....	4-68
Interactions in Views.....	4-69
Click Interactions in Views.....	4-69
Right-Click Interactions in Views.....	4-70
Drilling in Views.....	4-70
In Which Columns Can I Drill?.....	4-70
How Do I Allow Drilling in Columns?.....	4-71
What are the Effects of Drilling on Filters and Selection Steps?.....	4-71
Sorting Data in Views.....	4-71
Common Sort Functionality.....	4-72
Sorting Data.....	4-73
Clearing Sorts.....	4-74
Sorting in Tables and Pivot Tables.....	4-74
Example 1: Sorting with a Single Column on Each Edge.....	4-75
Example 2: Sorting with Two Columns on the Row Edge.....	4-76
Example 3: Sorting with Two Measures on the Column Edge.....	4-76
Sorting in Graphs by Using the Right-Click Menu.....	4-77
Resizing Rows and Columns in Table Views, Pivot Table Views, and Advanced Trellis Views.....	4-79
Saving Views.....	4-79
Renaming Views or Compound Layouts.....	4-80
Rearranging Views.....	4-80
Printing Views.....	4-81
Changing Print and Export Options for Views.....	4-81
Previewing How Views Are Displayed on a Dashboard.....	4-82
Removing Views.....	4-82
Refreshing the Results in Views.....	4-83
Customizing Views for Delivery to Agent Users.....	4-83
What Is Master-Detail Linking of Views?.....	4-83
What Are Master Views?.....	4-84
What Are Detail Views?.....	4-87
How Does Master-Detail Linking of Views Work?.....	4-88
Linking Views in Master-Detail Relationships.....	4-89
Defining the Master View.....	4-89
Defining the Detail View.....	4-89
Example of a Table and Graph Linked in a Master-Detail Relationship.....	4-91

6 Filtering and Selecting Data for Analyses

Saving Objects as Inline or Named	6-1
What are Inline or Named Objects?	6-2
What is the Folder Structure for Named Objects?	6-2
Saving Filters as Inline or Named	6-2
Saving Groups and Calculated Items as Inline or Named	6-2
What are Filters and Selection Steps?	6-3
How Do Filters and Selection Steps Differ?	6-3
Applying Filters to Attribute Columns to Affect Hierarchical Columns	6-4
Working with Selections of Data	6-4
Creating Selection Steps	6-5
Editing Selection Steps	6-6
Saving Selection Steps as a Group Object	6-6
Working with Selection Steps and Double Columns	6-6
Creating Column Filters	6-7
Editing Column Filters	6-8
Working with the EVALUATE_PREDICATE Function	6-9
How Can I Use the EVALUATE_PREDICATE Function with a Filter?	6-9
Adding the EVALUATE_PREDICATE Function to an Inline Filter	6-10
Applying a Named Filter to an Analysis	6-10
Combining and Grouping Column Filters	6-10
Using a Saved Analysis as a Filter	6-11
Creating and Editing the SQL Statements for a Column Filter in an Analysis	6-12
Working with Calculated Measures	6-12
Working with Groups and Calculated Items	6-13
What are Groups?	6-14
What are Calculated Items?	6-14
Creating Groups and Calculated Items	6-14
Editing Groups and Calculated Items	6-16
Adding a Group to Another Analysis	6-17
Nesting Groups and Calculated Items	6-17

Examples of Calculated Items	6-18
7 Prompting in Dashboards and Analyses	
What Are Inline and Dashboard Prompts?	7-1
What are Column Prompts?	7-2
Other Prompt Types	7-3
What Types of User Input Options Can I Use With a Column or Variable Prompt?	7-3
How Do Prompts Work in Oracle BI Mobile?	7-7
Can Dashboard Prompts and Analysis Prompts Interact?	7-7
In What Order Does Oracle BI EE Apply Prompts with Default Values?	7-8
What Is Auto-Complete?	7-9
Creating a Column Prompt	7-10
Overriding a Selection Step With a Column Prompt	7-12
Creating an Image Prompt	7-13
Creating a Currency Prompt	7-15
Creating a Variable Prompt	7-17
Editing Prompts	7-18
Adding a Dashboard Prompt to a Dashboard or Dashboard Page	7-19
Adding a Hidden Dashboard Prompt to a Dashboard or Dashboard Page	7-19
8 Formatting Analyses, Views, and Dashboard Pages	
What Can be Formatted?	8-1
Applying Formatting to Columns in Analyses	8-1
Applying Formatting to Views	8-2
Applying Formatting to Dashboard Pages	8-2
Formatting Columns in Analyses	8-2
What Kinds of Formatting Can I Apply?	8-3
Applying Formatting to a Column	8-3
Saving Formatting Defaults	8-4
What is Cosmetic Formatting?	8-4
Using a Saved Analysis to Modify the Cosmetic Appearance of Other Analyses	8-4
Applying Conditional Formatting to Tables, Pivot Tables, Performance Tiles, Graphs, Heat Matrices, and Trellises	8-6
How is Conditional Formatting Applied?	8-7
Can Conditional Formats Be Based on Another Column?	8-7
What Factors Affect Conditional Formats?	8-8
Applying Conditional Formatting	8-11
Example of Conditional Formatting for Ranking	8-12
Storing Custom Files Locally and Using the fmap Function to Reference Them	8-12
Custom Format Masks	8-13
Custom Format Strings	8-16
Custom Format Strings for Date and Time Fields	8-17
Custom Format Strings for Numeric Fields	8-19

Preface

The Oracle Business Intelligence Foundation Suite is a complete, open, and integrated solution for all enterprise business intelligence needs, including reporting, ad hoc queries, OLAP (Online Analytical Processing), dashboards, scorecards, and what-if analysis.

The Oracle Business Intelligence Foundation Suite includes Oracle Business Intelligence Enterprise Edition.

Oracle Business Intelligence Enterprise Edition (Oracle BI EE) is a comprehensive set of enterprise business intelligence tools and infrastructure, including a scalable and efficient query and analysis server, an ad-hoc query and analysis tool, interactive dashboards, proactive intelligence and alerts, and an enterprise reporting engine.

This guide contains information about using Oracle BI EE to organize and present data for making critical and timely business decisions.

Audience

This document is intended for anyone who plans to organize and present data for making critical and timely business decisions using Oracle Business Intelligence, such as a middle tier administrator, report specialist, departmental reporter, or information consumer.

(This guide refers to report specialists and departmental reporters collectively as content designers, and to information consumers as end users.) 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 Documentation and Other Resources

There are many places where you can find information about this product.

See the Oracle Business Intelligence documentation library for a list of related Oracle Business Intelligence documents.

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

Specific 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.

Introducing Oracle Business Intelligence Enterprise Edition

This chapter describes how to get started with Oracle Business Intelligence Enterprise Edition and explains how to sign in, sign out, and navigate Oracle BI EE. It also describes the Home page, the global header, how to act for others, how to set preferences, and how Oracle BI EE interacts with other products.

Topics

This chapter includes the following sections:

- [Introduction to Oracle BI Enterprise Edition](#)
- [Where Do I Store and Manage Oracle BI EE Objects?](#)
- [Signing In to Oracle BI Enterprise Edition](#)
- [Signing Out of Oracle BI Enterprise Edition](#)
- [Navigating Oracle BI Enterprise Edition](#)
- [What Is the Oracle BI EE Home Page?](#)
- [What Is the Oracle BI EE Global Header?](#)
- [Where Can I Get Help or More Information?](#)
- [About Privileges and Permissions](#)
- [About Acting for Other Users](#)
- [Acting for Other Users](#)
- [Setting Preferences](#)
- [How Does Oracle BI EE Interact with Other Products?](#)
- [Downloading BI Desktop Tools](#)
- [Topics of Interest in Other Guides](#)
- [System Requirements and Certification](#)

Introduction to Oracle BI Enterprise Edition

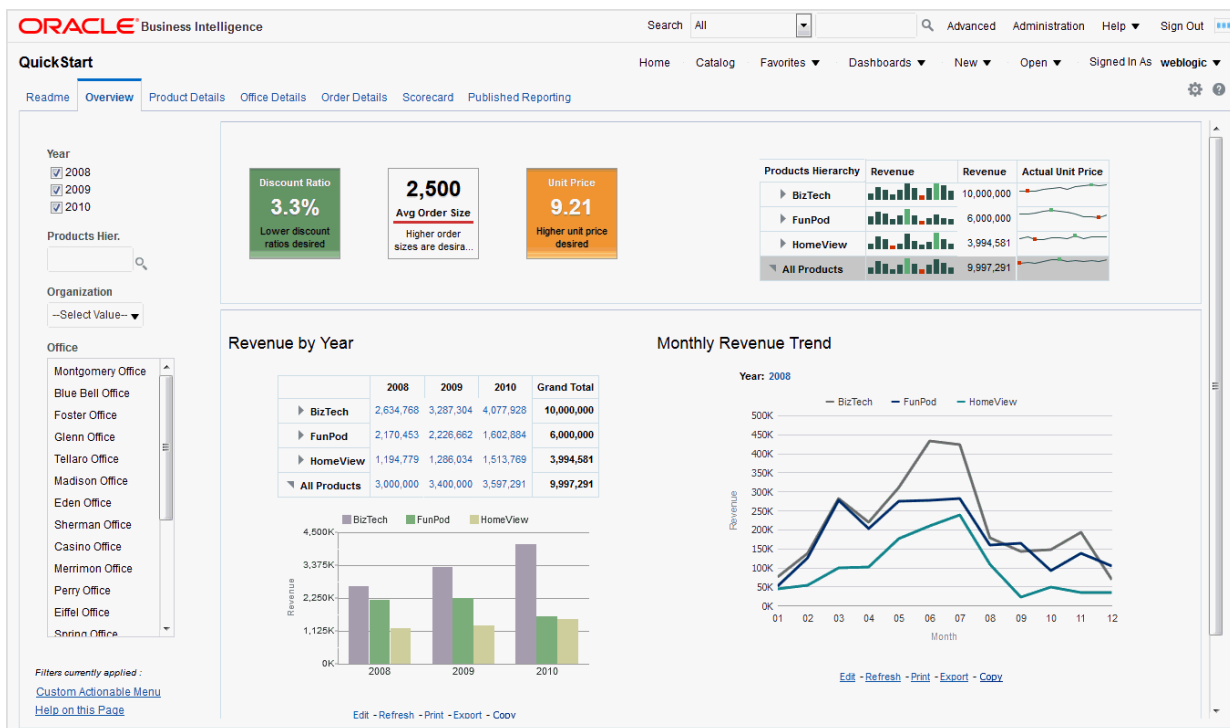
Oracle BI Enterprise Edition is a powerful tool for analyzing and presenting data.

Oracle BI Enterprise Edition (sometimes referred to as Oracle Business Intelligence) provides a full range of business intelligence capabilities that allow 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.

The illustration shows a portion of an example dashboard that presents organizational data in easy-to-understand formats (tiles, tables, graphs, and so on).



In Oracle BI Enterprise Edition, you can work with:

- **Analyses** — (This area of Oracle BI EE is also known as Answers.) Analyses are queries against an organization's data that provide answers to business questions. Analyses allow you to explore and interact with information by presenting data in easy-to-understand formats (such as tables and graphs). You can save, organize, and share the results of analyses.

Your organization might also have purchased prebuilt analyses specific to your industry. You can use prebuilt analyses to suit your business's information needs.

See [Creating Analyses](#).

- **Dashboards** — (This area of Oracle BI EE is also known as Interactive Dashboards.) Dashboards provide personalized views of corporate and external information. A dashboard consists of one or more pages that contain content, such as analyses, links to web sites, Oracle BI Publisher reports, and so on. Dashboards allow you to provide end users with access to analytics information.

Your organization might also have purchased preconfigured dashboards that contain prebuilt analyses specific to your industry.

See [Building and Using Dashboards](#).

- **Filters, Selection Steps, and Prompts** — Filters, selection steps, and prompts allow you to limit or specify the data that is displayed in dashboards and analyses. See [Filtering and Selecting Data for Analyses](#). For information on working with prompts, see [Prompting in Dashboards and Analyses](#).
- **Agents** — (This area of Oracle BI EE is also known as Delivers.) Agents enable you to automate your business processes. You can use agents to provide event-driven alerting, scheduled content publishing, and conditional event-driven action execution. You can schedule agents and can trigger them with a specific condition, which enables you to deliver timely information to users. See [Delivering Content](#).
- **Conditions** — Conditions are objects that return a single Boolean value that is based on the evaluation of an analysis or of a Key Performance Indicator (KPI). You use conditions to determine whether something is to be done, for example whether an agent is to deliver its content. See [Working with Conditions](#).
- **Actions** — Actions provide functionality to navigate to related content or to invoke operations, functions, or processes in external systems. You can include actions in various objects, such as analyses and dashboard pages. Actions allow users to take the proper action based on the business insight that they gained from the data that they received. See [Working with Actions](#).
- **Scorecards** — (This area of Oracle BI EE is known as Oracle Scorecard and Strategy Management). Scorecards allow you to model the objectives and initiatives that comprise your corporate strategy, evaluate their performance by assigning KPIs, and determine and display overall performance. See [Scorecarding](#).
- **Other Products** — Oracle BI EE interacts in various ways with other products. For example, with Oracle Hyperion Smart View for Office, you can access and run analyses from Oracle BI EE within your Microsoft Office applications (that is, Excel, Word, and PowerPoint). See [How Does Oracle BI EE Interact with Other Products?](#).

