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About EPM System and Enterprise Performance Management

Oracle Hyperion Enterprise Performance Management System offers a comprehensive Enterprise Performance Management (EPM) system that consists of these products:

- Oracle Enterprise Performance Management Workspace, Fusion Edition—Management reporting including query and analysis in one coordinated environment
- Oracle's Hyperion® Application Builder for .NET—Coordinated planning, consolidation, and scorecard applications
- Oracle's Hyperion® Foundation Services—Used to ease installation and configuration, provide metadata management, and support a common Microsoft Office interface
About EPM Workspace

EPM Workspace, a modular business intelligence platform, provides management reporting, query, and analysis capabilities for a wide variety of data sources in a single coordinated environment. EPM Workspace is also a zero-footprint client that provides the user interface for viewing and interacting with content created using Oracle’s Hyperion Reporting and Analysis authoring studios, financial applications, and Oracle Business Intelligence products.

EPM Workspace provides access to the following content:

- Oracle’s Hyperion® Interactive Reporting—for ad hoc, relational query, self-service reporting and dashboards against any ODBC data source
- Oracle’s Hyperion® SQR® Production Reporting—for high volume, enterprise-wide production reporting
- Oracle’s Hyperion® Web Analysis—for interactive ad hoc analysis, presentation, and reporting of multidimensional data
- Oracle Hyperion Performance Scorecard, Fusion Edition—a Web-based solution that enables your organization to set goals, and to use scorecard methodologies to measure and monitor business performance
- Financial Management and Planning—for consolidation and planning application tasks
- Profitability and Cost Management—for managing cost and revenue allocations that are necessary to compute profitability for a business segment
- Oracle BI Answers—Oracle BI Answers provides true end user ad hoc capabilities in a pure Web architecture
- Oracle BI Interactive Dashboards—Oracle BI Interactive Dashboards provides intuitive, interactive access to information that is actionable and dynamically personalized based on the individual’s role and identity
- Oracle BI Delivers—Oracle BI Delivers provides business activity monitoring and alerting that can reach users through multiple channels such as email, dashboards, and mobile devices
- BI Publisher—BI Publisher (formerly known as XML Publisher) offers efficient; scalable reporting solution available for complex, distributed environments

EPM Workspace, which includes Reporting and Analysis and Oracle Essbase, is part of a comprehensive EPM system that integrates this business intelligence platform with Oracle’s Hyperion financial applications, Performance Scorecard, and Oracle Business Intelligence Enterprise Edition products.
**Preparing to Use EPM Workspace**

Prior to using EPM Workspace, familiarize yourself with your documentation set.

Additional information that you need:

- **Browser information**— See the *Oracle Hyperion Enterprise Performance Management System Security Administration Guide*.
- **EPM Workspace URL and domain**
- **User account**— the user name and password assigned to you. See your system administrator.
- **Logon information**— “Logging on to EPM Workspace” on page 31
- **access permissions**— “Toolbars” on page 50
- **Preferences**— “Setting Preferences” on page 33
- **Oracle’s Hyperion® Shared Services Console user name and password**
- **Database information**

For Financial Reporting, Adobe Acrobat Reader must be installed on your computer. Before you can view reports in PDF, a PDF writer (Adobe Acrobat Distiller, GNU Ghostscript or AFPL Ghostscript) must be installed with your print server. If a PDF viewer is not available, only report names are listed. For information on printing PDF and text files, see the *Oracle Enterprise Performance Management Workspace Administrator’s Guide*.

To enable the use of Microsoft Internet Explorer (IE) for viewing PDF reports on EPM Workspace:

1. **Open Internet Explorer.**
2. **Select Tools, then Internet Options.**
3. **In the Internet Options dialog box, select the General tab, and then in the Temporary Internet Files topic, select Settings.**
4. **In the Settings dialog box, in the Check for newer versions of stored pages topic, select Every visit to the page.**

**Note:** Oracle recommends that you add EPM Workspace to the exceptions for your Web pop-up blocker. When you perform some EPM Workspace tasks on the Web such as loading data, a status window pops up showing the task status. If you have a pop-up blocker enabled on your computer, the status window is not displayed.
Note: The first time you access a database connection, you may be prompted to log on. This occurs if the user name and password you use to log on to the Web application differs from the user name and password for the database connection. Your administrator can provide you with the required database connection logon information.

For Internet Explorer, status information is displayed in the browser's status bar while interacting with EPM Workspace. For Firefox, the status bar is disabled by default.

➢ To enable the status bar for Firefox for additional progress information:

1. Select Tools, then Options.
2. Select Web Features.
3. Select Advanced.
4. From the Advanced Javascript Options dialog box, select Change status bar text.
5. Click OK.

Deployment Workflow

For deployment task information, see Hyperion Enterprise Performance Management Deployment Guidelines.

EPM Workspace

From EPM Workspace access the following from the Navigate menu:

- Applications enables you to access Financial Management, Planning, Performance Scorecard, Profitability and Cost Management, and Oracle Business Intelligence applications. Applications is only displayed when a user has rights and applications are available.

- From Workspace Pages, access My Workspace Pages and Shared Workspace Pages. My Workspace Pages can be stored in any folder that the user has access to. My Workspace Pages is similar to a favorites folder – allows a user to go to one location to access all of their personal Workspace Pages without having to navigate through the repository. Shared Workspace Pages are stored in a system folder that authorized users can access from Explore module. Users that have access to this folder can move their personal pages manually within the Explore module to promote them to the rest of the organization.

- Administer enables you to manage users, groups, user preferences, roles, SmartCuts, Explore Annotations, and authentication methods.

- Schedule enables you to manage jobs and schedule batches and events for automated processing.

- Impact Manager enables you to update Interactive Reporting documents when database structures, database connections, or links to external data sources change.
For an overview of the Reporting and Analysis reporting solution architecture, see the Oracle Enterprise Performance Management Workspace Administrator’s Guide.

EPM Workspace can also be installed with the following Reporting and Analysis thin client products: Financial Reporting, Interactive Reporting, Production Reporting, Web Analysis, and Performance Scorecard. These products are used to create documents and modify document elements. These installed components determine your available features. For example, Web Analysis must be installed to view Web Analysis documents. For information on tasks performed in these modules, see “Module Tasks” on page 29.

The main function of the repository is to store files. Every repository file features properties that identify the file and control user and group access. Your access permissions, set by your system administrator, determine which repository items you can view, modify, run, and delete. See “Reporting and Analysis Repository” on page 30.

**EPM Workspace Capabilities**

EPM Workspace tasks:

- Viewing documents and dashboards
- Accessing the following products:
  - Financial Management—For more information on using Financial Management applications from EPM Workspace, see Oracle Hyperion Financial Management User’s Guide
  - Performance Scorecard—For more information on Performance Scorecard from EPM Workspace, see Oracle Hyperion Performance Scorecard User Guide
  - Planning applications available to users that have access and rights—For Planning applications from EPM Workspace, see Oracle Hyperion Planning User’s Guide
  - Oracle Business Intelligence—Includes Oracle Business Intelligence Answers, Oracle Business Intelligence Interactive Dashboards, Oracle Business Intelligence Delivers, and BI Publisher. For more information on the Oracle BI EE products, see the Oracle Business Intelligence New Features Guide. For more information on Oracle BI Publisher, see the Oracle BI Publisher User’s Guide.
  - Profitability and Cost Management—For more information on Profitability and Cost Management from EPM Workspace, see Oracle Hyperion Profitability and Cost Management User’s Guide
- Scheduling batches, jobs, or events to automatically execute reports or create notifications
- Create Web Analysis and Interactive Reporting documents, books, or batches
- Personalizing EPM Workspace and thus managing information delivery by using a start page (also known as Home page), personal pages, favorites, and EPM Workspace pages

From EPM Workspace, you use menus, buttons, and items from the Navigate menu to perform tasks. Based on the following criteria, menus and toolbar buttons are updated as you use the system:
The roles granted you by the administrator. Roles determine which modules are displayed in the View pane and toolbar.

The Navigate menu items being used and the task being performed. For example, if you use Administer, the menus and toolbar icons contain tasks associated with administration related tasks. If you use Explore, the menu contains file tasks.

## Modules Used to Perform Tasks

You use EPM Workspace to perform user tasks:

- **Navigate Menu** – access Applications, Workspace Pages, Administer, Schedule, Impact Manager, and Open Items.
- **Applications** – access and view applications such as Financial Management, Planning, Oracle Business Intelligence applications, Profitability and Cost Management and Performance Scorecard.
- **Workspace Pages** – aggregate content from Oracle and non-Oracle sources. Workspace Page is a page made up of content from multiple sources including documents, URL’s, and other content types.
- **Schedule** – automatically run and manage documents, such as batches, jobs, and events

**Note:** The Administer and Impact Manager are used only by administrators. See the *Oracle Enterprise Performance Management Workspace Administrator’s Guide*.

- **Open Items** – view all documents or items you have open in EPM Workspace.

## Accessing Items from Navigate

To access an item, perform an action:

- From Navigate, click the `<item name>`.
- From the toolbar, select the `<item name>` button.

The variable `<item name>` is replaced by Applications, Workspace Pages, Administer, Schedule, Impact Manager, or Open Items.

## User Types and Tasks

For a complete listing of the different users available from EPM Workspace, see the *Oracle Hyperion Enterprise Performance Management System Security Administration Guide*.
Module Tasks

The available tasks from EPM Workspace depend on the roles and permissions assigned to you by the system administrator. For information on roles, see the Oracle Hyperion Enterprise Performance Management System Security Administration Guide.

EPM Workspace User Interface

When you log on, the default EPM Workspace start page or Home page is displayed. The default is set from the Preferences dialog, “Setting Preferences” on page 33.

The EPM Workspace user interface includes these areas:

1. **Menu Bar** – Commands and sub-commands that organize tasks and modules (See “Menus” on page 54)
2. **Standard toolbar** – Buttons for performing tasks, see “Toolbars” on page 50
3. **View pane** – Area that provides buttons that enable jumps between panels (each panel having a specific use and corresponding controls) and displays the list of documents and modules (Hiding this pane provides a larger content frame in which to use EPM Workspace. Select View, then View Pane to hide and display).
4. **View Pane or Content Area Adjuster** – Setting to adjust the size of the View pane and content area.
5. Content area – Area in which you view active-module documents, tasks, or files

6. Process bar – Location of the current folder, document, or step.

7. Document tab bar – Information bar specific to the current module (If multiple documents are open, the current document tab is highlighted).

**Reporting and Analysis Repository**

The repository is used to store, access, and share documents and files. You can access items such as documents, files, and folders in various ways, including browsing or searching for documents, subscribing to folders, and using dashboards. You make documents, files, and folders available to others by importing documents to the repository.

Documents show information and data in a predefined format. You can use jobs and batches to generate documents automatically. You can run jobs and batches at any time or schedule them to run automatically.

**Note:** Your file permissions determine which repository items you can view, modify, run, and delete.

**Actions**

- Documents, files, and folders can be opened in four formats:
  - Interactive HTML
  - Portable Document Format (PDF), displayed by Adobe Reader
  - Text files
  - Operation messages, which are generated by applications or services and stored in logs
- Interactive Reporting, Production Reporting, and Financial Reporting users can subscribe to documents. When the documents are changed or updated, the users are informed.
- Interactive Reporting, Production Reporting, and Financial Reporting users must import documents before the documents can be accessed by other users. Importing distributes previously private information for public consumption.

**Locations**

User preferences specify default startup options:

- The Content area can be Explore, documents, Workspace Pages, repository locations, or applications such as Performance Scorecard, Financial Management, Planning, Profitability and Cost Management, or Oracle Business Intelligence application products. Startup options are loaded and displayed when users log on to EPM Workspace.

**Tip:** Set a folder to the directory which contains the most frequently-accessed content.
• A Favorites folder contains a user’s most frequently sought repository content. All user profiles feature Favorites folders, the files of which are accessed through the Favorites menu. Favorites Manager can push content to users’ Favorites folders, providing one access point for content.

File Permissions

EPM Workspace file permissions determine who has access to what files or folders and what operations can be performed. You obtain access items as a user, as a group member, or through a role given to you by the system administrator. For information on roles, see the Oracle Hyperion Enterprise Performance Management System Security Administration Guide. The level at which you can access items and perform tasks is called access privilege.

Access to specific repository items is controlled by the document owner. Access to operations, such as importing, running jobs, or updating document POVs, is controlled through roles. For example, the owner gives you the modify and run access privilege to Job A, but you can run the job only if you have the Job Runner role. The owner gives you the full control access privilege to Document B, so you can open and update the file. For information on setting file permissions, see Chapter 3, “Exploring and Managing Items.”

Tip: When there are equivalent permissions that conflict with each other, the permission that grants lesser access takes precedence.

When you import a file, you become the file owner, and you specify the access level of other users. You might specify that all users can read the file, your group can modify the file, and only you can delete, change access for, and move the file.

Logging on to EPM Workspace

You can access EPM Workspace in two ways: through a URL provided by your administrator or through an Oracle application link.

Note: Access through Oracle application links requires that single sign-on be enabled.

To start an EPM Workspace session:

1. In your Web browser, go to EPM Workspace Web page.
2. Enter user name and password.

Tip: The user name and password may be case sensitive. To determine if user name and password are case sensitive, refer to authentication sources documentation.

3. Click Log On.
Your start or home page is displayed. For more information on setting your start or home page, see Chapter 2, “Setting Preferences and Personalizing EPM Workspace”.

**Customizing the Logon Page**

You can customize the logon page to add a proprietary disclaimer. This allows a company to broadcast this to all users when logging in to EPM Workspace. This information is displayed below the Copyright information.

To customize the logon page:

1. **Backup the file** `<workspace> \WEB-INF\classes\msgs \JSPResources_en.properties`.

   **Note:** All instances of `JSPResources_xx.properties` where `xx` is the language that the customer supports would have to be modified.

2. **Edit the file** `<workspace> \WEB-INF\classes\msgs\JSPResources_en.properties`.

3. **Search for the property** `logon.copyright.string`.

   **Note:** There may be two instances, modify the last instance.

4. **Append your text to the end of the string using \n to get a new line.**
5 Restart EPM Workspace Web Application.

Tip: Use \n to prevent a line from going to far to the right. If a string is too long, it causes the logon group box to be off center. Keep lines of text as wide as the logon group box border.

Changing Native Directory Password

If you are using Oracle Internet Directory as the Native Directory, Oracle's Hyperion® Shared Services enforces the Oracle Internet Directory password policies. Shared Services prompts Oracle's Hyperion product to change their passwords based on these policies. Because your Native Directory account is segregated from the user accounts created to support other corporate applications, Native Directory password changes affect only Oracle's Hyperion products. See Oracle Hyperion Enterprise Performance Management System Security Administration Guide for more info.

Note: You can change your Native Directory password at any time by modifying your Native Directory user account.

To change password in Native Directory:
1. In Current Password, enter your existing password.
2. In New Password and Confirm Password, enter your new password.

Note: The new password must adhere to the Oracle Internet Directory password policies.
3. Click OK.

Setting Preferences

As a designer, you can set defaults for the general appearance of EPM Workspace user interface, Explore, Reporting and Analysis products, Oracle Business Intelligence products, and authentication for changing user passwords. Preferences for Planning are not set from EPM Workspace. For Planning end-user preference settings see the Oracle Hyperion Planning User's Guide and for administrator and application preferences, see the Oracle Hyperion Planning Administrator's Guide. Financial Management preferences are set from EPM Workspace, see the Oracle Hyperion Financial Management User's Guide. Preferences for Oracle Business Intelligence products in EPM Workspace are set in EPM Workspace. Default startup options can be set for the content area. Some settings can be overridden through menu options. See Chapter 2, “Setting Preferences and Personalizing EPM Workspace”.

Note: Your e-mail address, which you cannot update, defaults to the e-mail address registered in your user security settings.
Using Data Source Elements for Reporting and Analysis

Data sources (generic data storage mechanisms) can be multidimensional databases, relational databases, or files. Database connections are portable files stored in the repository. They define the terms, conditions, and methods for connecting to data sources. In EPM Workspace, you cannot create or modify database connections; rather, you must use the applicable Reporting and Analysis product. You see only database connections that you own and to which you are granted permissions. Multiple permissions are needed to read, write, edit, and change database-connection file properties. For permission descriptions, see the Oracle Enterprise Performance Management Workspace Administrator’s Guide.

Database servers typically use server, application, and database names to create unique identifiers. Such identifiers make database references not readily portable. The studios use database aliases instead of long identifiers. Aliases are easier to remember and more economical to employ and enable a database to be maintained on multiple servers.

Repository documents are dependent on a database-connection file to query data sources for values. A document can use only one database connection but can use any of several data sources.

For a complete list of supported data sources and relational databases by Reporting and Analysis product, see Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide.

- Different data sources have different system requirements. See the Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide for descriptions of system requirements.
- The View pane displays specific information for the document currently open in the content area. For example, the database connection used by the current data object. The View pane displays two database connection segments for Web Analysis:
  - The Database segment displays the database connection name for the current data object.
  - The Database User Name segment displays the user name by which access to the database connection was granted.

Web Analysis Studio

Oracle's Hyperion® Web Analysis Studio users can construct seamless liaisons between OLAP data and relational data sources. Navigation from OLAP to relational data is typically called relational drill-through.

After relational drill-through is configured, users can navigate to level 0 (the bottom) of the OLAP database and drill down to relational data. Relational drill-through, a client-based integration solution, is comparable to the server-based Analytic Integration Services drill-through.

Relational drill-through supports an array of JDBC relational data sources but does not support queries by level, generation, or previously selected member. Relational drill-through definitions are saved as a property of the database-connection file.
Reporting Studio

For Oracle Hyperion Financial Reporting Studio, Fusion Edition, you must be defined as a user, with a user name and password, in the data source that your document uses. For example, if you want to view documents that use Analytic Services, you must logon to the database connections with a user account defined in Analytic Services. Logging on usually occurs automatically. However, if you are not registered in the database, you are prompted for logon credentials.

Interactive Reporting Studio

Interactive Reporting documents can contain multiple Query sections, each of which can access a range of data sources (relational databases, OLAP servers, imported data sets, and local joins). Each section can reference zero (if using only local joins) or one database-connection file. The file can reference only one data source. When a query section associated with a relational-database connection or using only local joins is processed, a corresponding Results section is produced. If the database-connection file is associated with a multidimensional database connection, results are shown in the Query section.

Production Reporting Studio

With Oracle’s Hyperion® SQR® Production Reporting Studio, users can easily develop a range of reports, from small ad hoc reports to mission-critical operational reports. Various data sources can be used; for example, relational databases, OLAP servers, and transactional systems.

After you create a data source connection, you can use the Production Reporting Studio wizard, layout editor, and explorers to design and customize enterprise reports. You can also insert and update database tables to incorporate data transformations into report processing.

Whether you are creating budgets, building exception reports, producing invoices from millions of records, or distributing Web-based reports to help end-users make quick, effective decisions, Production Reporting manages the secure delivery of content across the enterprise.

Analytic Services Features Available to the Studios

Analytic Services integrates data from multiple sources, meets user needs across an enterprise, adds value to previously inaccessible data, and transforms data into actionable information.

Analytic Services features available to studios:

- Data restriction
- Top and bottom only retrieval
- Data edits
- Suppression of rows that contain #MISSING values, zero values, and shared members
- Label mode and alias tables
- Drill settings specific to Analytic Services
- Linked reporting objects
- Relational drill-through
- Analytic Integration Services drill-through
- Advanced member selection
- Attribute dimensions and attribute calculations

For feature details, see the Oracle Enterprise Performance Management Workspace Users Guide.

Financial Management Features Available to the Studios

Financial Management is a centralized, scalable, financial management and reporting solution. Financial Management features that are extended through EPM Workspace:

- Organization by period
- Advanced member selection specific to Financial Management
- Cell text – related content
- Line item, detail-related content
- Advanced member selection
- User–defined fields
- Entity currency display

Planning Details as a Database Connection

After you install the Planning Details ADM driver, you can choose Planning Details as a database connection for Financial Reporting Studio. The Planning Details ADM driver is optimized as a data source to provide Planning features such as supporting details, planning unit annotations, and metadata filtering. If your report grid does not use Planning features, for optimal performance, choose Essbase as the database connection. See the Oracle Hyperion Financial Reporting Studio User’s Guide.

SAP BW Data Sources

You can use the studios to access SAP BW data sources. Using the custom-report, free–form grid component, you can present OLAP, relational, and manually entered data on a data object and leverage all data sources in integrated dynamic calculations. The studios offer visually compelling SAP BW reports that satisfy the presentation, reporting and distribution requirements of information consumers.

SAP BW Features

SAP BW features:
BEx Query Variables
Period-to-date values
Top and bottom retrieval
Attributes (member properties)
Searches for SAP BW characteristic values
Currency conversion
Unit of measure conversion
Unicode

**SAP BW Prerequisites**

To access an SAP BW data source, install the SAP BW client on the server. After installation, define SAP Logon parameters used to communicate with the SAP data source.

*Note:* For information on accessing SAP JCO data sources and authenticating users against an SAP server, see *Configuring SAP Data Source Access and Authentication* in the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.

**SAP BW InfoProviders Supported by Reporting and Analysis**

- InfoCubes/Remote InfoCubes
- ODS objects
- InfoSets
- BEx query cubes
- Multiproviders

*Note:* Using the SAP BW BAPI driver, you cannot issue MDX queries on cubes that have more than 50 characteristics. You can, however, have up to 255 characteristics in an SAP InfoCube.

**SAP Variable Support**

In this section:

- About SAP Variables
- Variables and Processing Types
- Variable Options
**About SAP Variables**

SAP variables are query parameters defined in the BEx Query designer. They function as a store for characteristic values, hierarchies, hierarchy nodes, texts, and formula elements.

SAP variables are displayed in a Variable dialog box when creating a new Web Analysis, Production Reporting, or Financial Reporting document, opening a Web Analysis, Production Reporting, or Financial Reporting document, or explicitly selecting to refresh the variables from the shortcut menu in the Content pane. SAP variables are displayed only if the database connection is created against a BEx query with variables defined.

Users are prompted for variable values only if the variable was created in the original BEx query with Ready for Input selected. For variables that do not have Ready for Input selected, the default variable values are applied to the Web Analysis, Production Reporting, or Financial Reporting document upon creation.

**Variables and Processing Types**

In order to run a variable, it must be associated with a processing type, which identifies the way the variable is processed.

<table>
<thead>
<tr>
<th>Processing Type</th>
<th>Characteristic Values</th>
<th>Hierarchies</th>
<th>Hierarchy Nodes</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Entry/Default Value</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Customer Exit</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>SAP Exit</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Authorization</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replacement Path</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

The following table lists the variable type and their corresponding descriptions.

<table>
<thead>
<tr>
<th>Variable/Processing Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristic</td>
<td>Most common type of variable. Most common processing type is manual/default with ready for input setting. Allows characteristic value to be selected at query run time. Authorization processing type—looks to the end-users’ authorization settings as defined with transaction RSMM and uses the value found there as input for the variable.</td>
</tr>
<tr>
<td>Hierarchy</td>
<td>Behaves in same manner as characteristic variables. Represent an entire hierarchy tree for a given characteristic. Allow the query user to select new hierarchies versus simply selecting a different node within the same hierarchy.</td>
</tr>
<tr>
<td>Hierarchy Node</td>
<td>Behaves in same manner as characteristic variables. Represents a given substructure within a hierarchy.</td>
</tr>
<tr>
<td>Variable/Processing Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Formula</td>
<td>Query parameters set in the query definition and not filled with values (processed) until the query is inserted into a workbook. Formula variables function as a store for individual formula elements.</td>
</tr>
</tbody>
</table>

The following table describes the processing type descriptions.

### Table 3  Processing Type Descriptions

<table>
<thead>
<tr>
<th>Variable/Processing Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Entry/Default Value</td>
<td>Variables processed with this processing type allow you to manually enter a value before inserting the query into the workbook. When you create the variables, you determine whether to enter a default value using the default value data.</td>
</tr>
<tr>
<td>Customer Exit</td>
<td>ABAP code that may be written by SAP customer to fill a variable.</td>
</tr>
<tr>
<td>SAP Exit</td>
<td>ABAP code written by SAP to fill a variable value.</td>
</tr>
<tr>
<td>Authorization</td>
<td>Indicates that variable value is stored with user authorization.</td>
</tr>
</tbody>
</table>

### Variable Options

There are five options for each variable type (with the exception of Hierarchies variables with all processing types and any variable type with the Replacement Path processing type) that determine the way values are selected for each variable. In the BEx variable dialog box, they are listed under **Variable Represents**. Values for each of these options are supported in the Variable dialog box.

### Table 4  Variable Options

<table>
<thead>
<tr>
<th>Option Name</th>
<th>Variable Represents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Value</td>
<td>One value only.</td>
</tr>
<tr>
<td>Multiple Single Values</td>
<td>Number of single values. Useful in hierarchy nodes, for example, to allow you to enter several single nodes.</td>
</tr>
<tr>
<td>Interval</td>
<td>From and to value, that is, an interval.</td>
</tr>
<tr>
<td>Selection Option</td>
<td>Any combination of single values and intervals.</td>
</tr>
<tr>
<td>Precalculated Value Set</td>
<td>Set of values that are staged persistently in a database table by the Reporting Agent.</td>
</tr>
</tbody>
</table>

There are three additional options for each variable type that determine whether a value is required for the variable. In the BEx Variable dialog box, they are listed under **Variable Value Is**.

### Table 5  Options for Variable Value Is

<table>
<thead>
<tr>
<th>Variable Value Is Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional</td>
<td>Variable does not need a value during runtime.</td>
</tr>
<tr>
<td>Variable Value Is Option</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Mandatory</td>
<td>At least one value must be entered for the variable during runtime:</td>
</tr>
<tr>
<td></td>
<td>• Initial value (#) is permitted explicitly</td>
</tr>
<tr>
<td></td>
<td>• Initial value # means “unassigned”, that is, you cause it to explicitly select all data that has no booked values for this characteristic</td>
</tr>
<tr>
<td>Mandatory, Initial Value Not Allowed</td>
<td>At least one value must be entered for the variable during runtime; Initial value (#) is not permitted (that is, you must enter one or more concrete values in order to execute the query).</td>
</tr>
</tbody>
</table>

**Note:** Variable Value Is can be modified after creating a variable in BEx, but Variable Represents can be set only at variable creation time.

**SAP Attribute Support**

Supported SAP attributes include:

- **Display attributes**—Users can select, search, filter, and include Display Attributes as part of queries and reports.

- **Navigation Attributes**—Navigation attributes are selected from the field catalog like characteristics, and are used for navigation in Web Analysis, Production Reporting, and Financial Reporting documents. They can also be passed on to Web Analysis, Production Reporting, and Financial Reporting as selection criteria.

**SAP Security Integration**

SAP BW provides single sign-on login for Web Analysis, Production Reporting, and Financial Reporting users integrating with SAP. For detailed information, see the section titled “Working with an SAP Provider” in the *Oracle Hyperion Enterprise Performance Management System Security Administration Guide*.

**Relational Access Methods**

Some documents, such as Web Analysis documents, can access OLAP, Oracle, and supported relational databases.

Methods for accessing relational data from Web Analysis:

- Custom document SQL spreadsheet
- Custom document free-form grid
- Relational drill-through
- Relational database connection
- Analytic Integration Services drill-through
- Repository
Controlling the Size of the Query Result Set

Query governors vary for relational access methods. Custom document SQL spreadsheets and relational drill-through methods enable users to declare query governors as they create SQL queries or relational drill-through definitions.

When you drill from OLAP to relational data, passing only the drilled OLAP dimension member to the relational data source may result in a large query result set. To reduce and simplify the query result set, you can pass the page and filter dimensions specified in the OLAP document.

In Interactive Reporting documents, Query section properties can govern the number of rows returned from relational data sources and impose time limits on queries. Users can cancel queries through the keyboard in some cases.

Starting Tasks

Most tasks in EPM Workspace start the same way.

Note: Some tasks can also be performed using the toolbar, menus, and shortcut menus. For a list of EPM Workspace toolbars, menus, and shortcut menus, see “Toolbars” on page 50.

To begin a task:

1. From Navigate, select Applications, Workspace Pages, Administer, Schedule, Impact Manager, or Open Items.
2. From any of the menus, select a task. For example, from the File menu, select New, then Workspace Page.

Creating Documents

With EPM Workspace, you can use the new document wizard to create Web Analysis or Interactive Reporting document, Financial Reporting book or batch, or create a Workspace page.

To create a Web Analysis or Interactive Reporting document, Financial Reporting book or batch, or Workspace page:

1. Select File, then New, then Document.
2. Select an option:
   - Create an Interactive Reporting Document
   - Create a Web Analysis Document
   - Collect reports into a Book
   - Batch Reports for Scheduling
   - Create a Workspace Page
Selecting a Data Source for a Document

To create a document, you must specify a data source. The data source determines the document type.

- To create a Web Analysis document, specify a Web Analysis database connection.
- To create an Interactive Reporting document based on an existing document, specify the existing document.

**Note:** In the following procedures, `<item name>` is Applications, Workspace Pages, Administer, Schedule, or Impact Manager.

Accessing Navigate Items

- To access an item from Navigate, select Navigate and click the `<item name>`.

Opening and Printing Documents or URLs

- To open a document:
  1. Select File, then Open, then Document.
     The Open dialog box is displayed.
  2. Select a document.

  **Note:** The list of open documents can be located from the Open Items option from the Navigate menu and from tabs at the bottom of EPM Workspace. You can toggle between open documents.

- To open a URL:
  1. Select File, then Open, then URL.
  2. Enter the URL name.
  3. Select OK.

  **Note:** The following procedure only applies to Financial Reporting, Web Analysis, or Production Reporting documents.
To print a document:
1. Select File, then Open, then Document.
2. Open a document, for example, a Financial Reporting document.

   **Note:** You may need to open the document as HTML or PDF.
3. Select File, then Print, then HTML or File, then Print, then PDF.

### Setting File Properties and Moving Files

To set file properties:
1. From Explore, select a document without opening.
2. Select File, then Properties.

   The General Properties option is selected by default in the Properties Dialog. You can modify the file name, description, and change the owner of an object. To change ownership of an object, the user must have full control over that object. For additional property settings, for example Permissions, see Chapter 5, “Importing Artifacts.”.

To move files or folders in Explore:
1. From Explore, select a document or folder.
2. Select Edit, then Cut or Copy. See “Moving or Copying Files or Folders” on page 99 for details on copying.
3. Select a repository location, and select Edit, then Paste.

### Renaming Files

To rename files:
1. From Explore, select a document or folder.
2. Select Edit, then Rename.
3. Enter a name.
4. Select Save.

### Adding and Removing Documents from Favorites

To add a document or folder to favorites:
1. From Explore, select a document or folder.
2. Select Favorites, then Add to Favorites.
3 Select Favorites.

The document or folder that you added is displayed as a menu option.

To remove a document or folder from Favorites:
1 Select Favorites, then Manage Favorites.
2 Clear Show, or select Remove.

To create a shortcut to a Production Reporting document:
1 From Explore, select the document.
2 Right-click the document, and select Create Shortcut.
3 Complete the General Properties dialog box, and select OK.

For instructions, see Chapter 11, “Using Production Reporting Documents.”

Using Explore

In Explore, you organize, search for, or assign access permissions to files. When you select Explore, the View pane shows folders, and the content pane shows files and folders.

Explore features:
- Folder tree—Navigate through EPM Workspace folders
- View File Properties—View file information, such as type, owner, creation date, access permissions, modified date, and description

Using Schedule

Use Schedule to manage and schedule batches, jobs, and events and to view status. Schedule is primarily used by Financial Reporting, Interactive Reporting, and Production Reporting.

Schedule features:
- Batch Scheduler
- Job Queue
- Job Notifications
- Show Parameters
- Jobs Running
- Manage Events
- Consolidated Job Status

See Chapter 14, “Scheduling Jobs and Batches.”
Using Open Items

Open Items from Navigate displays a list of opened documents, so you can quickly switch between the opened documents.

Using Smart View

Oracle Hyperion Smart View for Office, Fusion Edition provides a common Microsoft Office interface for Essbase, Financial Management, Planning, and four EPM Workspace components:

- Financial Reporting
- Production Reporting
- Web Analysis
- Interactive Reporting (Smart View export options not enabled)

The centralized interface enables simultaneous use of multiple Oracle products and improves integration with Microsoft Office (2000, 2002, and 2003). The Smart View implementation provides the following EPM Workspace functionality:

- Exports the current page of the current data object to Excel, Word, or PowerPoint
- Exposes Financial Management and Essbase functions in Excel, Word, and PowerPoint content
- Notifies you when you can upgrade to new releases of Smart View

Smart View enables two export options:

- You can export the current page of the current data object to Word, PowerPoint, or Excel as an image, and later, re-query the Web application to refresh the image.
- You can export documents to Excel as query-ready or formatted HTML.

When you export content as query-ready HTML, the current page of the current data object is converted to HTML, and Oracle-specific formatting is removed. Thus, Smart View can re-query the data source independent of the Web application.

When you export content as formatted HTML, the current page of the current data object is converted to HTML, and Oracle formatting definitions and calculated members are retained. Thus, Smart View cannot directly query the data source, but Oracle content can be leveraged by Microsoft Office applications. Not all export options are supported by all data sources and Web applications. See Chapter 3, “Exploring and Managing Items.”

Personalizing EPM Workspace

You can use EPM Workspace favorites, Workspace pages, and personal pages to personalize the process of organizing, accessing, and viewing documents. See Chapter 2, "Setting Preferences and Personalizing EPM Workspace.”
**Subscribing to Documents**

When documents are changed or updated, subscribing users can be informed:

- By e-mail notifications with attached files
- By bookmarked personal pages
- By images that represent bookmarks

For information on Subscribe, see Chapter 6, “Viewing and Organizing Information.”

**Working with Favorites**

Favorites provide quick access to frequently used items and documents. With appropriate access permissions, you can add items (push items) to other users’ favorites.

**Using Workspace Pages**

Workspace Pages enable users to create, edit, and aggregate content from Oracle (Reporting and Analysis and Application products) and non-Oracle sources (URL and Office documents), into a single environment. Templates are provided for users to create a Workspace page. There are two types of Workspace Pages, My Workspace pages and Shared Workspace pages. My Workspace pages can be stored in any folder that the user has access to. There is a favorites like implementation for Workspace Pages that creates shortcuts to the My Workspace Pages that can be stored in any folder. Shared Workspace pages are stored in a system folder that authorized users can access from Explore. Users that have access to this folder can move their personal pages manually within Explore to promote them to the rest of the organization. See “Workspace Pages” on page 164 for additional information.

**Using Personal Pages**

Personal pages provide a way to view frequently used information. You can have multiple personal pages and choose a default personal page, which is displayed when you open Personal Pages from Favorites. You can customize personal page content and layout, create personal pages, and copy and customize imported personal pages.

Personal page features:

- **Broadcast Messages**—A link to a folder, the contents of which are set up and managed by the administrator. Folder contents are displayed as one or more content window, and displayed to every user. The Broadcast Messages folder contains two sub-folders:
  - Personal Page Content—published personal pages
  - Sample Personal Page-content set up by the administrator and content added by subscription
- **My Bookmarks**—Links to Web pages or repository items that open as new tabs in EPM Workspace.
• **Image bookmarks**—Graphic links to Web pages or repository items.

• **HTML file or job output displayed as a file content window**—Workspace HTML items and URLs

• **Exceptions Dashboard**—Traffic light indicators. If the traffic light is red, the item is flagged as an exception or the job generated an exception. If the traffic light is green, the job did not generate an exception.

• **Displayable Interactive Reporting sections**—Sections from Interactive Reporting documents and job output that you can access.

For details on the following tasks, see Chapter 6, “Viewing and Organizing Information”:

• Adding personal page contents

• Modifying personal page layout

• Changing personal page colors

• Displaying HTML content on personal pages

• Creating bookmarks

• Using exception notifications

• Embedding Interactive Reporting document sections in personal pages

---

**Launching a EPM Workspace Object as a tab in EPM Workspace from Dashboard**

Create a text label dashboard graphics object and add a script similar to examples below into the objects title in the Properties dialog:

• To launch a Financial Reporting report:
  
  ```html
  @HTML(<script> function newtabFR()
  {top.gModuleManager.launchRelatedContentUri(top.location.href + "?
  module=tools.relatedcontent&repository_path=/<encoded path to repository
  object>&showViewPane=false");}
  </script>
  <span id="idnameFR" onClick="newtabFR()" style="cursor:pointer"><title text></span>)
  ```

• To launch a Financial Management application:
  
  ```html
  @HTML(<script> function newtabHFM()
  {top.gModuleManager.launchRelatedContentUri(top.location.href + "?
  module=hfm.appcontainer&sourceApp=<hfm app>&cluster=<clusternname>");}
  </script>
  <span id="idnamehfm" onClick="newtabHFM()" style="cursor:pointer"><title text></span>)
  ```

• To launch a Planning application:
  
  ```html
  @HTML(<script> function newtabPlan()
  {top.gModuleManager.launchRelatedContentUri(top.location.href + "?
  module=HyperionPlanning.planning&sourceApp=<Planning application name>"));}
  </script>
  ```

---

Personalizing EPM Workspace 47
To launch any URI:

```html
@HTML(<script> function newtabURI() {top.gModuleManager.launchUri("valid URL");} </script>)
```

*Note:* `top.location.href` is `http://server:port/context`

For more example of supported URLs, see “URLs Supported by EPM Workspace” on page 48.

### Enumerating the Repository Contents of a Folder in Dashboard

This allows a user to list and launch repository contents of a folder within a dashboard. In the dashboard, create an embedded browser object and set the URL similar to following:


Other parameters include:

- Optional: `showViewPane=true/false`
  
  False to hide the view pane when launching enumerated content. Default value is true.

- Optional: `showIcons=true/false`
  
  False to hide the icons in the listing. Default value is true.

### Enumerating EPM Workspace Applications in Dashboard

This allows a user to list and launch EPM Workspace Applications within a dashboard. In the dashboard, create an embedded browser object and set the URL similar to following:


### URLs Supported by EPM Workspace

The following are published URLs that EPM Workspace supports:

- Normal URL:
  
  http://<server>:<port>/workspace/
Note: Included in the URL is the trailing slash and no index.jsp. Using index.jsp is not recommended since the Web browser’s Back button is enabled, and selecting it can cause issues. Using the trailing slash is encouraged. Without it, the Web server does a redirect to the URL with the trailing slash. Prior to 9.3.1, the *Install Start Here Guides* omitted the trailing slash.

Additional parameters:
- Optional: sso_username=<username>
  The name of the user attempting to log in.
- Optional: sso_password=<password>
  Password of the user attempting to log in.
- Optional: fullscreen=true/false
  True launches page in full screen. Default value is false.

- URL to launch repository content:
  
  http://<server>:<port>/workspace/?module=tools.relatedcontent&repository_path=<encoded path to repository object>

  Additional parameters:
  - Optional: bpm.logoff=true/false
    False prevents system from logging off if using the same session. Default value is true.

- URL to launch Financial Management (Consolidation) Application:
  
  http://<server>:<port>/workspace/?module=hfm.appcontainer&sourceApp=<hfm_application_name>&cluster=<clustername>&workspace=true&iscontained=yes&reopen=true

  Additional parameters:
  - Optional: showViewPane=true/false
    False to hide left pane when module is loaded. Default value is true.
  - Optional: bpm.logoff=true/false
    False prevents system from logging off if using the same session. Default value is true.

- URL to launch Planning Application:
  
  http://<server>:<port>/workspace/?module=HyperionPlanning.planning&sourceApp=<appname>

  Additional parameters:
  - Optional: showViewPane=true/false
    False to hide left pane when module is loaded. Default value is true.
  - Optional: bpm.logoff=true/false
    False prevents system from logging off if using the same session. Default value is true.
- URL to launch EPM Workspace log on page as full screen:
  
  \[http://<server>:<port>/workspace/?fullscreen=true\]

- There are two ways to allow a user to specify credentials after a custom log in fails:
  2. URL to launch EPM Workspace if custom log in fails:
     
     \[http://<server>:<port>/workspace/?allowLogin=true\]

     URL parameter: allowLogin=true

If you try to login to EPM Workspace when a custom login policy is specified and credentials from the custom login policy are not valid, then either option above allows a user to specify correct credentials.

**Toolbars**

Toolbars provide quick, context-sensitive access to commonly used features. Button availability is determined by the content-area module.

**Note:** For Firefox 2.0, use `Shift+Alt+key` as a key combination to invoke access key for the button. For Macintosh operating systems, use `Ctrl+key`, and for UNIX, use `Ctrl+Shift+key`.

**Note:** Your role determines which toolbars, menus, shortcut menus, and modules are displayed on the user interface. For example, if your role enables you to create documents, the toolbar menu item File, then New is displayed.

**Standard Toolbar**

The Standard Toolbar is used for common EPM Workspace features. These are displayed prior to opening any item from the Navigate menu.

**Table 6 Standard Toolbar Buttons**

<table>
<thead>
<tr>
<th>Button</th>
<th>Menu Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Document Icon]</td>
<td>File, then New, then Document</td>
<td>Create documents, such as Financial Reporting books and batches, Web Analysis documents, Interactive Reporting document, and Workspace Pages</td>
</tr>
<tr>
<td>![Document Icon]</td>
<td>File, then Open, then Document</td>
<td>Open repository documents</td>
</tr>
</tbody>
</table>
### Toolbars

#### Web Analysis Toolbar

The Web Analysis toolbar displays standard buttons and buttons specific to it.

**Table 7  Web Analysis Toolbar Buttons**

<table>
<thead>
<tr>
<th>Button</th>
<th>Menu Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>File, then Logoff</td>
<td>End the current session</td>
</tr>
<tr>
<td>NA</td>
<td>Help, then Help on This Topic</td>
<td>Displays help for the page displayed in the content area</td>
</tr>
<tr>
<td>View, then Data Layout</td>
<td>Display the Data Layout dialog box, used to redefine queries and dimension member selections</td>
<td></td>
</tr>
<tr>
<td>File, then Save</td>
<td>Save documents to the repository</td>
<td></td>
</tr>
<tr>
<td>File, then Save As</td>
<td>Save documents to the repository under new names or to new locations</td>
<td></td>
</tr>
<tr>
<td>NA</td>
<td>Display the browser Print dialog box, used to define print parameters and options</td>
<td></td>
</tr>
</tbody>
</table>

#### Financial Reporting Toolbar

The Financial Reporting toolbar displays standard buttons and buttons specific to it.

**Table 8  Financial Reporting Toolbar Buttons**

<table>
<thead>
<tr>
<th>Button</th>
<th>Menu Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>File, then Open in, then PDF Preview</td>
<td>Open documents in the browser in PDF</td>
<td></td>
</tr>
<tr>
<td>File, then Open in, then HTML Preview</td>
<td>Open documents in the browser as HTML</td>
<td></td>
</tr>
</tbody>
</table>

#### Book Editor Toolbar

The Book Editor toolbar displays standard buttons and buttons specific to it.
### Table 9  Book Editor Toolbar Buttons

<table>
<thead>
<tr>
<th>Button</th>
<th>Menu Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Button" /></td>
<td>Edit, then Add Document</td>
<td>Add reports and snapshots to books</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>Edit, then Delete</td>
<td>Remove reports and snapshots from books</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>Edit, then Member Selection</td>
<td>Open the member selection dialog box</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>Edit, then Move Up</td>
<td>Move reports or snapshots up in the list</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>Edit, then Move Down</td>
<td>Move reports or snapshots down in the list</td>
</tr>
</tbody>
</table>

### Batch Editor Toolbar

The Batch Editor toolbar displays standard buttons and buttons specific to it.

### Table 10  Batch Editor Toolbar Buttons

<table>
<thead>
<tr>
<th>Button</th>
<th>Menu Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Button" /></td>
<td>Edit, then Add Items</td>
<td>Adds reports, books, or snapshots to batches</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>Edit, then Delete</td>
<td>Removes reports, books, and snapshots from batches</td>
</tr>
</tbody>
</table>

### Production Reporting Toolbar

When viewing Production Reporting documents in EPM Workspace, no buttons are displayed in the toolbar area except for navigation buttons. Navigate among HTML-report pages and viewing reports in multiple output formats. The navigation buttons are dynamic, based on job output. For button descriptions, see Chapter 11, “Using Production Reporting Documents.”

### Interactive Reporting Toolbar

The Interactive Reporting toolbar displays standard buttons and buttons specific to it. For button descriptions, see Chapter 10, “Interactive Reporting” for details.

### Batch Scheduler Toolbar

The Batch Scheduler toolbar displays standard buttons and buttons specific to it.
### Table 11  Batch Scheduler Toolbar Buttons

<table>
<thead>
<tr>
<th>Button</th>
<th>Menu Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="Image" alt="File" /></td>
<td>File, then New Scheduled Batch</td>
<td>Opens the Schedule Batch dialog box</td>
</tr>
<tr>
<td><img src="Image" alt="Edit" /></td>
<td>Edit, then Properties</td>
<td>Displays the details for scheduled batches; for example, the time for which a batch is scheduled</td>
</tr>
<tr>
<td><img src="Image" alt="Edit" /></td>
<td>Edit, then Delete</td>
<td>Deletes scheduled batches</td>
</tr>
<tr>
<td><img src="Image" alt="View" /></td>
<td>View, then Refresh</td>
<td>Updates the EPM Workspace with changes to scheduled batches</td>
</tr>
<tr>
<td><img src="Image" alt="Action" /></td>
<td>Action, then Retrieve Output</td>
<td>Retrieves results for the latest batch job</td>
</tr>
<tr>
<td><img src="Image" alt="Action" /></td>
<td>Action, then Show Details</td>
<td>Displays batch details; for example name, start time, and destination</td>
</tr>
</tbody>
</table>

### Explore Toolbar

The Explore toolbar displays standard buttons and buttons specific to it.

### Table 12  Explore Toolbar Buttons

<table>
<thead>
<tr>
<th>Button</th>
<th>Menu Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="Image" alt="File" /></td>
<td>File, then New Folder</td>
<td>Creates folders</td>
</tr>
<tr>
<td><img src="Image" alt="NA" /></td>
<td>NA</td>
<td>Navigates up to the repository location that contains the current folder</td>
</tr>
<tr>
<td><img src="Image" alt="Edit" /></td>
<td>Edit, then Cut</td>
<td>Marks repository files to be moved</td>
</tr>
<tr>
<td><img src="Image" alt="Edit" /></td>
<td>Edit, then Copy</td>
<td>Marks repository files to be duplicated</td>
</tr>
<tr>
<td><img src="Image" alt="File" /></td>
<td>File, then Properties</td>
<td>Open the Properties dialog box, used to set file properties; for example, file permissions</td>
</tr>
<tr>
<td><img src="Image" alt="Edit" /></td>
<td>Edit, then Paste</td>
<td>Pastes files to the current repository location</td>
</tr>
<tr>
<td><img src="Image" alt="View" /></td>
<td>View, then Refresh</td>
<td>Updates EPM Workspace with changes to scheduled batches</td>
</tr>
</tbody>
</table>
Administer and Impact Manager Toolbars

The Administer and Impact Manager toolbars enable you to manage EPM Workspace properties, performance, and user interaction. For button descriptions, see the Oracle Enterprise Performance Management Workspace Administrator’s Guide.

Schedule Toolbar

Schedule module toolbars enable you to perform the following tasks:

- Run and schedule job types:
  - Interactive Reporting job – An Interactive Reporting document imported in EPM Workspace as a job and its associated files.
  - Production Reporting job – A Production Reporting report or program and its associated files. A Production Reporting job can be secure or nonsecure.
  - Generic job – A report or program from another software provider (for example, an Oracle report or a Crystal report), and any associated files.

- Run and schedule batches, which are collections of reports.

Menus

- From EPM Workspace, the standard menus are Navigate, File, View, Favorites, Tools, and Help. These are explained in the following tables.

- Menus and buttons are updated as you use the system, based on the following criteria:
  - The roles granted to you. Role determines which items are displayed from Navigate.
  - The Navigate item being used and the task being performed. For example, if you use Explore, the menus contain file or folder tasks.

Navigate Menu

The Navigate menu is available for all EPM Workspace modules. Options displayed for each item depend on your role and rights.

<table>
<thead>
<tr>
<th>Table 13 Navigate Menu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Command</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Applications, then Consolidations (Financial Management Applications),</td>
</tr>
<tr>
<td>then Planning (Planning Applications), then Performance Scorecard</td>
</tr>
<tr>
<td>Profitability and Cost Management</td>
</tr>
<tr>
<td>Oracle Business Intelligence Answers</td>
</tr>
<tr>
<td>Oracle Business Intelligence Interactive Dashboards</td>
</tr>
<tr>
<td>Oracle Business Intelligence Delivers</td>
</tr>
<tr>
<td>BI Publisher</td>
</tr>
<tr>
<td><strong>Note:</strong> If instanced products are installed but the current user is</td>
</tr>
<tr>
<td>not provisioned for any application instances, the Navigate, then</td>
</tr>
<tr>
<td>Applications menu displays a No Applications disabled menu item</td>
</tr>
<tr>
<td>followed by a Refresh menu item. The No Application labels and Refresh</td>
</tr>
<tr>
<td>menu items are not displayed if the user is provisioned for any</td>
</tr>
<tr>
<td>application instances. The same applies to the File, then Open, and</td>
</tr>
<tr>
<td>then Applications menu.</td>
</tr>
<tr>
<td>Administer</td>
</tr>
<tr>
<td>General</td>
</tr>
<tr>
<td>Shared Services Console</td>
</tr>
<tr>
<td>Explore Annotations</td>
</tr>
<tr>
<td>Physical Resources</td>
</tr>
<tr>
<td>Mime Types</td>
</tr>
<tr>
<td>Notifications</td>
</tr>
<tr>
<td>Smartcuts</td>
</tr>
<tr>
<td>Row Level Security</td>
</tr>
<tr>
<td>Usage Tracking</td>
</tr>
<tr>
<td>Event Tracking</td>
</tr>
<tr>
<td>Change Ownership</td>
</tr>
<tr>
<td>Dimension Library</td>
</tr>
<tr>
<td>Application Library</td>
</tr>
<tr>
<td>Data Synchronization</td>
</tr>
<tr>
<td>Application Upgrade</td>
</tr>
<tr>
<td>Job Console</td>
</tr>
<tr>
<td>Classic Application Administration, then Consolidation Administration</td>
</tr>
<tr>
<td>or Planning Administration</td>
</tr>
<tr>
<td>Consolidation System Messages</td>
</tr>
<tr>
<td>Consolidation Users on System</td>
</tr>
<tr>
<td>Manage Consolidation Servers and Application</td>
</tr>
<tr>
<td>Command</td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td>Schedule, then</td>
</tr>
<tr>
<td>Batch Scheduler</td>
</tr>
<tr>
<td>Job Queue</td>
</tr>
<tr>
<td>Job Notifications</td>
</tr>
<tr>
<td>Show Parameters</td>
</tr>
<tr>
<td>Jobs Running</td>
</tr>
<tr>
<td>Manage Events</td>
</tr>
<tr>
<td>Consolidated Job Status</td>
</tr>
<tr>
<td>Impact Manager, then</td>
</tr>
<tr>
<td>Synchronize Metadata</td>
</tr>
<tr>
<td>Update Data Models</td>
</tr>
<tr>
<td>Javascript Update</td>
</tr>
<tr>
<td>Custom Update</td>
</tr>
<tr>
<td>Manage Task List</td>
</tr>
<tr>
<td>Show Task Status</td>
</tr>
<tr>
<td>Show Impact of Change</td>
</tr>
<tr>
<td>Open Items (List of open modules)</td>
</tr>
</tbody>
</table>

1Classic Application Administration is enumerated with both Consolidation Administration and Planning Administration if a user has Dimension Editor and application creator roles for Financial Management and Planning.

## File Menu

The File menu is available for all EPM Workspace modules. Option availability depends on the content of the current window, module from which the menu is accessed, and user role. For example, user with Explorer role does not have File, then New option available.
### Table 14  File Menu

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>File, then New, then Document, Personal Page, Workspace Page</td>
<td>Create documents, such as books, batches, or analysis documents, use repository documents, open applications, Personal Pages, Workspace Pages.</td>
</tr>
<tr>
<td>Open, then Document Workspace Pages, then My Workspace Pages or Shared Workspace Pages Application, then Consolidations (Financial Management Applications), Planning (Planning Applications), Performance Scorecard Profitability and Cost Management Oracle Business Intelligence Answers Oracle Business Intelligence Interactive Dashboards Oracle Business Intelligence Delivers Oracle Business Intelligence Publisher Close, then Current All Others URL</td>
<td>Open option is used to open documents, such as books, batches, or analysis documents, use repository documents, open applications, Personal Pages, Workspace Pages. Close option is used to close only the current document you have open and is in focus or all documents that are open can be closed. The Others option is used to close all documents except for the one in focus or active.</td>
</tr>
</tbody>
</table>

**Note:** If instanced products are installed but the current user is not provisioned for any application instances, the File, then Open, and then Applications menu displays a No Applications disabled menu item followed by a Refresh menu item. The No Application labels and Refresh menu items are not displayed if the user is provisioned for any application instances.

| Preferences | Opens the Preferences dialog box, used to change your password (using native authentication) and e-mail address and set the default for opening snapshots (PDF Preview or HTML Preview) For Financial Reporting, you can also change your language selection and enable XBRL editing |
| Logoff | End the session |
| Exit | Exit EPM Workspace |

### View Menu

The availability of View menu options depends on the content of the current window and the module from which the menu is accessed.
Table 15  View Menu

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>View pane</td>
<td>Show or hide the View pane</td>
</tr>
</tbody>
</table>

Favorites Menu

Use the Favorites menu to set up personal pages and favorites and to select from a list of favorite documents.

Table 16  Favorites Menu

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage Favorites</td>
<td>Opens the Favorites Manager dialog box</td>
</tr>
<tr>
<td>Show Subscribed Items</td>
<td>Display documents to which you are subscribed and manage personal pages</td>
</tr>
<tr>
<td>Manage Personal Pages</td>
<td>Displays in alphabetical order a list of favorite documents or folders defined by you or pushed to you</td>
</tr>
<tr>
<td>Displays list of available application products, for example Performance Scorecard.</td>
<td>Shows and manages the list of items that you have subscribed to, which can include documents, applications, or custom links.</td>
</tr>
<tr>
<td>My Personal Page</td>
<td>Opens your personal page</td>
</tr>
</tbody>
</table>

Tools Menu

The Tools menu is always available. Command availability is determined by product and roles.

Table 17  Tools Menu

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Search</td>
<td>Introduces additional search filters</td>
</tr>
<tr>
<td>Links, then Web Analysis Studio</td>
<td>Connect to Web Analysis Studio documents or launch applications or custom links from the Tools menu</td>
</tr>
<tr>
<td>Install, then Oracle's Hyperion® Interactive Reporting Web Client</td>
<td>Install the Interactive Reporting Web Client. Smart View, see &quot;Using Smart View&quot; on page 45 for more information.</td>
</tr>
<tr>
<td>Install, then Oracle BI for Microsoft Office</td>
<td>Install Oracle BI for Microsoft Office. For more information, see Oracle BI Help from product.</td>
</tr>
<tr>
<td>Offline Planning</td>
<td>Offline Planning allows the user to execute the offline Planning installer by downloading the offline executable. For more information, see Oracle Hyperion Planning User's Guide.</td>
</tr>
</tbody>
</table>

Help Menu

You use the Help menu to access EPM Workspace Help and information about EPM Workspace.
Table 18  Help Menu

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help on this Topic</td>
<td>Displays help for the current topic</td>
</tr>
<tr>
<td>Contents</td>
<td>Opens the online help Contents tab, from which you can search for specific topics</td>
</tr>
<tr>
<td>Oracle Support</td>
<td>Opens the Oracle Technical Support home page</td>
</tr>
<tr>
<td>Oracle Technology Network</td>
<td>Opens the Oracle Technology Network home page</td>
</tr>
<tr>
<td>Oracle Web site</td>
<td>Opens the Oracle home page</td>
</tr>
<tr>
<td>About Hyperion Workspace</td>
<td>Opens the About Hyperion Workspace window, which contains information about Hyperion Workspace, including Workspace, UI, and Server versions and version details</td>
</tr>
</tbody>
</table>

Shortcut Menu Commands

To perform tasks, you can use shortcut menu commands, which are displayed when you right-click in Explore for a document. Option availability depends on the content of the current window and the module from which the menu is accessed.

Table 19  Shortcut Menu: Explore

<table>
<thead>
<tr>
<th>Explore - Right Click Menu</th>
<th>Menu Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Go Up A Level</td>
<td>Display the contents of the parent folder</td>
</tr>
<tr>
<td></td>
<td>New Folder</td>
<td>Add folders to the repository</td>
</tr>
<tr>
<td></td>
<td>Open</td>
<td>Select, open, and use repository documents</td>
</tr>
<tr>
<td></td>
<td>Open In, then HTML Preview</td>
<td>View documents in browsers as HTML or PDF</td>
</tr>
<tr>
<td></td>
<td>PDF Preview</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Import, then File, then URL, then File as Job, then Financial Reports,</td>
<td>Open the Import to Repository dialog box, used to import reports, books, snapshot reports and books, Microsoft reports, report objects (grid, text, image, and chart) and row and column templates into the repository</td>
</tr>
<tr>
<td></td>
<td>Microsoft Reports</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expand</td>
<td>From the View pane, display sub-folders under selected folder</td>
</tr>
<tr>
<td></td>
<td>Collapse</td>
<td>From the View pane, collapse selected folder</td>
</tr>
<tr>
<td>Menu Command</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Export</td>
<td>Open the Export dialog box, used to export saved reports, snapshot reports and books, and report objects (grids, text, image, and chart) from the repository</td>
<td></td>
</tr>
<tr>
<td>E-mail Link</td>
<td>Display the E-mail Editor dialog box, used to indicate recipient names and e-mail message subjects. E-mail Links Editor creates hyperlinks to files so recipients can view the files in Web browsers. Only Financial Reporting users can view hyperlinked files.</td>
<td></td>
</tr>
<tr>
<td>Cut</td>
<td>Remove repository items and place copies on the clipboard</td>
<td></td>
</tr>
<tr>
<td>Copy</td>
<td>Copy a repository item</td>
<td></td>
</tr>
<tr>
<td>Paste</td>
<td>Place cut and copied items in reports</td>
<td></td>
</tr>
<tr>
<td>Delete</td>
<td>Remove files from the repository upon confirmation</td>
<td></td>
</tr>
<tr>
<td>Delete with Outputs</td>
<td>For Interactive Reporting documents, delete items with job outputs, if there are outputs</td>
<td></td>
</tr>
<tr>
<td>Rename</td>
<td>Changes name of file or folders</td>
<td></td>
</tr>
<tr>
<td>Properties</td>
<td>Display scheduled batch detail; for example, the time for which a batch is scheduled</td>
<td></td>
</tr>
<tr>
<td>Run Job</td>
<td>For Interactive Reporting jobs, set job parameters and run jobs</td>
<td></td>
</tr>
<tr>
<td>Subscribe</td>
<td>Inform subscribing users of document changes</td>
<td></td>
</tr>
<tr>
<td>Create Shortcut</td>
<td>Create document shortcuts, for example, create shortcuts to Interactive Reporting, PDF, and HTML documents</td>
<td></td>
</tr>
<tr>
<td>Retrieve</td>
<td>Download and save an Interactive Reporting document</td>
<td></td>
</tr>
<tr>
<td>Schedule Job</td>
<td>Schedule Interactive Reporting Job</td>
<td></td>
</tr>
<tr>
<td>Add to Favorites</td>
<td>Add files to the favorites list</td>
<td></td>
</tr>
<tr>
<td>Refresh</td>
<td>Refresh the repository to include new folders and files</td>
<td></td>
</tr>
<tr>
<td>Edit Permissions</td>
<td>Change or update access rights for an artifact</td>
<td></td>
</tr>
<tr>
<td>Apply Permissions to Children</td>
<td>Select the access rights to apply for all children objects of a folder.</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The only objects updated are the ones you have Full Control permission.
Setting Preferences and Personalizing EPM Workspace

In This Chapter

<table>
<thead>
<tr>
<th>Setting Preferences</th>
<th>Setting Up the User POV for Financial Reporting Documents</th>
<th>Displaying Aliases and Descriptions in the User POV for Financial Reporting</th>
<th>Personalizing Your EPM Workspace</th>
<th>Standard Files</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>85</td>
</tr>
</tbody>
</table>

Setting Preferences

Set defaults for initial view of EPM Workspace following login, Explore, authentication, applications, file types, Reporting and Analysis products, Oracle BI EE, and Oracle BI Publisher products. Preferences are also set for Accessibility Mode in EPM Workspace, see Appendix A, “Accessibility.” For Planning end-user preference settings see the Oracle Hyperion Planning User’s Guide and for administrator and application preferences, see the Oracle Hyperion Planning Administrator’s Guide. For Financial Management end user preference settings see the Oracle Hyperion Financial Management User’s Guide. For Performance Scorecard, see the Oracle Hyperion Performance Scorecard User Guide and the Oracle Hyperion Performance Scorecard Application Designer’s Guide. For Profitability and Cost Management, see the Oracle Hyperion Profitability and Cost Management User’s Guide and the Oracle Hyperion Profitability and Cost Management Administrator’s Guide. Use these preference tabs:

- “Setting General Preferences” on page 61
- “Setting Explore Preferences” on page 65
- “About Module Preferences” on page 67

Note: User interface settings from the View menu override default settings defined in General Preferences and remain until logging off. See “Personalizing Your EPM Workspace” on page 85.

Setting General Preferences

All users have access to general preferences. For example, a Planning or Financial Management user can set an application as their default startup item at logon. General preferences set defaults for default start page for the Content area, displaying document paths, prompting to save files, setting accessibility mode, and a default e-mail address. Change passwords after logging on to
EPM Workspace. This option is available to users with native authentication parameters specified, not external authentication.

Changes made using Preferences go into effect next time you log on.

➤ General preferences:

1. **File then Preferences.**

   **Note:** The e-mail address displayed is your e-mail address registered in your user security settings. You cannot update it.

2. **Hide document file paths in the progress bar by clearing Show Path For Documents.**

3. **EPM Workspace prompts you to save unsaved files by checking Prompt to Save Unsaved Files.**

4. **In Default Startup Options, select an option to display by default whenever you log in to EPM Workspace. The default option is Explorer, if users have the Explorer role and None if not.**

5. **Depending on your selection in step 4, complete the following:**
   - Explore option, click **Select.** From Select, select a folder and click **OK.** The path and folder displays in Folder.
   - Document option, select **Select.** From Select, select a document and click **OK.** The path and document name displays in the Document text box. You can also select a Workspace Page as your home page. A sample Workspace page is included with EPM Workspace in the Shared Workspace Pages folder. See also, “Using Home Page” on page 63.
   - Favorite option, select one of the following:
     - Select a favorites page you have saved from the Favorites menu to display in the content area.
     - Click **My Personal Page.**
   - For Application option, select the drop-down arrow next to the Application field. Select the following:
     - Consolidation for Financial Management applications
     - Planning for Planning applications
     - Profitability and Cost Management
     - Oracle BI EE applications

   **Note:** If instanced products are installed but the current user is not provisioned for any application instances, the Navigate, then Applications menu displays a No Applications disabled menu item followed by a Refresh menu item. None of these three items appear if the user is provisioned for any application instances. The same applies to the File, then Open, and then Applications menu.

6. **Scorecards**

   **Note:** In the Scorecard/Map text box, enter the Scorecard name or leave it blank.
Perform one of the following tasks:

- Save changes, click OK.
- Cancel changes, click Cancel.

**Note:** For details on Accessibility Mode, see Appendix A, “Accessibility.”

**Using Home Page**

Home page provides a starting point for users and launching point for EPM Workspace functionality. Home page can be used as follows:

- Home Page is the default startup document for users with a BI+ role. The Home page file installed with EPM Workspace is your default home page. This file is located in the Shared Workspace Pages folder.
- When you select the Home button, it opens the Home page that was selected from the Preferences dialog, Default Startup Options. For example, if you created a Workspace Page you can point to this file as your home page.

This home page file displays recently opened documents, Workspace Pages, and Quick Links to Favorites and Applications that a user has access to. For more information on Workspace pages, see “Workspace Pages” on page 164.

**Home Page Features**

The default home page consists of recently opened items, Workspace pages, and Quick links.

**Recently Opened**

Recently Opened has the following functionality:

- Stores recently opened items for each user provisioned in EPM Workspace
- Items listed have an icon followed by item name
- Clicking on an item opens it in the module content area
- Items supported include EPM Workspace repository items and applications
- If documents currently displayed are deleted from repository or user is deprovisioned from application, items is removed.
- Selecting the Open link displays the Open dialog from which you can open a document

**Workspace Pages**

Workspace Pages has the following functionality:

- Maximum size of files listed for each My Workspace Pages and Shared Workspace Pages is four. If only one of the listings is displayed, for example only My Workspace Pages are listed then the maximum number displayed is nine. If the user has access to more My Workspace
pages and Shared Workspace pages a More link is displayed which when selected displays a context menu to display all the remaining items.

- Maximum number of documents displayed is 10. If there are more then ten, links are displayed which display a context menu listing the remaining items
- Clicking on an item opens the item in the module content area

Quick Links
Quick links has the following functionality:

- Favorite items are displayed followed by application items
- Maximum size of each listing is four. If there are more items, then links are displayed for a context menu listing the remaining items. If there are no applications to list, then the maximum number of Favorites that can be displayed is 23.
- Clicking on an item in a section opens the item in module content area

**Setting Start Page back to Home Page**
If you change the Default Startup Options preferences to an application or document other than Home page you can set it back to the default Home page shipped with EPM Workspace.

1. To set the EPM Workspace start page back to Home page installed in the Shared Workspace Pages folder:
   1. Select File then Preferences.
   2. Select Document from the Content drop-down menu.
   3. Click Select. From the Select dialog, select the Shared Workspace Pages folder and select the Home Page Workspace page.
   4. Select Show Hidden Items and select the file named HomePage.
   5. Select OK for both the Select and Preferences dialog. The next time you login, the Shared Workspace Home page is displayed.

**Setting Authentication Preferences**
Set Authentication preferences to change your EPM Workspace login password.

1. Set Authentication preferences:
   1. Select File then Preferences, click Authentication.
   2. In Change Password, enter your current password and a new password.
   3. Re-enter your new password to confirm.
   4. Click OK.
For Interactive Reporting and Production Reporting authentication:

1. Select **File**, then **Preferences**, click **Authentication**.
2. Repeat step 2 through step 4 above in the In Credentials Used for Pass-Through area.

### Setting Explore Preferences

Set Explore preferences to define default folders and default permissions for items that you create or import. You can specify default permissions for specific users, groups, or roles. If you do not set these preferences, the Default folder and New Document folder are set to the top-most, or root folder and permissions for items are set to Empty.