Note: These areas of Oracle BI EE (that is, Analyses, Agents, Dashboards, and so on) are sometimes referred to as Presentation Services.

Where Do I Store and Manage Oracle BI EE Objects?

You use the Oracle BI Presentation Catalog to store the objects, such as analyses, dashboards, and KPIs, that you and other users create using Oracle BI EE.

Users have their own personal folder (My Folders), where they can store the objects that they create. You can access the objects in a personal folder and save content into that folder. Users can add sub-folders to their personal folders to organize their content in the way that is the most logical to them.

You can also store objects in shared folders where other users or groups can access the objects. A combination of business logic security, catalog object security, and data level security determines who can view data and objects, edit objects, and delete objects.

from the catalog. Your administrator creates and maintains the catalog's shared folder structure.

For more information, see [What is the Oracle BI Presentation Catalog?](#) and [Managing Objects in the Oracle BI Presentation Catalog](#). See Configuring and Managing the Oracle BI Presentation Catalog in *System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

Signing In to Oracle BI Enterprise Edition

You need a few pieces of information to sign in to the application.

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

Note: Oracle BI EE requires that the web browser be set to accept cookies. It uses a cookie to track a user's signed-in session.

You might not be prompted to enter values in all fields of the Sign In page (as described in the following procedure), if you have already signed on using single sign-on (SSO).

1. In the address field of a browser, enter the URL that was provided by your organization.
2. On the Sign In page, select the language in which you want to work.

You can change the default entry for this box by selecting another language in the **User Interface Language** field in the Preferences tab of the My Account dialog. For more information, see [Setting Preferences](#).

Note: On Windows, if you select the **Install files for complex script and right-to-left languages (including Thai)** option on the Languages tab of the Regional and Language Options dialog, Hebrew fonts display in the wrong direction, that is left to right rather than right to left.

The workaround is to deselect the **Install files for complex script and right-to-left languages (including Thai)** option as follows:

- a. In the Control Panel, click the **Regional & Language Options** button to display the Regional and Language Options dialog.
 - b. Click the Languages tab.
 - c. Deselect the **Install files for complex script and right-to-left languages (including Thai)** option.
 - d. Click **OK**.
-

3. Enter your user ID and password.
4. Select the **Accessibility Mode** box if you want content for Oracle BI EE to be rendered in a browser in a way that facilitates the use of a screen reader.

If you select this box, then the BI Composer wizard in accessibility mode is used as the analysis editor (rather than the Analysis editor). See [Using BI Composer to Work with Analyses](#) and [What Is the Analysis Editor?](#)

For more information on accessibility, see [Accessibility Features](#).

5. Click **Sign In**. One of the following pages (depending on what has been configured for you) is displayed:

- Your personal dashboard, named My Dashboard.
- The Home page. See [What Is the Oracle BI EE Home Page?](#).
- A dashboard that is specific to your job function (for example, Call Center representative).

A dashboard (whether My Dashboard or one specific to your job function) typically contains analyses and other information for your area of responsibility.

[Introduction to Oracle BI Enterprise Edition](#) shows an example of a dashboard.

You can now navigate Oracle BI EE. See [Navigating Oracle BI Enterprise Edition](#).

Tip: Once you have signed in, you can select the dashboard to be displayed when you sign in thereafter. For information, see [Setting Preferences](#).

Signing Out of Oracle BI Enterprise Edition

You must sign out properly to completely exit the application.

Note:

Do not close the browser window to sign out of Oracle BI EE.

- In the global header, click **Sign Out**.

Navigating Oracle BI Enterprise Edition

The interface provides simple access to the various areas of the application.

After signing in to Oracle BI EE, you are presented with one of the following pages, depending on what has been configured for you:

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

This page is your starting point for working in Oracle BI EE. 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. As you work, you can use the global header and the Home page as the primary ways to navigate Oracle BI EE:

- **The global header** — The global header is displayed at the top of the Oracle BI EE interface and is always available as you work. It enables you to access the functionality that Oracle BI EE provides. For example, you can access the Home

page, access dashboards, open objects (such as analyses and dashboard prompts), create new objects, and so on. Privileges determine which functionality is available to you in the global header. Your administrator can modify the global header by changing the order of the links, or by adding links specific to your company or industry. For example, your administrator could add a link to the Oracle Technology Network (OTN). See [What Is the Oracle BI EE Global Header?](#).

- **The Home page** — From the Home page, you can learn how to get started with Oracle BI EE, create and modify objects, and browse and manage objects. See [What Is the Oracle BI EE Home Page?](#).

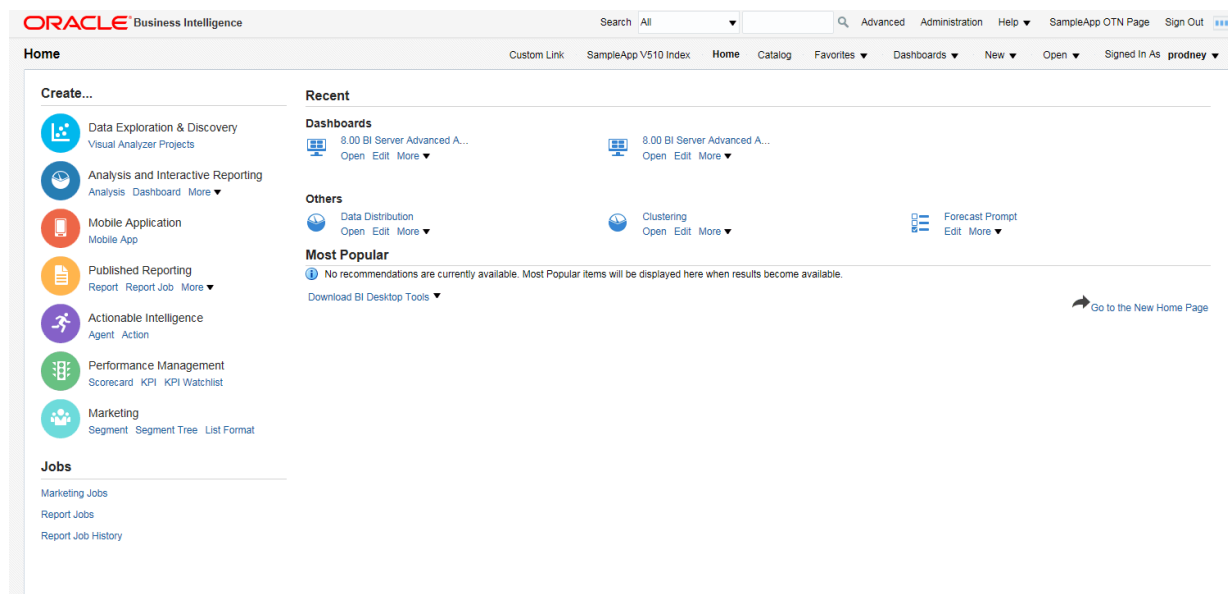
After you have accessed the starting point of a task, the interface then presents you with the page, dialog, or editor that you use to perform the task.

Note: It is recommended that you not use the browser's **Back** button to navigate Oracle BI EE, unless no other navigation methods are available. The browser **Back** button might not maintain the state of the dashboard upon return. Breadcrumbs are the recommended navigation approach. See [About Navigating With Breadcrumbs](#).

What Is the Oracle BI EE Home Page?

The Home page provides a starting point for performing tasks in Oracle BI EE.

The Home page is divided into sections that allow you to begin a specific task or locate an object. It also includes sections (for example, Recent and Favorites) that allow you to access objects that you have recently viewed, created, or updated, and objects that are accessed the most often by the users assigned to the groups to which you belong.



The illustration shows an example of a Home page.

Depending on what has been configured as your starting page, you might be presented with the Home page when you sign in to Oracle BI EE.

Where Can I Get Help or More Information?

Oracle BI EE provides direct access to guides, context-sensitive help, and libraries that contain conceptual and procedural information to help you understand Oracle BI EE.

Specifically, you can access:

- **Oracle Business Intelligence Enterprise Edition Help** — Each Oracle BI EE user interface page, tab, editor, pane, and dialog has a help topic associated with it. Each of these topics contains overview information, links to related concept and procedures, and an explanation of each component.

To access the online help for a page, editor, tab, or dialog, click its **Help** button.

Alternatively, for a page, editor, or tab, you can select **xxx Help** (where *xxx* is the name of the page, editor, or tab) from the **Help** menu that is located in the global header. For example, for help on the Catalog page, select **Catalog Page Help**. See [What Is the Oracle BI EE Global Header?](#)

- **Help Tables of Contents for Oracle BI EE, Oracle BI Publisher, and Marketing** — Navigating through these Table of Contents is a good way to get acquainted with the products and access a particular topic of interest.

To access one of these tables of contents, click **Help Contents** on the **Help** menu in the global header and then select the appropriate table of contents.

- **Oracle Business Intelligence Enterprise Edition Documentation Library** — The books in the Oracle BI EE documentation set are included in the Fusion Middleware Documentation Library on the OTN.

To access the Oracle BI EE documentation library, click **Documentation** on the **Help** menu in the global header.

- **Oracle Technology Network (OTN)** — On OTN, you can find information that is specific to Oracle Business Intelligence and information about all other Oracle products. OTN provides services and resources to help developers, database administrators (DBAs), and architects share and find expertise and best practices about how to design, build, deploy, manage, and optimize applications. Examples of the types of items that you find on OTN include information about industry-standard technologies such as JAVA and Linux, all Oracle product documentation, discussion forums, Oracle software, blogs and podcasts, and technical articles that are written by other OTN members.

To access OTN, click **OTN** on the **Help** menu in the global header.

Creating Analyses

This chapter describes how to create analyses in Oracle Business Intelligence Enterprise Edition, including how to specify the criteria for analyses, display the results, and examine the SQL statements. It also explains subject areas and columns, the double column feature, and variables.

Topics

This chapter includes the following sections:

- [What Is an Analysis?](#)
- [What Are Subject Areas and Columns?](#)
- [Understanding the Double Column Feature](#)
- [What Is the Analysis Editor?](#)
- [What Is the Process for Constructing Analyses?](#)
- [Creating New Analyses](#)
- [Specifying the Criteria for Analyses](#)
- [Saving Columns to the Catalog](#)
- [Changing the Sort Order of Subject Areas and Subject Area Folders](#)
- [Displaying the Results of Analyses](#)
- [Adding Prompts to Analyses](#)
- [Examining the Logical SQL Statements for Analyses](#)
- [Saving Analyses](#)
- [Creating Agents from Analyses](#)
- [Editing Analyses](#)
- [About Embedding an Analysis in a Dashboard](#)
- [Working with Direct Database Requests](#)
- [Using Variables](#)
- [Where Can I Reference Variables?](#)
- [What Is the Syntax for Referencing Variables?](#)
- [What Predefined Presentation Variables Are Available?](#)

- [Example of Referencing a Variable in a Title View](#)

What Is an Analysis?

An analysis is a query against an organization's data that provides answers to business questions.

Analyses let you explore and interact with information by visually presenting data in tables, graphs, pivot tables, and so on. You can save, organize, and share the results of analyses.

Analyses that you create can be saved in the Oracle BI Presentation Catalog and integrated into any Oracle BI EE dashboard. You can enhance analyses through features such as graphs, result layout, calculated items, and drilling.

How Do I Work with an Analysis?

You use an editor to work with an analysis.

To work with an analysis, you use one of the following editors:

- The Analysis editor — A feature-rich editor that allows you to explore and interact with information by visually presenting data in tables, graphs, pivot tables, and so on. See [What Is the Analysis Editor?](#)

You have access to this editor if you have been granted the Access to Analysis privilege by the administrator.

- The BI Composer wizard — A simple-to-use wizard that allows you to create, edit, or view analyses without the complexities of the Analysis editor. See [Using BI Composer to Work with Analyses](#).

You have access to this editor only if you have been granted the Access to BI Composer privilege by the administrator.

You specify which editor you want to use on the Preferences tab of the My Account dialog. However, if you have turned on accessibility mode either in the Sign In page or the Preferences tab of the My Account dialog, then the BI Composer wizard in accessibility mode is used as the analysis editor, regardless of your choice.

How Is an Analysis Processed?

When an analysis is processed, the request is sent in the form of logical SQL statements to the Oracle BI Server.

The BI Server then generates queries against the appropriate data sources. When the BI Server receives the query results, they are in a format that is not yet suitable for returning to the user. The BI Server merges the results and applies any additional calculations or filters that pertain to the results. The BI Server then sends the data to Oracle BI Presentation Services to format the results for display.

How Can I Always See the Most Current Results of an Analysis?

Embedding an analysis in a dashboard causes it to execute automatically and display the most current results every time the dashboard is accessed.