You can modify the following Explore Preferences:

- **Default Folder** - Your default folder is shown when you use Explore. Set it to the folder you access most frequently.
- **New Document Folder** - The New document folder is the default folder where the new document wizard searches for Web Analysis database connection files and Interactive Reporting documents. If you are creating new Interactive Reporting documents and browse for data sources this folder is used.
- **Default Permissions** - Default permissions are applied when you create a folder or import artifacts. Default permissions determine:
  - The ability of a user, group, or role to access the item.
  - Whether to automatically push the item to the user, group, or role favorites.

  **Note:** These default permissions are automatically applied to all artifacts you create or import. You can override these defaults by manually changing the permissions when you create or import the artifact.

Set default folders:

1. Select **File**, then **Preferences**, then select **Explore**.
2. Set the Default folder and New Document folder.
3. Click **Select**, and do one of the following steps:
   - From Look in, select a folder.
   - From the list of names:
     - Select a folder
     - To navigate, double-click a folder
       - The folder you select is displayed in the Name text box.

   **Tip:** Do not type a name in the Name text box.
4. From Default Permissions, select one of the following:
   - Interactive Reporting documents
● Interactive Reporting jobs
● Production Reporting jobs
● Generic jobs
● All other documents
● Folders

5 Click OK or Cancel.

6 To continue setting default permissions, repeat step 3.

Set default permissions:

Select Set Permissions to set default permissions for users, groups, and roles. The Permissions dialog is displayed. See “Setting Permissions and Pushing Artifacts” on page 129.

Formatting Preferences

The following preferences can be set for all reports created from EPM Workspace:

● “Default Formatting Preferences” on page 66
● “User Preferences and Formatting Options” on page 67

Default Formatting Preferences

Default Formatting preferences specify default data formatting for all subsequently created reports. Options are organized by their ability to amend, format, or replace data returned from the data source.

Table 20

<table>
<thead>
<tr>
<th>Formatting Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leading and Trailing Formatting</td>
<td></td>
</tr>
<tr>
<td>Currency Symbol</td>
<td>Inserts the following currency formatting symbols into the Positive Prefix and Negative Prefix text boxes: Dollar ($), Cents (¢), Pound (£), Euro(E), Deutschmark (DM), Franc (F), and Yen (¥).</td>
</tr>
<tr>
<td>Positive Prefix</td>
<td>Enters character to precede positive numeric values.</td>
</tr>
<tr>
<td>Positive Suffix</td>
<td>Enters character to follow positive numeric values.</td>
</tr>
<tr>
<td>Negative Prefix</td>
<td>Enters character to precede negative numeric values. <strong>Warning</strong>: The minus sign (⁻) is the default prefix. Deleting the default prefix without replacing it causes negative values to display positively.</td>
</tr>
<tr>
<td>Negative Suffix</td>
<td>Enters character to follow negative numeric values.</td>
</tr>
<tr>
<td>Numeric Formatting</td>
<td></td>
</tr>
<tr>
<td>Grouped Thousands Check Box</td>
<td>Displays numeric digits as grouped by thousands.</td>
</tr>
<tr>
<td>Minimum Decimals</td>
<td>Indicates the minimum number of decimal places to display.</td>
</tr>
</tbody>
</table>
### Formatting Options

<table>
<thead>
<tr>
<th><strong>Description</strong></th>
<th><strong>Maximum Decimals</strong></th>
<th>Indicates the maximum number of decimal places to display.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scale</strong></td>
<td></td>
<td>Enables abbreviated values by tens, hundreds, thousands, ten-thousands, hundred-thousands, millions, and billions.</td>
</tr>
<tr>
<td><strong>Use Negative Color Check Box</strong></td>
<td>Indicates that negative numbers are signified by a selected color.</td>
<td></td>
</tr>
<tr>
<td><strong>Select Negative Color</strong></td>
<td>Enables you to select the color representing negative values.</td>
<td></td>
</tr>
</tbody>
</table>

### Samples

<table>
<thead>
<tr>
<th><strong>Description</strong></th>
<th><strong>Update Samples</strong></th>
<th>Updates the samples panel based on the most recent formatting selections.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Replace Missing With</strong></td>
<td>Replaces missing values with either a text string or zero.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Zero</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Text</td>
<td></td>
</tr>
</tbody>
</table>

## User Preferences and Formatting Options

There are identical formatting options and user preferences. User preferences are global settings applied to new documents. User Preferences can be overridden by database connection formatting and document-based formatting.

**Order of Formatting Precedence:**

1. Options saved with documents
2. Options saved with the database connection
3. Options specified in the User Preferences dialog box

Spreadsheet user preferences and chart user preferences are identical to spreadsheet options and chart properties. They are only applied to subsequently created documents.

## About Module Preferences

Web Analysis, Financial Reporting, Production Reporting, Interactive Reporting, Performance Scorecard, Financial Management, Planning, Oracle BI EE, and Oracle BI Publisher preferences are accessed from the Preferences dialog box:

- **Setting Web Analysis Preferences** are organized on three tabs. These options specify the active preference file, set default leading and trailing data value formatting, numeric formatting, and database connection parameters for Web Analysis documents.
- **Setting Preferences for Financial Reporting** include options for how you want to preview documents, POV settings, export options, and formatting options, preferences for designing reports, the language to use, units of measure and guidelines document layouts.
- **Setting Preferences for Production Reporting** include scanning folders for Production Reporting Jobs.
Setting Preferences for Interactive Reporting include options for setting locale defaults based upon the country of origin, date and time formatting, and number formatting.

Setting Preferences for Oracle BI Publisher includes options for UI language, report locale, SVG supports in HTML, report time zone, and setting password.

Setting Preferences for Oracle Business Intelligence Products includes viewing general account information, preferences for default dashboard, locale, and language, time zone, delivery options, and so on.

To display the Preferences dialog box, select : File, then Preferences.

### Setting Web Analysis Preferences

Preferences are stored in the repository as preference files. A preferences file is located in every users Profiles folder. Share preference files with other users. Although multiple preference files can be defined, only one preference file can be active at a time.

**Note:** Only subsets of Web Analysis preferences are set through EPM Workspace. The Web Analysis Studio offers a comprehensive interface for specifying Web Analysis preferences. EPM Workspace and the Web Analysis Studio modify the same files.

### Setting the Active Preferences File

The Preferences dialog box Active Preferences tab specifies the current preferences file.

Selecting **Use My Preferences** indicates you are using and editing the preferences file located in your Profiles folder. Selecting **Use Shared Preferences** indicates you are using a shared preferences file at the specified repository location.

**Note:** The default location for Shared Preferences files is in the User\<Profiles> folder.

Changing the Active Preference does not impact opened documents in the content area. User and shared preferences are only applied to subsequently created documents.

Upon editing shared preferences files, change the default behavior for users referencing that file. To prevent users from changing your preferences, restrict yourself to using your own preferences file.

### Default Document Open Mode

- Selecting **HTML** or **Web Analysis Studio**, as your default document open mode, opens Web Analysis documents in the default mode selected
- Selecting **HTML** opens the document in EPM Workspace.
- Selecting **Web Analysis Studio** launches a Web Analysis Studio session, automatically logging in and opening the selected document.
Web Analysis Database Preferences

Web Analysis Databases user preferences provide an inventory of available database servers and database connections by listing the database connection name, description, alias table, and repository location.

To review database connection names, click Edit. The Database Preferences dialog box is displayed. It has three tabs:

- Details
- Point of View
- Personal Variable

Click Connect to connect to data sources and retrieve values. If you are unable to connect, you may browse to another database connection file.

About Alias Tables

Alias tables are database tables that store aliases, or alternate description labels, for dimensions or members. Essbase enables you to define multiple alias tables. Web Analysis user preferences enable you to specify which alias table to use. The alias table selection is saved as a Web Analysis Database user preference.

Label mode enables you to select whether dimension members are listed by ID number or description. Label mode options are data source-specific, and are set for database connections, specific documents, and specific dimensions.

Label mode indicates whether the description or ID number is used and the database alias table provides the displayed value. Set the alias table before opening documents using Web Analysis Database user preferences.

Specify which description label to use in specific dimensions, using Dimension Browser and set a default label mode after querying the data source using Data Display options on the data object right-click menu.

Setting Alias Tables

1. Specify default alias tables for database connections:

1. Select File, then Preferences.
2. Click Web Analysis.
3. Click Active Preferences, and select either Use My Preferences, or Use Shared Preferences. If you select Use Shared Preferences, click Browse and select a shared preferences file from the repository.
4. Click to make the Databases tab the current tab.
The Databases tab lists all available database connections for the active user.

5 **Optional:** To edit database preferences for a database connection, select the database connection from the list then click **Edit**.

6 **Optional:** To add a database connection to the list, click **Add**.

   The Database Preferences dialog has three tabs: Details, Point of Views, and Personal Variables. Point of Views and Personal Variable tabs are disabled until a database connection is identified.

7 **Optional:** To identify database connection files, perform one:
   - Click **Browse** and navigate to a database connection file in the repository. Select the file, click **Open** then **OK**.
   - Enter the repository location and filename for existing database connection files in the text area.
     - If you do not have access to database connection files, consult your Web Analysis administrator.

8 Click **Connect** to retrieve the latest values from the database connection.

   To log on to the data source, enter log on credentials, click **OK**.

   When you have connected to the data source, the Database File Location text area is disabled, and the Connect button is converted to a Disconnect button. Data sources supporting Point of View, Personal Variables and Alias Tables have these controls.

9 Select an alias table from the **Alias Table** drop down list.

10 Click **OK**.

   Whenever the specified database connection is used, the selected label mode is also used. Subsequent label mode selections made in the Cube Navigator or the Dimension Browser overwrite these default settings.

**Setting the Database Logon Method**

Web Analysis enables you to select among several data source log on options, and to save that selection as a Web Analysis Database user preference.

- Set default log on methods for specific database connections:

  1 Select, **File** then **Preferences**.

     The User Preferences dialog box is displayed.

  2 Click **Web Analysis**.

  3 **Click Active Preferences**, select **Use My Preferences** or **Use Shared Preferences**. If you select **Use Shared Preferences**, click **Browse** and select shared preferences file from the repository.

  4 **Click to make the Databases tab the current tab**.

     The Databases tab lists all available database connections for the Active user.
5 Optional: To edit database preferences for a database connection, select the database connection from the list then click Edit.

6 Optional: To add database connections, click Add.

The Database Preferences dialog box is displayed. It has three tabs: Details, Point of Views and Personal Variables. The Point of View and Personal Variable tabs are disabled until database connections are identified.

7 Optional: To identify database connection files, perform one:

- Click Browse and navigate to database connection files in the repository. Select the file and click the Open dialog box OK button.
- Enter the repository location and filename for existing database connection files in the text area.

If you do not have access to any database connection files, consult your Web Analysis administrator.

8 Click Connect to retrieve the latest values from the database connection.

Enter valid log on credentials, click OK.

When you have connected to the data source, the Database File Location text area is disabled, and the Connect button is converted to a Disconnect button. Data sources supporting Point of View, Personal Variables and Alias Tables, have these controls.

9 Select one option from the Default Logon group:

<table>
<thead>
<tr>
<th>Default Logon Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use User's name and Password</td>
<td>Connects to the database connection using the Web Analysis user name and password.</td>
</tr>
<tr>
<td>Prompt for User Name and Password</td>
<td>Connects to the database connection by prompting the user for a Web Analysis user name and password.</td>
</tr>
<tr>
<td>Enter User Name and Password</td>
<td>Connects to the database connection using a user name and password for the database connection, if it varies from the Analyzer Login parameters. You must enter the valid values in the corresponding text areas.</td>
</tr>
</tbody>
</table>

10 Click OK.

About Point of View Definitions

Point-of-view database preferences enable you to automatically insert dimensions and members that are of interest to them into the documents of others. Point of View definitions must be defined and activated specifically for a database connection.

When a point of view (POV) is activated, the Use Point of View check box in Cube Navigator and the Document Creation wizard are enabled. All subsequently created and loaded documents use the specified POV until it is deactivated. You can also deactivate use of POV by deselecting the Cube Navigator Use Point of View option as needed.
Point of View definitions consist of both axes and dimension member selections. The entire definition is used when new documents are created with the activated POV.

When you apply a point of view definition to an existing document, only the dimension member selections are applied. This prevents points of view from automatically arranging non-functioning layouts (such as moving all dimensions to a single axis).

If all POV member selections are custom filters, you may not see obvious changes to your document. Check to see which POV is applied on the View pane Information Panel tab, Point of View segment.

Using a point of view definition is a three part process. First, create a point of view definition. Next, activate the point of view definition. Lastly, set an existing document to use the activated point of view definition or create a new document that uses it.

Consider the following benefits:

**Generic and Specific Documents**

Document designers in large enterprises can create sets of generic documents, knowing that individual users can superimpose diverse and user-specific member selections into documents.

**Replacing Member Selection Statements**

Apply the complex calculations and analysis tool definitions of others' documents to the dimensions and members they track, using Point of View. This eliminates the need for the user to investigate and recreate these analyses.

**Default Dimension Layout and Member Selections for New Documents**

When Point of View is activated, the document-creation process is simplified. Cube Navigator is loaded with the dimension member selections designated by the current Point of View.

**Session-based Point of View**

Point of View is session-based. Point of View definitions are saved and recalled as part of individual database connections. This enables them to be used on all the documents using the corresponding database connection.

**Reloading Documents**

You must reload the document for the applied Point of View definition to be displayed.

**Point of View and Personal Variables**

Point of View definitions replace all existing member selections for corresponding dimensions and database connections. Personal variables augment existing member selections for single dimensions. Leverage personal variables in the creation of Point of View definitions.
**About Personal Variables**

Define and name complex member selections. Leverage personal variables when they are presented with the corresponding dimension and database connection.

**Generic and Specific Documents**

Other users create personal variables using the same name, dimension, and database connection that contain the dimensions members that are of interest to them. This technique creates hybrid documents with generic and user-specific content.

**Point of View and Personal Variables**

Point of View definitions replace existing member selections for corresponding dimensions and database connections. Personal variables augment member selections for single dimensions. Leverage personal variables in the creation of Point of View definitions.

**Setting Preferences for Financial Reporting**

The Financial Reporting Preferences dialog box contains two tabs; the General tab for setting EPM Workspace preferences and the Financial Reporting Studio tab for setting client preferences.

1. **Set Financial Reporting preferences:**
   1. Select **File**, then **Preferences**, then **Financial Reporting**
   2. From **Financial Reporting General** tab, select **HTML Preview** or **PDF Preview** to indicate default preference when previewing documents.
   3. From **User Point of View**:
      - Select **On** to enable the User Point of View to display prior to running a report or **Off** to disable. Off is the default.
      - Select where on the EPM Workspace you want to display the Point of View. **In View Pane** is the default. You can also select to display above the report or book.
      - Select **Setup Members** to select members you want available when using the User POV. The Setup User POV dialog is displayed. See the “Setting Up the User POV for Financial Reporting Documents” on page 83 for more information.
   4. Select a character for the Thousands Separator. The options are comma (,), period (.), underscore (_), and Space.
   5. Select a character to represent decimal points (for example, 1,000.06) for the Decimal Separator. The options are comma (,), period (.), underscore (_), and Space.
   6. From Export to Office Application, select either **Office 2000** or **Office 2002 or higher** as the version of Microsoft Office that you have installed.
Select Merge Equivalent Prompts to respond only once or deselect to respond consecutively to prompts and variables that are repeated multiple times.

Note: The setting for Merge Equivalent Prompts takes precedence in the EPM Workspace. However, if the Merge Equivalent Prompt is not set in the EPM Workspace, the default setting in the fr_global.properties file is used.

Select Show Annotation to add, edit, and display annotation in a report.

Select Annotation Print Details to specify how annotations should print. See “Setting Annotation Printing Preferences” on page 74.

From the Financial Reporting Studio tab, use the drop-down menus to activate default Financial Reporting Studio settings.

- Language—The language to display on the designer labels
- Units—The default units setting on the report designer; Inches or Centimeters
- Guidelines—The background settings on the report designer; Color, Style (dot or line), and Snap to Guide Line setting

You can also select whether you want to enable XBRL editing. See the Oracle’s Hyperion Financial Reporting – User’s Guide

Select OK.

Setting Annotation Printing Preferences

You can specify how annotations should print. There are 2 main preference settings:

- Details — When selected, a system-defined footnote is created. The Use Footnote Details area is enabled where the user can select print options such as the annotation elements to print and the number of annotation replies to print. Generic formatting is applied and the system-defined size and fonts are used.
- Text Object — When selected, the footnote function in the report’s text object is used to print annotations. Footnote functions are created by the report designer. This option provides more flexibility in terms of formatting and printing of annotations. For example, the footnote function may specify to print only grid annotations with different size, font, and color to be applied to the heading and content.

To set annotation printing preferences

1. In the Annotation Printing Preferences drop-down, select one:
   - Details - Use system-defined footnote details and printing of annotations. Generic formatting is applied.
     a. In Use Footnote Details, select the annotation elements to print.
Note: If you select Include replies, indicate to include All replies, Top number of replies or Bottom number of replies. Enter the number of replies to print in the space provided.

- Text Object — Use customized formatting and printing of annotations.
  a. In Use Footnote text object, click Select and search for a text object in the repository.

2. Click OK.

Setting Preferences for Production Reporting

Use this for Production Reporting files.

Set preferences for Production Reporting:

1. File, then Preferences, then Production Reporting.

2. Do one of the following:
   - Select All Folders to scan folders listed in Explore.
   - Select the Selected Folders option to search folders listed in the Folder window.

3. Use the Add and Remove buttons to add and delete folders from the Folder window. Selecting the Add button opens a Select dialog from which you can select the folders to add to your search. To remove a folder from the Folder window, select the folder and click the Remove button.

4. Select OK.

Setting Preferences for Interactive Reporting

Set preferences for Interactive Reporting:

1. File, then Preferences, then Interactive Reporting.

2. Select the country from the locale drop-down menu that you are setting the defaults for. The locale selected sets the locale or country associated with the default format that you want to use. The locale that you select determines the available number, date, and currency formats.

3. Select a format for the date, timestamp, time, and month from each of the drop-down menus. Date sets the default date format, timestamp sets the default time and date format, time sets the default time format, and month sets the default month format for the month used in Add Date Groups.

4. Select a format for the real number, integer, and null option from each of the drop-down menus. Null sets the default format for null values. Null values are empty values for which no data exists. Null values are not equal to zero. Real sets the default format for real values and integer sets the default format for integer values.

5. Select OK.
Default Open Interactive Reporting Format

The Default Open Format drop-down on the Interactive Reporting Preferences window enables you to set the default program to open Interactive Reporting documents when you select open from the menus. The default program can be set to HTML or Interactive Reporting Web Client. If the Interactive Reporting document is opened as HTML, the document is displayed in HTML format in the Content pane. In Interactive Reporting Web Client format, the document is opened in a special application file placed in a Web browser’s plug-in directory.

To select the default program:
1. Select File, then Preferences, then Interactive Reporting.
2. Select the default program to open the document from the Default Open Format drop-down and click OK.

Setting Preferences for Oracle BI Publisher

Use the Preferences page to set the following:
- UI Language
- Report Locale
- Report Time Zone
- SVG support in HTML
- Report Viewer Height

To set preferences for Oracle BI Publisher:
1. Select File, then Preferences.
2. Select Oracle BI Publisher. Complete the tasks in the following sections.

Setting UI Language

The UI language is the language that your user interface displays in.

Note: The Locale and Use Interface Languages lists are read-only, because you cannot modify them. The locale and language are inherited from EPM Workspace. See the Oracle Enterprise Performance Management Workspace, Fusion Edition Administrator’s Guide for information on setting the locale.

Setting Report Locale

A locale is a language and territory combination, for example, English (United States) or French (Canada). Oracle BI Publisher uses the report locale selection to determine the following:
- The template translation to apply
- The number formatting and date formatting to apply to the report data.
Note: A particular report must have an available template translation for the selected locale. If not, Oracle BI Publisher applies a locale fallback logic to select the template. For more information, see Oracle Business Intelligence Publisher User’s Guide.

The appropriate number and date formatting are applied independently of the template translation.

**Setting Report Time Zone**

Select the time zone to apply to your reports. Reports run by this user display the time according to the time zone preference selected here. You can override this setting for a particular report. See Schedule Report in the Oracle Business Intelligence Publisher User’s Guide.

Note: The time displayed on the user interface and reflected in report processing times is governed by the Oracle BI Publisher server time zone.

**Enable SVG for HTML**

You can choose to have graphics in your HTML reports displayed using scalable vector graphics (SVG) technology. Your browser may require a plug-in to enable SVG. If so, you are prompted to download this plug-in the first time you attempt to view an HTML graphic with SVG enabled. If you do not wish to use the SVG plug-in, select No.

**Report Viewer Height**

You can set report viewer height by entering a value in the text box.

**Setting Preferences for Oracle Business Intelligence Products**

You can perform the following actions from the Preferences page:

Note: The Locale and Use Interface Languages lists are read-only, because you cannot modify them. The locale and language are inherited from EPM Workspace. See the Oracle Enterprise Performance Management Workspace, Fusion Edition Administrator’s Guide for information on setting the locale.

- View general account information, such as your display name and user ID.
- View and modify your preferences such as a default dashboard.
- View and modify your delivery options for Oracle BI Delivers iBots.
- View the Presentation Services groups to which you currently belong.
Note: Depending on your privilege settings, not all of these options may be available.

To change your preferences:

1. Select File, then Preferences.
2. Select Oracle Business Intelligence.
3. In the Preferences section, perform one of the following actions:
   - In the Default Dashboard drop-down list, select the dashboard you want to display when you log in to Oracle BI.
   - Select a time zone from the Time Zone drop-down box. For details on setting time zones, see “Setting Your Oracle BIEE Time Zone” on page 78.

Setting Your Oracle BI EE Time Zone

You can use the time zone option to choose your Oracle BI EE account’s preferred time zone. This option allows system users who do not reside in the same physical location to override the default time zone that was set by the system administrator. For example, suppose the Oracle BI server that sends you alerts resides in the US Pacific time zone, but your work location is in the US Central time zone. After you set the Central time zone as your preferred time zone setting, the delivered time on your alerts appears in Central time. Your account’s time zone automatically apply to any items that you create, modify, run, receive, and print.

The date and time columns included in reports appear according to the report designers specifications. The report designer can force a specific time zone to appear in the column, or allow the users default time zone to appear in the column. A clock icon appears in the column heading, and when you mouse over this icon, the name of the time zone used in the column is displayed.

For more information on how the administrator sets the Oracle BI Presentation Server’s time zone, see the Oracle Business Intelligence Presentation Services Administration Guide.

Setting Your Oracle BI EE Delivery Options

This section of the Oracle BI EE preferences dialog allows you to add or modify the devices on which you receive notifications from Oracle BI Delivers.

Note: If devices or profiles have been preconfigured for you, do not change them without first consulting your Oracle BI administrator.

For more information on setting your delivery options, see “Configuring Your Oracle BI Delivers Devices, and Delivery Profiles” on page 79.
Configuring Your Oracle BI Delivers Devices, and Delivery Profiles

Oracle BI users can configure delivery devices and delivery profiles through the My Account link. These links are available on the main page in Oracle BI Answers, Oracle BI Delivers, and Oracle BI Interactive Dashboards.

Devices and delivery profiles control how Oracle BI Delivers reach you when an alert is triggered by an iBot. After you add one or more devices, you can create delivery profiles, and specify which delivery profile should be your active profile for receiving alerts.

Note: If your Delivery Options area already contains devices and profiles, do not make any changes to the Delivery Options area without first consulting your Oracle BI administrator (any changes you make will override the delivery device and profile information that was configured for you).

Users can also add devices, specify alternative default devices, and configure their delivery profiles.

To configure a delivery option for Oracle BI Delivers:

1. Select File, then Preferences.
2. Select Oracle Business Intelligence.
3. To add a device, perform the following steps:
   a. Select the tab for the device you want to add. For example, select the Email tab.
   b. Select the Add Device link (for example, the Add Email Device link). The Device page appears with the Device Name field populated, and options are available in the Device / Provider list.
   c. Select the appropriate option for the device category from the Device / Provider drop-down list.
   d. Enter the address for the device in the Address field. For example, this would be an email address for email, or a telephone number for a digital phone.

   Note: When typing a phone number for a device, do not use punctuation such as spaces, dashes, or parentheses.
   e. Select Finished to return to the My Account page. The device appears in the Devices area for the appropriate category (for example, Email devices).
   f. To change information for the device, select the Edit link to go back to the Device page.
   g. If you decide you do not want the device, select the Delete link. This removes the device from the Devices area.
   h. To add another device, repeat the preceding steps.
4. To specify an alternative default device, perform the following:
   a. Select the tab for the device category in which you want to set a default device (for example, Email, Phone). All devices for the selected device category are displayed.
To add a delivery profile, perform the following:

5. To add a delivery profile, perform the following:
   a. Select the Add Delivery Profile link. The Delivery Profile page is displayed.
   b. Enter a delivery profile name in the Name field. For more information about your choices at the Delivery Profile page and how delivery profiles work, see “Using Oracle BI Delivers Delivery Profiles” on page 80.
   c. Select Finished to return to the Delivery Profile page. The profile appears in the Delivery Profiles list.
   d. To change information for the delivery profile, select the Edit link to go back to the Delivery Profile page.
   e. If you decide you do not want the delivery profile, select the Delete link. This removes the delivery profile from the Delivery Profiles area.
   f. To add another delivery profile, repeat the preceding steps.

6. To make a delivery profile the active profile, select the radio button next to the profile. The radio button next to the profile is filled in to indicate that it is the active delivery profile.

Using Oracle BI Delivers Delivery Profiles

Oracle BI Delivers uses your active delivery profile to determine how to reach you when an alert is triggered by an iBot, and which devices should receive delivered content. You configure your delivery profile from the My Account page. For information about accessing the My Account page to configure your delivery profile, see “Configuring Your Oracle BI Delivers Devices, and Delivery Profiles” on page 79.

iBot contents can be delivered to a range of devices, including Web, wireless, and mobile devices. By default, iBot contents are available for delivery to the dashboard and the appropriate devices defined in your active delivery profile (based on the priority of the iBot contents). Content may be specifically directed to a device, and if so, you will receive content on that device if it is defined, even if it is not in your active delivery profile.

Content is delivered to the intersection of devices as determined by the active delivery profile and the specific devices defined for the target content. Content is delivered only once to a device, even if that device is in your active delivery profile and specifically selected as a delivery device for the iBot content. If a specifically requested device or active delivery profile cannot be found, iBot content is automatically pushed to the dashboard.

iBot content is assigned a specific priority. The default priority is normal. When you select devices for your active profile, you can indicate what priority content should be sent to that device. For example, if you have added a pager to your delivery profile, you might associate it with high priority content only. When you know that you will be away from your office frequently, and out of email range, you may select to receive only low priority content through your office email.
You can create any number of delivery profiles. However, only one profile can be active at any given time.

To add or edit an Oracle BI Delivers delivery profile:

1. At the Delivery Profile page, enter the name of the profile in the Name field.
2. For each device you want to use in the profile, select the priority of the content to be delivered.

   **Note:** Do not set the priority for devices that you do not want to use. Devices that do not have a priority selected are not used by the profile.

   You can select any or all priorities by clicking the appropriate check boxes.

3. Select **Finished** to save this profile and return to the My Accounts page. The delivery profile appears in the Delivery Profiles list.

### Selecting Destinations for an Oracle BI Delivers iBot

Use the Destinations tab to specify a range of desired devices and destinations for iBots. This section contains the following topics:

- **About User Destinations for the Oracle BI Delivers iBot**
- **About Specific Devices for the Oracle BI Delivers iBot**
- **About System Services for the Oracle BI Delivers iBot**

To specify devices and destinations for the iBot:

- Select a check box next to a device or destination to select it for the iBot.

### About User Destinations for the Oracle BI Delivers iBot

This section describes the user destinations available for the iBot on the Destinations page.

- **Interactive Dashboard**
  
  Active iBots appear in a Dashboard Alerts section as well as on the Alerts! page. A link to this summary appears together with the application navigation links when new iBots are delivered. After these are cleared on the Alerts page, the alert link is removed.

- **Active Delivery Profile**
  
  iBots will be sent to specified devices in the active delivery profile. The active delivery profile is configured through the My Account page. For more information, see “Configuring Your Oracle BI Delivers Devices, and Delivery Profiles” on page 79.

### About Specific Devices for the Oracle BI Delivers iBot

If you select a specific device on the Destinations page, the default device selected on the My Account page will override the devices set in the active delivery profile for a user. Devices specified on the Destinations page act as additions to the active delivery profile. An iBot, for example,
need not be dependent upon a user’s configuration. The iBot could just be configured to use device information from default devices in the Devices area in the My Account page.

For more information about active delivery profiles and Devices, see “Configuring Your Oracle BI Delivers Devices, and Delivery Profiles” on page 79.

These are the available devices:
- Email
- Pager
- Digital Phone
- Handheld Device
- Other Device

About System Services for the Oracle BI Delivers iBot

This section describes the system services available for administrators on the Destinations page.

- Oracle BI Server Cache
  
  This is used for seeding cache.

  Oracle BI administrators can create Server cache for individual users. The cache seeding operation allows administrators to run requests on dashboard pages or requests stored in the Presentation Catalog, and create a Server cache. This speeds up response time for users when they actually run the requests on the dashboards. If data already exists in the cache for a given request, the data is deleted and refreshed when the iBot runs.

  The cache for the request or the dashboard page is created at the appropriate schedule for the indicated set of users.

  **Note:** To have the cache created for each user, choose the Personalized option for data visibility at the General tab.

  You would typically not select any other destination for this kind of request.

- Disconnected Application Cache
  
  This setting is for organizations that have licensed Disconnected Analytics or a disconnected application such as Oracle’s Siebel Pharma Mobile Analytics. It is related to the preprocessed synchronization mode in Disconnected Analytics applications.

  You can create server datasets for users of disconnected applications, so that when they synchronize their applications, the data downloads are faster.

  The preprocessed synchronization mode is the recommended data download mode for users. It avoids the potential overhead that can occur from running data creation requests in online mode during normal business hours and reduces wait time for the download. Preprocessed data is stored under each user’s directory on the computer running Oracle BI Web. If you decide to use this mode to schedule data cache creation, make sure that adequate disk space is available.
For more information about Oracle Disconnected Analytics, see *Siebel Business Intelligence Server Administration Guide*.

**Note:** To have the disconnected application cache created for each user, choose the Personalized (individual data visibility) option for Data Visibility at the General tab. (Nonpersonalized data is not used for Disconnected Analytics users.)

You would typically not select any other destination for this kind of request.

### Setting Up the User POV for Financial Reporting Documents

Dimensions often contain members that you may never access. Setting up the user POV enables you to create a choices list for any dimension in a specified data source. If a choices list is set up for a dimension, only the members in the choices list are displayed when the dimension is accessed from the user POV. Any members not included in the choices list are hidden. See “Displaying Aliases and Descriptions in the User POV for Financial Reporting” on page 85.

> Set up user POVs for Financial Reporting in the EPM Workspace:

1. **File**, then **Preferences**.
2. Click **Financial Reporting**.
3. From the **User Point of View** area of the **General** tab, select the **Setup Members** button.

   **Tip:** Select **Refresh** to update the list of database connections.

4. Select a data source from **Database Connection**.
5. If prompted, enter log on credentials, select **OK**.

   **Note:** Use the Planning Details data source only if your grid will contain Supporting Detail or Planning Unit Annotations. In all other cases, use Essbase as the data source.

6. Click **Go to Member Selection: Dimension** button, to select the members you want to be available when using the User Point of View. The Setup User POV page is displayed for member selection.

7. Expand the views to select available members, then click the **Add to Selected** button, . The selected members are displayed in the Selected column and are in the Choices list.

   **Note:** The Choices list is displayed whenever you are using the specified data base connection in a member selection.
Managing Dimension Members

The procedures for managing members are found here:

- Showing Dimension Properties
- Arranging the Selected Members

Showing Dimension Properties

Determine the properties to display for dimension members by performing the following.

Note: The changes made apply only to the dimension selected. Each dimension has different display properties. The properties list varies from one dimension to another.

- Modify the properties displayed for dimensions:

  1. On Select Members of the Setup User POV dialog box, click Show Properties. The dimension properties list is displayed.
  2. Perform one of the following:
     - Select an unchecked property to add the column to the table.
     - Select a checked property to remove the column from the table.
  3. Repeat step 2 until only the desired columns are displayed.
  4. Click OK to retain the changes.
  5. The dimension properties table displays the choices you made.

Arranging the Selected Members

The members in the Setup User POV member selection Dialog box can be arranged in a particular order.

- To change the order in which members are displayed in the selected member list:
  1. From the Select column of the Setup User POV member dialog box, select a member to move.
  2. Perform one of the following:
     - Click , to move members up.
     - Click , to move members down.
  3. Repeat the first two steps until the member order arrangement is complete.
  4. Click OK to save all changes.
Displaying Aliases and Descriptions in the User POV for Financial Reporting

Select how members display in the user POV Financial Reporting documents in EPM Workspace. Members are displayed by name of member, by alias/description, or both member name and alias/description. Specify how to display the member label or whether dimension labels are included.

1. **Display aliases/descriptions in the user POV:**
   1. **File**, then **Preferences**, then **Financial Reporting**.
   2. From User Point of View, click **General**, select **Setup Members**.

   **Tip:** Select the **Refresh** button to update the list of database connections.

3. Select data sources from **Database Connection**.

4. If prompted enter your log on credentials, click **OK**.

**Note:** Use the Planning Details data source only if your grid will contain Supporting Detail or Planning Unit Annotations. In all other cases, use Essbase as the data source.

5. Select the member label you prefer from **Display Member Label**. The label selection is based on the data source you are using.

6. From the **Dimension Labels are:** drop-down list, select whether to include or not include dimension labels.

7. Perform one of the following tasks:
   - Click **OK** to save your current changes and return to the repository screen.
   - Click **Cancel** to cancel your current changes.
   - Click **Apply** to save the changes and continue manipulating dimensions for other database connections.

---

**Personalizing Your EPM Workspace**

When using EPM Workspace, perform customization tasks to change the user interface appearance. Use the View menu or user preferences for customization.

**Note:** The user interface settings made with the View menu override the default settings defined in the General Preferences tab and remain in effect until you log off.

The following table describes the tasks you can perform to customize EPM Workspace user interface.
Table 22

<table>
<thead>
<tr>
<th>Customization Task</th>
<th>Modules</th>
<th>Menu Bar Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Show/hide the View pane</td>
<td>All modules</td>
<td>View, then View Pane</td>
</tr>
<tr>
<td>Resize the View pane and content area</td>
<td>All modules</td>
<td>See “Resizing the View Pane and Content Area” on page 86</td>
</tr>
<tr>
<td>Which file types are listed in the content area</td>
<td>Explore</td>
<td>View, then Display Items of Type. See “Showing Specific File Types” on page 87</td>
</tr>
<tr>
<td>Whether to show hidden files in the content area</td>
<td>Explore</td>
<td>View, then Show Hidden</td>
</tr>
<tr>
<td>Which item properties are displayed in the content area</td>
<td>Explore</td>
<td>View, then Show Columns. See “Displaying Columns” on page 86</td>
</tr>
<tr>
<td>Sort items in the content area</td>
<td>Explore</td>
<td>See “Sorting Items” on page 87</td>
</tr>
</tbody>
</table>

**Resizing the View Pane and Content Area**

- Resize the View pane and content area:
  1. Drag the mouse and point to the column border between the View pane and the content area.

  **Tip:** You must point to the View Pane/Content Area Adjuster which is displayed as a faint double line in the border.

  2. When the pointer changes to a horizontal double-headed arrow, drag the border to the right or left.

**Displaying Columns**

From Explore, items and properties display in the columns within the content area. The setting you make for the columns are retained after you log-off.

- Hide or display columns:
  1. View, then Show Columns.
  2. Display or hide columns by setting or clearing its check-box. For example, select the check box for Size to display as a column in the content area.
  3. To specify the column width, click a column check box, and enter the new column width in pixels.

  **Note:** You cannot specify the column width for exceptions, priority, or versions.

  4. Click Save to save or Cancel to discard your changes.

1. To reorder columns, do one of the following steps:
   - Click a column, use and arrows.
   - View, then Show Columns.
• From the content area, drag and drop the columns.

➤ Resize column widths:
1 Drag the mouse and point to a column border in the column header.
2 When the pointer changes into a horizontal double-headed arrow, drag the border to the right or left.

Sorting Items
From Explore, alphabetically sort by items in the columns within the content area. Sort using any column heading. Date columns are sorted chronologically.

➤ To sort a column, click the column heading, then do one of the following:
• To sort items in ascending order, click the icon next to the column heading to point up.
• To sort items in descending order, click the icon next to the column heading to point down.

Showing Specific File Types
From Explore, you can specify which file types to display in the content area.

Note: Your role and permissions also determine if an item is displayed.

➤ Display specific file types:
1 Select View, then Display Items of Type. You have the following options to choose from:
• All Files—Displays all files in Explore
• Select from a list of file type groups—See step 2.
• Hyperion or Standard—Displays either Hyperion type files or standard files, see “Standard Files” on page 89.
• Other—select a particular file from the dialog box displayed.
2 Optional: For the list of file type groups, you can select only one file type group from the list.

Table 23  File Type Groups

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Jobs (and Output)</td>
<td>Displays all jobs and all job output.</td>
</tr>
<tr>
<td>All Jobs</td>
<td>Displays all jobs. This includes all items imported as a job.</td>
</tr>
<tr>
<td>All Job Output</td>
<td>Displays all job output produced from running a job.</td>
</tr>
<tr>
<td>External Links</td>
<td>Displays all items imported as a URL.</td>
</tr>
<tr>
<td>Option</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>All Office Files</td>
<td>Displays Microsoft Word, Excel, Power Point, and Project files. It also displays files with the file extensions .mht, .mhtml, or .nws.</td>
</tr>
<tr>
<td>All Reports</td>
<td>Displays:</td>
</tr>
<tr>
<td></td>
<td>● Production Reporting documents</td>
</tr>
<tr>
<td></td>
<td>● Interactive Reporting documents</td>
</tr>
<tr>
<td></td>
<td>● Web Analysis documents</td>
</tr>
<tr>
<td></td>
<td>● Financial Reporting reports, snapshot reports, books, snapshot books and batches</td>
</tr>
<tr>
<td>All Financial Reporting Objects</td>
<td>Displays all Financial Reporting reports, snapshot reports, books, snapshot books and batches.</td>
</tr>
<tr>
<td>All Connections</td>
<td>Displays all database connection files:</td>
</tr>
<tr>
<td></td>
<td>● Interactive Reporting database connection</td>
</tr>
<tr>
<td></td>
<td>● Web Analysis Analytic Services (Essbase) database connection</td>
</tr>
<tr>
<td></td>
<td>● Web Analysis Financial Management database connection</td>
</tr>
<tr>
<td></td>
<td>● Web Analysis Relational database connection</td>
</tr>
<tr>
<td></td>
<td>● Web Analysis SAP Info Cube database connection</td>
</tr>
<tr>
<td></td>
<td>● Web Analysis SAP Multiprovider database connection</td>
</tr>
<tr>
<td></td>
<td>● Web Analysis SAP InfoSet database connection</td>
</tr>
<tr>
<td></td>
<td>● Web Analysis SAP ODS database connection</td>
</tr>
<tr>
<td></td>
<td>● Web Analysis SAP Query Cube database connection</td>
</tr>
<tr>
<td>All Images</td>
<td>Displays all image files with the following extensions:</td>
</tr>
<tr>
<td></td>
<td>● .gif</td>
</tr>
<tr>
<td></td>
<td>● .jpeg</td>
</tr>
<tr>
<td></td>
<td>● .png</td>
</tr>
<tr>
<td></td>
<td>● .bmp</td>
</tr>
<tr>
<td></td>
<td>● .tiff</td>
</tr>
<tr>
<td></td>
<td>● .xbm</td>
</tr>
<tr>
<td></td>
<td>● .xwb</td>
</tr>
<tr>
<td>Hyperion</td>
<td>Displays the following:</td>
</tr>
<tr>
<td></td>
<td>● Production Reporting documents</td>
</tr>
<tr>
<td></td>
<td>● Interactive Reporting documents</td>
</tr>
<tr>
<td></td>
<td>● Web Analysis documents, presentations, database-connection files.</td>
</tr>
<tr>
<td></td>
<td>● Financial Reporting reports, snapshot reports, books, snapshot books and batches</td>
</tr>
<tr>
<td></td>
<td>● All jobs</td>
</tr>
<tr>
<td></td>
<td>● All Job output</td>
</tr>
<tr>
<td></td>
<td>● All connections</td>
</tr>
<tr>
<td></td>
<td>● HTML files</td>
</tr>
<tr>
<td></td>
<td>● SPF security files</td>
</tr>
<tr>
<td>Option</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| Standard | Displays files with the following extensions:  
- .xls  
- .doc  
- .mpp  
- .ppt  
- .pdf  
- .html  
- .txt  
- .xml  
- .zip  
- .rtf |
| Other | Select one file type to display from the list of file types. |

**Standard Files**

Standard files include text files, log files, HTML files, and Microsoft Office files. The administrator sets up the types of files that the repository supports. See Chapter 3, "Exploring and Managing Items." Open the following standard file types from EPM Workspace:

- .xls  
- .doc  
- .mpp  
- .ppt  
- .pdf  
- .html  
- .txt  
- .xml  
- .zip  
- .rtf
Exploring and Managing Items

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Using Explore

Explore enables you to list and navigate repository contents; manage and control files and folders; and use elements, like the Open dialog box, that present the repository as a file management system. User’s roles and the installed Reporting and Analysis modules determine what parts of the user interface are shown — as a result some documents are displayed in the content area and others can also be opened in their own studios. For example, for Interactive Reporting, you can have it set to always open documents in the Interactive Reporting Web Client.

Access privileges or permissions determine which items you can view, modify, run and delete in the repository. See “Setting Permissions and Pushing Artifacts” on page 129.

Items

Items are objects stored in the repository, including files, folders, URL’s and shortcuts. Items are HTML files, Interactive Reporting database connections, jobs, batches, documents, reports, and presentations.
All items have properties which store information about files such as attributes and access control information. Properties include: type, a description of the file, and search keywords.

Items are categorized into the following:

- **“Documents” on page 92**
- **“Collections” on page 93**
- **“Supporting Files” on page 93**
- **“Other Standard Files” on page 95**
- **“Folders” on page 95**

## Documents

Documents are files created using Oracle's Hyperion applications. Documents include Interactive Reporting documents, Financial Reporting reports, snapshots, Web Analysis documents and Production Reporting documents. Documents are listed and viewed using Explore. Items opened from Explore display as tabs at the bottom of the EPM Workspace. The following table describes viewable documents. Documents can contain and generate the following:

- **Dashboard**—Collection of metrics and indicators provide interactive summaries of your business.
- **Report**—Formatted data values and interactive elements. Reports are displayed in tabular, grid, or chart formats.

### Table 24

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Created in</th>
<th>File Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Reporting document</td>
<td>Reports querying a relational data source</td>
<td>SQR Production Reporting Studio</td>
<td>.spf</td>
</tr>
<tr>
<td>Interactive Reporting document</td>
<td>Formatted, dynamic, document that generates reports or dashboard typically querying a relational data source.</td>
<td>Oracle's Hyperion® Interactive Reporting Studio, Oracle's Hyperion® Dashboard Development Services, and EPM Workspace</td>
<td>.bqy</td>
</tr>
<tr>
<td>Web Analysis document</td>
<td>Web Analysis document typically querying an OLAP data source.</td>
<td>Web Analysis Studio and EPM Workspace</td>
<td>.ard</td>
</tr>
<tr>
<td>Financial Reporting report</td>
<td>Highly formatted reports containing dynamic data from OLAP data sources.</td>
<td>Reporting Studio</td>
<td>.des</td>
</tr>
<tr>
<td>Snapshot report</td>
<td>Highly formatted reports containing static data from OLAP queries.</td>
<td>Reporting Studio</td>
<td>.rpt</td>
</tr>
</tbody>
</table>
Collections

Collections contain references to groups of documents, such as books, presentations, or job output files. Collections are listed and viewed using Explore. Items opened from Explore display as tabs at the bottom of the EPM Workspace.

Table 25  Collections in the Repository

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Created in</th>
<th>File Extension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Output</td>
<td>Collection of files resulting from running a job.</td>
<td>EPM Workspace</td>
<td>.pdf, .html, or .txt</td>
<td>Files are a variety of extensions, such as .pdf, .html, or .txt.</td>
</tr>
<tr>
<td>Books</td>
<td>Collection of Reporting Studio documents. Dynamically specify dimension sections and dimension changes for Books.</td>
<td>EPM Workspace</td>
<td>.kbk</td>
<td></td>
</tr>
<tr>
<td>Snapshot Books</td>
<td>Generated books containing static data.</td>
<td>EPM Workspace</td>
<td>.kbt</td>
<td></td>
</tr>
<tr>
<td>Batches</td>
<td>Collection of executable Reporting Studio documents and books with special properties and are executed to generate reports.</td>
<td>EPM Workspace</td>
<td>.bch</td>
<td></td>
</tr>
<tr>
<td>Presentation</td>
<td>Collections of Web Analysis documents.</td>
<td>Web Analysis Studio</td>
<td>.apt</td>
<td></td>
</tr>
</tbody>
</table>

Supporting Files

The following tables lists EPM Workspace supporting files used when authoring or managing documents or collections.
<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Studio created in</th>
<th>File Extension</th>
</tr>
</thead>
</table>
| Job  | Items with special properties that execute to generate output. Jobs contain Interactive Reporting documents, Production Reporting documents or generic documents. | Interactive Reporting - created with EPM Workspace by importing Interactive Reporting documents.  
Production Reporting - created with EPM Workspace by importing Production Reporting program files (*.sqr).  
Generic - created with EPM Workspace by importing Oracle reports or batch files. Generic reports use a command line interface. | Interactive Reporting jobs do not have file extensions.  
Production Reporting jobs have *.sqr file extensions.  
Generic jobs can have a variety of file extensions, such as .sh, .bat. |
| Interactive Reporting database connection | Portable files defining terms, conditions, and methods for connecting to data sources. | Interactive Reporting Studio | .oce |
| SQR Production Reporting Studio files used by a Production Reporting document or Production Reporting job. | Files that Production Reporting program references when executed:  
- Include files (#include commands)  
- Input data files (Open for-reading commands)  
- Image files (print-image and declare-image commands) | SQR Production Reporting Studio | File extensions include .cvs, .img, or .inc. |
<p>| Folder | Containers that contains other folders and files. | not applicable | none |
| Shortcut | Pointer to a repository item. Creates shortcuts when you want an item to display in folder A, though it is stored in folder B. | not applicable | none |
| URL | Link to Web sites or HTML pages. | not applicable | none |
| Grid | Reporting Studio object containing data from external sources. Grids contain rows, columns, and optionally, a page axis. | Reporting Studio | .rog |
| Chart | Reporting Studio object containing charts. | Reporting Studio | .roc |
| Image | Reporting Studio image object. | Reporting Studio | .roi |
| Text | Reporting Studio text object. | Reporting Studio | .rot |
| Row and Column Template | Templates used to author Financial Reporting reports. | Reporting Studio | .ros |</p>
<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Studio created in</th>
<th>File Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Web Analysis Essbase database connection</td>
<td>Portable files that defines the terms, conditions and methods for connecting to data sources for Web Analysis documents.</td>
<td>Web Analysis Studio</td>
<td>.adc</td>
</tr>
<tr>
<td>• Web Analysis Financial Management database connection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Web Analysis Relational database connection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Web Analysis SAP Info Cube database connection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Web Analysis SAP Multiprovider database connection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Web Analysis SAP InfoSet database connection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Web Analysis SAP ODS database connection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Web Analysis SAP Query Cube database connection</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Other Standard Files**

Other standard files include text files, log files, and Microsoft Office files. The administrator sets the types of files that the repository supports. See “Registering a File Type” on page 102.

**Folders**

*Folders* exist with the repository and are arranged in a hierarchical structure. Folders are used for organization, they can contain subfolders and items such as jobs, documents, and URLs. The *root* folder contains all files and folders.

**Basics of Explore**

Use Explore to list, find or view content. Items opened in Explore display as tabs at the bottom of the EPM Workspace. The View pane displays folders.

When items have high priority, multiple versions, or is manually flagged as an exception, an icon is displayed. In order to see these icons the priority, version, or exception column must be displayed.

- **Folder Contents:**
  - Sub-folders in the left pane; click the plus button next to the folder name.
  - Folders in the left pane and items in the content area; double-click the folder.
Contents in the content area; click an item.

**Note:** When entering names for items in the repository such as files and folders, you can use upper and lowercase letters and numbers. Spaces cannot be used at the beginning or end of folder names. Invalid Name characters are as follows: `\,/,%,+,<,>,|,`,*,". Invalid Path characters are as follows: `\,%,+,<,>,|,`,*,".

**Note:** Since importing Financial Reporting objects with invalid characters in their Names/Path is still allowed, those objects once imported in EPM Workspace, should be renamed. Scheduled Batches containing object names with invalid characters will fail when PDF and HTML are selected as output options.

### Viewing Priorities, Exceptions, and Versions

When an item is listed in Explore, an icon displays indicating priorities, exceptions, or multiple versions. You can view and set the following conditions:

- **!** Priority - High or low priority.

  **Table 27** Priorities

<table>
<thead>
<tr>
<th><strong>File Type</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>All items that have versions</td>
<td>Use version properties to set an item’s priority to Normal or High. Only available if your administrator activated the priority feature.</td>
</tr>
</tbody>
</table>

  **Note:** Priorities for scheduled jobs differ from an item’s priority. Set priorities on schedules you associate with jobs. Priority is a property of schedule. If multiple job are scheduled to run simultaneously, the high priority job is run first. The priority icon is not displayed next to the job. See “Scheduling Jobs” on page 436.

- **!** Exceptions - Indicator of conditions or results such as a threshold being reached. Notify subscribing users when an exception has been generated and monitor exceptions on the Exceptions dashboard on your Personal Pages.

  **Table 28** Exceptions

<table>
<thead>
<tr>
<th><strong>File Type</strong></th>
<th><strong>Exceptions</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Items with versions</td>
<td>Manually flag an exception on an item. See “Version Properties” on page 140.</td>
</tr>
<tr>
<td>Production Reporting jobs</td>
<td>Programmatically enable jobs to generate exceptions. The exception icon is not displayed next to the job. See “Using Exceptions” on page 157.</td>
</tr>
<tr>
<td>Interactive Reporting jobs</td>
<td></td>
</tr>
<tr>
<td>Generic jobs</td>
<td></td>
</tr>
</tbody>
</table>

- **!** Versions - Indicates an item has multiple versions. See “Working with Versions” on page 138.
To display the priority, versions or exceptions column:

1. View, then Show Columns.
2. Click Priority, Version, or Exception.

Managing Files

This section describes the following tasks associated with managing files and folders in the repository.

- “Opening or Selecting Files or Folders” on page 97
- “Saving Files” on page 98
- “Creating Folders” on page 99
- “Creating Documents or Collections” on page 99
- “Moving or Copying Files or Folders” on page 99
- “Renaming Files or Folders” on page 100
- “Deleting Files or Folders” on page 100
- “Searching for Files or Folders” on page 100

Opening or Selecting Files or Folders

After opening files or folders, its contents display in the content area. Items have multiple versions. Imported files are collections containing a single version. You can later save or import additional versions. Versions can be revisions of the same file or completely different files. See also “Saving Files” on page 98.

- Open files using the shortcut menu:
  - From the content area of Explore, right-click a file, from the shortcut menu select Open In, then select a format. See one of the following:
    - For Financial Reporting items, see “Viewing Reports” on page 174.
    - For Interactive Reporting items, see “Selecting an Interactive Reporting Data Source” on page 213.
    - For Web Analysis items, see “Opening Presentations” on page 337 and “Creating Documents from Documents” on page 342.
    - For Production Reporting items, see “Viewing a Production Reporting Document” on page 331.
    - For generic files, you can select an option to open the file in a browser window.

- Open files using default formats:
  1. From Explore, double-click the file or folder.
  2. To view or interact with the opened item, see “Using Different File Types” on page 143.
Open or select a file or folder:

1. Select File, then Open, then Document.

2. Navigate to the file or folder, perform the following:
   - From the Name column, double-click the file or folder to open.
   - From Look in, select a folder.
   - To filter the list of items, from the Type list box, click the arrow, select the file type.

   **Tip:** Click Go Up A Level to move up the folder hierarchy specified in the Look in: text box.

3. Click Open.

4. **Optional:** To open a file with another application:
   - Click Options.
   - From Open As: select an application to open the file.

   **Note:** Every file type on your local system maintains information about which application will launch that type of file, and where the application resides. See “Registering a File Type” on page 102.

5. **Optional:** To open a version of the item, from Versions list, select the version, click Open.

6. To view and interact with the opened item, see “Using Different File Types” on page 143.

**Saving Files**

Save files to replace them or save files using a new name, which creates a copy of the file. You can save the following files in EPM Workspace:

- Interactive Reporting document
- Web Analysis document
- Snapshot Book
- Book
- Batch
- Workspace Page

To save

1. Open the file.

2. Select File, then Save.

3. To save the file with a new name; File, then Save As, specify a name and location.
Creating Folders

Create folders to organize files and documents.

To create folders:

1. From Explore, select File, then New, and then Folder.
2. Type a name for the folder, select Save.

Note: When entering names for items in the repository such as files and folders, you can use upper and lowercase letters and numbers. Spaces cannot be used at the beginning or end of folder names. Invalid Name characters are as follows: \\/%,+,<,>,|,`,*,". Invalid Path characters are as follows: \\/%,+,<,>,|,`,*,".

Creating Documents or Collections

You can create the following documents or collections:

- Interactive Reporting, see “Using the Toolbars” on page 208
- Web Analysis, see “Creating Web Analysis Documents” on page 339
- Book or Snapshot book, see “Creating Books” on page 187
- Batch, see “Designing Batches” on page 201
- Job, see “Importing Files as Jobs” on page 126

Moving or Copying Files or Folders

You can move or copy a file or folder to another location. The following applies to copying:

- Copying of all document types in the EPM Workspace repository is supported with the exception of Production Reporting job output files. A user must have a minimum of View access
- The user that copies the repository object becomes the owner
- Multiple documents can be selected for copy and paste
- All metadata associated with a document is copied except for Job parameters and Schedules
- Folders and its contents can be copied except for objects within a folder that have No Access permission
- Hidden files are copied if a user has View access
- Copying of nested folders is not allowed

To move or copy files or folders:

1. Select Explore, then the file or folder you want to or move or copy.
2. Edit, then Cut or Copy.
3 Click the folder where you want to copy or move the item.

4 **Edit**, then **Paste**.

**Tip:** To select consecutive files or folders to copy or move, select the first item, press and hold down **SHIFT**, and select the last item. To select files or folders that are not consecutive, hold down **CTRL**, and select each item.

---

### Renaming Files or Folders

Rename files or folders by changing properties.

➢ Rename files or folders:

1 Select **Explore**.

2 **Edit**, then **Rename**.

**Note:** When entering names for items in the repository such as files and folders, you can use upper and lowercase letters and numbers. Spaces cannot be used at the beginning or end of folder names. Invalid Name characters are as follows: \\,/,%?,+,<,>,|,~,*,". Invalid Path characters are as follows: \\,%,?,+,<,>,|,~,*,".

3 **Click OK**.

---

### Deleting Files or Folders

➢ Delete files or folders:

1 Select **Navigate**, then **Explore**.

2 **Edit**, then **Delete**.

---

**Caution!** Deleted files cannot be restored.

---

### Searching for Files or Folders

Search Services enables users to search for and retrieve documents, reports, and dashboards from any repository in EPM Workspace. The search operation returns a list of results based on locating the users keywords in document-specific metadata; for example, document name, date created or owner (for Financial Reporting Word or PDF documents only), and extracting content-based information from documents. For more information, see Chapter 4, “Using Search Services.”
Linking to Web Analysis Studio

You can open Web Analysis Studio from EPM Workspace. Web Analysis Studio enables you to access and create documents and presentations.

Link to Web Analysis Studio by selecting **Tools**, then **Links**.

Creating E-mail Links to Items

E-mail links to items in the repository. E-mailing link rules:

- Recipients must be defined as a user with an EPM Workspace user name and password to open the linked item in a Web browser.
- Recipients need proper access privileges to view the item.
- Items in the link can be viewed in Web browsers. A link to the item is sent not the item. When you click on the link, EPM Workspace is opened and the item is displayed.
- You cannot send an e-mail link to a folder.
- You must select and send e-mail links one item at a time.
- You can add text to the e-mail message.

Create e-mail links:

1. From the repository, select the item to e-mail.

   **Tip:** If the e-mail link option does not display for an item, that item cannot be sent as an e-mail link.

2. **File**, then **E-mail Link**. The **Email Link** dialog box, containing the URL links is displayed.

   **Note:** If your default e-mail address is not specified, you are prompted to request from the Administrator to update your e-mail address listed through Shared Services. Your e-mail address is used as the sender for the e-mail link.

3. Perform one of the following tasks:
   - Enter the recipient’s e-mail address.
   - Use the Recipient List, see **Using the E-mail Recipient List**.

4. **Optional:** Update the Subject text associated with the e-mail message.

5. **Click Send**.

   **Note:** You cannot recall a message after it is sent.
Using the E-mail Recipient List

Use the e-mail recipient list to organize a list of recipients to which you send e-mail links. By entering addresses in this list you do not need to retype e-mail address again. Two e-mail recipient lists are maintained; one to e-mail links, one to e-mail batch notifications.

- Use the e-mail recipient list:
  1. Select File, then Email Links.
  2. Click Select to display Email Link, and select recipients.
  3. Optional: To add a recipient, in New Recipient, type the e-mail address and click.
  4. Optional: To remove an e-mail from the selected recipient list, select an e-mail and click.

Using Ambiguous Items

It is possible for different items to have the same name and reside in the same folder. These are ambiguous items. When an ambiguous item is accessed, a list of items with the same name are displayed. Select the item you want to use. This may happen when you perform the following:

- Create e-mail links to an ambiguous item.
- Prompted to select related content links that link to an ambiguous item.

- Select ambiguous items:
  1. From the list, select the item you want.
  2. To determine the differences between the items, do the following:
    - To view the item properties, right-click the item, select Properties.
    - To open and view the item, see “Opening or Selecting Files or Folders” on page 97.

Registering a File Type

The server maintains information about Repository items and which application to launch to open that type of file and where the application resides.

Administrators create file types (technically, new MIME Types) or add file extensions to file types. You may be informed of the new type by your administrator, or you may discover it while browsing or trying to open a file. If there is a file type that your browser cannot open, you are prompted for a program to open it. To avoid that prompt, you need to register the type in your browser or operating system.

The procedure to register new file extensions or MIME types varies with each operating system, its version, your browser, and the browser’s version. Consult the documentation or on-line help of the browser or operating system or ask your system administrator.
Exporting Items

From Explore, only Financial Reporting items have an export option. Export items for the following usages:

- Locations outside of EPM Workspace. You can import items into a Studio or back into EPM Workspace later. Financial Reporting items can export from testing environments to production environments.
- For use in Smart View, see “Exporting to Smart View for Office” on page 103.

Export items:
1. Click Navigate, then Explore.
2. File, then Export.
3. To navigate to items, preform the following:
   - From the Look in: list box, select a folder.
   - To filter the list of items, from the Type list, select the file type.
4. Select the items, click OK.
5. Click Save.
6. Navigate to the location where you want to save the exported file.
7. Click Save.

Exporting to Smart View for Office

This section describes Smart View functionality, concepts and procedures. Smart View provides a common Microsoft Office interface for the following EPM Workspace components:

- Financial Reporting, see “Exporting Financial Reporting Reports and Snapshots to Microsoft Office” on page 105
- Production Reporting, “Exporting Production Reporting Content to Microsoft Excel” on page 107
- Web Analysis, “Exporting Web Analysis Documents to Microsoft Office” on page 106
- Interactive Reporting, Interactive Reporting does not enable Smart View export options

It also provides a common Microsoft Office interface for Essbase, Financial Management and Planning.

The centralized interface enables simultaneous use of multiple Hyperion products and improves integration with Microsoft Office (2000, 2002, and 2003). The Smart View implementation provides the following EPM Workspace functionality:

- Exports the current page of the current data object to Excel, Word, or PowerPoint
- Exposes Financial Management and Essbase functions in Excel, Word, and PowerPoint content
About Hyperion Reporting and Analysis Smart View Export Options

Smart View enables the following export options:

- You can export the current page of the current data object to Word, PowerPoint or Excel as an image. After insertion, you can re-query the corresponding Web application to refresh the image.

You can export documents to Microsoft Excel as either query-ready HTML or formatted HTML:

- When you export content as query-ready HTML, the current page of the current data object is converted to HTML and Hyperion-specific formatting is removed. This enables Smart View to re-query the data source independent of the Web application.

- When you export content as Formatted HTML, the current page of the current data object is converted to HTML with the Hyperion formatting definitions and calculated members. This specific formatting content prevents Smart View from directly querying the data source, but enables Hyperion content to be leveraged by Office applications.

Not all export options are supported by all data sources and Web applications. The following table indicates export options to Smart View:

<table>
<thead>
<tr>
<th>Web Applications</th>
<th>Export Image to Microsoft Word, and PowerPoint</th>
<th>Export Formatted HTML to Excel</th>
<th>Export Query-ready HTML to Excel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytic Services</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Financial Management</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Planning</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes *</td>
</tr>
<tr>
<td>Financial Reporting</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Interactive Reporting</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Production Reporting</td>
<td>N/A</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>Web Analysis</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Note: To export Hyperion Planning data sources in query ready format, you must use the Hyperion Analytic Services provider.

Note: Exporting charts from Production Reporting is not supported in this release.
Because Excel worksheets prevent users from entering data into read-only cells, some Excel functions such as AutoSum, F9, and some formatting functions are disabled in Smart View. Also note that you must have Microsoft Excel, Word, and PowerPoint installed on the computer running the Hyperion Reporting and Analysis client.

**Importing Reporting and Analysis Content**

Using Smart View, you can import Financial Reporting through EPM Workspace. You can use smart tags to import Reporting and Analysis content. For information on importing content and using smart tags, see the *Hyperion System 9 Smart View for Office User’s Guide.*

**Installing Smart View From EPM Workspace**

Smart View is installed with Hyperion Reporting and Analysis but to use Smart View you must also separately install a client component. This Office client component is displayed as a Hyperion menu and toolbar within the Microsoft Office suite.

**Note:** Before installing Smart View, exit the Interactive Web Client and Microsoft Office applications, and enable pop-ups.

To install the Smart View client from EPM Workspace:

1. **Select Tools**, then **Install**, then **Smart View**.

   The Hyperion Smart View installation wizard is launched.

2. **Accept the default installation options**.

   By default, the installation wizard installs Smart View program files to `C:\Hyperion\SmartView`. You can specify an alternative installation directory.

3. **Reopen the Microsoft Office application**.

   **Note:** If Word fails to display the Hyperion menu, create a data source connection in Excel then restart Word.

**Exporting Financial Reporting Reports and Snapshots to Microsoft Office**

**Note:** When exporting multiple pages to PowerPoint, all pages are placed in a single slide. To have them automatically placed in separate slides, use Smart View in PowerPoint to import the reports.
To export Financial Reporting report and snapshots to Microsoft Word or PowerPoint as an image, you must install and configure either GNU or AFPL Ghostscript on the Financial Reporting Print server.

To export a report or snapshot to Microsoft Excel, Word, or PowerPoint:

1. Open a report and select File, then Export.
2. Select one of the following submenu commands:
   - To export the current page of the current financial report as query-ready HTML, select Excel, then Query-Ready Grid and Text. You cannot use this option to export snapshots.
   - To export the current financial report as formatted HTML, select Excel, then Fully-Formatted Grid and Text.
   - To export the current page of the current financial report to Microsoft Word as a static image, select Word.
   - To export the current page of the current financial report to Microsoft PowerPoint as a static image, select PowerPoint.

Snapshots are always exported as static images.

The File Download dialog box displays profile information about exported content.

3. Select an option:
   - Select Open to display exported content in the specified application.
   - Select Save to save the content.

When exporting Financial Reporting grid objects to Excel the values are exported as displayed in the report. The desired number of decimal places for precision should be set in the report before exporting.

### Exporting Web Analysis Documents to Microsoft Office

To export the current page of the current data object of the current Web Analysis document to Microsoft Excel, Word, or PowerPoint:

1. Right-click a data object and select Export.
2. Select one of the following submenu commands:
   - To export the current page of the current data object as query-ready HTML, select Excel, then Query-Ready Grid and Text.
   - To export the current page of the current data object as formatted HTML, select Excel, then Fully-Formatted Grid and Text.
To export the current page of the current data object to Microsoft Word as a static image, select Word.

To export the current page of the current data object to Microsoft PowerPoint as a static image, select PowerPoint.

Although the image is static, you can re-query the Web application as needed.

Data is exported to the Microsoft Office application and displayed in a worksheet.

Note: Exporting an SQL spreadsheet to Microsoft Excel is not supported.

Exporting Production Reporting Content to Microsoft Excel

To export content to Microsoft Excel as Fully-Formatted HTML:

1. Select Navigate, then Explore and choose File, then Import, then File as job.
2. Click Browse and select an SQR job.
3. Proceed through the pages in the wizard. When you get to the last page, select Excel (.xls) as the output option.
4. Look in the Table of Contents for the Excel output.

Changing Related Content Servers for Financial Reporting

You can change the server for selected reports and grids or both in EPM Workspace repository by specifying a new URL or a substitution variable. For example, you may want to change the related content servers when moving reports and grids from a development server to a production server.

To change the related content server in EPM Workspace repository:

1. Select Explore, then Tools, and then Change Related Content Links.
2. In Select, select a file and click OK.
3. In Change from the Related Content server named, change the URL to that associated with the selected documents, if it is not already displayed.
4. In To Related Content server name, select an option:
   - To specify a server through a URL, select URL, then enter the path and server name in the text box. The URL must start with either http:// or https://.
   - To specify a server using a substitution variable, select Substitution variable, then select a variable from the drop-down list.
Changing Financial Reporting Database Connections

You can change the database connection for reports and books in EPM Workspace repository. You change the database connection when moving from a development environment server to a production environment server.

When the dimensions in the changed database connections do not match the previous dimensions, an error message similar to the following is displayed:

1012: Report contains an invalid grid. The following dimensions could not be found: Measures

The following actions occur when you open and save a report that has mismatched dimensions:

- Dimensions that existed in the old database connection but not in the new database connection are removed. The dimensions and its members that existed in the rows and or columns are removed from the grid. If, as a result of the removal, no dimension exists in the row or column, you need to add a valid dimension to the cleared row or column in order for the report to run.
- Dimensions that exist in the new database connection but not in the old one, are added to the POV.

If the report contains at least one dimension in both the row and column, it can be run and opened when the error message is received. The report can also be exported from the repository.

If you do not like the modifications that are automatically made for mismatched dimension, you can close the report and change to the original database connection.

When you change the database connection for reports or books, you can also select to validate that the databases have the same dimension. When this option is selected for a report, and dimensions do not match, you are prompted that the action failed. Likewise, if dimensions do not match for a specific report in a book, you are prompted that the action for the entire book failed. If you do not choose to validate, the database connection for the reports and books are changed and you are not prompted for mismatched dimensions. However, errors may occur when you open or run the reports or books.