For example, if you are a sales executive whose company captures sales data on a daily basis, then you might want to have the dollar volume of product that was sold today be displayed on the front page of your dashboard.

You can embed a saved analysis by using the Dashboard editor. See [Adding Content to Dashboards](#).

What Are Subject Areas and Columns?

Subject areas and columns are the building blocks for an analysis.

A subject area contains folders, measure columns, attribute columns, hierarchical columns, and hierarchy levels that represent information about the areas of an organization's business or about groups of users with an organization. Subject areas usually have names that correspond to the types of information that they contain, such as Marketing Contracts, Service Requests, and Orders.

A subject area corresponds to the presentation layer in an Oracle BI metadata repository. In a repository, the subject area is the highest-level object in the presentation layer and represents the view of the data that end users see when they create or edit an analysis.

A related subject area is an external data source that is connected to a primary subject area in an analysis.

Individuals who design and build metadata repositories (such as a Business Intelligence strategist, metadata provider, or Extract Transform Load (ETL) developer) create subject areas using the Oracle BI Administration Tool. Generally, rather than creating one large subject area for their company's data, they create multiple smaller subject areas. This enables them to provide a particular group of users or a particular area of a company with the most important data that they need in one small subject area and the less important data in one or more related subject areas created from the same business model layer. Having these smaller subject areas makes it easier for users to find the data they need. It also makes it easier to maintain the data. See *Creating Subject Areas in Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition*.

Note: The individuals who design and build metadata repositories can specify that a subject area, folder (and its children), or column (both attribute and hierarchical) is to be hidden. A hidden subject area, folder, or column is not visible in the Subject Areas pane but is visible elsewhere, such as in an analysis or saved filter contents. (Because the object is still visible elsewhere, hiding a subject area, folder, or column in this way is not a solution for security or access control.)

If the criteria of an existing analysis include a subject area, folder, or column that is subsequently hidden, the analysis is still accessible but the subject area, folder, or column is no longer visible in the Subject Areas pane of the Criteria tab Analysis editor.

Columns contain the individual pieces of data that an analysis returns. Columns usually have names that indicate the types of information that they contain, such as Account or Contact. Together with filters and selection steps, columns determine what data an analysis contains.

When you create an analysis, filter, or dashboard prompt, you first select the subject area with which you want to work. This is known as the primary subject area and is displayed in the Subject Areas pane. If, as you work, you find that you need more data, you can add additional subject areas that are related to the primary subject area that you have chosen. (You can add related subject areas only if they are available for the primary subject area and only if you have permission to access them.)

Note: You can add your own data to analyses too. For information, see [Adding External Data to Analyses](#).

Typically, when you query a single subject area, all the measure columns that are exposed in that subject area are compatible with all the attribute columns and hierarchical columns that are exposed in the same subject area. However, when you combine columns from multiple subject areas, you must ensure that you do not include combinations of measure columns with attribute columns and hierarchical columns that are incompatible with one another.

For example, a measure column in one subject area might not be associated with the Project attribute column. If measure columns associated with the Project attribute column from another subject area are added to the analysis along with columns that are not associated with Project, then the query might fail to return results, or cause the BI Server error `No fact table exists at the requested level of detail: XXXX`.

For an analysis to return data, you must select at least one column to include in the analysis.

What Are the Types of Columns?

Different types of columns are used in different situations.

Subject areas contain the following types of columns:

- **Attribute Column** — Holds a flat list of values that are also known as members. No hierarchical relationship exists between these members, as is the case for members of a hierarchical column. An attribute column was referred to as a presentation column in previous releases (prior to 11g).
Examples include Product ID or City.
- **Hierarchical Column** — Holds data values that are organized using both named levels and parent-child relationships. This column is displayed using a tree-like structure. Individual members are shown in an outline manner. Hierarchies allow you to drill deeper into the data, to view more detailed information. Examples include Time or Geography. The illustration shows the Time folder and the Time and Fiscal Time hierarchies expanded in the Subject Areas pane.

What Is the Analysis Editor?

The Analysis editor lets you explore and interact with information by visually presenting data in tables, graphs, pivot tables, and so on.

You can include the views that you create in an analysis for display in dashboards.

The Analysis editor contains the following tabs:

- **Criteria tab** — Lets you specify the criteria for an analysis, including columns, and filters. You can specify the order in which the results should be returned, formatting (such as headings, number of decimal places, styles such as fonts and colors, and conditional formatting), and column formulas (such as adding a Rank or Percentile function). Additionally, you can change the sort order of the subject area and subject area folders. See [Changing the Sort Order of Subject Areas and Subject Area Folders](#).
- **Results tab** — Lets you create different views of the analysis results such as graphs, tickers, and pivot tables. You can also add or modify selection steps.
- **Prompts tab** — Lets you create prompts that allow users to select values to filter an analysis or analyses on a dashboard. Prompts allow users to select values that dynamically filter all views within the analysis or analyses. You can also create

prompts for use with selection steps, both for member selection steps and qualifying condition steps.

- **Advanced tab** — Lets you edit XML code and examine the logical SQL statement that was generated for an analysis. You can use the existing SQL statement as the basis for creating a new analysis.

The tabs of the Analysis editor are organized into various panes and areas. As you work, you can manage these panes to suit your needs. See [Managing Panes in the Analysis Editor Tabs](#).

You access the Analysis editor when you create (or edit) an analysis. See [Creating New Analyses](#).

Note: If you are using Oracle BI EE in accessibility mode, then, when you create (or edit) an analysis, the Analysis editor is replaced by the BI Composer wizard. For more information on BI Composer, see [Using BI Composer to Work with Analyses](#). See [Accessibility Features](#).

Managing Panes in the Analysis Editor Tabs

Each of the tabs in the Analysis editor consists of several panes.

For example, the Results tab consists of the Subject Areas pane, the Catalog pane, the Views Pane, the Compound Layout, and the Selection Steps pane.

As you work, you can manage these panes to give yourself the most efficient work area for the task that you are performing. For example, if you add multiple views to the compound layout on the Results tab, then you might want to hide the other panes in the Results tab to maximize the area in which to see the views that you are adding. You can:

- Show or hide the panes that are displayed on the left side of the Analysis editor by clicking the sideways triangle button that is displayed between the left and right sides.
- Expand or collapse an individual pane by clicking the plus or minus button in the title bar of the pane.
- Resize an expanded pane by dragging its splitter. For example, you can drag the splitter on top of the Catalog pane up to increase the height of the pane.
- Show or hide a pane by clicking its show/hide button, if one is available for the pane on the toolbar. For example, you can show or hide the Filters pane in the Criteria tab by clicking **Show/Hide Filters pane** on the toolbar.

What Is the Process for Constructing Analyses?

Creating useful analyses requires several steps.

Note:

If you are using Oracle BI EE in accessibility mode or you have selected **Wizard (limited functionality)** as the analysis editor, then you use the BI Composer wizard rather than the Analysis editor to construct analyses. See [Using BI Composer to Work with Analyses](#) and [Accessibility Features](#).

The process for constructing an analysis includes the following steps:

1. [Creating New Analyses](#)
2. [Specifying the Criteria for Analyses](#)
3. [Displaying the Results of Analyses](#)
4. [Adding Prompts to Analyses](#)
5. [Examining the Logical SQL Statements for Analyses](#)
6. [Saving Analyses](#)

Creating New Analyses

This is one step in the process for constructing an analysis.

For more information, see [What Is the Process for Constructing Analyses?](#)

Creating an analysis allows you to add that analysis to dashboards.

- In the global header, click **New**, then **Analysis**, then one of the following options:
 - Select a subject area. If you purchased Oracle Data Visualization, you can also select an external data source (uploaded Microsoft Excel file).
The Analysis editor is displayed. You can now specify the criteria for the analysis.
 - **Create Direct Database Query**
See [Working with Direct Database Requests](#).
 - **Create Analysis from Simple Logical SQL**
The Analysis Simple SQL Statement dialog is displayed in which you enter SQL statements for creating an analysis. You can display and manipulate within the Analysis editor, and subsequently incorporate, and subsequently incorporated into dashboards and agents.

Specifying the Criteria for Analyses

This procedure is a step in the process for constructing an analysis.

See [What Is the Process for Constructing Analyses?](#).

You use the Criteria tab of the Analysis editor to specify the criteria for an analysis, including columns, filters, and selection steps. You also can specify:

- The default order in which columns are to be displayed in the analysis results
- The default sorting for the values that are displayed in views
- The default formatting (such as headings, number of decimal places, conditional formats, and system-wide defaults)
- Column formulas (such as adding a Rank or Percentile function)
- The aggregation rules for column totals
- The sort order for subject area folders and folder objects within the Subject Areas pane

1. In the Criteria tab, select the columns to be included in the analysis by doing one of the following:

- Double-clicking the columns in the Subject Areas pane.
- Dragging and dropping the columns from the Subject Areas pane to the Selected Columns pane. To select multiple non-contiguous columns, press and hold the Ctrl key, then click each column to include.
- Dragging and dropping saved columns from the Catalog pane.

The selected columns are displayed in a box in the Selected Columns pane. Each column box has two sections. The upper section shows the name of the folder that contains the column, for example, Customers. The lower section shows the name of the column, for example, Customer Name.

If you want to:

- Initiate a search within the subject areas that are displayed in the Subject Areas pane, click **Search** button.
- Change the sort order of the subject area folders and objects within each folder, click the **Sort Subject Area** button. Clicking the button executes the sort and closes all subject area folders except the primary subject area.
- Add or remove related subject areas from which to select columns, click the **Add/Remove Subject Areas** button in the Subject Areas pane to display the Add/Remove Subject Areas dialog.

If you add a related subject area but do not add any columns from that subject area to the analysis, then the subject area is not related to the analysis after you close and re-open the analysis.

- A check mark beside a subject area identifies a related subject area that has been added. A grayed out check mark identifies the primary subject area or a related subject area whose data is currently being used in the analysis, named filter, or column prompt. You cannot remove a primary subject area. You can remove a related subject area only if its data is not currently being used.
- Refresh the content in the Subject Areas pane, click the **Refresh** button on the Subject Areas pane or click the arrow beside the button.

Clicking the button executes the default behavior of **Refresh Display**. Clicking the arrow enables you to select **Refresh Display** or **Reload Server Metadata** to refresh the subject area's metadata.

2. Modify the columns or levels of hierarchical columns as needed using the Selected Columns pane:

- Click the **Options** button to the right of a column name in the Selected Columns pane to display options to:
 - Specify the sort order for columns. (You cannot specify the sort order for hierarchy levels.)
 - Edit formulas for attribute columns and measure columns, including customizing headings, and specifying the aggregation rule. (You cannot customize headings, specify the aggregation rule, or edit the formulas for hierarchical columns or for hierarchy levels.)

- Edit column properties to control the formatting and interaction of columns and hierarchy levels.
 - Add filters for attribute columns and measure columns. (You cannot add filters for hierarchical columns or hierarchy levels.)
 - Delete the columns from the analysis. (You cannot delete hierarchy levels.)
 - Click the **Remove all columns from criteria** button in the Selected Columns pane to remove all columns from the analysis.
 - Click the **Combine results based on union, intersection, and difference operations** button in the Selected Columns pane to combine the results of two or more analyses into a single result.
 - Use the **Drag Column** buttons in the Selected Columns pane to place the columns in the default order for display in the analysis results.
3. Add and edit inline filters as needed using the Filters pane.
 4. Create or edit selection steps as needed using the Selection Steps pane.
 5. Add named filters, calculated items, and groups from the Oracle BI Presentation Catalog as needed using the Catalog pane.
 6. Use the buttons on the toolbar for the Criteria tab, as needed, to show or hide the Filters pane, to show or hide the Selections Steps pane, and to edit the properties of the analysis, such as the type of message (default or custom) to be displayed if no results are available.

You can now add views to the analysis.

Bear these guidelines in mind:

- In general, an analysis should contain at least one measure column. Measure columns are the key additive measurements of business performance, such as dollar sales per store, or the number of service requests opened and closed each day. An analysis without any measure columns generally is not meaningful, and can cause poor query performance or unexpected results. If you want to build an analysis without any measure columns, then first consult the administrator.
- Generally, you should avoid including both a hierarchical column and an attribute column that is also a lower level in the hierarchical column in the same analysis, unless you have selection steps that limit the data in the analysis to only the same level as the attribute column. If you do so, the data for all levels above the level that is the same as the attribute column will not be correct.

For example, suppose you have a hierarchical column named Merchandise Hierarchy that has these levels:

```
Total Product
  Brand
    LOB
      Product Type
        Product
```

And you have another attribute column named Product Name, which is the same level as the Product level. If you include both Merchandise Hierarchy and the Product Name attribute column in the same analysis, the data above the Product level will not be correct.

Adding Views for Display in Dashboards

This chapter describes the views that are available in Oracle Business Intelligence Enterprise Edition to present the results of analyses in meaningful, intuitive ways. It explains how to add views for display in dashboards, how to modify values (that is, perform write back) in views, and how to set up master-detail linking of views. It also describes interactions, drilling, sorting, and printing in views.