To change the data source in the repository:

1. From EPM Workspace, select Explore to display the Select dialog box, then select Tools and, then Change Database Connections.
2. In the Type field, select a report type to change, and click OK. Change Database Connection is displayed.
3. Select the item and click OK.
In Find all references to the Database Connection, select the database connection to change.

In Replace With, select a database connection.

**Note:** To create a new database connection, click *New Database Connection*. See “Adding Database Connections” on page 111.

Make changes to all items that you selected.

Click OK.

**Changing Analytic Services and Planning Details**

When changing a report from Analytic Services database connection to a Planning Details database connection or vice versa, there are several restrictions. The data source reference is the only change and there is no conversion.

**Changing from Analytic Services to Planning Details**

The following is a list of considerations when changing the database connection from Analytic Services to Planning Details for a report:

- The dimensions and functions defined in reports and books must exist in the target data source. The following limitations apply:
  - Attribute dimensions are only supported for Essbase.
  - Hsp_Rates is not available as a dimension.
  - The cell text function cannot be used, because Linked Reporting Objects (LROs) are not supported.
  - Only the member selection using a level 0 is supported.
- Validate that dimensions exist prior to opening the report. If a dimension defined on a grid is not available in the Planning Details data source, no change is made. If an invalid function is used, an error is returned. The report designer has to remove the invalid function or dimension.

**Changing from Planning Details to Analytic Services**

There are several features that may be defined in a Planning Details report that are irrelevant for Analytic Services report, including PlanningAnnotations, Supporting Detail, and OrderBy. If Supporting Detail is defined in the report, the details are ignored. If PlanningAnnotations or OrderBy are used, they return an error. The report designer must remove the PlanningAnnotation function and OrderBy for the report to run.
Managing Database Connections for Financial Reporting

The Database Connection Manager provides a means to manage reports, books, saved reports objects (row/column templates, grids), batches, and scheduled batches. Reports and report objects can be moved from a development environment to a production environment, or between production servers. The Database Connection Manager provides the following information about each database connection:

- **Name**—The database connection name
- **Type**—The data source type (Analytic Services, Financial Management, Planning, SAP BW)
- **Value**—The connection path

A designer can use EPM Workspace to create, maintain, and assign names to database connections.

Users can select an existing database connection when prompted throughout the Reporting Studio; for example, while adding a grid to a report. A database connection consists of a database name, ID, password, and several values that are different for each data source.

### Table 30  Valid Database Values by Database

<table>
<thead>
<tr>
<th>Database</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essbase</td>
<td>Server</td>
</tr>
<tr>
<td></td>
<td>Application</td>
</tr>
<tr>
<td></td>
<td>Database</td>
</tr>
<tr>
<td></td>
<td>Data Source Type</td>
</tr>
<tr>
<td>Financial Management</td>
<td>Server</td>
</tr>
<tr>
<td></td>
<td>Application</td>
</tr>
<tr>
<td></td>
<td>Data Source Type</td>
</tr>
<tr>
<td>Planning</td>
<td>Application</td>
</tr>
<tr>
<td></td>
<td>Database Connection</td>
</tr>
<tr>
<td></td>
<td>Data Source Type</td>
</tr>
<tr>
<td>SAP BW</td>
<td>Server</td>
</tr>
<tr>
<td></td>
<td>System Number</td>
</tr>
<tr>
<td></td>
<td>Client</td>
</tr>
<tr>
<td></td>
<td>Application</td>
</tr>
<tr>
<td></td>
<td>Database</td>
</tr>
<tr>
<td></td>
<td>Data Source Type</td>
</tr>
</tbody>
</table>
Adding Database Connections

When you create a database connection, it is appended to the list in the Database Manager dialog box.

To add a database connection

1. In EPM Workspace, select Explore. Then select Tools, then Database Connection Manager.
2. Click New.
3. In Database Connection Properties, enter a Database Connection Name.
4. Select a data source Type.
5. The remaining values will differ, based on the data source selected. See Table 30 to view values that display for each data source.
6. To add application and database names, click, and make your selections.

Note: The Application Lookup button displays a tree view of the applications and corresponding databases; the applications are listed as parents and the databases are listed as children. You can search on an application or database. For data sources that are not associated with a database, only applications are listed.

7. Click OK.
8. The database connection profile is appended to the list in Database Connection Manager Dialog.

Selecting an Application and Database Name

The Select Application dialog box displays a tree view of the applications and corresponding databases; the applications are listed as parents and the databases are listed as children. You can search on an application or database.

<table>
<thead>
<tr>
<th>Database</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSAS</td>
<td>Server Application Database Data Source Type</td>
</tr>
</tbody>
</table>
To Select an Application and Database Name:

1. Scroll through the list to locate your selection, or enter an application or database name in the Application/Database field.

   **Note:** For data sources that are not associated with a database, only applications are listed.

2. For a data source associated with a database, select the database and click OK. For a data source that is not associated with a database, select the application and click OK.

**Editing Database Connections**

You can edit database connections, when required.

1. In EPM Workspace, select **Tools**, then **Database Connection Manager**.

2. In **Database Connection Manager**, select the database connection to edit, then click **Edit**.

3. Make your changes, then click **OK**.

**Deleting Database Connections**

You can delete database connections, when required.

1. In EPM Workspace, select **Explore**. Then select **Tools**, then **Database Connection Manager**.

2. In **Database Connection Manager**, select the database connection to remove, then click **Delete**.

3. An information prompt is displayed. Select **Yes** to delete.

4. The database connection is removed from **Database Connection Manager**.

**Using the Key Figure Manager for Financial Reporting**

Key Figure Manager is used against an SAP BW data source only. A key figure is a dimension contained in every SAP BW cube. Financial Reporting allows the creation of two additional types of key figures: calculated and restricted. Using Key Figure Manager, you can create calculated and restricted key figures. The Calculated and Restricted key figures created in the Key Figure Manager become additional members for the SAP BW key figure dimensions within the Select Members dialog in Reporting Studio; calculated key figures are contained in the Calculated Key Figure folder and restricted key figures are shown in the Restricted Key Figure folder. The report designer can use those key figures in place of or in addition to the SAP BW defined key figure members to return more definitive values in a report.

- Calculated — You can recalculate the key figures for use in Financial Reporting using formulas. Calculated key figures consist of formula definitions containing basic key figures.
You can create a calculated key figure based on a key figure or any functions listed in the Key Figure Manager.

- **Restricted** — Restricted are key figures of the cube that are filtered by one or more dimension member selections, and are needed in order to define a detailed report. By using restricted key figures, you can focus the query result on certain values.

New Calculated and Restricted key figures are stored in Key Figure Manager and are available for use in Member Selection. You can now use the calculated and restricted key figures in your Reporting Studio.

To define a new calculated key figure:

1. Navigate to the Key Figure Manager by selecting Tools, then Manage Key Figures.
2. In Key Figure Manager, select a SAP BW data source, then click New Calculated.

   **Note:** You may be prompted to enter a database connection.

3. In Calculated Key Figure, enter a name for the calculated key figure you are creating.
4. In the Add Function container, select Key Figure and/or function, then click Add.

   **Note:** When you select a function, your calculation is based on a dimension other than Key Figure. For functions, the Formula dialog box is displayed where you select the Dimension and Measures fields.

5. In Member Selection, select a Member for your formula and click OK. The member is entered into the Formula text box in Calculated Key Figure dialog box.

6. In Calculated Key Figure, define the variable and values for your formula by using the Add Literals keypad.
7. Click OK to accept the formula. The Calculated Key Figure information is stored in Key Figure Manager and is added to Select Members for a SAP BW data source in Reporting Studio.

   **Note:** An error message is displayed for an invalid formula.

To define a new Restricted key figure:

1. Navigate to the Key Figure Manager by selecting Tools, then Manage Key Figures.
2. In Key Figure Manager, select a SAP BW data source, then click New Restricted.

   **Note:** You may be prompted to enter a database connection.

3. In Restricted Key Figure, enter a name for the restricted key figure you are creating.
4. In the Dimension container, select Key Figure, then select click to select a key figure member.

5. **Optional.** In the Dimension container, select a Dimension, then click to select members for which you want to display members. To select another dimension members, repeat this step.
6. Click OK to accept the restricted key figure information. The Restricted Key Figure information is stored in Key Figure Manager and is added to Select Members for a SAP BW data source in Reporting Studio.
➢ To edit a calculated or restricted key figure, click **Edit**.

**Note:** The Key Figure Name cannot be edited.

➢ To delete a calculated or restricted key figure, click **Delete**.
Introduction

Search Services enables users to search for and retrieve documents, reports, and dashboards from any repository in EPM Workspace. The search operation returns a list of results based on locating the users keywords in document-specific metadata; for example, document name, date created or author (for Financial Reporting Word or PDF documents only), and extracting content-based information from documents.

The following searches can be performed:

- **General search**—Search keywords in any part of all supported content published in EPM Workspace
- **Context-sensitive search**—Search keywords associated with specific aspects of some content in all supported content published in EPM Workspace
- **Search within a hierarchy**—General or context-sensitive searches restricted to selected branches of EPM Workspace or to selected repositories (Scorecard for example)
- **Data or metadata search**—If content is static in nature, then both metadata and data is indexed (for example, filter name and selected values for the filter). If content is dynamic in nature, then only metadata is indexed (for example, column name only).

When a search request is initiated, the index is searched for terms entered in the request. The results are returned on another page as a list of document references and synopses, ranked in order of relevance.

Search results are:

- Categorized based on content type, modified date, and file locations within EPM Workspace
Search Services can also integrate with external applications and services. Connectors are available for Oracle Secure Enterprise Search and Google OneBox. See “Integrating Search Services with External Applications” in the *Oracle Enterprise Performance Management Workspace Administrator’s Guide*.

**Indexing Keywords**

Search Services are based on an index of keywords that is updated whenever documents are modified. Different document types require different methods for keyword extraction. Specialized parsers generate keyword information for different document types in a common format. Whenever documents are published or updated in EPM Workspace, the appropriate parser is activated to index or re-index keywords. The specialized parser understands the document content and returns keywords to the indexing facility in a standard format. The indexing facility creates the keyword index to facilitate a prompt search operation.

Parsers are available for the following content:

- Interactive Reporting files (.bqy, .oce files)
- Production Reporting (SQR programs, reports) files
- Web Analysis files (.apt, .ard, database connection files)
- Financial Reporting files (.des files)
- Oracle’s Hyperion® Annotations – database content
- Oracle's Hyperion® Impact Management Services transformation scripts (.js files)
- HTML, PDF, RTF and TXT files
- Microsoft Office documents (.doc, .xls and .ppt files)

**Using the Search Service**

A search can be initiated by typing one or more keywords in a text box located in the upper right hand part of all EPM Workspace screens, and then either pressing Enter or clicking the search button.

1. **Enter a keyword in the Search text box.**

   A Suggestion feature is available that spell-checks text and suggests alternative keywords if available.

   The search results are displayed on a separate page and include:
   - File name (clicking on this launches the document)
If a Planning result is selected, a Planning tab is launched and supporting detail is displayed.

2 Optional. Order the search results according to Score or Last modified date.

By default, search results are sorted by score. A document’s score or relevance is determined by how many times the keyword appears in the document and how many other keywords are in the document. For example, a document where the keyword appears three times but only has five words scores higher than a document where the keyword appears 10 times but with 1000 other keywords.

3 Optional. Filter the search results according to document type, modified date, or publish location.

Using Advanced Search

Search Services includes an Advanced Search feature that provides a convenient way to generate advanced search queries.

To use advanced search:

1 Click the Advanced Search link on the Search Results page, or select Tools, then Advanced Search.

2 Enter or select the desired search criteria and click Search.

Advanced search options include:

- **All words**—Each document in the search results contains all the keywords entered.
- **At least one word**—Each document in the search results contains at least one of the keywords entered.
- **Without the words**—Each document in the search results does not contain any of the keywords entered.
- **Written in (language)**—Restricts the results to documents written in a specific language.
  The language is determined by an entry in the metadata and may not be applicable to all document types.
  To refine a search to allow for multiple languages, edit the search text field at the top of the Search Results page.
- **Created in the past**—Restricts results to documents created within a specific time frame, such as within the past 24 hours or the past week.
  The Custom date option activates a calendar control to search for documents created on a specific date.
The **Custom date range** option activates calendar controls to search for documents created between a specified date range.

- **Modified in the past**—Restricts results to documents modified within a specific time frame.

The **Custom date** option activates a calendar control to search for documents last modified on a specific date.

The **Custom date range** option activates calendar controls to search for documents last modified between a specified date range.

- **In folder**—Restricts results to a specific repository and folder name.

- **Only search (document type)**—Restricts results to documents of a specific MIME type.

To allow for multiple document types, edit the search text field at the top of the Search Results page. For example, change `sales +MimeType:application/x-brioquery to sales +(MimeType:application/x-brioquery MimeType:application/pdf)`.

- **Hidden file options**—Defines whether to retrieve hidden files. The "hidden" attribute of a file is set within the context of its repository. For example, it can be viewed or altered by the Properties dialog in the EPM Workspace repository.

- **Priority**—Restricts the results to documents of High or Normal priority. The "priority" attribute of a file is set within the context of its repository. For example, it can be viewed or altered by the Properties dialog in the EPM Workspace repository.

- **Order by**—Defines the sort sequence of the search results.

### Table 31  Advanced Search Examples

<table>
<thead>
<tr>
<th>Search Term</th>
<th>Request</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;sales +LanguageCodes:de&quot;</td>
<td>Documents that contain the term 'sales' and the language to be German</td>
</tr>
<tr>
<td>&quot;sales +(LanguageCodes:de LanguageCodes:es)&quot;</td>
<td>Documents that contain the term 'sales' and the language to be German, or documents that contain the term 'sales' and the language to be Spanish</td>
</tr>
</tbody>
</table>

### Search Syntax

The basic Search Services syntax follows a number of rules. Terms can be logically grouped using the following operators:

### Table 32  Search Syntax Operators

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td><strong>AND</strong></td>
</tr>
<tr>
<td>-</td>
<td><strong>NOT</strong></td>
</tr>
<tr>
<td>( )</td>
<td>Parenthesis – Apply an operator to a group of keywords</td>
</tr>
<tr>
<td>&quot; &quot;</td>
<td>Quotes – Search for the exact occurrence</td>
</tr>
<tr>
<td>Syntax</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>[]</td>
<td>Brackets – Search for a range value</td>
</tr>
<tr>
<td>*, ?</td>
<td>Wild-card – Used in the middle or at the end of words to indicate any values in place of the *</td>
</tr>
</tbody>
</table>

You can further restrict searches by searching for or excluding a specific category. The syntax for a category is of the form `category:search_term`. Use quotes to search for exact strings in categories. Use AND and NOT operators to logically add or remove categories.

**Examples**

Search for documents containing `sales` but not `oracle`:

`+sales –oracle`

Search for documents containing the phrase `radio sales`:

`“radio sales”`

Search for documents containing `sales` but not `oracle`, or `sales` but not `radio`:

`+sales -(oracle radio)`

Search for documents containing the terms `sales` and `oracle`:

`+sales +oracle`

Search for documents containing the terms `rent` and `sales` or `rent` and `oracle`:

`+rent +(sales oracle)`

Search for documents that have a file name starting with `revenue` but are not in the `Sample Content` folder:

`+FileName:revenue* -Path:“Sample Content”`

Search for documents modified in the date range 15th Dec 2007 and 21st Dec 2007:

`+LastModifiedDate:[2007-12-15 TO 2007-12-21]`

Search for documents modified in 2007:

`+LastModifiedDate:[2007]`

Search for documents modified in December 2007:

`+LastModifiedDate:[2007-12]`

**Supported MIME Types**

The following Mime Types are indexed by Search Services and can be used with Search expressions.
<table>
<thead>
<tr>
<th>MIME Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>application/hyperion-analyzer-presentation</td>
<td>Presentation</td>
</tr>
<tr>
<td>application/hyperion-analyzer-report</td>
<td>Web Analysis Document</td>
</tr>
<tr>
<td>application/hyperion-annotation</td>
<td>Annotations</td>
</tr>
<tr>
<td>application/hyperion-reports-batch</td>
<td>Financial Reporting Batch</td>
</tr>
<tr>
<td>application/hyperion-reports-book</td>
<td>Financial Reporting Book</td>
</tr>
<tr>
<td>application/hyperion-reports-chart</td>
<td>Financial Reporting Chart</td>
</tr>
<tr>
<td>application/hyperion-reports-grid</td>
<td>Financial Reporting Grid</td>
</tr>
<tr>
<td>application/hyperion-reports-image</td>
<td>Financial Reporting Image</td>
</tr>
<tr>
<td>application/hyperion-reports-report</td>
<td>Financial Reporting Report</td>
</tr>
<tr>
<td>application/hyperion-reports-row_column</td>
<td>v Row and Column Template</td>
</tr>
<tr>
<td>application/hyperion-reports-snapshot_book</td>
<td>Financial Reporting Snapshot Book</td>
</tr>
<tr>
<td>application/hyperion-reports-text</td>
<td>Financial Reporting Text</td>
</tr>
<tr>
<td>application/msword</td>
<td>PDF File (.pdf)</td>
</tr>
<tr>
<td>application/pdf</td>
<td>PDF File (.pdf)</td>
</tr>
<tr>
<td>application/rtf</td>
<td>RTF File (.rtf)</td>
</tr>
<tr>
<td>application/sqr_viewer</td>
<td>Production Reporting Document (.spf)</td>
</tr>
<tr>
<td>application/vnd.ms-excel</td>
<td>MS Excel File (.xlsx,.xls)</td>
</tr>
<tr>
<td>application/vnd.ms-powerpoint</td>
<td>Powerpoint File (.pptx,.ppt)</td>
</tr>
<tr>
<td>application/x-brioquery</td>
<td>Interactive Reporting Document (.bqy)</td>
</tr>
<tr>
<td>application/x-SQR</td>
<td>application/x-SQR Production Reporting Job (.sqr)</td>
</tr>
<tr>
<td>BrioQueryJob</td>
<td>Interactive Reporting Job</td>
</tr>
<tr>
<td>OCEFile</td>
<td>Interactive Reporting Database Connection (.oce)</td>
</tr>
<tr>
<td>text/html</td>
<td>HTML File (.htm,.html)</td>
</tr>
<tr>
<td>text/im-javascript</td>
<td>Oracle's Hyperion® Impact Management Services JavaScript File (.js)</td>
</tr>
<tr>
<td>text/plain</td>
<td>text/plain Plain Text (.text,.txt)</td>
</tr>
</tbody>
</table>
Security

End user queries return results and related content without breaching the security of documents or data. Search results are based on a user's security profile. The results do not include documents that users are not authorized to see.
Importing artifacts to the repository makes them available to others. You might give users the ability to modify one artifact, while limiting others. See “Setting Permissions” on page 129 for detailed information on permissions.

Note: If you try to import an artifact whose MIME type is not defined, you get an error message. Contact your administrator to create the MIME type.

Table 34 shows the Reporting and Analysis products and artifacts you can import:

<table>
<thead>
<tr>
<th>Reporting and Analysis Product</th>
<th>Description</th>
</tr>
</thead>
</table>
| Financial Reporting          | - Dynamic report (*.des)  
- Snapshot reports (*.rpt)   
- Books (*.kbk)               
- Snapshot Books (*.kbt)      
- Batch files (*.bch)         
- Supporting files, see “Supporting Files” on page 93 |

Note: To import these files, you must use the Import, then Financial Reports menu item.
<table>
<thead>
<tr>
<th>Reporting and Analysis Product</th>
<th>Description</th>
</tr>
</thead>
</table>
| Production Reporting         | - Documents to view (*.spf)  
- Program files to run as jobs (*.sqr)  
- Supporting files, see “Supporting Files” on page 93 |
| Interactive Reporting        | - Documents to view and modify (*.bqy)  
- Documents to run as jobs (*.bqy)  
- Supporting files, see “Supporting Files” on page 93 |
| Web Analysis                 | - Documents and presentations (*.apt)  
- Supporting files are automatically imported with the document or presentation, see “Supporting Files” on page 93 |

**Note:** To import these files, you must use the Web Analysis Studio.

| Microsoft Reports            | A user can browse the Microsoft Report server repository. The user can then import a link to a Microsoft Report as a URL object into EPM Workspace repository. See “Importing Microsoft Reports” on page 129 for more information. |

## Interactive Reporting Documents and Jobs

Import an Interactive Reporting document as a file to use it with interactive analysis. Import an Interactive Reporting document as a job for scheduled or on-demand execution and distribution of output. The import essentially creates the job.

**Note:** If the Interactive Reporting document you are importing uses row-level security, the row-level security feature is applied when job queries are processed. When users process queries to get more detailed information, their row level security restrictions would be applied at the more detailed levels, such as sales data for their region or department only.

### Table 35

The following table describes when to import an Interactive Reporting file or job.

<table>
<thead>
<tr>
<th>Function</th>
<th>File</th>
<th>Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive with EPM Workspace</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Schedule automatic execution</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Distribute output via E-mail</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Produce multiple-cycle output</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Distribute output to network directories</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Import current results for analysis with Interactive Reporting Web Client</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>FTP output</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
HTML Files

HTML image links and other HTML files are dependent on their folder locations. Ensure the links remain functional after you import them:

- Use relative links in the HTML.
- Create folders that mirror the folder structure

Importing Artifacts

Import from Explore using File, then Import and these instructions:

- Importing Files
- Importing Multiple Files
- Importing Files as Jobs
- Importing a URL
- Importing a Financial Reporting File

Importing Files

Import files into the repository with the following exceptions:

- For Financial Reporting files, see Importing a Financial Reporting File.
- For importing files as jobs, see “Importing Files as Jobs” on page 126.
- For Interactive Reporting .oce files, see “Setting Processing and Metadata Options” on page 464.
- For importing URLs, see “Importing a URL” on page 127.

To import files:

1. From Explore, navigate to the folder where you want to import the artifact.
2. Select File, then Import, then File.
3. Browse to the file you want to import.
4. Enter a description, click Next or select Finish without specifying any Advanced options. If you select Finish, skip the following steps.
5. Enter properties, see “Advanced Properties” on page 136.
6. Complete permissions, see “Setting Permissions and Pushing Artifacts” on page 129.
7. Click Finish.
Importing Multiple Files

- Files must be imported to the current folder.
- Import different file types together, for example, import text files, HTML files and image files.
- You cannot import multiple Interactive Reporting files (*.bqy, *.oce) or Production Reporting files (*.sqr, *.spf).

To import multiple files:
1. From Explore, navigate to the folder in which you want the files to reside.
2. Select File, then Import, then File.
3. Click Multiple Files.
4. Select the files you want to import.
   - Browse for the first file. Click >> (right-facing arrows) to add the file to the list. To delete files from the list, select the file and click << (left-facing arrows).
5. Optional: Enter a description, and click Finish to complete the import without specifying any Advanced options.
6. Click Next.
7. Enter properties, See “General Properties” on page 135 and “Advanced Properties” on page 136.
8. Click Finish to import the artifact.
   - The artifacts are imported into the current folder.

Importing Files as Jobs

Import Production Reporting program files (*.sqr) to create Production Reporting jobs, Interactive Reporting documents (*.bqy) to create Interactive Reporting jobs or generic files to create generic jobs. Schedule, set options on and execute the job using the Schedule module, see “Scheduling Jobs” on page 436.

To import files as jobs:
1. From Explore, navigate to the folder where you want to place the artifact.
2. Select File, then Import, then File as Job.
3. Browse to the artifact you want to import, and click Next.
4. Do one of the following to complete the Import wizard:
   - For Production Reporting files and generic jobs, see Chapter 16, “Using Production Reporting and Generic Jobs.” This chapter guides you through the steps to complete this wizard.
For Interactive Reporting BQY files, see “Setting Data Source and Query Properties” on page 462.

5 To complete step 2 (Job Input/Output) of the Import dialog do the following, for an Interactive Reporting job:

- For Query properties, see “Setting Data Source and Query Properties” on page 462.
- For Job properties, see “Setting Interactive Reporting General Properties and Options” on page 463 and “Setting Interactive Reporting Job Properties” on page 460.
- For Job defaults, see “Setting Job Defaults” on page 463.

6 Enter properties, see “General Properties” on page 135 and “Advanced Properties” on page 136. Required properties are marked with a red asterisk.

7 Click Next.

8 Complete the final step in the Import wizard — Permissions, see “Setting Permissions and Pushing Artifacts” on page 129.

9 Click Finish or Finish and Schedule.

**Importing a URL**

Perform these steps to import URLs.

- To import URLs:

  1. From Explore, navigate to the folder where you want to place the artifact.
  2. Select File, then Import, then URL, enter the URL name.
  3. Optional: Enter a description, and click Finish to complete the import without specifying any Advanced options or Permissions.
  4. Click Next, then see “General Properties” on page 135 and “Advanced Properties” on page 136.

     Required properties are marked with a red asterisk.
  5. Complete step 3, Permissions. To specify permissions for the artifact, see step 1.
  6. Click Finish.

**Using EPM Workspace URLs**

Use these steps to open EPM Workspace URLs which point to a repository artifact.

- Opening a URL
- Opening a URL in a New Window
- Updating a URL
Opening a URL

Perform the following steps to open a URL.

To open a URL:
1. Select File, then Open, then URL.
   The URL dialog is displayed.
2. Enter the URL name.
3. Select OK.

Opening a URL in a New Window

To open a URL in a new window:
1. Complete procedure from Opening a URL.
2. Select New Window.
3. Enter the URL.
4. Select OK.

Updating a URL

Perform the following steps to update the content of an existing URL displayed in the content area.

To update a URL:
1. Complete procedure from Opening a URL.
2. Select Update URL.
   The Update URL dialog is displayed.
3. Enter the URL.
4. Select OK.

Importing a Financial Reporting File

Use this procedure to import a Financial Reporting file.

Note: Only one file at a time can be imported.

To import a Financial Reporting file:
1. From Explore, navigate to the folder where you want to place the artifact.
2 Select File, then Import, then Financial Reports.
3 Browse to the file you want to import.
4 Click Import.
5 Optional: If you import an artifact that uses a data source connection you are prompted to select it.

**Importing Microsoft Reports**

EPM Workspace users with a Content Publisher role can import Microsoft reports to the EPM Workspace repository. Browse the Microsoft report server repository and import as a link a Microsoft report to the EPM Workspace repository. The link is in the form of a URL object and any user can launch a Microsoft report URL object as a tab in EPM Workspace. For details on how to setup Microsoft Reports Integration with EPM Workspace, see the Oracle Enterprise Performance Management Workspace Administrator’s Guide.

To import Microsoft reports:

1 Select a folder from the EPM Workspace repository.
2 Right-click and select Import then Microsoft Reports.
3 From the Import Microsoft Reports dialog, select a Microsoft Report.
4 Select Import. A URL object is created in the EPM Workspace repository.

**Setting Permissions**

Access permissions define your level of access - view, modify, full control. When you import artifacts, you:

- Specify who gets access and to what level
- Have full control over the artifacts you import, and can change the permission level for all roles, groups, and users
- Efficiently grant permissions through roles or groups rather than to individual users

To modify permissions, use:

- Setting Permissions and Pushing Artifacts
- Setting Permissions on Interactive Reporting Documents

**Setting Permissions and Pushing Artifacts**

Set artifact permissions when you import or select an artifact. Push artifacts to be accessible to Favorites.

Rules for setting permissions and pushing artifacts:
To push artifacts, you need proper permissions and a role that enables you to push them.
Push any artifact, except multiple-cycle jobs and folders.

- Make artifacts accessible in the repository by changing their permissions
- Make artifacts accessible on Favorites by pushing them to Favorites
- To apply permissions to artifacts within folders, you need proper permission and role.

To edit permissions for files and folders:

1. From Explore, right-click the file or folder whose permissions you want to modify.

   **Note:** You can select multiple items in Explore and apply Edit Permissions. Permissions can only be applied to items that a user has Full Control permission.

2. Select **Edit Permissions**.

3. To complete the Permissions dialog, see step 1 on page 132.

To apply permissions to artifacts in a folder:

1. Right-click on a folder in Explore.

2. Select **Apply Permissions to Children**.

3. To complete Apply Permissions to Children dialog, see Changing Permissions or Pushing Artifacts.

4. Set permissions for the children of the folder. The columns displayed for selected users, groups, and roles in the Apply Permissions to Children dialog depend on the artifact type within the folder. Use the description for each of the permissions as a guideline:

   **Table 36 Setting Permissions for Children of Folder**

<table>
<thead>
<tr>
<th>Permission</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inherit</td>
<td>Not set to anything. Inherit defaults to No Access. See Example of Inherit Permission topic below.</td>
</tr>
<tr>
<td>No Access</td>
<td>Users cannot see the object.</td>
</tr>
<tr>
<td>View</td>
<td>View document but cannot modify.</td>
</tr>
<tr>
<td>Job Output Only</td>
<td>View and produce output in the folder. No additional Modify capabilities.</td>
</tr>
<tr>
<td>Modify</td>
<td>Make changes but not delete.</td>
</tr>
<tr>
<td>Full Control</td>
<td>Access the Apply Permissions to Children dialog (add/edit/delete permissions to other users/groups/roles).</td>
</tr>
<tr>
<td>Run</td>
<td>Ability to run a job.</td>
</tr>
<tr>
<td>Modify and Run</td>
<td>This is applicable only to jobs. You can modify the properties of the job and run the job. If you have modify permission only, you can modify the properties of the job but not run the job.</td>
</tr>
<tr>
<td>View and Process</td>
<td>View documents and refresh data, cannot modify.</td>
</tr>
</tbody>
</table>

   **Note:** these are adaptive states and are applicable only to Interactive Reporting artifacts.
<table>
<thead>
<tr>
<th>Permission</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyze</td>
<td>Create and modify charts, pivots, and reports in the document, but cannot modify the queries or refresh the data.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> these are adaptive states and are applicable only to Interactive Reporting artifacts.</td>
</tr>
<tr>
<td>Analyze and Process</td>
<td>Create and modify charts, pivots and reports in the document and refresh data. Cannot modify the query.</td>
</tr>
<tr>
<td>Query and Analyze</td>
<td>Create and modify charts, pivots and reports in the document and refresh data. Can build and limit queries before processing.</td>
</tr>
<tr>
<td>Data Model and Analyze</td>
<td>Create and modify charts, pivots and reports in the document and refresh data. Can build and limit queries before processing. Can create and modify data models.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> these are adaptive states and are applicable only to Interactive Reporting artifacts.</td>
</tr>
</tbody>
</table>

5 Once you are done making your selections, select **OK**.

**Note:** Permissions are only applied to artifacts within a folder in which a user has Full Control permission.

**Example of Inherit Permission**

The following is an example of a BQY file and permissions set in the Permissions dialog.

UserA:
- Inherit for File Permission
- View for Adaptive State
- Inherit for Favorite

GroupA:
- View for File
- Process for Adaptive
- Inherit for Favorite

RoleA:
- Modify for File
- Datamodel for Adaptive
- Pushed for Favorite

Result of above scenario:
- If UserA belongs to GroupA then UserA is able to View the File
- If UserA has RoleA then UserA can Modify the File
- If UserA does not belong to GroupA or RoleA then UserA has NoAccess to the file
Inherit basically means inherit from the role's or group's permissions and the same applies for Favorites.

**Changing Permissions or Pushing Artifacts**

In the dialog, Apply Permissions to Children of the Selected Folder, you can choose to overwrite or merge permissions, thus eliminating the need to redefine permissions from scratch.

**Note:** Permissions change for all files in folder when you click OK. However, permissions are not saved for future use. If a new artifact is subsequently added to that folder, it does not get this permission. However, you can go to individual artifacts in that folder and change the permissions.

- To change permissions or push artifacts:
  1. To specify selected users, groups, and roles perform the following:
     a. To populate the list with all users, groups or roles leave the text box blank, select Update List.
     b. To populate the list with specified users, groups or roles:
        i. To filter the list by name, select begin with, contain, or are in group and enter letters.
        ii. To filter the list by user type, select tabs for Users, Groups, or Roles, then click Update List.

   **Available Users, Groups, and Roles** display artifacts based upon the selections you made in the drop-down lists.

   **Note:** If all of the artifacts are not listed, filter the list with criteria or contact your administrator. Your administrator determines the maximum number of artifacts to list. Wild cards are not supported and the filter is not case sensitive.

  2. Select a user, group, or role from Users, Groups, or Roles tab, then click .

  3. From **Selected Users, Groups and Roles** select a name from the Name column. From Access or Access to file drop-down set permissions:
     - Inherit – Not set to anything. This permission defaults to No Access.
     - No Access - Cannot access the document.
     - View - Can only display the document.
     - Modify - Change, but not delete.
     - Full control - Display, change, and delete.

     See “Setting Permissions on Interactive Reporting Documents” on page 133.

  4. From the Favorite drop down, select Pushed to push the artifact to the users Favorites or Inherit (not pushed) to view only if this is the only permission set.
5 Repeat previous steps to set additional permissions for other users, groups, or roles.

Note: If all of the users/groups/roles in which you have access to are not listed, filter the list with different criteria or contact your administrator. Your administrator determines the maximum number of users/groups/roles to list.

6 Select one of the following:

a. To remove existing permissions and set new permissions, select Overwrite current permissions.

b. To redefine some permissions, and add new permissions to the existing ones, select Merge with the current permission. The changes are applied to folder child elements recursively.

Note: In a merge, if a user already exists in Apply Permissions to Children for some artifacts, and this user is granted new permissions, the new permissions are in force.

7 To apply these permissions for an artifact, click OK.

8 Click OK.

Note: To remove a role, group, or user from the selected list, click after highlighting the name to be removed.