Topics

This chapter includes the following sections:

- [What Are Views?](#)
- [What Types of Views Are Available?](#)
- [Adding Views to the Results of Analyses](#)
- [What Is the Recommended Visualizations Feature?](#)
- [Editing Views](#)
- [Modifying Values and Performing Write Back](#)
- [Interactions in Views](#)
- [Drilling in Views](#)
- [Sorting Data in Views](#)
- [Resizing Rows and Columns in Table Views, Pivot Table Views, and Advanced Trellis Views](#)
- [Saving Views](#)
- [Renaming Views or Compound Layouts](#)
- [Rearranging Views](#)
- [Printing Views](#)
- [Changing Print and Export Options for Views](#)
- [Previewing How Views Are Displayed on a Dashboard](#)
- [Removing Views](#)
- [Refreshing the Results in Views](#)
- [Customizing Views for Delivery to Agent Users](#)
- [What Is Master-Detail Linking of Views?](#)

- [Linking Views in Master-Detail Relationships](#)

What Are Views?

Views use the presentation capabilities of Oracle BI Enterprise Edition to help you 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 allow drilling down to more detailed information, explanatory text, a list of filters that were used to limit the results, and more.

When you display the results of a new analysis, the following views are displayed by default in the Compound Layout in the Results tab of the Analysis editor:

- A title view, which displays the name of the saved analysis.
- A table or pivot table view, which displays the results of the analysis, depending on the types of columns that the analysis contains:
 - If the analysis contains only attribute columns, only measure columns, or a combination of both, then a table is the default view.
 - If the analysis contains at least one hierarchical column, then a pivot table is the default view.

You can customize or delete the existing views for an analysis, add other views, and combine and position views anywhere in the pane.

Preparing multiple views of results can help you identify trends and relationships in data. If you are customizing results for display on a dashboard, then you can preview how the combination and position of views looks when viewed on a dashboard.

You can then save the analysis with the collection of views.

What Types of Views Are Available?

There are several types of views available for presenting data.

The table describes the types of views that are available.

Note: Your privileges control whether you can access all views or specific views only.

View Name	Description
Title	Displays a title, a subtitle, a logo, a link to a custom online help page, and timestamps to the results.
Table	Displays results in a visual representation of data organized by rows and columns. A table provides a summary view of data and enables users to see different views of data by dragging and dropping rows and columns.

View Name	Description
Pivot Table	Displays results in a pivot table, which provides a summary view of data in cross-tab format and enables users to see different views of data by dragging and dropping rows and columns. Pivot tables structure data similarly to standard tables that contain column groups, but can display multiple levels of both row and column headings. Unlike regular tables, each data cell in a pivot table contains a unique value. By organizing data in this way, a pivot table is more efficient than a row-based table. Pivot tables are ideal for displaying a large quantity of data, for browsing data hierarchically, and for trend analysis.
Performance Tile	<p>Displays a single aggregate measure value in a manner that is both visually simple and prominent, yet it immediately reveals summary metrics to the user that will likely be presented in more detail within a dashboard view.</p> <p>Performance tiles:</p> <ul style="list-style-type: none"> • Focus the user's attention on simple, need-to-know facts directly and prominently on the tile. • Communicate status through simple formatting by using color, labels, and limited styles, or through conditional formatting of the background color or measure value to make the tile visually prominent. For example, if revenue is not tracking to target, the revenue value may appear in red. • Respond to prompts, filters, and user roles and permissions by making them relevant to the user and their context. • Support a single, aggregate or calculated value.
Treemap	<p>Displays a space-constrained, two-dimensional visualization for hierarchical structures with multiple levels.</p> <p>Treemaps:</p> <ul style="list-style-type: none"> • Are limited by a predefined area and display two levels of data. • Contain rectangular tiles. The size of the tile is based on a measure, and the color of the tile is based on a second measure. • Are similar to a scatter plot graphs in that the map area is constrained, and the graph allows you to visualize large quantities of data and quickly identify trends and anomalies within that data.
Heat Matrix	Displays a two-dimensional depiction of data in which values are represented by a gradient of colors that are well suited for analyzing large amounts of data and identifying outliers. Heat matrices structure data similarly to pivot tables in that they are formed by the grouping and intersection of rows and columns.

View Name	Description
Trellis	<p>Displays multidimensional data shown as a set of cells in a grid, where each cell represents a subset of data using a particular graph type. Data can be represented with graphs, microcharts, and numbers.</p> <p>The trellis view has two subtypes: Simple Trellis and Advanced Trellis.</p> <p>Simple trellis views are ideal for displaying multiple graphs that enable comparison of like to like. Advanced trellis views are ideal for displaying spark graphs that show a trend.</p> <p>A simple trellis displays a single inner graph type, for example a grid of multiple Bar graphs. The inner graphs always use a common axis; that is to say, the graphs have a synchronized scale.</p> <p>An advanced trellis displays a different inner graph type for each measure. For example, a mixture of Spark Line graphs and Spark Bar graphs, alongside numbers. In this example, the Spark Line graph might show Revenue over time, and the Spark Bar graph might show Units Sold. A measure column displaying numbers might be placed adjacent to the Spark Line graphs, showing the Revenue measure as a total value for a year.</p> <p>In an advanced trellis, each measure column operates independently for drilling, axis scaling, and so on.</p> <p>For definitions of <i>microchart</i> and <i>spark graph</i>, see What Terms are Used with Trellis Views?</p>
Graph	<p>Displays numeric information visually, which makes it easier to understand large quantities of data. Graphs often reveal patterns and trends that text-based displays cannot. However, when precise values are needed, graphs should be supplemented with other data displays, such as tables.</p> <p>A graph is displayed on a background, called the graph canvas.</p> <p>For the types and subtypes of graphs that are available, see What Types of Graphs Are Available?</p>
Gauge	<p>Shows a single data value. Due to its compact size, a gauge is often more effective than a graph for displaying a single data value. Beside displaying the data visually, each gauge also displays the result in numeric form.</p> <p>Gauges identify problems in data. A gauge usually plots one data point with an indication of whether that point falls in an acceptable or unacceptable range. Thus, gauges are useful for showing performance against goals.</p> <p>Depending on the data in the analysis, a gauge view might consist of multiple gauges in a gauge set. For example, if you create a gauge view to show the sales data for the last twelve months, the gauge view consists of twelve gauges, one for each month. If you create one to show the total sales in the US, then the gauge view consists of one gauge.</p> <p>A gauge or gauge set is displayed on a background, called the gauge canvas.</p> <p>For the types of gauges that are available, see What Types of Gauges Are Available?</p>

View Name	Description
Funnel	<p>Displays results as a three-dimensional graph that represents target and actual values using volume, level, and color. Typically, funnel graphs are used to graphically represent data that changes over different periods or stages. For example, funnel graphs are often used to represent the volume of sales over a quarter.</p> <p>Funnel graphs are well suited for showing actual compared to targets for data where the target is known to decrease (or increase) significantly per stage, such as a sales pipeline.</p> <p>In funnel graphs, the thresholds indicate a percentage of the target value, and colors provide visual information for each stage. You can click one of the colored areas to drill down to more detailed information.</p> <p>For the types of funnel graphs that are available, see What Types of Funnel Graphs Are Available?</p>
Map view	Displays results overlain on a map. Depending on the data, the results can be overlain on top of a map as formats such as images, color fill areas, bar and pie graphs, and variably sized markers.
Filters	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.
Selection Steps	Displays the selection steps in effect for an analysis. Selection steps, like filters, allow you to obtain results that answer particular questions. Selection steps are applied after the query is aggregated.
Column Selector	Adds a column selector in the results. A column selector 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.
View Selector	Adds a view selector in the results. A view selector is a drop-down list from which users can select a specific view of the results from among the saved views.
Legend	Adds a legend to the results, which enables you to document the meaning of special formatting used in results, such as the meaning of custom colors applied to gauges.
Narrative	Displays the results as one or more paragraphs of text. You can type in a sentence with placeholders for each column in the results, and specify how rows should be separated.
Ticker	Displays the results as a ticker or marquee, similar in style to the stock tickers that run across many financial and news sites on the Internet. You can control what information is presented and how it scrolls across the page.
Static Text	Adds static text in the results. You can use HTML to add banners, tickers, ActiveX objects, Java applets, links, instructions, descriptions, graphics, and so on, in the results.
Logical SQL	<p>Displays the SQL statement that is generated for an analysis. This view is useful for trainers and administrators, and is usually not included in results for typical users.</p> <p>You cannot modify this view, except to format its container or to delete it.</p>

View Name	Description
Create Segment	<p>Displays a Create Segment link in the results. Users can click this link to create a segment in their Oracle's Siebel Marketing operational application, based on the results data.</p> <p>This view is for users of the Oracle's Siebel Marketing Version 7.7 (or higher) operational application. For information, see <i>Oracle Marketing Segmentation Guide</i>.</p>
Create Target List	<p>Displays a Create Target List link in the results. Users can click this link to create a target list, based on the results data, in their Oracle's Siebel operational application. This target list can be used as the foundation for initiating and logging call activity information for this defined set of targets.</p> <p>This view is for users of Oracle's Siebel Life Sciences operational application integrated with Oracle's Siebel Life Sciences Analytics applications.</p>

What Types of Graphs Are Available?

There are many types of graphs available to display different types of data.

The table shows the types of graphs that are available and describes their uses. It also shows the available styles for each type. All graph types except for scatter, radar, and microchart can be 2-dimensional (2D) or 3-dimensional (3D). Not all types of graphs are appropriate for all types of data.

Graph Type	Graph Subtype	Description	Styles
Bar	Vertical	Shows quantities associated with categories. Bar graphs show quantities as bar lengths and categories as bars or groups of bars.	Rectangle
	Curved Line		Triangle
	Horizontal	Bar graphs are useful for comparing differences among like items; for example, competing product sales, same product sales over different time periods, or same product sales over different markets.	Cylinder
	Stacked Vertical		Diamond
	Stacked Horizontal		Gradient
	100% Stacked Vertical	Can be used to compare measure columns by showing bars in a horizontal or vertical direction.	Pattern Fill
	100% Stacked Horizontal		
Line	-	Shows quantities over time or by category.	Standard Line
		Line graphs are useful for showing trends over time.	Stepped Line
		Can be used to plot multiple measure columns.	Curved Line
Area	Stacked	Shows the trend of the contribution of each value over time or by category.	Solid Fill
	100% Stacked		Gradient Fill
		An area graph is a line graph for which the regions between lines are filled in. Regions stack, adding up to the total value for each time period or category. In 100% stacked graphs, each category is displayed as a percentage contribution to the total value.	Pattern Fill

Graph Type	Graph Subtype	Description	Styles
Pie	-	Shows data sets as percentages of a whole. Pie graphs are useful for comparing parts of a whole, such as sales by region or by district.	Solid Fill Gradient Fill Pattern Fill
Line-Bar	Standard Stacked	Plots two sets of data with different ranges, one set as bars, and one set as lines overlaid on the bars. Line-bar graphs are useful for showing trend relationships between data sets.	Rectangle Triangle Cylinder Diamond Gradient Pattern Fill
Time Series Line	-	Plots time series data. It scales the horizontal axis based on the time that has elapsed between data points.	Standard Line Stepped Line Curved Line
Pareto	-	Is a form of bar graph and line graph that displays criteria in descending order. In this graph type, the line shows a cumulative total of the percentages. Pareto graphs are useful for identifying significant elements, such as best and worst or most and least.	Rectangle Triangle Cylinder Diamond Gradient Pattern Fill
Scatter	-	Displays x-y values as discrete points, scattered within an x-y grid. It plots data points based on two independent variables. This enables you to plot large numbers of data points and observe the clustering of data points. Scatter graphs are useful for observing relationships and trends in large data sets.	Standard Scatter Scatter-with-Lines
Bubble	-	Is a variation of a scatter graph that displays data elements as circles (bubbles). It shows three variables in two dimensions. One value is represented by the location of the circle on the horizontal axis. Another value is represented by the location of the circle on the vertical axis. The third value is represented by the radius of the circle. Bubble graphs are useful for plotting data with three variables, and for displaying financial data over a period of time.	None
Radar	-	Plots the same information as a bar graph, but instead displays data radiating from the center of the graph. Each data element has its own value axis. Radar graphs are useful for examining overlap and distribution.	None

Graph Type	Graph Subtype	Description	Styles
Microchart	Spark Line	A text-sized graphic (of similar size to a piece of nearby text) that displays only in the context of the trellis view and that is ideal for showing trend information.	None
	Spark Bar		
	Spark Area		
		<p>A microchart graph type is useful within an advanced trellis, where data is displayed as a mixture of spark graphs and numbers.</p> <p>A microchart does not have axes or legends. Like larger graphs, a microchart's measure values are rendered as relatively sized bars (or lines, or area). Each measure name is displayed in its column header. Further details of the measure appear as tooltip text when you hover the mouse over a data cell.</p>	
Waterfall	-	<p>A waterfall graph lets you visualize how a value increases or decreases sequentially and cumulatively. Waterfall graphs have the following characteristics:</p> <ul style="list-style-type: none"> • Focus the user's attention on how each measure contributes to the overall total. • Communicate through simple formatting by using color. <p>An initial value is summed with subsequent values (both negative and positive deltas or changes) to arrive at a total. There is only one total per waterfall graph and subtotals can be added. See What Types of Waterfall Graph Formats Are Available? for additional information.</p>	None

What Types of Funnel Graphs Are Available?

There is more than one type of funnel graph.

The table lists and describes the types of funnel graphs that are available. The style of each type can be either solid or gradient fill.

Type	Description
Standard	Uses a standard shape with equal stage widths.
Non-Standard	Uses a standard shape with unequal stage widths
Last-Stage Only	Uses a standard shape with equal stage widths. It is similar to standard funnel except that the target values of all the stages before the last is calculated based on the last stage target value and a constant called target factor.

What Types of Graphs Are Available to Trellis Views?

The list of graph types that are available for use in trellis views varies by trellis view subtype: Simple Trellis or Advanced Trellis.

The following types of graphs can be used in simple trellises:

- Bar (subtype Vertical)

- Bar (subtype Horizontal)
- Line
- Area
- Line-Bar
- Pie
- Scatter
- Bubble

The following visualization choices are available in advanced trellises:

- Numbers
- Microchart, of the following subtypes:
 - Spark Bar
 - Spark Line
 - Spark Area

For details on each graph type, see [What Types of Graphs Are Available?](#).

What Types of Gauges Are Available?

A variety of gauges are available to display information about different types of data.

The table lists and describes the types of gauges that are available. All gauges are 2-dimensional (2-D) except for bulb gauges which can be either 2-dimensional or 3-dimensional (3-D). Their sizes can be small, medium, large, or a custom size.

Type	Description
Dial	Shows data using a dial arc with one or more indicators that point to where the data falls within predefined limits.
Horizontal bar	Shows data using a horizontal bar that changes color to indicate whether the data is within predefined limits. The inner rectangle of the horizontal bar shows the current level of data against the ranges marked on an outer rectangle.
Vertical bar	Shows data using a vertical bar that changes color to indicate whether the data is within predefined limits. The inner rectangle of the vertical bar shows the current level of data against the ranges marked on an outer rectangle.
Bulb	Shows data using a circle that changes color to indicate whether the data is within predefined limits. Bulb gauges are useful when you must know what the status is, and not any indication of a specific value, or relative information about other threshold ranges.

What Types of Logical SQL Views Are Available?

Logical SQL can be displayed in a few ways.

The table lists and describes the types of Logical SQL views that are available.

Type	Description
Standard	Displays only logical SQL. This view is useful to check whether the generated logical SQL is correct.
Diagnostic	Displays diagnostic information that is helpful to include with a Service Request when you are having issues with incorrect data.

What Types of Waterfall Graph Formats Are Available?

Waterfall graph formats have predefined bar color combinations.

The default colors for increasing (positive) and decreasing (negative) are green and red, respectively. The format defines the appearance of the waterfall graph, including the color of the bars and the bars that display.

The table lists and describes the types of formats available for waterfall graphs.

Format Type	Description
Increase, Decrease and Total	Use this format to display increasing measures, decreasing measures, and a total (subtotal) in the specified colors. Both the total and subtotal display in the same associated color.
First, Increase, Decrease and Total	Use this format to display increasing measures, decreasing measures, and a total (or subtotal), where the first bar and the total (subtotal) have the same color bar.
Single Color	Use this format to display all bars in the same color.
Dual Color	Use this format to display the first bar and total (or subtotal) in one color, and positive or negative values in a second color.
Custom	Use this format to create unique colors for increasing and decreasing values, the first bar, and total bars. Once you select a color from one of the color block lists, the format automatically becomes custom. Both the total and subtotal display in the same associated color.

By default, the waterfall graph includes the following characteristics:

- The bars are rendered in a cumulative manner. Each bar starts rendering from the top of the previous bar (positive values go up, negative values go down). Cumulative totals may be rendered (from the chart baseline) at various points.
- The graph is rendered as a 2D bar graph with a format of **Increase, Decrease and Total**.
- Default colors are green (positive), red (negative), and blue (total).
- Zoom to data range is not supported for waterfall graphs.
- Data labels display according to defined specifications. See the **Vertical Axis Labels, Horizontal Axis Labels or Data Markers: Format Label** button in the Titles and Labels tab of the Graph Properties dialog for additional information.
- Tooltips for waterfall graphs contain the same information as other graph types (for example, member name, dimension, and actual value), but they also contain a subtotal value.

- Left-click interactions are not available for the total bar or the legend.

See Style tab of the Graph Properties dialog and Titles and Labels tab of the Graph Properties dialog for detailed information on editing waterfall graph properties.

Adding Views to the Results of Analyses

You can add one or more views to the results of analyses to make the data easier to understand.

Bear these guidelines in mind:

- If you select a graph type or gauge type that is incompatible with the results, then no results are shown.
- Do not use a pie graph to visualize data that includes negative values. Either filter the analysis to ensure that all values are greater than 0 or use a different graph type.
- As you design graphs, funnel graphs, and gauges, note that there are differences in the display of a graph or gauge legend, depending on whether the graph or gauge is displayed on a desktop or on a mobile device:
 - On a desktop (where the graph or gauge format is Flash), the legend list is scrollable and the legend text does not wrap.
 - On a mobile device (where the graph or gauge format is PNG), the legend list is not scrollable and the legend text can wrap.

See [What Is the Recommended Visualizations Feature?](#)

1. In the Results tab of the Analysis editor (or alternatively in the Views Pane), click the **New View** button, then select a type of view to create in one of the following ways:
 - If you know which view type you want to create, click it.
 - If you want to have Oracle BI EE's recommended visualizations feature automatically create the most appropriate view based on the data in your analysis, click **Best Visualization**, rather than a specific view type.
 - If you want to have Oracle BI EE's recommended visualizations feature provide a ranked list of view types for you based on the data in your analysis as well as on what you want the view to illustrate, click **Recommended Visualization for** and then in the Select Visualization list, select your preference, such as **Discovering Patterns and Outliers**.

Note: For some view types, you can also use the recommended visualizations feature to choose a recommended subtype.

The view is displayed in a container on the Compound Layout. (Note that defaults are used to generate this view, such as the default view type, default formatting, and so on.)

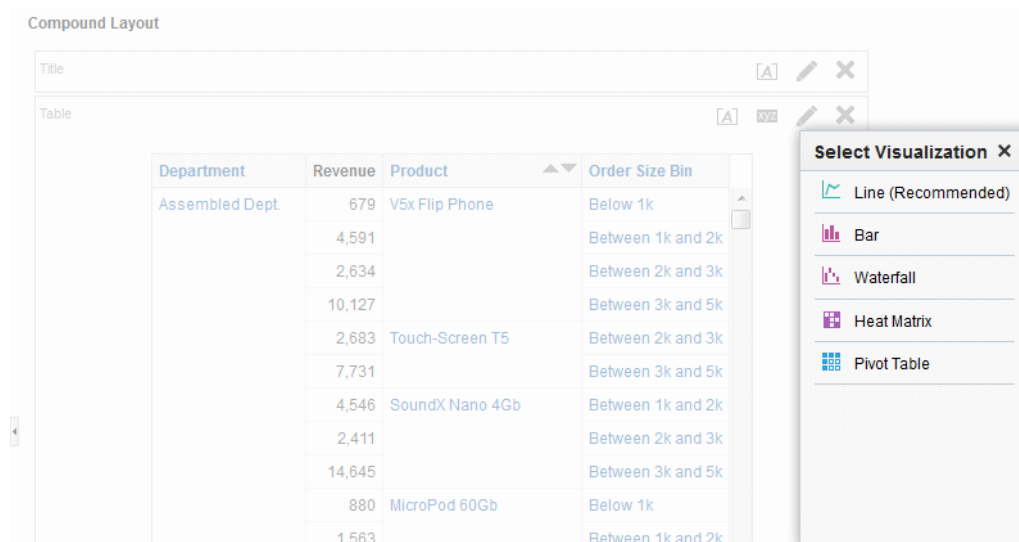
2. To format the container for the view, click the **Format Container** button on the view container to display a formatting dialog.

3. To set the properties for a funnel, gauge, graph, heat matrix, map, performance tile, pivot table, table, treemap, or trellis (simple and advanced) view, click the **View Properties** button.
4. To edit the view, click the **Edit View** button on the view container.
5. Save the view.

What Is the Recommended Visualizations Feature?

Oracle BI EE provides recommendation functionality whenever you create a view.

As you are in the process of creating a new view in the Analysis editor, this feature delivers a ranked list of view-type suggestions in a dialog, as shown in the following illustration.



The recommended visualizations feature works by gathering information on your inputs for a view, such as number of dimensions, number of members, and so on. It then determines the optimal layout for each possible view.

Will your new view be useful for analyzing trends? Comparing values and their parts? Discovering patterns and outliers? In the Recommended Visualization submenu, you can tell the Analysis editor what you intend to illustrate with the view you are creating, as shown in the following illustration.

Filtering and Selecting Data for Analyses

This chapter explains how to construct filters, selection steps, groups, and calculated items in Oracle Business Intelligence Enterprise Edition. It explains how to use these objects to specify the data that is displayed in analyses and dashboards.

Topics

This chapter includes the following sections:

- [Saving Objects as Inline or Named](#)
- [What are Filters and Selection Steps?](#)
- [Working with Selections of Data](#)
- [Creating Column Filters](#)
- [Editing Column Filters](#)
- [Working with the EVALUATE_PREDICATE Function](#)
- [Applying a Named Filter to an Analysis](#)
- [Combining and Grouping Column Filters](#)
- [Using a Saved Analysis as a Filter](#)
- [Creating and Editing the SQL Statements for a Column Filter in an Analysis](#)
- [Working with Calculated Measures](#)
- [Working with Groups and Calculated Items](#)

Saving Objects as Inline or Named

This section describes saving objects as inline or named. It contains the following topics:

Topics

- [What are Inline or Named Objects?](#)
- [What is the Folder Structure for Named Objects?](#)
- [Saving Filters as Inline or Named](#)
- [Saving Groups and Calculated Items as Inline or Named](#)

What are Inline or Named Objects?

As you work with certain objects, you can create other objects that are saved with those objects.

When you save one object with another, that object is saved "inline." You can save filters, groups, and calculated items inline. For example, you can create a group as part of an analysis. When you save the analysis, the group is saved "inline" or along with the analysis.

In addition to saving these objects inline, you can save them as individual objects with the subject area in the Oracle BI Presentation Catalog. When you save an object on its own, it becomes a "named" object. Named objects provide reusability, because you can create one object and use it multiple times with any analysis, dashboard (for filters), or dashboard page (for filters) that contains the columns that are specified in the named object. When the named object is updated and saved, those updates are immediately applied to all objects where the named object is used.

For example, after you save a group inline with an analysis, you can save the group as its own object in the catalog. You can then apply that named group from the Catalog pane to other analyses.

What is the Folder Structure for Named Objects?

Named filters, groups, and calculated items are generally saved to their related subject area folder.

By saving the objects to a subject area folder, you ensure that they are available when you create an analysis for the same subject area.

Named objects saved in the /My Folders folder are available only to you. Objects saved in the /Shared Folders folder are available to other users who have permission to access the folders. If a subject area folder does not exist in your /My Folders folder or within the /Shared Folders folder, then the subject area folder is created automatically. When you save the object, the Save As dialog displays a default save path to /My Folders/Subject Area Contents/<subject area>. However, the dialog's Folders area continues to display all instances of the subject area folder in the catalog.

Saving Filters as Inline or Named

You can save a filter as an inline filter or a named filter.

When you create an inline filter in the Criteria Tab's Filters pane of the Analysis editor, you can optionally save the inline filter as a named filter. Named filters can also be created at the analysis level or as a standalone object from the global header.

A named filter can filter all or some of the analyses that are embedded in a dashboard or analyses that are embedded on the same dashboard page.

Saving Groups and Calculated Items as Inline or Named

Saving groups and calculated items allows those functions to be re-used throughout the application.

You can save groups and calculated item as an inline or named object:

- When you create a group or calculated item while editing and saving a view or while working in the Compound Layout, the group or calculated item is saved inline with the analysis.

- When you work in the Selection Steps pane:
 - You can save a group or calculated item that is within a step as a named object in the catalog.
 - You can save a set of steps or the resulting members list for a column as a named object. You cannot save a set of steps as a group if one of the steps includes a calculated item.

See [Adding a Group to Another Analysis](#) for information on adding a saved group to an analysis.

To save a calculated item or group as a named object to the catalog:

1. Display the Selection Steps pane.
2. Click the link for the calculated item or group, then click **Save Calculated Item As** or **Save Group As** to display the Save As dialog.
3. Complete the dialog to save the object to the catalog.

To save a set of steps as a group to the catalog:

1. Display the Selection Steps pane.
2. Click the **Save Selection Steps** button to the far right of the column name.
3. Complete the **Save Selection Steps dialog** to save the group as an object to the catalog.

What are Filters and Selection Steps?

You use both filters and selection steps to limit the results that are displayed when an analysis is run, so 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, what are the dollar sales for a particular brand, which are the most profitable customers, and so on.