**Setting Permissions on Interactive Reporting Documents**

These permissions apply to Interactive Reporting files and jobs:

- Adaptive states specify what functionality is available to users when viewing an Interactive Reporting document.

- Only user who ran the job has access to the job output specifies you are the only user who can access the job output.

Note: When importing an Interactive Reporting job, assign an adaptive state on the job output to access it.

**Table 37**

<table>
<thead>
<tr>
<th>Adaptive State</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inherit</td>
<td>Not set to anything. This permission defaults to View Only if this is the only permission set.</td>
</tr>
<tr>
<td>View Only</td>
<td>View document, but cannot modify.</td>
</tr>
<tr>
<td>View and Process</td>
<td>View documents and refresh data, cannot modify.</td>
</tr>
<tr>
<td>Analyze</td>
<td>Create and modify charts, pivots, and reports in the document, but cannot modify the queries or refresh the data.</td>
</tr>
<tr>
<td>Adaptive State</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Analyze and Process</td>
<td>Create and modify charts, pivots and reports in the document and refresh data. Cannot modify the query.</td>
</tr>
<tr>
<td>Query and Analyze</td>
<td>Create and modify charts, pivots and reports in the document and refresh data. Can build and limit queries before processing.</td>
</tr>
<tr>
<td>Data model and Analyze</td>
<td>Create and modify charts, pivots and reports in the document and refresh data. Can build and limit queries before processing. Can create and modify data models.</td>
</tr>
</tbody>
</table>

**Creating Shortcuts**

Create a shortcut to a file or document.

To create shortcuts:

1. From **Explore**, navigate to an artifact.
2. Right-click the artifact, click **Create Shortcut**.
3. Enter the name and folder.

**Working with Properties**

This section describes how to modify properties of repository artifacts. You specify properties when importing and modifying artifacts. See “**Importing Artifacts**” on page 125 to learn how to access properties pages while importing artifacts.

Properties for artifacts:

- “**General Properties**” on page 135
- “**Advanced Properties**” on page 136
- “**Output Properties**” on page 137
- “**Setting Permissions**” on page 129
- “**Working with Versions**” on page 138
- “**Interactive Reporting Properties**” on page 137
- “**Production Reporting Properties and Generic Job Properties**” on page 137
- “**HTML File Properties**” on page 137
- “**URL Properties**” on page 138
- “**Interactive Reporting Database Connection Files**” on page 138

To access properties:

1. From **Explore**, select an artifact.
2 Select **File**, then **Properties**.

**General Properties**

Most artifacts have these general properties: **Table 38**.

<table>
<thead>
<tr>
<th>General Properties</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>File</strong></td>
<td>The file name and path.</td>
</tr>
<tr>
<td><strong>Name</strong></td>
<td>The name you assign to the file. For example, if the file is <code>C:\Jan03SR</code> set the name to <code>January 2003 Sales Report</code>. Use letters, numbers, a space, and an underscore (<code>_</code>). <strong>Note:</strong> For Production Reporting jobs, select <strong>Replace</strong> to replace this job with another. Replacing this file may impact existing schedules dependent on this file. Owners of these schedules must be notified of these changes so that they can modify the job parameters accordingly.</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>The description used to generate search keywords. Limit the length to 250 characters.</td>
</tr>
<tr>
<td><strong>Owner</strong></td>
<td>The User Name of the person who imported the artifact. To change owner of an artifact, see &quot;Changing Ownership of Artifacts&quot; on page 135.</td>
</tr>
<tr>
<td><strong>Original File Name</strong></td>
<td>(Read-only) The name of the file when it is imported or created.</td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td>(Read-only) file size</td>
</tr>
<tr>
<td><strong>SmartCut</strong></td>
<td>(Read-only) A SmartCut is a URL pointing to a file.</td>
</tr>
<tr>
<td><strong>Shortcut To</strong></td>
<td>Specify the folder and subfolders for shortcuts.</td>
</tr>
<tr>
<td><strong>Also store file in compressed (.zip) format</strong></td>
<td>Set this when you import to store the file in WinZip format. This saves disk space, but slows down viewing.</td>
</tr>
</tbody>
</table>

**Changing Ownership of Artifacts**

Users can change the owner of repository artifacts. Artifacts you can change ownership for include, repository objects, folders (including sub-folders), Events, Job Parameters, and Schedules. A user must have Full Control or Administrator role rights.

➢ To change the owner of an artifact:

1 From **Explore**, select an artifact.
2 Select **File**, then **Properties**.
3 From the **Properties** dialog, select **Change Owner**.
4 Perform the following to complete the Change Owner dialog:
   a. Select how you want to sort the name list by, User ID, First name, or Last name from the first drop down menu.
b. To filter by name, select **begin with**, **contain**, or **are in group** and then enter letters.

c. Select **Update List**.

d. Select **OK**.

5. **Select OK.**

### Advanced Properties

Some artifacts have these advanced options: **Table 39**.

#### Table 39

<table>
<thead>
<tr>
<th>Advanced Properties</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MIME Type</strong></td>
<td>(Read Only) Multipurpose Internet Mail Extensions. Update this for jobs and documents only, MIME types are MS Word file, HTML file, and Personal Page.</td>
</tr>
<tr>
<td><strong>Security Tags Included</strong></td>
<td>(Read only) Indicates whether the Production Reporting job is secure. Secure jobs are Production Reporting only and always have HTML output.</td>
</tr>
<tr>
<td><strong>Character Encoding</strong></td>
<td>The character-encoding method, such as UTF-8. This encoding must be specified for HTML files so that EPM Workspace can display the file correctly.</td>
</tr>
<tr>
<td></td>
<td>If the character encoding is not specified in this property or in the HTML file, EPM Workspace uses the character encoding set by your administrator.</td>
</tr>
<tr>
<td><strong>Hidden File</strong></td>
<td>Hides files in Explore.</td>
</tr>
<tr>
<td></td>
<td>Example: Enable this option for image files needed by an HTML file, so the users select HTML files only.</td>
</tr>
<tr>
<td><strong>Auto-delete file on this date or Auto-delete shortcut on this date</strong></td>
<td>Enable to automatically delete this artifact. From the repository when these conditions are met:</td>
</tr>
<tr>
<td></td>
<td>• The expiration date passed.</td>
</tr>
<tr>
<td></td>
<td>• Auto-delete is selected.</td>
</tr>
<tr>
<td></td>
<td>• The system performs regular garbage collection (up to an hour after the expiration date).</td>
</tr>
<tr>
<td></td>
<td>• For folders, set auto-delete to occur after all contents have been deleted from the folder.</td>
</tr>
<tr>
<td><strong>If Exceptions are generated, allow users to add to their Exceptions Dashboard</strong></td>
<td>The Exceptions dashboard is displayed on a Personal Page.</td>
</tr>
<tr>
<td></td>
<td>This field is not used for jobs. When a job exception occurs, subscribed users can be notified by E-mail or with a Exceptions Dashboard indicator.</td>
</tr>
<tr>
<td><strong>Automatically generate keywords</strong></td>
<td>Generates search keywords based on words contained in the Name and Description. For Interactive Reporting content, the section names are also used as keywords. The search function uses these keywords to find an artifact.</td>
</tr>
<tr>
<td><strong>Keywords</strong></td>
<td>New keywords used to search for an artifact. Creating keywords for artifacts is highly recommended and used for searching repository artifacts.</td>
</tr>
</tbody>
</table>
**Advanced Properties**

<table>
<thead>
<tr>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Delete job outputs after</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Output Properties**

Output properties option is displayed for Interactive Reporting and Production Reporting jobs. A summary of the job outputs with the respective dates and output formats that the job outputs are available in are displayed when this property is selected for one of these products. You can also delete a selected output from the Output Summary.

**Interactive Reporting Properties**

In addition to General Properties and Advanced Properties, Interactive Reporting files and jobs have unique properties. See “Setting Interactive Reporting Job Properties” on page 460.

**Production Reporting Properties and Generic Job Properties**

In addition to General Properties and Advanced Properties, Production Reporting files and Production Reporting jobs have unique properties. See “Job Properties” on page 476 and “Generic Job Properties” on page 485.

**Setting Permissions**

Set rights for users to access files. See “Setting Permissions and Pushing Artifacts” on page 129.

**HTML File Properties**

In addition to General Properties and Advanced Properties, HTML files contain these unique properties also:

<table>
<thead>
<tr>
<th>HTML File Properties</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Character encoding</td>
<td>The method of character encoding. Note: Use UTF-8 for non-Latin-1 languages or when using WebSphere or iPlanet native servlet engines.</td>
</tr>
<tr>
<td>Make displayable as a file content window</td>
<td>Contents of this artifact can be displayed on Personal Pages. (Default is enabled.)</td>
</tr>
</tbody>
</table>
### URL Properties

In addition to General Properties and Advanced Properties, URLs have these properties:

<table>
<thead>
<tr>
<th>URL Properties</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>URL (in the General Properties group)</td>
<td>The URL starts with http:// or https://.</td>
</tr>
<tr>
<td>Make displayable as a file content window</td>
<td>Contents of this artifact can be displayed on Personal Pages. (Default is enabled.)</td>
</tr>
<tr>
<td>Character encoding</td>
<td>The method of character encoding for the Web page. Note: Use UTF-8 for non-Latin-1 languages or when using WebSphere or IPlanet native servlet engine.</td>
</tr>
<tr>
<td>Icon</td>
<td>The icon shown for the URL. To change the icon, click Change Icon.</td>
</tr>
<tr>
<td>Change Icon</td>
<td>Select to add a graphic file from your PC or from the repository. Set the width and height to smaller than 24 pixels.</td>
</tr>
</tbody>
</table>

### Interactive Reporting Database Connection Files

These files are used by Interactive Reporting jobs and Interactive Reporting documents to connect to databases. Separate Interactive Reporting Database Connection file must be specified for each query within a file or job, except for queries that use Local Results. See “Selecting Database-Connection File Options” on page 464.

### Working with Versions

Repository artifacts have multiple versions, except for jobs, job output, Interactive Reporting database connection files, shortcuts, Web Analysis artifacts and Financial Reporting artifacts.

Typical files are collections of versions, even if you have not imported multiple versions. When a file is imported, the resulting artifact is a collection containing a single version. You can later import additional versions.

Versions can be revisions of the same file or completely different files. If the file is considerably different from the original file, you should import a new file with a unique name.

**Note:** To change imported versions for Interactive Reporting jobs or Interactive Reporting database connection files, use Replace in General Properties. It is important to replace the Interactive Reporting job or Interactive Reporting database connection file with a similar file. If the Interactive Reporting job is considerably different from the original Interactive Reporting job, import a new job. The system accepts files as replacements for Interactive Reporting jobs or Interactive Reporting database connection files.
Click an artifact’s name for the latest version. When you move or delete an artifact, versions are included in the operation.

Versions have their own properties that are distinct from the properties of their collection artifact.

This section describes how to manipulate versions:

- Opening a Version
- Viewing or Modifying Properties of Versions
- Adding a Version
- Listing Multiple Versions
- Version Properties
- Deleting Versions

### Opening a Version

Open any artifact version, see “Opening a Version” on page 139.

### Adding a Version

Add another file as a version to an artifact in the repository.

**Note:** All artifacts in the repository can have multiple versions, except for jobs, job output, Interactive Reporting database connection files, shortcuts, Web Analysis artifacts and Financial Reporting artifacts.

To add versions:

1. From **Explore** select an artifact.
2. Select **File**, then **Properties**.
   
   The Properties dialog is displayed.
3. Select **Versions**, click **Add New Version**.
4. Click **Browse** and select a file to add as a new version.

5. **Optional:** Do one or more of these steps:
   - Enter a Description.
   - Enable **Flag as an exception**, then enter a message. If an exception occurs, the message is displayed on the Exceptions dashboard.
   - Set the priority to **High** or **Normal**.
6. Click **OK**.

The version is added to the repository as the latest version.
Viewing or Modifying Properties of Versions

Each version has its own properties.

To view or modify properties of versions:

1. From Explore, click the artifact whose version you want to edit.
2. Select File, then Properties.
3. Select Versions.
4. Select Modify.

The only changeable properties are Description, Flag as an Exception, and Message, see “Version Properties” on page 140.

5. After modifying properties, click OK.

Version Properties

Table 42 The following table shows versions properties:

<table>
<thead>
<tr>
<th>Version Properties</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>A description that identifies this version. Using preliminary figures as of 2/03 or First draft with Marketing’s comments. The length is limited to 250 characters.</td>
</tr>
<tr>
<td>Creation date</td>
<td>(Read-only) Date the version was created.</td>
</tr>
<tr>
<td>Last modified</td>
<td>(Read-only) Date the version was changed. Changing versions includes replacing or modifying its properties.</td>
</tr>
<tr>
<td>Modified By</td>
<td>(Read-only) User, who made the last modification to the version.</td>
</tr>
<tr>
<td>Priority</td>
<td>Normal or High priority shows in Explore, ⚠ indicates high priority. Users can sort on priority, and search for high-priority artifacts.</td>
</tr>
<tr>
<td>Note:</td>
<td>⚠ does not display for high-priority scheduled jobs. This property is available if your administrator activated the priority feature on your system.</td>
</tr>
<tr>
<td>Size</td>
<td>(Read-only) The file size which is set automatically.</td>
</tr>
<tr>
<td>Flag as an exception</td>
<td>An exceptions indicates a condition or result, such as a threshold being reached. Flag as an exception can be set manually by a user. If you set this option on the latest version of an artifact, put the artifact on your Exception Dashboard, its state is displayed on the Exceptions Dashboard. See “Using Exceptions” on page 157.</td>
</tr>
<tr>
<td>Message</td>
<td>Text associated with an exception for this version. When an exception is flagged on the version, this message prints, or it may be visible from a users Exception Dashboard.</td>
</tr>
</tbody>
</table>
Listing Multiple Versions

From Explore, the latest artifact version is displayed in the content area.

➤ To see all versions:
1. Select View, then Show Columns.
2. Click Versions, then click Save.

Deleting Versions

Delete one or more versions together.

➤ To delete versions:
1. From Explore, navigate to the artifact whose version you want to delete.
2. Select File, then Properties.
   The properties of the artifact are displayed.
3. Click Versions, then select a version.
4. Click Delete Selected.
5. Click OK.
Viewing

To view, interact, and modify content within documents use Workspace Pages, Explore, Applications, and Open Items. These can all be accessed from Navigate except for Explore which you can select from the toolbar.

- **Workspace Pages** – Enable users to create and edit a page aggregating content from various sources, see also “Using Home Page” on page 63.
- **Explore** - Navigate through the repository to locate files and folders.
- **Applications** – Select Financial Management, Planning, Profitability and Cost Management, Oracle Business Intelligence products, or Performance Scorecard for viewing or launching.
- **Open Items** - Select the document name to view in the contents pane. Opened documents display in this list. Use the View pane to interact and view a document. For example, use the View pane to navigate through specific information for the active document. If the active document is a Web Analysis document, the document panel displays options such as filters, pages, and row sections in a Windows Explorer format.

Using Different File Types

For information on how to view and use each file type, see:

- “Using Financial Reporting” on page 171
- “Designing Documents for Financial Reporting Batches and Books” on page 185
- “Interactive Reporting” on page 207
Creating a New Book, Batch, Document, or Workspace Page

The new document wizard creates the following items:

- Web Analysis documents, see “Creating Web Analysis Documents” on page 339
- Interactive Reporting documents see “Interacting with Interactive Reporting Documents” on page 211
- Books, see “Creating Books” on page 187
- Batches, see “Designing Batches” on page 201
- Workspace Pages, see “Workspace Pages” on page 164

Selecting a Data Source for a Document

When creating documents you need to specify the data source. This determines the document type.

- To create a Web Analysis document, specify a Web Analysis database connection. See “Creating Web Analysis Documents” on page 339.
- To create an Interactive Reporting document, based on an existing document, specify a Interactive Reporting document. See “Interacting with Interactive Reporting Documents” on page 211.

Using Favorites

Users can set up their own Favorites and track items you access frequently to view them in the future. Administrators and users can push items to a users Favorites.

You need the proper role to push items to Favorites. See the corresponding appendix in the *Oracle Hyperion Enterprise Performance Management System Security Administration Guide*. If you do not have the proper role to access Explore, you can also see your Favorites list by selecting the Favorites menu.

You can do the following with Favorites:

- “Adding Items to Your Favorites” on page 145
- “Pushing Items to Favorites” on page 145
- “Managing Favorites” on page 146
Access Favorites

1. Select Favorites.
2. Select an item from the list of Favorites.

Tip: You can also access your personal pages.

Adding Items to Your Favorites

Add items to your Favorites or push items to another users Favorite using the following:

- You need view access permissions or higher.
- Add any item to Favorites.
- Add folders then use Favorites to access that folder; you cannot access items within the folder directly.

Add items to Favorites:

1. Select Explore, navigate to the item.
2. Right-click and select Add to Favorites.

Add folders to Favorites:

1. Select Explore, navigate to the folder.
2. Right-click and select Add to Favorites.

Pushing Items to Favorites

Push items to another users Favorites by specifying the user name, group, or role.

Push item to Favorites:

1. Select Explore, select an item.
2. File, then Properties.
3. From Properties, select Permissions in left pane.

Note: You can also use your mouse and select Edit Permissions by right-clicking on the artifact.

4. Populate Users, Groups, and Roles tab with the following:
   a. To filter by name, select begin with, contain, or are in group and then enter letters.
      You cannot use the are in group filter for roles.
   b. To filter by user type, select roles, groups, or users, click Update List.
The Users, Groups, and Roles tab display items based upon the selections you made in the drop-down lists.

**Note:** If all of the users/groups/roles are not listed, filter the list with different criteria or contact your administrator. Your administrator determines the maximum number of users/groups/roles to list. Wild cards are not supported and the filter is not case sensitive.

5. Select users from the Users, Groups and Roles tab, click, ![click](image).

6. From Selected Users, Groups and Roles
   select **Pushed** from the Favorite drop-down menu to push the item to the users Favorites.

7. Select **Push this item to selected Users, Groups, and Roles**.
   **Note:** If the Access to File option is set to No Access and there are no higher access rights for this item to inherit, then the item is not pushed.

8. Repeat step 1 through step 7 to push other items to Favorites.

9. Click **OK**.

10. **Optional:** If you want permissions to apply to other content you import, make them your default permissions by selecting:
   a. For files, make the default permissions for all files I import.
   b. For folders, make the default permissions for all folders I import.

   Selecting this enables the system to automatically set the same permissions for files you import. You can change the permissions for each file or reset your default permissions at any time.

   **Note:** To remove a role, group, or user from the selected list, click ![remove](image) after highlighting the name to be removed.

### Managing Favorites

- Manage items in Favorites:

  1. From EPM Workspace, select **Favorites**, then Manage Favorites.
  2. To remove an item from your Favorites, click **Remove** next to the item you want to remove.
  3. To display an item on your list of Favorites, click **Show** next to the item you want to show.

   **Note:** Pushed items can be hidden in Favorites but not removed by the recipient. Pushed items can only be completely removed by the user that performed the push.

4. **Optional:** To resize column widths, drag the mouse over a column border, when the pointer changes to a double headed arrow, drag the borders to the right or left.
Click OK.

Using Subscriptions

Subscriptions enable you to perform the following:

- Receive e-mail notifications and links to items every time the particular item is modified, a specific job runs, an exception is generated or anything in a folder changes. Subscribe to any item in the repository and you send it to one or more e-mail addresses. See “Creating a Subscription” on page 147.

- If you subscribe to a folder you are notified of any new items imported or created in that folder or any modifications to items within its subfolders. See “Subscribing to Folders” on page 149.

**Note:** You cannot subscribe to Personal Pages.

Creating a Subscription

Subscribe to items to be notified when it changes. Receive e-mail notifications that the item changed or with the changed item attached.

Subscribe to be notified when exceptions occur as opposed to receiving notification when an item changes. The item’s owner must enable the item or job to generate exceptions for you to subscribe. Items and jobs generate exceptions when the following steps are setup:

- Production Reporting jobs and generic jobs can be programmatically set up to generate exceptions. See “Supporting Exceptions in Production Reporting or Generic Programs” on page 492.

- Interactive Reporting jobs can be programmatically set up to generate exceptions. See “Supporting Exceptions in Interactive Reporting Programs” on page 460.

- Manually set exceptions on items by setting the version property Flag as Exception; indicating that the item generated an exception. See “Version Properties” on page 140. The latest version of the item is used to determine if an exception is set.

Create subscriptions:

1. Select Explore, navigate to the item you want to subscribe to.
2. Right-click the item, select Subscribe.
3. On the Subscribe page, perform the following steps:
   - Select Subscribe and send e-mail notifications to.
   - In the text box, type one or more e-mail addresses for the recipient of the notification.
   - If you want to send the item as an attachment, select Attach file for “report name” to email message (if possible).
Tip: Your administrator determines the maximum size of attachments.

4 **Optional:** To subscribe to an item only when a programmatic exception occurs, select Exception Only. This option is applicable to jobs only.

**Note:** If this option is not displayed, this item or job does not use exceptions.

Add subscriptions to your default personal page:

1. Select **Explore**, navigate to the item you want to subscribe to.
2. Right-click the item, select **Subscribe**.
3. Click the **Personal Pages** tab, perform the following:

**Note:** This option is not available for multiple-cycle Interactive Reporting jobs.

- To add links to the subscription, click **Add to My Bookmarks**.
- To add an image that links to the subscription, click **Add as Image Bookmark**.
  - You can use a preconfigured image or browse to an image in the repository.
  - To use a preconfigured icon, click **Use pre-configured icon file**.
  - To use a custom icon, click **Use custom icon file** and enter the path and file name or use the **Browse** button.
  - To specify the image size, enter pixel values in the width and height text boxes. If you do not enter values the entire image is used.

4. Click **OK**.

To add Interactive Reporting document sections to your default personal page:

1. Select **Explore**, navigate to the item you want to subscribe to.

**Note:** The Interactive Reporting document must contain sections.

2. Right-click the item, click **Subscribe**.
3. From **Personal Pages** tab, click **Add Sections of Interactive Reporting document**.
4. From **Embed Section**, select a section, click **Add**.
5. Repeat step 4 to add all desired sections.
6. Click **OK**.

**Modifying or Removing Subscriptions**

You can modify or remove subscriptions by managing a list of subscribed items.
Modify or remove subscriptions:

1. From EPM Workspace, select Favorites, then Show Subscribed Items.
2. Click a subscription, then click Open Subscriptions.
3. To remove the subscription, clear Subscribe and send e-mail notifications to.
4. To modify the subscription, use the steps described in “Subscribing to Folders” on page 149.

   **Note:** If you remove a subscription, it is also removed from all of your Personal Page Bookmark sections.
5. Click OK.

Subscribing to Folders

When you subscribe to folders, you are notified of items imported to that folder or updates to items within the folder or its subfolders.

If you are interested in the entire contents of a folder or sub folder, you can subscribe to the folder or sub folder.

Subscribe to folders:

1. Select Explore, navigate to the folder to which you want to subscribe.
2. Right-click the item, from the shortcut menu select Subscribe.
3. On Subscribe Settings, select Subscribe and send e-mail notifications to: to receive notification for this folder and to change or enter your e-mail address.
4. Enter an e-mail address for one or more recipients of the subscription.

   **Note:** You must enter the e-mail address, you cannot select from a list of recipients.
5. To receive notification when there are changes to the subfolders, select Notify on changes to sub-folders of “Users”.
6. To receive notification only when items in the folder generate exceptions, select exception items.
7. To receive notification only when items in the folder are high priority items, select High Priority Items.

   **Note:** This option is only available if the administrator has enabled priority ratings.
8. Click OK.

Receiving and Viewing Subscriptions

Using a subscription e-mail notification you can access items directly without browsing the repository.

E-mail notification comes in two formats:
• E-mail with a link to the item or folder - Click the link; if you have access to that item, you can open the document.

• E-mail with the item attached - Follow the directions to either view the file where it is or download the attachment to a file.

## Using Personal Pages

Personal Pages are customizable pages enabling you to organize, view, and access EPM Workspace items and other Web content on Web pages. Items on personal pages do not interact with each other. If items change, it cannot propagate changes to items on the Personal Page. To build interactive dashboards, see [Hyperion Interactive Reporting Object Model and Dashboard Development Services Developer’s Guide, Volume I: Dashboard Design Guide](#).

You can modify the content and layout of Personal Pages, create additional Personal Pages, copy and customize Personal Pages, add links to repository items or to a Web site.

Content windows and file content windows are the components that make up a Personal Page. Personal Pages open in the maximize mode, automatically hiding the view pane. When publishing personal pages, you can set access permissions during the personal page publish phase. Bookmarks for Web Analysis, Production Reporting, Financial Reporting, and Interactive Reporting jobs open as new tabs in EPM Workspace.

- **Content windows** are collections of links to repository items or external sources, image bookmarks, and Broadcast Messages.

- **File content windows** display the contents of an item opposed to a link to the item. You can display the contents of the following items:
  - Embedded Interactive Reporting document sections
  - HTML files
  - HTML job output

Add or remove content windows or file content windows. Content windows and file content windows are optional except Broadcast Messages. You cannot remove Broadcast Messages, nor delete a Personal Page that displays them, unless you have another Personal Page that displays the Broadcast Messages.

Content on Personal Pages include:

- **Broadcast Messages** - Link to special folders that the administrator populates. The contents of this folder are displayed as one or more content windows and set up and managed by the administrator.

  Broadcast messages contains two sub-folders:
  - Personal Page Content - Published personal pages.
  - Sample Personal Page - Content on personal pages set up by the administrator and content that you add to personal pages by subscribing to items.

- **My Bookmarks** - Collection of links to Web pages or repository items.
- **Image bookmarks** - Graphic links to web pages or repository items.
- **HTML file or job output displayed as a file content window** - Contents of EPM Workspace HTML items displayed on a Personal Page. URLs are also displayable.
- **Exceptions Dashboard** - Add traffic light indicators for jobs enabled for exceptions, or items flagged as exceptions. If the traffic light is red, the item was flagged as an exception or the job generated an exception. If the traffic light is green, the job did not yet generate an exception.
- **Displayable Interactive Reporting sections** - Sections from Interactive Reporting documents and Interactive Reporting job output to which you have access.

The following figure shows a variety of content windows and file content windows.

**Figure 1**

<table>
<thead>
<tr>
<th>Broadcast Messages</th>
<th>MSND Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>No messages.</td>
<td></td>
</tr>
</tbody>
</table>

**Sample Personal Page**

MSND logo
MSND Sales
MSND Script
Page Footer
Unit Sales 1597 Chart
Unit Sales 1597 Pie
Unit Sales 1597 Trend
William Shakespeare Bio

**My Bookmarks**

- report
- hyperion website
- Text File Sample

**Exceptions Dashboard**

- No monitored exceptions

---

**Note:** If your administrator configured the use of heading bars, each content window’s title is displayed in a colored heading on Personal Pages as shown.

A Personal Page includes:

1. **Broadcast Messages Heading Bar** - Format the Heading bar for each content window.
2. Links - links to HTML pages or Web sites
3. Content Window - My Bookmarks that are set up using Subscriptions.
4. Exceptions Dashboard - Lists job exceptions and notification messages or items that are flagged for exceptions.
5. File Content Window - Displays the contents of an HTML file.

Customizing Personal Page Content

You can specify information included and the appearance of your Personal Pages. Use the following steps to customize your Personal Pages:

- “Adding or Removing Personal Page Contents” on page 152
- “Displaying HTML Content on Personal Pages” on page 152
- “Embedding Interactive Reporting Document Sections in Personal Pages” on page 153
- “Creating Bookmarks” on page 155
- “Using Exceptions” on page 157
- “Modifying the Layout of a Personal Page” on page 160
- “Changing the Colors on a Personal Page” on page 161

Adding or Removing Personal Page Contents

To add or remove content (content windows) to a Personal Page:

1. Favorites, then Manage Personal Pages.
2. Select a personal page.
3. Select .
   The content of the selected personal page is displayed in the My Personal Page Content area.
4. Select the content you want to add from Select Content, select .
   The items listed in the select content area are controlled by your administrator. You can also add content through the subscribe feature. See “Using Subscriptions” on page 147.
5. To remove items, select the content you want to remove from My Personal Page Content and select Remove.
6. Select Save Settings or close the window to Cancel. Changes are automatically displayed in the personal page you updated.

Displaying HTML Content on Personal Pages

Add HTML items as a file content window on a Personal Page, which displays the content of the item as opposed to a link to the item.
Note: HTML job output from Production Reporting jobs and generic jobs must be enabled in order to display the HTML job output as a file content window.

Displaying an HTML File on a Personal Page

Display HTML files on Personal Pages:

1. Select Explore, navigate the folders until you find the document you want to add to your Personal Page.
2. Right-click the item, select Subscribe.
3. From the Subscribe window, select the Personal Pages tab.
4. Select Display file/output as a File Content Window.
   If this option is not available, this file/output cannot be displayed as a file content window.
5. Optional: To add the file content window to a personal page, click the desired personal page.
   The HTML displays the embeddable content windows list.

Adding a File Content Window to Personal Pages

Add file content windows to Personal Pages:

1. Favorites, then Manage Personal Pages.

   Tip: To define the location of the Broadcast Messages and content windows on your page, select the personal page and right-click. Select Personalize Layout.

2. Select the Personal Page you want to add the file content window to and click Personalize Content.
3. From Select Content Window, click the desired file content window(s) and add it to the Content list for your Personal Page.
4. Click Save Settings.

Removing a File Content Window from All Personal Pages

Remove file content windows from Personal Pages:

1. Select Explore and navigate to the original HTML document/output file.
2. Right-click the item, select Subscribe.
3. On Subscribe, clear Display file/output as a File Content Window.
4. Select OK.

Embedding Interactive Reporting Document Sections in Personal Pages

Embed sections of Interactive Reporting documents or Interactive Reporting job output into Personal Pages.
• If the item is an Interactive Reporting job output, it must be HTML from a single-cycle job. The most recent job output is displayed in the embedded section and it is not interactive.

• Embedded Interactive Reporting sections are fully interactive, with options available from the pop-up menu.

Specify whether to include the Interactive Reporting Main Menu bar or the Navigation bar as part of the embedded section. Interactive Reporting document sections you can embed are:

• **Results** - Reduced vertically to fit in the container, with horizontal scroll bars. To view more vertical regions, use the page navigation options available on the Main Menu bar.

• **Tables** - Reduced vertically to fit in the container, with horizontal scroll bars. To view more vertical regions, use the page navigation options available on the Main Menu bar.

• **Pivot** - Reduced vertically to fit in the container, with horizontal scroll bars. To view more vertical regions, use the page navigation options available on the Main Menu bar.

• **Chart** - Scaled proportionally to fit in the container.

• **Reports** - Clipped to fit in the container.

• **Dashboard** - Clipped to fit in the container.

---

**Embedding an Interactive Reporting Section on a Personal Page**

1. **Embed Interactive Reporting sections on a Personal Page:**
   1. Select **Explore**, navigate to the Interactive Reporting document or job output file.
   2. Right-click the item, click **Subscribe**.
   3. Click **Personal Pages** tab.
   4. Select **Add sections of Interactive Reporting Document**.
   5. Select the section you want to add from **Embed Section**.
   6. Select the Personal Page that you want to update.

   **Note:** A list is displayed if you have more than one Personal Page.

7. Click **Add**.
   
   The section is displayed in the **Embedded BQY Sections** list box.

8. Specify the size you want each section to be on the Personal Page.
   
   Select the desired section from **Embedded BQY Sections** and specify its height and width in pixels in the respective field.

9. Click **OK**.

---

**Editing Embedded Interactive Reporting Sections on a Personal Page**

After embedding an Interactive Reporting section, you can edit its properties.
Edit the appearance of embedded sections:

1. Select Favorites, then My Personal Page.
2. From the personal page, select <!--image-->
3. Change the settings from the Edit Results Section window:
   - Replace embedded section - (Read only) Displays the section currently embedded.
   - With section - Select a section to replace the currently embedded section. The name of currently embedded section is displayed by default.
   - Specify section size - Enter the size of the section in pixels.
   - Toolbar display - Select the Interactive Reporting Server toolbar to embed with the section (the default is none).
     o Select Navigation Only, to have the first page, previous page, next page, and last page toolbar buttons only.
     o Select Standard, to have all toolbar buttons except for the Interactive Reporting Server help button.
     o Select None, to have no toolbar displayed.
4. Click Save Settings.

The edited embedded section is displayed on your Personal Page.

Removing Embedded Interactive Reporting Sections from a Personal Page

You can remove any embedded Interactive Reporting section from your Personal Page.

To remove embedded Interactive Reporting sections from Personal Pages, click X in the title of the file content window containing the Interactive Reporting section you want to remove.

To remove an embedded Interactive Reporting section from all Personal Pages:

1. Select Explore, navigate the folders until you find the item containing the embedded sections you want to remove from your Personal Page.
2. Right-click the item, click Subscribe.
3. On the Subscribe page, navigate to Add Sections of Interactive Reporting Document.
4. Select the section you want to remove from the list box and click Remove.
5. Click OK.

Creating Bookmarks

Include bookmarks on a Personal Page. A bookmark is a text link or image link to a item or to a URL.
Adding Bookmarks for a EPM Workspace Item from Explore

1. Select Explore, navigate to the item.
2. Right-click the item, select Subscribe.
3. On Personal Pages tab, select Add to My Bookmarks.

**Note:** The new bookmark is displayed on every Personal Page that includes the My Bookmarks item.
4. Select OK.
5. Go to your Personal Page.

The Bookmark is displayed in the My Bookmarks list.

**Note:** When selecting a Web Analysis, Production Reporting, Financial Reporting, or Interactive Reporting jobs bookmark from the My Bookmarks list of a personal page, it opens as a new tab in EPM Workspace.

Adding Image Bookmarks for a EPM Workspace Item

Bookmarks are added for items you subscribe to, except folders.

1. Select Explore, navigate to the original item.
2. Right-click the item, select Subscribe.
3. On Subscribe Settings, Add As Image Bookmark. Specify the following information:
   a. Specify graphic files you want to use. Select either:
      - A pre-configured icon file from the drop-down list
      - A custom icon file (your administrator needs to add your custom graphic to the EPM Workspace file system and give you the path to it). Using a graphic file from your local file system does not work.
   b. Enter the desired dimensions for displaying the image (in pixels).
4. Select OK.

Adding URL Bookmarks from Personal Pages

Bookmarks can also be added from within Personal Pages.

1. Select Favorites, then My Personal Page.
2. Select a personal page from the list. Right-click and select Add bookmark URL.
From the Add URL Bookmark to My Bookmarks dialog, enter a bookmark name and URL for bookmark.

Select Save.

Note: The URL must begin with either http:// or https://.

Using Exceptions

Exceptions are conditions or results (such as a threshold being reached) requiring intervention. Exceptions cause corresponding indicators on a subscribing users Exceptions Dashboard to change, or a notification to be sent to users who have subscribed.

The exceptions dashboard is an optional content window used to monitor exceptions, it displays on Personal Pages. Each indicator represents one exception-capable job or items manually flagged as an exception.

Use exceptions with jobs or items:

- Using monitored exceptions with jobs:
  - Programmatically enable monitored exceptions on jobs. The exception is set when certain conditions or thresholds are met. Job exceptions are generated by Production Reporting jobs, Interactive Reporting jobs, or generic jobs. See “Configuring Exceptions” on page 158.
  - Subscribe to jobs and choose to be notified by e-mail when the exception occurs.
  - Place jobs on the Exceptions Dashboard and view its exception status. For each job you add to the Exceptions Dashboard, a green traffic light icon is displayed. If the job generates an exception, the traffic light changes to red. “Using the Exceptions Dashboard” on page 158.

- Using exceptions with items:

  Note: An item must have version properties in order to use exceptions.

  - Manually set exception status for items. See “Configuring Exceptions” on page 158.
  - Subscribe to items and choose to be notified by e-mail when the exception occurs.
  - You can place items on the Exceptions Dashboard and view its exception status. For each item you add to the Exceptions Dashboard, a red traffic light icon is displayed. Items cannot be added to the exception dashboard unless the exception status is set. See “Using the Exceptions Dashboard” on page 158.

You have only one Exceptions Dashboard, even if you put it on multiple Personal Pages. If you modify the Exceptions Dashboard on one Personal Page, it changes on all of your Personal Pages that include it.
Configuring Exceptions

Configure exceptions for jobs and items with version properties. There are two ways to configure exceptions:

- Programmatically set-up a job to generate exceptions if certain conditions are met. When you run the job if an exception occurs, the exception status of the job is set.
- Manually set exceptions on an item by setting the property to **Flag as an Exception**.

Programmatically enable a job with monitored exceptions capability:

- Design the Production Reporting job (*.sqr) or generic jobs to write exceptions to the `output.properties` file. See “Supporting Exceptions in Production Reporting or Generic Programs” on page 492.
- Design the generic job, to write exceptions to the `output.properties` file. “Supporting Exceptions in Production Reporting or Generic Programs” on page 492.
- Design the Interactive Reporting job to write exceptions. See “Supporting Exceptions in Interactive Reporting Programs” on page 460.

To set exception status for items manually, from Explore, set the property **Flag as an Exception** for the latest version of the item. See “Version Properties” on page 140.

Using the Exceptions Dashboard

The exceptions dashboard shows a traffic light indicator for each job or item you place on it. The traffic light indicator changes to indicate if an exception occurred (red) or did not occur (green).

**Note:** Items have version properties to use exceptions and the exceptions dashboard.

Use Exceptions Dashboard with jobs:

1. Select **Explore**, navigate to the job whose exception you want to monitor, right-click the job, click **Properties**.
2. From **Advanced**, select **If exceptions are generated, allow users to add to their Exceptions Dashboard**, click **OK**.
3. Select **Explore**, navigate to the job, right-click the job, click **Subscribe**.
4. On **Personal Pages** tab, select **Add to Exceptions Dashboard**.
   - If this option is not on the Subscribe Settings page, the file cannot be monitored for exceptions.
5. Click **OK**.

A traffic light is added to the exceptions dashboard. The traffic light indicator is green. If the job is run and generates an exception, then the traffic light indicator changes to red.
Use Exceptions Dashboard with items:

1. Select **Explore**, navigate to the item that has an exception you want to monitor.
2. Right-click the item, click **Properties**.
3. From Advanced, select **If exceptions are generated, allow users to add to their Exceptions Dashboard**.
4. From Versions, set the property **Flag as an Exception** for the latest version of the item and click **OK**.
5. Select **Explore**, navigate to the item.
6. Right-click the item, from the shortcut menu, select **Subscribe**.
7. On Subscribe Settings, select **Add to Exceptions Dashboard**.
   - If this option is not on the Subscribe Settings page, this file cannot be monitored for exceptions.
8. Click **OK**.

A red traffic light is added to the exceptions dashboard, to indicate that an exception is set for this item.

**Adding the Exceptions Dashboard to a Personal Page**

Add the Exceptions Dashboard to Personal Pages or just one.

1. Go to the Personal Page to which you want to add an Exceptions Dashboard.
2. Click ➡️.
3. Click **Exceptions Dashboard** and click ➡️.
4. Click **Save Settings**.

**Customizing the Exceptions Dashboard**

Customize the display of the Exceptions Dashboard.

1. Select **Favorites**, select a Personal Page.
2. On Exceptions Dashboard, select ➡️.
3. To not show green lights, and have red lights displayed when an exception occurs, enable the **Only display links to artifacts that have exceptions**.
Note: This option is applicable for monitored exceptions used with jobs. Traffic lights display when the exception status is set. You cannot show a green traffic light for items.

4 When exceptions occur and you want to see its exception text explanatory message next to its red light, select Display exception messages next to graphic indicators.

Note: There is a smartcut tag called \texttt{getException()} that displays exception messages on a Interactive Reporting dashboard. For more information, see the Hyperion Interactive Reporting Studio User’s Guide

5 Click Change Properties.

Modifying the Layout of a Personal Page

Use the Layout button to select different layout styles for Personal Pages or to rearrange content windows.

Specifying Layout Style

The layout style of a Personal Page includes how many columns or sections the page has and where they are displayed on the page.

▸ Specify layout styles:

1 Favorites, then Manage Personal Pages.

2 Select a Personal Page, then select .

3 Click Select Layout Style and select a layout style.

4 If you want to put content windows in a section across the top or bottom of the Personal Page, click Show Header Section or Show Footer Section.

5 Click Save Settings.

Rearranging Content Windows

▸ Move content windows:

1 Favorites, then Manage Personal Pages.

2 Select a Personal Page, then click Layout.

3 Select a content window you want to move.

4 If you want to move the selected content window up or down within the section (column, header or footer) it is currently in, click a vertical arrow. If you want to move the selected content window to another section, click a horizontal arrow.

5 Continue selecting and moving content windows until they are arranged as you want.
6  If you want to move the Broadcast Messages content windows, select Above all Content Windows or Below all Content Windows in the Broadcast Messages section of the Content Layout page.

7  Click Save Settings.

**Changing the Colors on a Personal Page**

Select color schemes for Personal Pages, or individually set colors for page elements.

▶  Change colors on Personal Pages:

1  Select Favorites, then Manage Personal Pages.

2  Select .

3  Select a color scheme.

4  If you want to set colors individually, click Customize Colors for Custom. If not, go to step 7.

   Each colorable Personal Page element displays an array of color samples above a My Own __ Color option. Select any color in the array by selecting its radio button. Colors shown next to the My Own __ Color entry box is the current color of the element.

5  Each element whose color you want to change, select the new color you want or enter a hexadecimal color code (for example, #000000 is the hexadecimal color code for black) in the My Own __ Color entry box.

6  Select Save Settings.

7  Select a color scheme option:

   ▪  Change all my Personal Pages to use this Color Scheme - Applies the specified color scheme to all your existing Personal Pages.
   
   ▪  Use this as my default Color Scheme for all new Personal Pages - Applies the specified color scheme to the current Personal Page and any future ones.

8  Select Save Settings.

**Working With Personal Pages**

Create multiple Personal Pages for different purposes, specify a default Personal Page if you have more than one, and publish a Personal Page so that others can use it as their own.

   ▪  “Creating a Personal Page” on page 161
   
   ▪  “Copying a Personal Page” on page 162
   
   ▪  “Deleting Personal Pages” on page 163
   
   ▪  “Publishing and Replacing Personal Pages” on page 163

**Creating a Personal Page**

You can create multiple Personal Pages.
To create a Personal Page:

1. Select File, then New, then Personal Page.

2. Use to add the content windows you want (listed on the left side) to the Personal Page Content list for your new Personal Page (on the right), click Next.

3. Select a layout style and click Next.

   Note: Layout styles only show the Personal Page portion of the browser window; the View pane also is displayed on the left. A Header section is a wide area that contains one or more content windows. A Footer section is the same, but located at the bottom of the page.

4. For Layout, arrange the various content windows where you want them on your Personal Page. Select a content window and to move the content window between sections. Select a content window and then to change a content window’s position in a section. When you are done, click Next.

5. On Edit Personal Page, enter a name and description for your Personal Page, select a color scheme, click Finish or Finish & Publish.

   Note: Selecting Finish opens the personal page just created for viewing. Finish & Publish enables you to assign permissions during the publishing process of Personal Pages prior to viewing.

You can further customize the colors at a later time, see “Changing the Colors on a Personal Page” on page 161. On the My Personal Pages page, the new Personal Page is listed.

Also, from Favorites, select your Personal Page to view.

Copying a Personal Page

In addition to publishing new Personal Pages, you can also copy a published Personal Page to a new Personal Page.

Note: You must have a published Personal Page prior to performing the following steps.

To copy published Personal Pages:

1. Select Favorites, then Manage Personal Pages.

2. Select .
Note: is not displayed if you exceeded the number of Personal Pages allowed by your administrator. You must remove a Personal Page to enable it.

3 Select Copy Published Personal Page, select Next.
The Add Existing Personal Pages page is displayed.

4 Select the personal page(s) you want to copy from the list, select Finish.
Select . The page(s) are displayed in Manage Personal Pages.

Deleting Personal Pages

- Delete Personal Pages:
  1 Select Favorites, then Manage Personal Pages.
  2 Select the Personal Page you want to delete from My Personal Pages.
  3 Right-click and select Remove Page.

Note: Select Restore Settings to restore the deleted Personal Page to the list.

4 Select Save Settings.

Publishing and Replacing Personal Pages

Publish new Personal Pages or replace published Personal Pages using the content of your Personal Page. Publishing a Personal Page enables other users to copy it.

Note: To publish Personal Pages, you need access permissions to the Personal Page folder.

- Publish or replace Personal Pages:
  1 Select Favorites, then Manage Personal Pages.
  2 On My Personal Pages, select the Personal Page you want to publish, right-click and select Publish.
  3 To publish, enter a name and a description in the Publish New Personal Page section, select Publish.

The name and description defaults to what you have already assigned to this Personal Page. The name and description should communicate what is distinctive about this page.

Note: When you Publish and run an Interactive Reporting or Production Reporting job to generate the job output, the default naming convention for the job output changes to list the job and job output together.

4 To replace: In Replace Personal Page, select the page to replace, click Replace.
You can replace a published Personal Page with one that has a different name. The contents of the published page are replaced and the published page name remains the same.
To set access permissions on the Personal Page you just published: select **Edit Permissions**.

The default access permissions when publishing Personal Pages are the same as basic documents. To set access permissions, see “Setting Permissions” on page 129.

## Workspace Pages

Workspace Pages enable users to create, edit, and aggregate content from Oracle and non-Oracle sources from EPM Workspace repository, into a single environment.

Oracle sources include:

- Interactive Reporting— Sections within the document, Sections within the job, Sections within the snapshot
- Web Analysis Document
- Production Reporting or SQR Document or Snapshot
- Financial Reporting Document, Snapshot
- Performance Scorecard Templates
- Favorites
- Alerts or Exceptions
- Folder listing (no subfolder items)

Non-Oracle source files include:

- URL
- Text files
- Image files
- HTML files
- Microsoft Office documents (Word, Excel, PowerPoint, Project)
- XML files
- RTF files
- PDF files
- Image files—.jpg, .gif, .png
- Shortcuts

There are two types of Workspace Pages, My Workspace Pages and Shared Workspace Pages. My Workspace pages are customizable workspace pages created by a user that are marked specially so that they can be easily accessed from one single place without having to navigate the repository. You can create shortcuts to My Workspace Pages that may be stored in any folder. Shared Workspace pages are stored in a system folder that authorized users can access from Explore. Users that have access to this folder can move My Workspace pages manually within Explore to promote them to the rest of the organization. A user needs Content Publisher role to be able to save anything to the repository, including Workspace pages. There is also a Home
page Workspace page that is installed with EPM Workspace that you can point to using Preferences as a default start page, for more information see “Using Home Page” on page 63.

Additional Workspace page features include:

- Provide content aggregation
- Provide interactivity directly within a workspace page
- Easy self service creation with supplied templates
- Ability to build a dashboard in very little time
- For advanced users, free form layout mechanism
- Navigate through EPM Workspace repository

**Creating Workspace Pages**

Templates are used as a starting point to create Workspace pages. Templates allow the user to specify in advance the layout of the workspace page before adding content. A user can then drag and drop content from the Content browser (left pane) to a layout area. The Content browser contains the following sources to select from: EPM Workspace repository, Favorites, and Applications repository. The Applications repository contains Performance Scorecard and non-Reporting and Analysis artifacts. Users can only select one item at a time from the Content browser.

The Find at the bottom of the Content browser allows users to perform a search in the chosen source. Find searches EPM Workspace repository items based on matches to the name of the object, it does not perform finds based on other attributes of the object. Find performs a search of the entered string without having to force the user to enter wildcard characters. Results are displayed in alphabetical ascending order within the Content browser. The results are also displayed in the source drop down allowing users to switch between find results and repository navigation.

To create a Workspace page:

1. Do one of the following:
   - Select File, then New, then Workspace Page.
     - Select a template from the Templates dialog. Selected template is highlighted.
     - Select OK. Workspace page is created with chosen template.
   - Select File, then New, then Document.
     - Select Create a Workspace Page and click Next.
     - Select one of the templates. Selected template is highlighted.
     - Click Finish. Workspace page is created with chosen template.

2. From the Content Browser, select a source for the location of the file you want to add to the layout area.

3. Select the file and drag and drop from Content Browser to a layout area. The title bar displays the title of the document by default.
Optional: To resize a layout area, select the lower right corner with your mouse and drag to resize.

Optional: To move a layout area, select the title area with your mouse and drag to new position.

Optional: To add a URL, Favorites, or Alerts Exceptions in the content area of a Workspace page, select Edit, then Add Content, then URL, Favorites, or Alerts Exceptions.

Optional: To add a folder listing, select the folder and drag and drop from Content Browser to the content area of Workspace page.

To edit a layout area, select from the layout area toolbar. See “Editing Layout Area” on page 167.

Note: The layout area toolbar must be enabled to use the icons in the toolbar. Select Edit, then Show Portlet Toolbars to enable and disable.

Optional: Select the layout area toolbar to open the content as another tab within EPM Workspace.

Optional: Select to delete the layout area.

Optional: Select to maximize the content to consume the entire content area. Once maximized, you can restore to it's original size and location by selecting.

By default, a Workspage page is saved as My Workspace Page. This allows the Workspace page to be available from the Navigate, then Workspace Pages, then My Workspace Pages menu and from the File, then Open, then Workspace pages, then My Workspace Pages menu.

To save the Workspace page without having it available in the above menu locations, deselect Save as My Workspace Page from the Save As dialog.

Optional: To save a Workspace page as a Shared Workspace page, from the Explore module, click and drag the Workspace page file to the system folder where Shared Workspace pages are stored.

Note: You must be an authorized user that has access to the folder where Shared Workspace pages are stored.

**Layout Area**

Layout area is used to designate an area on a Workspace page where content can be placed. Each layout area is independent, and can be resized and overlap. Layout areas also have properties that can be modified, see “Editing Layout Area” on page 167. Each layout area can be positioned anywhere within the content area. Toolbars are used to perform functions such as editing the properties, maximizing and restoring, deleting, and launching the layout area as another tab within EPM Workspace. You can add layout areas to an existing Workspace page by dragging and dropping repository content from the Content Browser into the Content area. Additional content includes: URL, Favorites, and Alerts. URL is used to specify any URL as the source location for the content. Users should not add URLs to untrusted sites for security purposes. Favorites displays the user’s favorites within EPM Workspace. This provides quick access to a user’s Favorite repository. Alerts content displays the alerts or exceptions that are generated by Interactive Reporting and Production Reporting. Users can also add a folder to the content area by dragging and dropping a folder from the Content Browser. Links to files contained within
the folder are displayed which when selected launches the file as a tab in EPM Workspace. Subfolders are not listed.

**Editing Layout Area**

Users can edit the properties of a layout area in a Workspace page.

➤ To edit layout area properties:

1. To rename a layout area, enter a name in the Title text box.
2. Source displays the path to the file in the layout area. Select the **Select** button to select another file or folder to replace the existing content.

   **Note:** You cannot change the source for Favorites or Alerts content.

3. **Optional:** Complete the following if you selected the Select button in the previous step.
   a. From the Browse dialog, select a source for the file you are searching for.
   b. Enter the filename in the Find textbox and select **Find**.
   c. Select **OK**.

4. Enter values for size and position.

5. For Financial Reporting, Web Analysis, and Interactive Reporting products, you can select the **Show Portlet Toolbar** option from Properties to display the content toolbar.

6. **Optional:** Deselect **Show Scrollbars** if you do not want to display scrollbars for layout area.

   **Note:** Documents in a layout area that have their own scroll bars cannot be hidden for example, a .PDF document.
Launching Oracle's Hyperion Applications

Applications from the Navigate menu can contain a list of Profitability and Cost Management, Oracle Business Intelligence, Oracle Hyperion Performance Scorecard, Fusion Edition, Planning, or Financial Management applications which you can open. Applications is displayed if both of the following are true:

- A user has rights
- Applications have been installed and are available

The list of available applications is retrieved from Oracle's Hyperion® Shared Services. When an application is selected, it launches in a new window, passing the single sign on token so you are not prompted again for credentials.

The list of available applications are filtered by the user's provisioned status. For example, if the currently logged on user was not provisioned for a project that included the Planning Real App, it would not be listed. For additional information on using Planning applications, see Oracle Hyperion Planning User’s Guide, for Financial Management applications, Oracle Hyperion Financial Management User’s Guide, Oracle Hyperion Profitability and Cost Management, Fusion Edition applications, see Oracle Hyperion Profitability and Cost Management User’s Guide, and for Oracle Business Intelligence application products, see the Oracle Business Intelligence product guides.

To launch applications:

1. **Select Navigate, then Applications.**

A list of available applications for the products installed and for those you have rights to are displayed.

**Note:** If instanced products are installed but the current user is not provisioned for any application instances, the Navigate, then Applications menu displays a No Applications disabled menu item followed by a Refresh menu item. None of these three items appear if the user is provisioned for any application instances. The same applies to the File, then Open, and then Applications menu.
2 Select the application you want to open.

   The application launches as a tab at the bottom of the EPM Workspace allowing easy
   switching between screens.

Note: Preferences can be set when viewing certain applications from EPM Workspace. See
   Chapter 2, “Setting Preferences and Personalizing EPM Workspace.”
Overview

EPM Workspace enables previewing of Financial Reporting documents, such as reports and books, from the Explore module. You can preview reports and books in HTML or PDF format.

Note: Text automatically wraps within a grid’s cell. When print previewing PDF reports, text cells with long text are automatically merged into the next cell to the right, if that cell is empty. When previewing HTML reports, text cells are not automatically merged unless the Merge feature was applied at design time. The rows height automatically adjusts to display all text.

Note: You must have file permissions to view reports or books. See the Oracle Enterprise Performance Management Workspace Administrator’s Guide.

EPM Workspace Tasks

Tasks, other than previewing, performed through EPM Workspace.

- Customize report and book elements. For example, change the POV before or after running the report or book.
- Export reports, snapshot reports, XML (report-definition file), PDF, HTML, Word, Excel, or PowerPoint.
Use Related Content to link to Financial Reporting reports and EPM Workspace URLs.

Subscribe to Financial Reporting documents to receive e-mail notifications when reports are modified and add notifications to your favorites. See Chapter 6, “Viewing and Organizing Information.”

Modify permissions to Financial Reporting documents. See Chapter 6, “Viewing and Organizing Information.”

Organize the E-mail Recipient list.

Types of reports and books available from the Explore module:

- Reports—Populated with data from data sources; users can customize by selecting members
- Snapshots—Contain static data for a specific point in time; populated with data when saved.
- Books—Contain sets of dynamic reports and, optionally, tables of contents. Reports are run for all specified member combinations.
- Snapshot books—Contain sets of snapshot reports and, optionally, tables of contents; can be viewed for multiple POVs

Designers incorporate EPM Workspace features into reports and books to enable viewers to perform tasks:

<table>
<thead>
<tr>
<th>Table 43</th>
<th>EPM Workspace Features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reports</td>
</tr>
<tr>
<td>Prompt</td>
<td>Yes</td>
</tr>
<tr>
<td>User POV</td>
<td>Yes</td>
</tr>
<tr>
<td>XML, HTML, and PDF</td>
<td>Yes</td>
</tr>
<tr>
<td>Page Axis</td>
<td>Yes</td>
</tr>
<tr>
<td>Expansions</td>
<td>Yes</td>
</tr>
<tr>
<td>Related Content</td>
<td>Yes</td>
</tr>
<tr>
<td>Grid POV</td>
<td>Yes</td>
</tr>
<tr>
<td>Data Security¹</td>
<td>Yes</td>
</tr>
<tr>
<td>E-mail Links</td>
<td>Yes</td>
</tr>
</tbody>
</table>

¹Data source security is applied.

**Interacting with Documents**

For Financial Reporting, you use the Viewer to change the userPOV for reports and books.
Note: The Document panel is not displayed if you select to display the POV above the report or book. See Chapter 2, “Setting Preferences and Personalizing EPM Workspace”.

Enabling Viewing

EPM Workspace viewing prerequisites:

- For PDF, Acrobat Reader must be installed.
- For reports in PDF, a PDF writer (Acrobat Distiller, GNU Ghostscript, or AFPL Ghostscript) must be installed with the print server. If a PDF viewer is not available, only report names are listed.

To use Internet Explorer for viewing PDF reports in EPM Workspace:

1. Open Internet Explorer.
2. Select Tools, then Internet Options.
3. In Internet Options, select the General tab, and, in Temporary Internet Files, select Settings.
4. In Settings, Check for newer versions of stored pages, select Every visit to the page.
5. Click OK twice.

Preview Preferences

You can set how to view reports and books; PDF Preview or HTML Preview. See Chapter 2, “Setting Preferences and Personalizing EPM Workspace.”

Logging On to Database Connections

You must be defined as a user, with a user name and password, in the data source that your report is using. For example, if you want to view a report that uses Analytic Services as a data source, you must log on to the database connection with a user account defined in Analytic Services.

Logging on usually occurs automatically. However, if you are not registered in the database, you are prompted to log on through the Database Connection Properties dialog box, which displays the database connection name assigned by the report designer. Ask your administrator for a user name and password. See Chapter 3, “Exploring and Managing Items ”.

To log on to a database connection:

1. In Database Connection Properties, enter your user name and password.
2. Click OK.
Changing Expired Passwords for Essbase Users

Essbase administrators can set conditions to control when Essbase users have to change their passwords in Financial Reporting.

➢ To change your expired Essbase password from EPM Workspace, when prompted:

1 Log on with your current user name and password.
2 Click Go.
3 In Change Analytic Services Password, enter your old password and new password.
4 In Confirm Password, reenter the new password.
5 Click OK.

Viewing Reports

If the report contains dimensions on the user POV, they are displayed above the report or book or in the EPM Workspace document panel. Setting dimensions on the user POV enables modification of the dimensions, which results in a modified POV and requires regeneration of the report or book.

Note: In the repository, you can display the current user POV settings page before reports or books are run. Current user POV settings can be edited after reports or books are run. See Chapter 2, “Setting Preferences and Personalizing EPM Workspace.”

Reports viewed in PDF are generated using the user POV and output in PDF. Reports with multiple page members are generated for all page members and displayed in Acrobat Reader in EPM Workspace. HTML reports are generated using the user POV.

Viewing and customizing reports tasks:

- “Printing Reports and Books” on page 175
- “Changing User POV” on page 176
- “Responding to Prompts” on page 177
- “Using Expansions” on page 178
- “Using Related Content” on page 179
- “Selecting Members” on page 180
- “Changing Members for Grid POVs” on page 182

➢ To view a report:

1 Select Viewer, then Explore, then select a report or book that has prompts.
2 Select File, then Open, then Document.
Note: The file opens in PDF or HTML, as set Preferences. See Chapter 2, “Setting Preferences and Personalizing EPM Workspace.”

Tip: Select the report or book from the repository. Then, right-click the report, and select Open in, then HTML Preview or Open in, then PDF Preview.

3 Optional: If the Current User POV Settings page is displayed, change the settings and click OK.

See “Changing User POV” on page 176.

If the page is displayed, User Point of View is selected in Preferences for Financial Reporting. See Chapter 2, “Setting Preferences and Personalizing EPM Workspace.”

4 After the report opens, in the View pane, click the database connection right arrow, and review POV settings.

5 Select a dimension to invoke Member Selection, select another member, then click OK.

Report content changes to reflect the POV change. For information on Member Selection, see “Selecting Members” on page 180.

6 Select View, then Preview User Point of View.

7 In Preview User Point of View, change one or more dimension selections by clicking Select.

8 In Member Selection, select another member, click OK.

The report is refreshed. See “Changing User POV” on page 176.

Printing Reports and Books

You can print any type of report or book. For dynamic reports and books, data is refreshed. For snapshot reports and books data is not refreshed.

➤ To print a report:

1 From EPM Workspace repository, open the report.

   Respond to prompts and modify as needed.

2 Select File, and then Print.

   Note: The output is fully formatted, in PDF, for end-user use.

➤ To print a book:

1 From EPM Workspace repository, open the book.

   Respond to prompts and modify, as needed.

2 Select File, then Open In, then Complete Book in PDF to create a PDF of the entire book, including all reports.
To print a report from a book:

1. From Table of Contents view, select a report in the book and select Show Report.
2. Select File, then Print.

Changing User POV

User POV, which specifies members for dimensions not defined on report grids, is available for dynamic reports and books, as specified during design-time. You can change user POV members before running reports and books and then run the reports and books to display new-member data. You can also edit user POVs after running reports and books.

When you view a report or book in HTML, the user POV can be displayed in the Document Panel of the View pane or above the report or book table of contents in the Content area.

Figure 2  Financial Reporting HTML Report

Each dimension or member is a link. When a link is selected, it displays a Member Selection page from which you can select members for the dimension. The members for a dimension are shown in Tree view, which is a hierarchal view of the members of the dimension. By default, Tree view shows only the top-level member. You can expand a member to see its children.

Note: Financial Management dimensions often have more than one top-level node.

Member-search methods:

- Expand data-member rows, and search visually. You can use the Expand all Rows button to expand the rows.
- Use the Find text box to search by member or alias and description. Search criteria can include wildcards; for example, * and ?.

See “Selecting Members” on page 180.

To preview user POV settings prior to running a report or book:

1. Select File, then Preference, then Financial Reporting, then General. Select one of the following for Location of Point of View: and a default location for the User Point of View when previewing a report; In View Pane or Above Report/Book.
Select In View Pane to display the user POV selections in the Viewer. If you do not select this option, the Viewer displays a Preview User Point of View option that, if selected, displays the Preview User Point of View dialog box.

Select Above Report/Book to display the user POV above the report or book.

2 Click OK.

3 From the repository, select the report or book.

4 Select File, then Open In, then PDF Preview or File, then Open In, then HTML Preview, or save the book as a snapshot book. The user POV is displayed in the location specified in Preferences.

5 Click a dimension to modify the POV in Member Selection.

See “Selecting Members” on page 180.

Responding to Prompts

Some reports are designed with prompts, which are displayed when you view the reports or books containing the reports. You respond to prompts and provide requested information by selecting members from prompt lists. You can edit prompts manually. If the prompts contain alias names, you convert them to member names.

SAP BW Variable Support in Financial Reporting

SAP BW variables are treated similar to Financial Reporting Member Selection prompts with some key differences: Variables are defined on the Cube, so no action is necessary to put them into a report. When a Cube has one or more variables present and a report/book which references that Cube is executed, the user is prompted to enter a response to any variables present in the Cube. All variables which are marked “ready for input” are shown for any report/book which references the Cube. The Respond to Prompt dialog box, is used to respond to Financial Reporting member selection prompts, as well as Variable responses. There are some differences: a Financial Reporting prompt always allows one or more members to be entered, whereas a variable can be defined to require a single member, numerous members, or an interval or range of members. Variables may be defined to not require a value. Variables can be set to take a numeric value instead of a member name. The Respond to Prompts dialog shows prompts and/or variables within the same dialog. For variables which take a single or numerous members, the user interface behaves the same as a prompt (except that if the variable takes a single member the member selection tree will only allow a single member to be picked). For variables which take an interval or range of members, two member selection/numeric value fields are shown; one for the “from” and one for the “to”. The member selection selector only allow a single member to be selected for either of those member selection fields. For variables which take a numeric value, the no member selection buttons are shown. The following describes the Respond to Prompts columns when a report goes against a cube which is a variable:

- Variable — shows the variable description
- Type — shows the type of variable which can be: Required Leaf Member Variable, Required Non-Leaf Member Variable, Required Numeric Variable, Optional Leaf Member Variable, or Optional Non-Leaf Member Variable.
- Selection — shows the description of the currently selected members with default values.
Source — shows the report or grid which references the datasource which contains the variable.

The Run button validates the prompt members and variable values. Errors display next to the prompt/variable which has the error. The Reset button resets the prompt members and variable values to the initial, default values.

When a report has a member selection prompt in the Report and goes against a Cube which has an “interval” variable, the prompts are separately grouped to clarify the difference.

To respond to a prompt when previewing a report or book:

1. From EPM Workspace repository, navigate to a report or book that has prompts.
2. Select the report or book and select File, then Open In, then PDF Preview or File, then Open In, then HTML Preview.

   Note: The file opens in either PDF or HTML. This is set from the Preferences dialog box. For more information, see Chapter 2, “Setting Preferences and Personalizing EPM Workspace.”

3. Under the Selection column Respond to Prompts, perform an action:
   - Enter the member name in the text box for the respective prompt, if known. If the text box is disabled, the prompt contains alias names. To edit the text box, select Edit Member Names. If more than one member is provided for the prompt, members must be separated by commas.

   Note: Selecting Edit Member Names displays the member names in the text box, not the alias names. Edit the member name associated with that alias.

   - Click Go to Member Selection. Select Members is displayed. The default member is listed in the right panel - Selected area. See “Selecting Members” on page 180.

4. Click OK.

5. Optional: To undo any changes, click Reset in Respond to Prompts.

6. Click Run. The report or book is displayed.

Using Expansions

Expansions, available only in HTML reports, enable report viewers to see children of members and their corresponding data. Rows and columns for which expansions are enabled are displayed with right-facing triangles, which you click to view associated detail. After expansions are executed, pages are positioned near the rows or columns selected for expansion. Expansions are set up during design-time.

To use expansions, perform an action:

- Click the right-facing triangle for a row or column to view the next level of detail.
You can click multiple times, to see multiple levels of detail.

- Click the down-facing triangle for an expanded row or column to collapse its members.

**Using Related Content**

Related Content links to other Financial Reporting documents and to documents on other Hyperion servers. Related Content, set up by report designers, is available in HTML or PDF, as specified by the designers. You view Related Content links by clicking grid values, which are underlined by default.

Members of the cell selected for Related Content are passed to the user POV and used in the related content report. Thus, the context of the Related Content report is the cell selected in the primary report. For example, if you select the Margin row, Boston column cell, Financial Reporting sets the user POV for the Account dimension to Margin and for the Entity dimension to Boston and then displays the Related Content report. See the *Oracle Hyperion Financial Reporting Studio User’s Guide*.

Related Content rules:

- If only one action (HTML or PDF) is enabled for the object, actions are not listed on the Related Content page.
- The default action (HTML or PDF) is listed next to the object label.
- Folders open in the Related Content area.
- Object-level security is observed inside folders and when reports are requested to be viewed.

To use Related Content:

1 **In a report, click a Related Content link.**

   The report opens if a single report is selected in the list of Related Content and only one action is specified. If multiple reports are selected or multiple actions are specified, the Related Content page is displayed in a separate browser window.

2 **If Related Content is displayed, click a link.**

   ![Related Content link image]
If the link you click is not a folder, the document or action combination clicked is displayed.

**Selecting Members**

For reports, member selection is used to retrieve data and to determine how many members are displayed. You can also search for specific members.