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

Oracle BI Enterprise Edition provides the Filters view and Selection Steps view, which you can add to an analysis to display any filters or selection steps applied to the analysis. Adding these views can help the user understand the information displayed in the analysis. For more information about how to add views to an analysis, see [Adding Views for Display in Dashboards](#).

How Do Filters and Selection Steps Differ?

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

You can apply filters directly to attribute columns and measure columns. You must apply filters before the query is aggregated and 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

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 hierarchical 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.

You can create selection steps for both attribute columns and hierarchical columns. Selection steps are per column and cannot cross columns. Because attribute columns do not have an aggregate member, the use of selection steps versus filters for attribute columns is not as distinctive as for hierarchical columns. While measure columns are displayed in the Selection Steps pane, you cannot create steps for them so steps do not affect them. Measures are used to create condition steps for attribute and hierarchical columns, such as Sales greater than \$1 million.

Applying Filters to Attribute Columns to Affect Hierarchical Columns

You can use a filter on a related attribute column to affect the display of members in a hierarchical column.

For example, suppose a hierarchical column contains the levels Year, Quarter, and Month. Suppose that a filter exists on the attribute column that corresponds to the Year hierarchy level. If you create a filter on Year to limit it to 2008 and 2009, then when the hierarchical column is displayed in a view, only those two years are visible. This functionality depends on the way that the logical columns have been defined in the business layer of the subject area in the Oracle BI Administration Tool.

Working with Selections of Data

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.

You can view these selection steps in the Selection Steps pane. Steps are created using the following means:

- When you add a column to an analysis, a selection step is created automatically to start with all members, unless you explicitly add specific members. As you drag and drop column members in the Results tab to add to the analysis, steps are also created automatically. For example, suppose that you drag and drop the FY2007 and FY2008 members from the Year hierarchical column to a pivot table. The selection step **Add FY2007, FY2008** is created.
- As you add groups and calculated items, steps are created automatically.

- When you use right-click interactions (such as **Add Related** or **Keep Only**) to refine the selection of data for a particular hierarchical column or attribute column, steps are created automatically. To remove these selection steps, use right-click interactions such as **Remove Group** or **Remove Calculated Item**. See [Right-Click Interactions in Views](#) for additional information.
- You can create steps directly using the Selection Steps pane, to refine the selection of data for a particular hierarchical column or attribute column. You can display the Selection Steps pane from various places including the Results tab, the Criteria tab, and some view editors.

Selection steps are one of the following types:

- Explicit list of members — A step can include a list of members for a column, such as Boston, New York, Kansas, South. For hierarchical columns, the members can be from different hierarchy levels. For attribute columns, the members are from only that column.
- Condition step — A step can specify that members are selected from a column based on a condition, which can be one of various types including based on measures or on top/bottom values. This member list is dynamic and determined at runtime.
- Based on hierarchy step — A step for hierarchical columns that enables you to select the type of relationship with which to select members. You can select a family relationship (such as children of or parent of), a specific hierarchy level (for level-based hierarchies only), or a level relationship (for level-based hierarchies only).
- Groups and calculated items — A step can include a group or calculated item. You can use groups and calculated items only with Add steps; you cannot use them in Keep Only or Remove steps.

For information, see [Working with Groups and Calculated Items](#).

Note: When working with selection steps, if you search for members in hierarchical columns that are non-text (for example, date or time), then the search will yield no results.

Creating Selection Steps

You create steps in the Selection Steps pane, which you can display in various places.

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.

Creating selection steps in the Results tab allows users to choose the data most important to them.

1. Display the Results tab of the Analysis editor.
2. If the Selection Steps pane is not visible, then click the **Show Selection Steps pane** button on the toolbar to display it.

The pane might also be collapsed at the bottom of the Results tab. Click the plus sign icon to expand it.

3. For the column whose steps you want to define, click the **Then, New Step** link.
4. From the menu, select the option for the step type to create and complete the resulting dialog.

Selection steps are automatically created when you use the right-click interactions (such as **Add Related** or **Keep Only**) to refine the selection of data for a particular hierarchical column or attribute column in a view. See [Right-Click Interactions in Views](#).

After you add selection steps to the analysis, you can go to the Results tab of the Analysis editor and add the Selection Step view to the analysis. If you add the Selection Steps view, at runtime the user can view the selection steps that are applied to the analysis. For more information about adding the selection steps view, see Selection Steps editor of the Results tab.

Editing Selection Steps

You can edit existing selection steps in an analysis.

Use the Selection Steps pane to make changes to selection steps.

- Hover the mouse pointer over the step in the Selection Steps pane and click a button on the resulting toolbar.

You can perform various tasks such as displaying a dialog for editing the step, deleting the step, or changing the order of the step in the list of steps.

For a group or calculated item, click its name to display a menu with options for editing and saving.

Saving Selection Steps as a Group Object

Saving selection steps as a group object lets them be reused in multiple places.

If you have created a set of selection steps, then you can save and reuse the set as a group object, as described in [Saving Groups and Calculated Items as Inline or Named](#).

Working with Selection Steps and Double Columns

If your repository is configured for double columns, then you can create a selection step on a double column.

To create a selection step on a double column, select the display values for that column and the step is automatically evaluated using the code values that correspond to those display values.

If you use double columns, then use care with the New Calculated Item dialog. You can include a positional operator in the custom formula for the calculated item, such as \$1, which specifies the column from the first row in the data set. When you include a positional operator, the display values cannot be mapped to the code values when evaluating the formula.

For information on double columns, see [Understanding the Double Column Feature](#).

Creating Column Filters

You can create a named or inline filter in columns to display specific data.

For information about opening a filter for editing, see [Editing Column Filters](#).

Note: If your repository is configured for double columns, and you want to use an operator other than **is equal to / is in**, **is not equal to / is not in**, or **is between** and specify code values rather than display values, then you should explicitly choose the code column rather than the display column.

For information on double columns, see [Understanding the Double Column Feature](#).

1. To create a named filter:
 - a. From the Oracle Business Intelligence Home page, locate the global header, hover over the **New** menu, and from the menu select **Filter**.
 - b. From the Select Subject Area dialog, choose the subject area for which you want to create a filter.
 - c. From the Subject Areas pane of the Filter editor, double-click the column for which you want to create the filter.
2. To create an inline filter:
 - a. Either create an analysis or access an existing analysis for which you want to create a filter. Click the **Criteria** tab.
 - b. Locate the Filters pane and from the Filters Pane's toolbar, click the **Create a filter for the current Subject Area** button. The analysis' selected columns are displayed in the cascading menu.
 - c. Select a column name from the menu. Or select the **More Columns** option to access the Select Column dialog from which you can select any column from the subject area.

Note: If you want to add a filter for a column located in a different subject area, then you must first add that subject area to the analysis by clicking the **Add/Remove Subject Area** button in the Subject Areas pane.

3. In the **Operator** field of the New filter dialog, choose an operator for the filter. The operator list from which you can choose is populated based on the type of column that you selected. For more information about each operator, including the **is prompted** and **is based on the results of another analysis** operator options, see [Operators](#).
4. In the **Value** field, specify one or more values to use when applying the filter or condition. You can:
 - Type values, using a semicolon to separate the values.
 - Select values from the list or calendar.

Prompting in Dashboards and Analyses

This chapter explains how to construct prompts in Oracle Business Intelligence Enterprise Edition and use them to specify the data that is displayed in dashboards and analyses. It also describes the auto-complete functionality and explains how to add dashboard prompts to dashboards and dashboard pages.

Topics

This chapter includes the following sections:

- [What Are Inline and Dashboard Prompts?](#)
- [What are Column Prompts?](#)
- [Other Prompt Types](#)
- [What Types of User Input Options Can I Use With a Column or Variable Prompt?](#)
- [How Do Prompts Work in Oracle BI Mobile?](#)
- [Can Dashboard Prompts and Analysis Prompts Interact?](#)
- [In What Order Does Oracle BI EE Apply Prompts with Default Values?](#)
- [What Is Auto-Complete?](#)
- [Creating a Column Prompt](#)
- [Overriding a Selection Step With a Column Prompt](#)
- [Creating an Image Prompt](#)
- [Creating a Currency Prompt](#)
- [Creating a Variable Prompt](#)
- [Editing Prompts](#)
- [Adding a Dashboard Prompt to a Dashboard or Dashboard Page](#)
- [Adding a Hidden Dashboard Prompt to a Dashboard or Dashboard Page](#)

What Are Inline and Dashboard Prompts?

The two differences between inline prompts and dashboard prompts is where they are stored and their runtime behavior.

A prompt that is created at the analysis level is called an inline prompt because the prompt is embedded in the analysis and is not stored in the Oracle BI Presentation Catalog and, therefore, cannot be added to other analyses. Inline prompts allow the

end users to specify the data values that determine the content of the analysis. An inline prompt can be a column prompt, variable prompt, image prompt, or currency prompt. When you create an inline prompt, you select the columns and operators for the prompt and specify how the prompt is displayed to the users and how the users select the values. The user's choices determine the content of the analyses that are embedded in the dashboard. An inline prompt is an initial prompt, meaning that it only displays when the analysis is rendered. After the user selects the prompt value, the prompt fields disappear from the analysis and the only way for the user to select different prompt values is to re-run the analysis.

A prompt that is created at the dashboard level is called a dashboard prompt because the prompt is created outside of a specific dashboard and is stored in the catalog as an object, which can then be added to any dashboard or dashboard page that contains the columns that are specified in the prompt. Dashboard prompts allow the end users to specify the data values that determine the content of all of the analyses and scorecard objects contained on the dashboard. A dashboard prompt can be a column prompt, variable prompt, image prompt, or currency prompt. Dashboard prompts are reusable, because you can create one prompt and use it many times. When the prompt object is updated and saved, those updates are immediately displayed in all dashboards where the prompt is used. A dashboard prompt is a specific kind of filter that, when created, saved, and applied to a dashboard or dashboard pages, can filter all or some of the analyses and scorecard objects that are embedded in a dashboard or analyses and scorecard objects that are embedded on the same dashboard page. A dashboard prompt is interactive and is always displayed on the dashboard page so that the user can prompt for different values without having to re-run the dashboard. Users can create and save dashboard prompts to either a private folder or to a shared folder.

Note that for a dashboard using a column that was renamed in the Business Model, the existing dashboard prompts based on the renamed column do not work with newly created analyses. The workaround for this issue is to use Catalog Manager to rename the column in the catalog.

For more information about creating a column prompt, see [Creating a Column Prompt](#).

What are Column Prompts?

A column prompt is the most common and flexible prompt type.

A column prompt enables you to build very specific value prompts to either stand alone on the dashboard or analysis or to expand or refine existing dashboard and analysis filters. Column prompts can be created for hierarchical, measure, or attribute columns at the analysis or dashboard level.

You can create intelligent prompts that are specialized for the user's business needs and roles so that the user can quickly and accurately find the appropriate data that is needed to make a key business decision.

Oracle BI Enterprise Edition also enables you, as the content designer, to create currency prompts, image prompts, and variable prompts. For more information about these types of prompts, see [Other Prompt Types](#).

How Do Column Prompts and Selection Steps Interact?

Selection steps allow the user to provide or refine the data from attribute columns and measures columns and to provide a kind of filter for hierarchical columns. Note that selection steps are applied after data aggregation. When you create selection steps for a column, you have the option of overriding one step of the selection with a dashboard

or analysis column prompt. All selection steps before and after the override step are processed as specified, and the override step is processed using the user-specified data values that are collected by the column prompt. Column prompts that are created for hierarchical columns allow you to include only the Choice List input option.

For more information about selection steps, see [What are Filters and Selection Steps?](#) and [Working with Selections of Data](#). For more information about creating a prompt that works with selections, see [Overriding a Selection Step With a Column Prompt](#).

Other Prompt Types

In addition to column prompts, you can create currency prompts, image prompts, and variable prompts.

The following list contains information about these prompt types.

For information about column prompts, see [What are Column Prompts?](#).

- **Currency Prompt** — A currency prompt enables the user to change the currency type that is displayed in the currency columns on an analysis or dashboard. For example, suppose that an analysis contains the sales totals for a certain region of Canada in Canadian dollars. However, because the users viewing the analysis reside in the United States, they can use the currency prompt to change the sales totals from Canadian dollars to US dollars. The prompt's currency selection list is populated with the currency preferences from the user's My Account dialog: Preferences tab. Note that the Currency Prompt option is available only if the administrator has configured the userpref_currencies.xml file as described in *Configuring Currency Options in System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*. For more information about creating a currency prompt, see [Creating a Currency Prompt](#).
- **Image Prompt** — An image prompt provides an image that users click to select values for an analysis or dashboard. For example, in a sales organization, users can click their territories from an image of a map to see sales information, or click a product image to see sales information about that product. If you know how to use the HTML <map> tag, then you can create an image map definition. For more information about creating an image prompt, see [Creating an Image Prompt](#).
- **Variable Prompt** — 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 allow the user to specify existing data to perform sales projections. For example, you can 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. For more information about creating a variable prompt, see [Creating a Variable Prompt](#).

What Types of User Input Options Can I Use With a Column or Variable Prompt?

At design time, you must specify the prompt's user interface component.

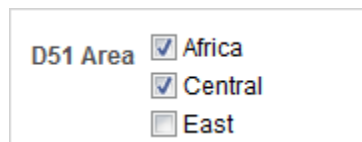
The user interface component enables the user to enter a prompt value at runtime. You can select from several user input options. The **Radio Button** option enables the user to specify only one prompt value. The **Check Boxes**, **Choice List**, **List Box**, and **Text**

Field options allow the user to select either one or multiple prompt values. The **Slider** option enables the user to select multiple values by specifying a range of values, or all values that are lesser than or greater than a specified value (for example, include everything equal to 200 and greater). Note that the input option types that are available depend upon the column type that you are working with. The following sections provide information about each input option.

Check Boxes

The **Check Boxes** input option provides the user with a visible list of all prompt values where a small, selectable box displays before each value item. This input option is suitable for a prompt that contains a smaller set of data. Note that the **List Box** input option is suitable for a prompt that contains a larger set of data. This user input type automatically enables the user to select one or more prompt values. To select a specific prompt value, the user scans the list and clicks the box that corresponds to a particular item.

The following illustration shows an example of the **Check Boxes** user input option for a column or variable prompt. The column being prompted is D51 Area, and each value option (Africa, Central, and East) is displayed next to a small box. To select a value, the user clicks the small box that is adjacent to the prompt value. This example shows that Africa and Central are selected, which illustrates that the user can select multiple prompt values.

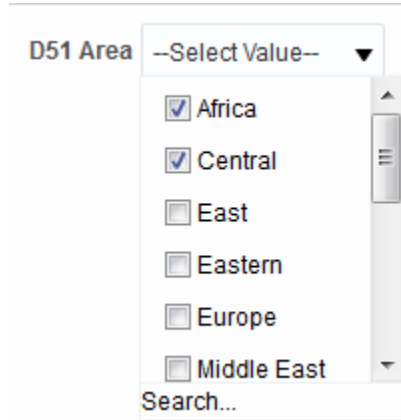


Choice List

The **Choice List** input option provides the user with a collapsed list of all prompt values. This option is useful for a long list of values where you want to provide the user with the ability to search for a specific value. You can set up this user input type to accept only one prompt value or multiple prompt values.

This input option provides a field and list that, when the user clicks the down-arrow button, expands and contains a list of all prompt values. To select a specific prompt value from the expanded list, the user scrolls through the list (or searches the list) and clicks the box that corresponds to a particular value. If you are using this input option with hierarchical columns, then a search dialog is displayed where the user can search for the prompt values.

The following illustration shows an example of the **Choice List** user input option for a column or variable prompt. The column being prompted is D51 Area. The user accesses the list of values by clicking the down-arrow button next to the D51 Area field. After accessing the list of values, each value option (Africa, Central, East, Eastern, Europe, and Middle East) is displayed next to a small box. To select a value, the user clicks the small box that is adjacent to the prompt value. This example shows that Africa and Central are selected, which illustrates that the user can select multiple prompt values. The user can also click Search at the end of the list of values to search for a specific value.

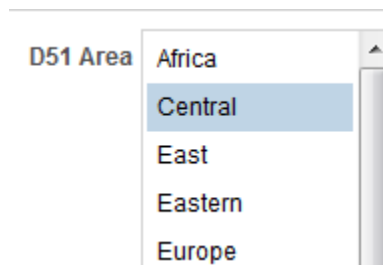


List Box

The **List Box** input option provides the user with a visible list of all prompt values. This input option is suitable for a prompt that contains a large set of data. Note that the **Check Boxes** input option is suitable for a prompt that contains a smaller set of data. You can set up this user input type to allow the user to select only one prompt value or multiple prompt values by using Ctrl+ click or Shift+ click.

To select a specific prompt value, the user scans the list and selects the prompt value name (for example, Chicago), similar to how a user would click a hyperlink. The **List Box** option is very similar to the **Check Boxes** option, but the **List Box** option does not include a box before each value item.

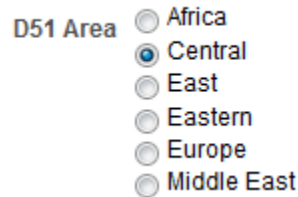
The following illustration shows an example of the **List Box** user input option for a column or variable prompt. The column being prompted is D51 Area. The list contains each value option (Africa, Central, East, Eastern, and Europe). To select a value, the user clicks a value. This example shows that Central is selected.



Radio Buttons

The **Radio Buttons** input option provides the user with a visible list of all prompt values where a **Radio Button** is displayed before each prompt value. This option type is useful for short lists of values where the user is to select only one prompt value. To select a prompt value, the user scans the list and selects the radio button that corresponds to a particular item.

The following illustration shows an example of the **Radio Buttons** user input option for a column or variable prompt. The column being prompted is D51 Area. The list contains each value option (Africa, Central, East, Eastern, Europe, and Middle East). To select a value, the user clicks a radio button that corresponds to the value. This example shows that the Central radio button is selected.



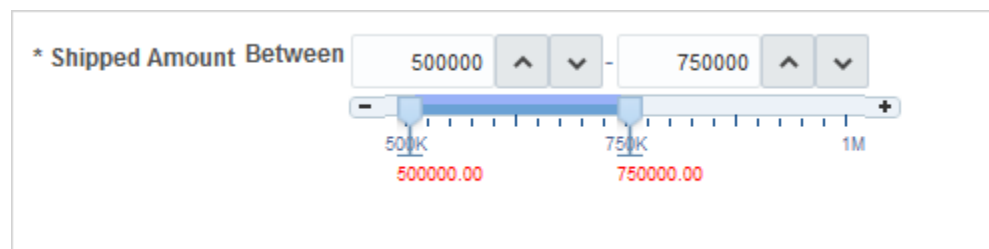
Slider

This option is not available for Variable Prompts.

Note: The **Prompt Width** option, which sets the prompt's field size and the **Wrap Label to Fit** Prompts page setting option cannot be specified for or applied to this user input type.

You can use the **Slider** input option for numeric data values only. Depending upon the operator that you select, this option enables the user to select multiple values by specifying a range of values, or all values that are lesser than, greater than, or equal to a specified value. You select the **Slider** option to provide the user with a number line representation of the range of prompt values. The number line displays the prompt values in a range, for example 10,000 to 20,000. To select a prompt value, the user can either click a value on the number line or click and drag the thumb to select the desired value. A spinner box is also provided with up and down-arrow buttons that the user can click to select the desired value. If you selected the **Slider** option and the **is between** operator for the prompt, then the user can click and drag two thumbs to select the desired range of values for the prompt. Two spinner boxes are provided where you can either type or use the up and down-arrow buttons to specify a range of values.

The following illustration shows an example of the **Slider** user input option that accepts a range of values for a column prompt. The column being prompted is 7-Shipped Amount. The slider itself is a number line and on the left end is the number label 500K, in the middle is the number label 750K, and on the right end is the number label 1M. There are also two spinner boxes above the number line. From these spinner boxes, the user can specify either a single number (for example, 500000 in the first spinner box and 500000 in the second spinner box) or two numbers to specify a range of numbers (for example, 500000 in the first spinner box and 750000 in the second spinner box). To specify numbers in the spinner boxes, the user can either type the value or use the box's up and down arrows to scroll to the desired value. To select a value from the number line, the user clicks and drags the thumb to the desired value or clicks and drags both thumbs to specify the desired range of values. This example shows that a range of values from 500000 to 750000 is selected.



Formatting Analyses, Views, and Dashboard Pages

This chapter explains how to apply formatting to analyses, views, and dashboard pages in Oracle Business Intelligence Enterprise Edition. It describes cosmetic formatting, conditional formatting, custom format masks, and custom format strings.

Topics

This chapter includes the following sections:

- [What Can be Formatted?](#)
- [Formatting Columns in Analyses](#)
- [What is Cosmetic Formatting?](#)
- [Applying Conditional Formatting to Tables, Pivot Tables, Performance Tiles, Graphs, Heat Matrices, and Trellises](#)
- [Storing Custom Files Locally and Using the fmap Function to Reference Them](#)
- [Custom Format Masks](#)
- [Custom Format Strings](#)

What Can be Formatted?

After you create and run an analysis, default formatting rules are applied to the analysis' results.

Default formatting rules are based on cascading style sheets and XML message files. You can create additional formatting to apply to specific results. Additional formats help you to highlight blocks of related information and call attention to specific data elements. You can also use additional formatting to customize the general appearance of analyses and dashboards.

You can apply formatting to the following:

- Columns in analyses, as described in [Applying Formatting to Columns in Analyses](#)
- Views, as described in [Applying Formatting to Views](#)
- Dashboard pages, as described in [Applying Formatting to Dashboard Pages](#)

Applying Formatting to Columns in Analyses

As you work with columns in an analysis, you can specify their formatting.

The formatting that you apply is visible when the column is displayed in views such as tables and pivot tables. For information, see [Formatting Columns in Analyses](#).

Applying Formatting to Views

There are multiple ways to apply formatting to views.

You can apply formatting to views in the following ways:

- In the View editor: When you edit a view in its editor, you can generally display various dialogs that allow you to format either the view itself or its pieces, as applicable. Formatting options are unique to the view type. Formatting that you specify in the view editor overrides any formatting that was specified for columns.
- In the Compound Layout: When you use the Compound Layout, you can click a button on the toolbar of the container for each view to display a formatting dialog. Use that dialog to apply formatting to the view's container, such as to place a green background on the container for a table.

Applying Formatting to Dashboard Pages

You can apply formatting to the page layout columns and sections of dashboard pages.

When you edit a dashboard page, you can edit the properties of its columns and sections and apply cosmetic formatting. For information, see [What is Cosmetic Formatting?](#) and [Building and Using Dashboards](#).

Formatting Columns in Analyses

Applying specific formatting to columns helps bring attention to data when it meets criteria.

When you build 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. By default, the specifications for a column apply only to the current analysis.

If your account has the appropriate privileges, then you can save the user-specified column properties as the systemwide default settings to use every time that data from that column, or columns of that particular data type, is displayed in results. The properties that you can save as defaults include formatting ones and other properties such as those that affect interactions and data write back.

Because groups and calculated items are simply members of their respective columns, they inherit the formatting from the column and follow the same precedence order as for other members, unless you specifically apply formatting to the groups or calculated items.

This section contains the following topics:

- [What Kinds of Formatting Can I Apply?](#)
- [Applying Formatting to a Column](#)
- [Saving Formatting Defaults](#)

What Kinds of Formatting Can I Apply?

You can use the tabs in the Column Properties dialog to customize how content is displayed for columns in views. Hierarchy levels provide an additional detail of formatting for hierarchical columns.

The following list provides examples of the kinds of formatting that you can apply:

- Apply cosmetic formatting to the column or hierarchy level, such as font family and size.
- Assign alternate folder and column heading names and apply custom formatting to them.
- Control the display of duplicate data, such as repeating column labels.
- Override the default formatting for columns and data values with custom formatting.
- Apply conditional formatting to the column or hierarchy level, which enables different formatting to be applied based on the values. For example, values greater than \$1 million can be formatted with a green color.

Applying Formatting to a Column

You can set default formatting for columns.

You can override the default settings by formatting columns in editors for data views, such as tables.

1. Open the analysis in which you want to edit formatting and behavior in the Criteria tab of the Analysis editor, and then:
2. Add or locate the column or hierarchy level to modify. (Expand a hierarchical column to see its levels.)
3. Click the **Options** button to the right of the column name or hierarchy level name in the Selected Columns pane, and click **Column Properties** or **Hierarchy Level Properties**.
4. In the Column Properties dialog, click the **Style** tab and specify how you want each cell and its contents to be displayed in the analysis. For example, change the cell border to red and the cell content to be displayed in a 14-point Arial font.
5. In the Column Properties dialog, click the **Column Format** tab to specify various properties such as those for heading names and value suppression.
6. Click the **Data Format** tab to specify how you want to override the data's default display characteristics. The options that display on this tab depend upon the data type (text, date and time zone, or numeric).
7. Click the **Conditional Format** tab to add conditional formatting to a column or hierarchy level.
8. If you accessed the Column Properties dialog from the Criteria tab, you can optionally click **Save as Default** and click the appropriate option to restore or to save defaults, if you have the appropriate privileges.

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

Saving Formatting Defaults

You can override column formatting defaults using the provided style sheet.

When you use the tabs in the Column Properties dialog to customize how content is displayed for columns in views, you override the Oracle Business Intelligence style sheet and the system defaults for the column or hierarchy level.

You have the option of saving the modified properties for just the column or hierarchy level within the analysis, of saving the properties as systemwide defaults for the data type, or of saving the properties as systemwide defaults for the column or hierarchy level so that its formatting and behavior is the same no matter in which analysis it displays. Anyone who uses this column or hierarchy level or a column or hierarchy level of this data type in subsequent analyses therefore uses the settings in the Column Properties dialog by default. To save systemwide properties, you must have the appropriate privileges.