Member selection tasks:

- “Selecting Members for User POVs” on page 181
- “Finding Members” on page 181
- “Changing Page Members” on page 181

<table>
<thead>
<tr>
<th>Table 44</th>
<th>Items from the Member Selection Web Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Item</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td><img src="image" alt="Cancel" /></td>
<td>Cancels changes made to the Member Selection dialog box</td>
</tr>
<tr>
<td><strong>Find button</strong></td>
<td>Used to select the type of search. A member can be searched for and displayed as the name of the member, the description or name in the alias table, and the name of the member and description/alias from a particular table. To search, click Find.</td>
</tr>
<tr>
<td><strong>Find text box</strong></td>
<td>Enter search criteria (not case sensitive)</td>
</tr>
<tr>
<td><img src="image" alt="Display members" /></td>
<td>Displays members that match the search criteria</td>
</tr>
<tr>
<td><strong>Use Wildcards</strong></td>
<td>Enables use of wildcards in the Find text box (selected by default)</td>
</tr>
<tr>
<td><img src="image" alt="?" /> for one character</td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="*" /> for multiple characters</td>
<td></td>
</tr>
<tr>
<td><strong>Note:</strong> If search criteria includes a space, enclose the search phrase in double quotation marks. For example, &quot;IC Offset&quot; is &quot;IC Offset&quot;. If the &quot;<em>&quot; wildcard is at the end only, for example, IC Offset</em>, quotation marks are not required.</td>
<td></td>
</tr>
<tr>
<td><strong>Rows Per Page</strong></td>
<td>Specifies a number of rows per page to be displayed on the member list (default 20). If the number of members exceeds the number of rows, use buttons on the Edit Member Selection header to scroll through the rows:</td>
</tr>
<tr>
<td><img src="image" alt="Next Page" /></td>
<td>Next Page</td>
</tr>
<tr>
<td><img src="image" alt="Previous Page" /></td>
<td>Previous Page</td>
</tr>
<tr>
<td><img src="image" alt="Display properties" /></td>
<td>Displays one or more member properties</td>
</tr>
<tr>
<td><img src="image" alt="Expand hierarchy" /></td>
<td>Expands all row members of the hierarchy down to the child level</td>
</tr>
<tr>
<td><img src="image" alt="Collapse hierarchy" /></td>
<td>Collapses all rows</td>
</tr>
</tbody>
</table>
Selecting Members for User POVs

You can use the Member Selection dialog box to select members for reports and books. Using selected dimensions, you can locate members and run reports or books for them.

To select a member for the user POV:

1. Open a report or book that contains a user POV.
2. Click a dimension or member link. Member Selection is displayed.
3. Click the plus sign (+) to display children.
4. Select a member, then click OK.

The reports runs for the member. Note that report content reflects the POV change.

Finding Members

From the Member Selection page, for the user POV, you can find and select members.

To find a member:

1. From the Find list, select criteria.
   The search-options list is based on the report data source.
2. In Find, enter complete or partial text. You can use partial text with * or ? wildcard symbols. Use Wildcards is selected by default.

   Tip: Use double quotation marks to search for members containing spaces.
3. Click Find to display search results.
4. Select a member, then click OK. The reports runs for the member.

Changing Page Members

You can change a page member only if, during report design, multiple members are assigned to the page axis of a grid. You change a page member to see different report views—HTML reports only. After you change a page member, the report is refreshed and populated with the new page member.

To change a page member:

1. From EPM Workspace, open a report with page-axis members in a grid.
2. From Page, select a member. The report is run, and data is displayed for the selected member.

   Note: For PDF, data for page members is displayed on different pages.
Changing Members for Grid POVs

Grids on reports can have dimensions on the grid POV. You can use the default member for each dimension or select a new member to run for a report.

➢ To change a member on the grid POV:

1. Open an HTML report that displays a grid POV.
2. Click a dimension or member link.
3. In Member Selection, select a member, then click OK. The report runs for the selected member.

Viewing Snapshots

Snapshots are similar to reports, except that they contain data for a specific point in time and thus do not retrieve data dynamically. Therefore, data-level security from the data source is not respected.

You can view snapshots in HTML or PDF. However, the print server and a PDF writer must be available to display both HTML and PDF links. If the print server is not available, snapshots are available only as HTML links.

See Table 43 for a list of features available in snapshots.

➢ To view a snapshot:

1. From EPM Workspace repository, select View, then Display Items of Type, then Hyperion, then Snapshot Book or Snapshot Report.
2. Right-click the snapshot and perform an action:
   • To view the snapshot in HTML, and select Open In, then HTML Preview.
   • To view the snapshot in PDF, and select Open In, then PDF Preview.

Viewing Books

From EPM Workspace, you can view books in HTML or PDF. In PDF, you can view the entire book or individual reports in the book. The print server must be available to display both HTML and PDF links. If the print server is not available, books are available only as HTML links. When you select a report name, the report is generated for all member combinations specified in the book. You can add reports to books and modify members. To create and modify books, see Chapter 9, “Designing Documents for Financial Reporting Batches and Books.” To select and modify members, see “Selecting Members” on page 180.

You can preview user POVs before running books. When you view books, user POVs and tables of contents are displayed. User POVs specify members for dimensions not defined on report grids. You can change user POV members and then run books to display new-member data. See “Changing User POV” on page 176.

You use tables of contents to locate reports that you want to view and to set options.
**Note:** The time required to generate and display books in EPM Workspace varies, depending on book size. You can cancel books at any time.

For reports with multiple page members, you can change page members and refresh the reports to show the updated data. Reports are viewed in Acrobat Reader within EPM Workspace.

To view a book:

1. From the list of files in EPM Workspace repository, select **View**, then **Display Items of Type**, then **Hyperion**, then **Book**.
2. Right-click the book, then perform an action:
   - To view the book in HTML, and select **Open In**, then **HTML Preview**.
   - To view the book in PDF, select **Open In**, then **PDF Preview**.
3. Optional: If the Current User POV Settings page is displayed, change the settings, then click OK.
   
   See “Changing User POV” on page 176.

   If the page is displayed, User Point of View is selected in the Preferences dialog box for Financial Reporting. See “Selecting Members” on page 180.
4. **Optional:** Modify the user POV, from the Book Table of Contents page, and run the report for the new POV.
5. **In Book Table of Contents,** review the list of reports and locate the report with the preferred members.
6. **Perform an action:**
   - For HTML books, click **File**, then **Open In**, then **HTML Preview**.
   - For PDF books, click **File**, then **Open In**, then **PDF Preview** to view individual reports, or click **File**, then **Open In**, then **Complete Book in PDF** to view the entire book.
7. **Optional:** Perform one or two actions:
   - From the book editor, add reports and re-run the book.
     See Chapter 9, “Designing Documents for Financial Reporting Batches and Books.”
   - From the book editor or from the book POV, modify members.
     See “Selecting Members” on page 180.

### Viewing Snapshot Books

You can view snapshot books from EPM Workspace in HTML or PDF. When you view snapshot books in PDF, you can view the entire snapshot book or individual snapshot reports. The print server must be available to display both HTML and PDF links. If the print server is not available, snapshot books are available only as HTML links.

When you view snapshot books, tables of contents are displayed. You use tables of contents to locate snapshot reports that you want to view and to set options.
To view a snapshot book:

1. From the repository, select **View**, then **Display Items of Type**, then **Hyperion**, then **Snapshot Book**.

2. Right-click a snapshot book, then perform an action:
   - To view the snapshot book in HTML, then select **Open In**, then **HTML Preview**.
   - To view the snapshot book in PDF, select **Open In**, then **PDF Preview**.

3. Optional: From the Table of Contents page, modify the user **POV** and run the report for the new **POV**.

4. In **Book Table of Contents**, review the list of reports and locate the report with the preferred members.

5. Perform an action:
   - For HTML snapshot books, click **File**, then **Open In**, then **HTML Preview**.
   - For PDF snapshot books, click **File**, then **Open In**, then **PDF Preview** to view individual snapshot reports, or click **File**, then **Open In**, then **Complete Book in PDF** to view the entire snapshot book.
Overview

From EPM Workspace, batches can be created, maintained, and scheduled and books can be created, maintained, and run. Also, advanced member selection provides capabilities such as member functions; for example, Children, Descendants and lists which can be used when editing books.

About Designing Documents

For Financial Reporting module, you can define and save batches using EPM Workspace new document wizard and copy and delete batches in the repository. Deleting a batch requires file permissions to the batch. By default, only the scheduling user is assigned access rights to snapshots and snapshot books in the repository. If you have file permissions to a batch, you can...
run every report in the batch when scheduled. The scheduling user can assign file permissions to other users and groups at the time of scheduling. For more information, see “Assigning File Permissions to Snapshots and Snapshot Books” on page 204.

Scheduled batches have a scheduled batch POV (Point of View), which you can modify while scheduling. You can also specify prompt information for the batch. The POV and prompt information, provides values for the POV and prompts specified for each book and report contained in the batch. You can schedule batches to be processed immediately or in the future. For more information on the scheduled batch POV, see Chapter 14, “Scheduling Jobs and Batches.”

Reports or snapshot reports created in Reporting Studio and other artifacts located in the repository such as text and PDF files and Microsoft PowerPoint, Excel and Word files, can be assembled into a book, enabling you to generate their output in one session from EPM Workspace. For example, you can schedule a set of reports and other artifacts to run once a month. You can configure books to generate several versions of a report and different member selections. A book containing those reports can be run at once. The reports contained in the book can be printed or viewed individually in entirety.

Two types of books can be defined and saved to the repository:

- Books—Comprises of reports and snapshot reports and other artifacts such as text and PDF files and Microsoft PowerPoint, Excel and Word files. When you run a book, the report data is dynamically retrieved from the database; the snapshot data remains static.

- Snapshot books—A book saved as a snapshot book. The data contained in the reports, as well as a table of contents, is created when you save a book. Whenever a snapshot book is viewed, data-level security does not apply; data-level security is applied when the snapshot book is created and is based upon the data level security that is set for the user that saved the snapshot book.

A book contains a book POV, which is a combination of all dimensions in the user POVs for each report in the book. Dimensions that are not defined in a report, default to the user POV member and the dimensions are displayed in the book POV of the Book Editor. You can also select the user POV as a member on the book POV, allowing you to modify the parameters since they are no longer stored in the book definition.

The member selected for a dimension in the book POV is used in each report referencing the book POV for that dimension. The data sources in the POV match the data sources used by the reports in the book.

**Note:** When a book is scheduled as part of a batch, the dimension referring to the user POV are controlled by the scheduled batch POV.

Tasks that can be performed with books and snapshot books:

- Use batches to group and process sets of books. See Chapter 14, “Scheduling Jobs and Batches.”

- E-mail links to the books or snapshot books. See Chapter 3, “Exploring and Managing Items.”
Designing Documents

From EPM Workspace, you can create a book or batch using the Select a Task wizard. For more information on these topics, see the following:

- “Creating Books” on page 187
- “Designing Batches” on page 201

Creating Books

Creating books includes the following:

- “Saving Books and Snapshot Books” on page 195
- “Opening Books or Snapshot Books” on page 196
- “Renaming Books and Snapshot Books” on page 196
- “Previewing and Printing Books and Snapshot Books” on page 196

Books are created, edited and saved in EPM Workspace. You must have administrator or designer rights to create a book. A book can include reports, snapshot reports, and third party documents (Adobe Portable Document Format files (PDF), text (.txt) files, and Microsoft Office Excel, PowerPoint and Word files). Third party documents are listed in the table of contents and can be launched in the same manner as Financial Reporting documents. They are also included in a PDF file, when opening a Book as “Complete Book in a File”.

Note: All file types must reside in the repository in order to select them for a book.

Note: When you save a book as a snapshot book, expansions and related content are removed.

When adding a report to a book, the report may contain prompts for member selection. Prompts are defined when the book is run. Also when adding a report to a book, dimensions from the book POV can be set to multiple members. When the book is run, the report iterates over each member. For example, if North, South, East, West, Actual, and Budget are selected, the book contains six versions of this report. You can collate the printed output by member selection if
the same member selections are used for all reports in the book. This enables, for example, all the reports for East, Budget to be grouped.

You can copy report member selections between reports if they use the same data source. This eliminates having to select shared members multiple times.

A table of contents is created for the book. You can collate the reports within the printed table of contents by report or by member selection. For example, you can create the following two books:

**Book 1** Balance Sheet (New York, Boston), (Q1, Q2) Cash Flows (New York, Boston), (Q1, Q2)

**Book 2** Balance Sheet (Actual, Budget), (Q1, Q2) Cash Flows (New York, Boston), (Q1, Q2)

If you collate reports in printed books by report, The first report for each set of member selections is run, then the second report for each set of member selections is run. The following book is generated:

**Book1 Table of Contents**

- Balance Sheet
  - New York, Q1
  - New York, Q2
  - Boston, Q1
  - Boston, Q2
- Cash Flows
  - New York, Q1
  - New York, Q2
  - Boston, Q1
  - Boston, Q2

If you collate reports in printed books by member selections, each report for the member selection is run. The following book is created:

**Book1 Table of Contents**

- Balance Sheet
  - New York, Q1
  - Cash Flows
  - New York, Q1
  - Balance Sheet
  - New York, Q2
  - Cash Flows
  - New York, Q2
- Balance Sheet
  - Boston, Q1
  - Cash Flows
  - Boston, Q1
  - Balance Sheet
  - Boston, Q2
  - Cash Flows
  - Boston, Q2

To create a book:

1. **Launch EPM Workspace.**
2. Select **File**, then **New**, then **Document**. The 1. Select a Task wizard is displayed in the Content area.
3 Select Collect reports into a book and click Next.

4 In Step 2: Select Files, select reports and other artifacts from folders, then click Next.

   Tip: Press the Shift key to select multiple consecutive reports. Press the Ctrl key to select multiple non-consecutive reports.

5 Optional: To remove a report from the book, select the report, then click Remove. To remove all reports from the book, click Remove.

   Note: If you move, delete, or rename a report or other artifacts in the repository, they are removed from the book the next time the book is opened. Those artifacts must be added again if you wish to include them in the book.

   Tip: To change the order of the selected reports, click Up and Down.

6 When completed, click Finish to open the Book Editor.

   Note: To display dimensions in the table of contents, select the dimension name in the Book Editor and select Edit, then Display Members in Table of Contents. The Table of Contents column of the Book Editor indicates whether the member name is hidden or displayed.

7 Optional: Add or change members selections for the book POV:
   a. In the Name column, double-click the dimension to display Member Selection.
   b. Select the members. See “Selecting Members” on page 189.
   c. Click OK.

8 Optional: Copying report member selections from one report to another in the Book Editor:

   Note: Member selections are only copied between reports having the same dimensions on the User Point of View.

   a. Highlight the report containing the members to copy.
   b. Select Edit, then Copy Member Selection to, then select a report.

9 Select File, then Save to save the Book with a file name and description. See “Saving Books and Snapshot Books” on page 195.

Selecting Members

When working with books in the Book Editor, you can modify and select members for the book point of view. You can select members, create and save member lists, and select functions that dynamically retrieve members from the database connection.
The following figure shows the Member Selection dialog box for the product dimension. The left panel shows the Members, Lists, and Functions tabs. For information on member lists and functions, see the Oracle Hyperion Financial Reporting Studio User’s Guide. You can add additional column headings in the Members tab.

**Figure 3  Member Selection Dialog Box**

![Member Selection Dialog Box](image)

**Note:** Substitution variables have been placed in a directory.

- To add column headings to the left panel of the Members tab display, select **Show Properties**, then select the column name.

- To view a hierarchy other than the one that is displayed:
  1. Click a hierarchical dimension in the Available area of the Members tab.
  2. Click the Hierarchy drop-down list, then select the hierarchy.
  3. Click **OK**.

  **Note:** The properties below the Available area are displayed only if you are reporting on Hyperion Financial Management Organization by Period for the Entity dimension. Both the parent and the entities that belong to the parent are displayed.

When you run a report, the entity name is displayed; not the parent name.

**Available Area**

**Member Selection** has three navigational tabs; Members, Lists, and Functions. In the left panel, you can show individual members, member lists, and functions that dynamically select members.
Members Tab

The Members tab shows members that are associated with the selected dimension. By default, the members for a dimension are shown in tree view, which is a hierarchal view of the members of the specified dimension. You can also show the members in a flat list. By default, the tree view shows only the top-level member. You can expand the top-level member to see its descendents.

Lists Tab

The Lists tab shows member lists used to perform a query or to select members for your report. The type of lists are based on the database connection. Member lists can be:

System lists — Predefined in the database when you create user lists; you can include members, member lists, and functions. System lists are available when using Essbase, Oracle Hyperion Planning, Fusion Edition, or Financial Management as database connections.

User lists — Lists that are created by you. When you select print preview or Web preview, the members in the user-defined list are displayed in the order that you specified during list creation. User lists can be created when using Essbase as a database connection. See Oracle Hyperion Financial Reporting Studio User’s Guide.

Dynamic lists — Predefined lists that are used with the DynamicMemberList function. Dynamic lists are available only when using Financial Management as a database connection. See Oracle Hyperion Financial Reporting Studio User’s Guide.

Functions Tab

You can specify functions to use when selecting members for your report or adding members to member lists. Functions enable you to retrieve members and related members from a database connection. You can specify one or more functions and edit the function parameters. See Oracle Hyperion Financial Reporting Studio User’s Guide.

Assigning Special Members

Use the Select Members dialog box to select the special members Prompt, Same As, Current Point of View, and User Point of View.

- Prompt — Acts like a variable that asks the user to select members. Prompts enable the report writer to filter the dimension members from which the user can select when running the report.
- Same As — Creates a column or row member selection with the same member selection setting as another column or row.
- Current Point of View — Acts as a variable that employs the POV to specify the member of a particular dimension when the report is run.
- User Point of View — Can be selected as a member on the book POV. The parameters can be modified by the end user.
Prompt Details

Prompt Details allows you to limit the members that can be selected for a book. You can also specify an alternate member label; a description (for a Financial Management database connection) or aliases (for Analytic Services or Planning database connections), or both member names and descriptions or aliases. For example, if you want to only provide lines of products, in Member Selection (the previous screen) you would select Prompt as a member of Product, then in Prompt Details select specific lines of product. The user who runs the report selects from those product lines.

To set up a report prompt for members:

1. **Optional:** To limit the prompt selection to specific default members, or a list of members, or both, take an action:
   - If the member name is known, enter the member name in Default Member or click the Default Member search button. If multiple member are provided for the prompt, members must be separated by commas.

   **Note:** If you leave Default Member blank, the Respond to Prompts dialog box does not display a default member when a user runs the report. The user must specify a member rather than accept a default.

   - If the list of members is known, click the Choices List button to select a list of members. If multiple member lists are provided for the prompt, member lists must be separated by commas.

2. From the **Member Labels in Prompt Selection Dialog** drop-down list, select the kinds of labels to be displayed in the **Respond to Prompts** dialog box when the report is run:
   - If the database connection is Analytic Services or Planning, select Member Name, Alias, or Member Name and Alias.
   - If the database connection is Financial Management or SAP BW, select Member Name, Description, or Member Name and Description.

3. Click **OK**.

Selecting the User Point of View as a Member in the Book Point of View

When a report is added to a book, the dimensions that are on the user POV in the report definitions are applied to the book POV. Members on the book POV default to the user POV in the Book Editor.

**Tip:** To filter the repository by books, select View, then Display Items of Type, then Hyperion, then Book.
To select the user POV as a member in the book POV:

1. From EPM Workspace repository, right-click a book, then select Open In, then Editor. The Book Editor is displayed.
2. In the book POV View pane, click a dimension for which you want to set up a user POV.
3. In Member Selection, select User Point of View for.
4. Click OK.

Assigning Members Using Functions

You can use functions and edit their parameters to select members dynamically. For information on the use of, and editing function parameters, see the Oracle Hyperion Financial Reporting Studio User's Guide.

Selecting Multiple Members Based on Criteria

You can select members based on criteria. You define criteria by creating expressions of members, Boolean operations, and commands.

Boolean operators enable you to specify precise member combinations for the report, useful with large volumes of data. Use the AND, OR, UNION, and NOT Boolean operators, combined with expression commands, to refine your member selections.

To select multiple members based on criteria:

1. In Member Selection, click Show Advanced Options, located in the right panel Selected area.

   Note: At least two members must be displayed in the Selected area before you can create criteria.

2. Build expressions by using one or more of the following operators and symbols:
   - Select the Not Boolean operator to build the expression. Not is the inverse of the selected condition.
   - Type a left parenthesis, ( ( ) , to add an opening character to the expression.
   - Type a right parenthesis, ( ) ), to add a closing character to the expression.
   - Click in the Operator column, then select:
     - And — When all conditions must be met.
     - Or — When one condition of several must be met.
     - Union — To combine the data.
Note: You must use double parentheses if you are using three members. For example, if you selected descendants of Market and you want to exclude East, West, and South, your advanced member selection query should be as follows: Descendants of Market AND NOT (East AND NOT (West AND NOT South))

3 Click OK.

Searching for Members

You can search for members to edit. You can search using a text string or property (that is, name and description). You can use a blank space as a separator to perform simultaneous searches. To search a string for an exact match, including blank spaces, enclose the string in quotation marks.

If you are searching for a list or function, you must activate this function by using the Find Next or Find Previous button.

Note: For Financial Management, when you search for an entity, you need to search on parent.entity (for example. D62VIELO.D62475LO). When you search just the entity, you need to precede the entity with a wildcard, (for example, *D62475LO).

Find options to locate members:

Table 45

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find</td>
<td>Enter the characters for the search, or select a saved search criteria string from the list. The search string can be a partial search string, one word or multiple words. Click to display the members matching the search criteria.</td>
</tr>
<tr>
<td>Use Wildcards</td>
<td>Enter the Find text with wildcard symbols (* and ?) to search for members. By default, Use Wildcards is displayed. Use ? to represent a single character search. Use * to represent a multiple character search. Note: If the search criteria has a space in it, enclose the search phrase in quotes. For example, <em>IC Offset</em> should be &quot;<em>IC Offset&quot;. If the location of the &quot;</em>&quot; wildcard is at the end only, for example IC Offset*, then you do not need to enclose the phrase in quotes. In the List or Functions tab, highlights the previous item matching the search criteria.</td>
</tr>
<tr>
<td></td>
<td>In the List or Functions tab, highlights the next item that matches the search criteria.</td>
</tr>
</tbody>
</table>

To search for members:

1 In Member Selection, enter text in the Find text box.
Note: The wildcard option is enabled.

2 Perform an action:

- If you are searching in the Members tab, click the Find button.
- If you are searching in the Lists or Functions tab, click Find Next, or Find Previous.

3 Click OK.

Previewing Selected Members

You can preview the selected members. Members can include a list or function result from evaluated member lists or functions, if applicable.

To preview members, in Member Selection, click Preview Selection, located in the right panel.

Saving Books and Snapshot Books

You can save books to the repository as a compilation of reports, snapshot reports, or reports and snapshot reports. An existing book can be replicated by saving it with the Save As command.

To save a book or snapshot book:

1 From EPM Workspace repository, right-click a book and select Open In, then Editor to open it in Book Editor.

2 Select File, then Save or File, then Save As.

3 Select one of the following options from the Type drop-down list:

- Book—Reports data will be dynamic when the book is run; snapshot report data will be static, based on when the report was saved as a snapshot.
- Snapshot Book—Reports data is saved and becomes static; snapshot reports data is static, based on when the report was saved as a snapshot.

4 Enter a name and description, select a folder, then click Save.

Note: If you are saving as a snapshot book, the Respond to Prompts dialog box is displayed if any prompts exist in the book or any report in the book and the Current User POV Settings dialog box is displayed. See Chapter 8, “Using Financial Reporting.”

5 Navigate to the repository to establish file permissions for the book or snapshot book. See “Assigning File Permissions to Snapshots and Snapshot Books” on page 204.
Opening Books or Snapshot Books

After you save a book, you can open it to maintain, print, or preview the book in HTML or PDF format. When you preview a book, a table of contents is displayed with a list of reports in the book. When you preview a snapshot book, the Table of Contents is displayed in PDF or HTML format, depending on your preference setting. Snapshot books cannot be changed, but they can be previewed, printed, and viewed from the repository. See “Previewing and Printing Books and Snapshot Books” on page 196.

To open a book or snapshot book:

1. From EPM Workspace repository, navigate to a book or snapshot book and select File, then Open In.
2. Perform an action:
   - To view a printed version of the book, select PDF Preview.
   - To view the book in HTML format, select HTML Preview.
3. The Content area displays the Book Table of Contents, the tab at the bottom of the browser displays the book name and View (for example, TestBook - View). The report, snapshot or member name is displayed on every row for which it applies in the Book Table of Contents.
4. Select one of the reports or snapshots in the Book Table of Contents, then click Show Report. The report or snapshot is displayed in the Content area in HTML or PDF format, with the Report Name and POV in the tab description.
5. To close the book or snapshot book, select File, then Close.

Renaming Books and Snapshot Books

After saving a book or snapshot book or making a duplicate, you may want to rename the file.

To rename a book or snapshot book:

1. Select the book in Explore and select File, then Properties.
3. Type another name and description into the Name and Description fields.
4. Click OK.

Previewing and Printing Books and Snapshot Books

You can preview books and snapshot books in PDF or HTML prior to printing. From the book table of contents, you can select individual reports within a book to preview as PDF or HTML or view the entire book with all of the reports in PDF.

You can also print an entire book or snapshot book or print individual reports in a book or a snapshot book. When you print a book, the data is retrieved for the reports in the book and the
book is printed. When you print a snapshot book, the data has already been saved in the reports when you save the book as a snapshot book.

Prior to running a book, you can preview the user Point of View and make any necessary changes. This allows users to verify that the members on the user POV are appropriate before running the report or book instead of after the output is displayed.

Features of a PDF File Generated from a Book

The following list highlights the features available in PDF files generated in a book.

- Support for PDF and plain text files. When we refer to "external content" within books, we can now include Excel, Word, PowerPoint, PDF and regular text files within books.
- "Cell documents" that are extracted from a Financial ReportingReport ("CellDoc_Attach_Doc") can include PDF and plain text files.
- PDF bookmarks are shown on the left part of Adobe Reader. With bookmarks, you can jump to any of the book's chapters.
- A table of contents with linked items. When you click on an item in the table of content, you are presented with the first page of that item.
- Continuous page numbers. Financial Reporting reports, snapshots Excel, Word, PowerPoint, and plain text files show continuous page numbers.

Note: The user needs to select the "continuous page number" option in the book setup for the continuous page numbers to be in effect. Also, it is not possible to implement continuous page numbers for embedded PDF files.

- Total page counts. Similar to continuous page numbers, Financial Reporting reports, snapshots, Excel, Word, PowerPoint, and plain text files show a consistent total page count. For example, suppose a report has 3 pages but the book's contents make 10 pages. If the "<<PageCount()>>" text function is used in the report, it will show "10" instead of "3"
- The way plain text files are printed can be customized by modifying the "FR_TextTemplate.doc" Word file. See “Microsoft Word Template” on page 200

For more information on previewing and printing, see the following chapters:

- Chapter 8, “Using Financial Reporting”
- Chapter 3, “Exploring and Managing Items ”
- “Printing PDF Files” on page 199

Note: Before you print a book, you should set the Book Setup options as described in the following section.
Changing the Book Setup

Book Setup options enable you to specify whether to include the printed table of contents, set the page orientation, set the numbering of pages to consecutive, and include the table of contents in the consecutive page numbering, collate the table of contents based on reports, collate the table of contents based on the member selection, and select the member label you want used in the table of contents for each data source.

**Note:** The table of contents can be set up to display the name, description, or custom text. See “Setting Table of Contents Text” on page 199.

➢ To change the book setup:

1. From **Explore** repository, right-click a book and select **Open In**, then **Editor** to open the Book Editor.
2. Select **File**, then **Book Setup** to display the Book Setup dialog box.
3. In the **Page Setup** section, select the following:
   - In **Paper Size**, select **Letter**, **Legal**, **Ledger**, **A4** or **A3**.
   - To continue the page numbering from the previous report in the book, select **Consecutive Page Numbers**. To begin each report in the book with page 1, deselect **Consecutive Page Numbers**. To include the table of contents in the consecutive numbering scheme, select **Include Table of Contents**.

   **Note:** Page numbering must be specified in the header or footer of each report in the book before you can print the page number.

   - In **Collate Reports By**, select an option for collating the printed table of contents:
     - Select **Reports** to collate based on the reports.
     - Select **Member Selection** to collate based on the member selection.

4. In the **Table of Contents** section of the dialog, select the following:
   - To include the book table of contents when printing, click **Include Table of Contents in Printed Output**.

     **Note:** For HTML or PDF preview, this option does not apply. The book preview always includes the table of contents for the book.

   - Select **Portrait** or **Landscape** for the orientation of the Table of Contents.

   - In **Member Labels in Table of Contents**, select the member label to use in the table of contents for the data source that you are currently using. The listed options depend on the data source you are using.

5. Click **OK**.
Setting Table of Contents Text

In the Book Editor, the table of contents column reflects the text selected for each entry. The default text in the table of contents is the object name or, in the case of a member, the member name. For example, if the object in the book is a report, the report name is shown. If the object in the book is an external file (for example, a Microsoft Word document), the filename, as it exists in the repository is shown. You can change the text that is shown to the object description (as it exists in the repository), or to customized text.

To set the table of contents text for an object:

1. In Book Editor, right-click an object and select Table of Contents.
2. Select a text display type to show in the table of contents:
   - Select Display Name to show the name of the object.
   - Select Display Description to show the description of the object, as it exists in the repository.
   - Select Display Custom Text to add customized text. The Table of Contents dialog is displayed. Type a meaningful description in the Custom Text field, and click OK.

To set the table of contents text for a member:

1. In Book Editor, right-click a member and select Table of Contents.
2. Select a text display type to show in the table of contents:
   - Select Show Member to show the member name.
   - Select Hide Member to hide the member name.

Printing PDF Files

In order to support PDF files for cell documents and third party content in books, Ghostscript is required on the Financial Reporting print server. Ghostscript is required to incorporate PDF files for PDF preview. The Financial Reporting print server searches for the supported Ghostscript versions in the following order:

- AFPL Ghostscript 8.5.4
- AFPL Ghostscript 8.51
- AFPL Ghostscript 8.14
- GNU Ghostscript 7.06

Supported Distiller Servers

- Acrobat Distiller Server version 6.0
- Acrobat Distiller Server version 8.0
To override the search order:

1. Using `regedit.exe`, create the following registry key:

```
HKEY_LOCAL_MACHINE\SOFTWARE\AFPL Ghostscript\FRCustom
```

2. Create a new string value named `GS_DLL`.

   The value for `GS_DLL` should be the full path to the preferred Ghostscript dll file which should be named `gsdll32.dll`. For example: `C:\Program Files\gs\gs8.14\bin\gsdll32.dll`.

---

**Printing Text Files**

The Microsoft Word application has been extended to print text (.txt) files.

**Microsoft Word Template**

A Microsoft Word template document, `FR_TextTemplate.doc`, is installed on the Financial Reporting print server in the `${home.reports}/bin/` folder. When the template is found by the Financial Reporting print server, the contents of the text file is inserted into the Word template, after which the existing routine that prints Word documents is used to print text files. When the print job has finished, the file is closed without saving, preserving the template for the next text file.

**Default template settings**

By default, the Word template has:

- the `<<FR_content>>` string as its only content in the body of the document.
- text formatted to Courier New, 10pt font.
- settings to print portrait with 1 inch margin.
- footer set to print date and time and current page number. These settings are updated for all text files printed through the Financial Reporting print server.

**Customizing the template**

Always make a backup of the template before customizing it. You can open the template through Microsoft Word. Any changes to the template are applied the next time a text file is printed. The Financial Reporting print server does not need to be restarted.

In the `<<FR_content>>` string, you can specify the font and paragraph settings for the inserted text file content and should be included in the `FR_TextTemplate.doc` template.

When printing a text file, the Financial Reporting print server opens `FR_TextTemplate.doc` and looks for the `<<FR_content>>` string. If found, the contents of the text file replaces the string. If the string is not found the contents of the text file is inserted at the end of the Word document and any pre-existing content in the template is shown before the data in the text file.
Benefits of implementing the Microsoft Word template

- Default formatting of the template can be customized.
- Page setup of the template, such as print mode and page size, can be controlled.
- Footers of the template, such as page numbers, can be customized.
- Content of the template, such as inserting a standard confidentiality clause, can be added.
- Images or backgrounds of the template, such as a company logo, can be added.

**Exporting Books and Snapshot Books**

You can export books and snapshot books from the repository. See Chapter 3, “Exploring and Managing Items.”

**Designing Batches**

Using batches, you can process sets of reports and books simultaneously. Batch creation is comprised of the name, the reports, books, snapshots, snapshot books, and prompts. The prompt information is for the current batch you are running.

Saved batches can be modified, removed, or rescheduled. You can duplicate a batch to use some or all of the same properties as the original batch.

1. To design a batch:

   1. Launch EPM Workspace.
   2. Select **File**, then **New**, then **Document** to display the **Select a Task** wizard.
   3. Select **Batch Reports for Scheduling**, then click **Next**.
   4. In **Select Files**, use the **Type** field to filter your selection by **Financial Reporting report**, **Snapshot report**, **Book or Snapshot book**.
   5. Select your report types and move them to the **Selected Items** panel by clicking ,.
   6. Optional: To remove a report type from **Selected Items**, select the report, then click, . To remove all reports from **Selected Items**, select ,.

   **Note:** If you move, delete, or rename a report in the repository, the report is removed from the book the next time the book is opened. To include the report, add it to the book.

   **Tip:** To change the order of the selected reports, use, , and, .

   7. Click **Finish** to open the **Batch Editor**.
Tip: If you select a report type multiple times, you are prompted to enter a new name for the duplicate report type. The renamed report type is listed in the Batch Editor with its original name followed by the new name in parentheses. To discard the duplicate report, click Cancel.

8 Respond to any prompts that are displayed. See “Defining Prompts for a Batch” on page 202.

9 Select File, then Save As.

10 