The ability to set a systemwide 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 systemwide default for text columns. All existing analyses that contain text columns in which the font family is specified as Default (Arial) are updated automatically.

What is Cosmetic Formatting?

Cosmetic formatting affects the visual appearance of data in columns and hierarchy levels, views, and columns and sections on dashboard pages.

You can apply cosmetic formatting, copy and paste cosmetic formatting attributes, and save a formatted analysis to use with the columns of another analysis.

You can display various dialogs that provide access to and control over various cosmetic attributes. Depending on the object that you are formatting, the dialog displays different options, such as font, cell, and border controls, background color, additional formatting options such as cell padding, and custom CSS style options for HTML.

Using a Saved Analysis to Modify the Cosmetic Appearance of Other Analyses

You can import the formatting from a saved analysis into other analyses.

After you have customized the cosmetic appearance of an analysis using the Criteria tab and the Results tab and have saved it, you can import the formatting from the saved analysis and its views to new or existing analyses. Some views, such as gauge, graph, heat matrix, performance tile, and treemap do not support formatting by importing. This section contains the following topics:

- [Where is the Import formatting from another analysis Button?](#)
- [Which View Types Support Imported Formatting?](#)
- [How is Imported Formatting Applied?](#)
- [Importing Formatting Using a Saved Analysis](#)

Where is the Import formatting from another analysis Button?

You can use a saved analysis to modify the cosmetic appearance of other views by clicking the **Import formatting from another analysis** button.

This button is available on the following toolbars:

- The Compound Layout toolbar — When you click this button, the formatting is applied to all applicable views in the layout. See [Applying Formatting from Containers](#).
- The view editor toolbar — When you click this button, the formatting is applied only to the view that you are editing. See [Which View Types Support Imported Formatting?](#).

Which View Types Support Imported Formatting?

Some view types support formatting imported from other views.

The following list describes the components that support the use of a saved analysis for formatting other views:

- **View Types** — You can import formatting from the following view types:
 - Legend — Imports formatting for the legend title, the caption, and the legend container. Textual content is not imported.
 - Narrative — Imports only the text font color. Textual properties such as prefix, postfix, and narrative texts are not imported.
 - 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. Textual content is not imported.
 - Title — Imports formatting for the title, logo, subtitle, start time, and help URL.
 - View Selector — Imports only the caption formatting.
- **Compound Layout** — You can import formatting that was specified after clicking the **Format Container** button for the view in the Compound Layout.

How is Imported Formatting Applied?

Imported formatting is applied differently than local formatting.

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

Applying Formatting from Columns

This functionality works best for views when attribute, measure, or hierarchical column numbers align precisely or for a single column template that can be applied to all columns.

If a single column exists in the saved analysis, then its formatting is applied to all columns in the tables, pivot tables, and trellises of the target analysis.

For multiple columns, formatting is applied positionally, from left to right for column headings and values. A column that exceeds the number in the saved analysis gets the

closest column's format repeated. For example, suppose the saved analysis contains four columns formatted with these colors in this order: red, green, blue, yellow. In the target analysis, its six columns would acquire these colors in this order: red, green, blue, yellow, yellow, yellow.

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 legend to which you have customized formatting. If you import that formatting into a target analysis that contains three legends, then all three legends inherit that formatting.

Applying Formatting from Containers

In the Compound Layout, you can specify formatting properties (such as background color, borders, and padding) for view containers.

When you import that container formatting using a saved analysis, 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 need not be exactly the same for container formatting to work correctly. If the target analysis contains more views than the source analysis, then the extra views inherit the imported formatting. For example, suppose a saved analysis contains two tables that are stacked on top of each other in the Compound Layout. Suppose 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 Using a Saved Analysis

Using a saved analysis to import formatting helps ensure consistency across analyses.

You can use the format of a saved analysis like a template.

1. Display either the analysis in which you want to import formatting in the Results tab of the Analysis editor, or display the view in its editor.
2. Click the **Import formatting from another analysis** button.
3. In the Select Analysis dialog, navigate to the saved analysis and click **OK**.

Applying Conditional Formatting to Tables, Pivot Tables, Performance Tiles, Graphs, Heat Matrices, and Trellises

In tables, pivot tables, performance tiles, graphs, heat matrices, and trellises conditional formatting helps direct attention to a data element if it meets a certain condition.

For example, you can show below-quota sales figures in a certain color, or display an image such as a trophy next to the name of each salesperson who exceeds quota by a certain percent.

This section describes how to apply conditional formatting in tables, pivot tables, performance tiles, heat matrices, and trellises. For information on graphs, see [Graph Formatting Based on Columns](#). This section contains the following topics:

- [How is Conditional Formatting Applied?](#)

- [Can Conditional Formats Be Based on Another Column?](#)
- [What Factors Affect Conditional Formats?](#)
- [Applying Conditional Formatting](#)
- [Example of Conditional Formatting for Ranking](#)

How is Conditional Formatting Applied?

You apply conditional formatting by selecting one or more columns or hierarchy levels in the analysis to use, specifying the condition to meet, and then making specifications for font, cell, border, and style sheet options to apply when the condition is met.

The conditional formats can include colors, fonts, images, and so on, for the data and for the cell that contains the data. Your specifications apply only to the contents of the columns or hierarchy levels in the tables and pivot tables for the analysis with which you are working.

You can add multiple conditions so that the data is displayed in one of several formats, based upon the value of the data. For example, below-quota sales can be displayed in one color, and above-quota sales can be displayed in another color. When you specify multiple conditions, all the conditions are verified and the formats are merged for the conditions that are true. In the event of a conflict when trying to merge multiple formats, the condition that is last verified as true affects the format that is displayed.

Note: Conditional formatting is not supported for direct database requests.

Can Conditional Formats Be Based on Another Column?

You can create conditional formats to apply to one column based on the values of a second column, for display in tables, pivot tables, and trellises.

For example, you can create a conditional format to color the D50 Region column green when values of the 1 - Revenue column are greater than \$9 million, as shown.

T05 Per Name Year	D50 Region	1- Revenue
2010	AMERICAS	6,958,556
	APAC	7,092,042
	EMEA	9,449,403
2011	AMERICAS	6,767,910
	APAC	6,985,977
	EMEA	9,246,113
2012	AMERICAS	6,918,876
	APAC	7,221,563
	EMEA	9,359,560

You can create a condition using a column that is not displayed in views for the analysis, if you use the **Hide** option on the Column Format tab of the Column Properties dialog. If you place the column in the Excluded drop target of the Layout pane, then you cannot create a condition using that column.

Note: Performance tiles cannot inherit conditional formatting based on another column, nor do performance tiles have an Excluded drop target.

Conditional formatting is applied based on the underlying value, even if you select the **Show Data As** options in the Layout pane to show the data as percentages or indexes.

What Factors Affect Conditional Formats?

Conditional formats are affected by a variety of factors.

The way that conditional formats are applied to columns depends on the factors that are described in the following list:

- [Layout, Order, and Conditional Formats](#)
- [Value Suppression and Conditional Formats](#)

Layout, Order, and Conditional Formats

The layout of the columns in the view affects the conditional formatting of the values of one column when the conditional format is based on another column.

Changing the layout of the columns in the view can change the display of the conditional formats. For example, suppose that you specify a conditional format on the D50 Region column where T05 Per Name Year is 2009. If D50 Region and T05 Per Name Year are on opposite edges of the pivot table, then no conditional formatting is visible.

The order of the columns as they are displayed in the view also affects conditional formatting. The order in the view affects the "grain" at which the values are displayed. You can think of "grain" as a level of aggregation. The conditional format applies when

the column to format is displayed at a finer grain or the same grain as the column on which the format is based. If the column being formatted is of a higher grain than the column on which the format is based, then the format applies only if the condition is based on a measure column. If the format is based on an attribute column and the column to format is displayed at a higher grain, then the conditional format does not apply.

For example, consider the table in the illustration that follows. A conditional format has been specified to color the D50 Region when T05 Per Name Year is 2011. Notice that no light blue coloring is visible because D50 Region is on a different edge than T05 Per Name Year. See [Value Suppression and Conditional Formats](#) for additional information.

Pivot Table

	2010	2011	2012
D50 Region	1- Revenue	1- Revenue	1- Revenue
AMERICAS	6,958,556	6,767,910	6,918,876
APAC	7,092,042	6,985,977	7,221,563
EMEA	9,449,403	9,246,113	9,359,560

Suppose that you change the order of the columns so that T05 Per Name Year is the first column in the table. Then the T05 Per Name Year column is displayed at a higher grain, and the appropriate conditional formatting is applied to the D50 Region column. The illustration that follows shows a pivot table with the appropriate conditional formatting.

Pivot Table (2)

T05 Per Name Year	D50 Region	1- Revenue
2010	AMERICAS	6,958,556
	APAC	7,092,042
	EMEA	9,449,403
2011	AMERICAS	6,767,910
	APAC	6,985,977
	EMEA	9,246,113
2012	AMERICAS	6,918,876
	APAC	7,221,563
	EMEA	9,359,560

Conditional formats can be displayed on any edge of the table, pivot table, or trellis. On the Prompts drop target (also known as the "page edge"), the conditional format applies only to the column member that is currently selected for that target. For example, suppose that you have a D50 Region column that has the members AMERICAS, APAC, and EMEA. Suppose the D50 Region column is on the Prompts

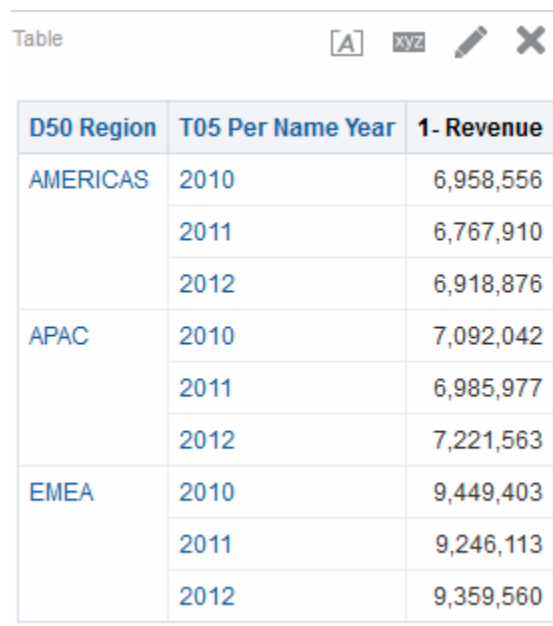
drop target for a pivot table and the conditional format is set to color the region name green if 1 - Revenue is greater than \$6.5 million. If AMERICAS is the only region that meets that condition, then AMERICAS is colored green only when it is selected for the Prompts drop target.

Value Suppression and Conditional Formats

For tables, the value suppression setting in the Column Format tab of the Column Properties dialog affects conditional formatting.

If you set value suppression to **Repeat**, then the column that you are formatting is displayed at the detail grain of the view. No aggregation is needed on the column on which the format is based for applying the conditional format.

For example, consider the table in the first illustration. A conditional format has been applied to color the D50 Region column light blue when T05 Per Name Year is 2011. Notice that no light blue coloring is visible, because the value suppression is set to **Suppress**, which does not allow for repeating column values for the members of D50 Region.



D50 Region	T05 Per Name Year	1 - Revenue
AMERICAS	2010	6,958,556
	2011	6,767,910
	2012	6,918,876
APAC	2010	7,092,042
	2011	6,985,977
	2012	7,221,563
EMEA	2010	9,449,403
	2011	9,246,113
	2012	9,359,560

If the value suppression is set to **Repeat**, then column members are repeated and the appropriate conditional formatting is applied. The following illustration shows a table with repeat value suppression.

D50 Region	T05 Per Name Year	1- Revenue
AMERICAS	2010	6,958,556
AMERICAS	2011	6,767,910
AMERICAS	2012	6,918,876
APAC	2010	7,092,042
APAC	2011	6,985,977
APAC	2012	7,221,563
EMEA	2010	9,449,403
EMEA	2011	9,246,113
EMEA	2012	9,359,560

Applying Conditional Formatting

You can apply specified properties to analyses when specific conditions are met.

Conditional formatting allows you to bring attention to data based on specified conditions, such as making a negative number red bold text.

1. Open the analysis in which you want to edit formatting and behavior in the Criteria tab of the Analysis editor.

Note: You can also apply conditional formatting to a performance tile from the Performance Tile editor of the Results tab by clicking the **Edit Conditional Formatting** link in the Performance Tile Properties dialog. This opens the Conditional Formatting dialog. You would then add the conditional formatting to your tile by completing steps 4 through 6 below. Note that the conditional format is not reflected in the Styles pane.

2. Add or locate the column or hierarchy level to modify. Click the **Options** button to the right of the column name in the Selected Columns pane, and click **Column Properties** or **Hierarchy Level Properties**. The Column Properties dialog is displayed.
3. Click the **Conditional Format** tab of the Column Properties dialog.

Note: You cannot apply conditional formatting to the data cell background or font color in a heat matrix.

4. Click **Add Condition**, then select the column to which to apply the condition.
5. Complete the New Condition dialog. You can click the **Edit Condition** button to the right of the condition name to display the Edit Condition dialog.

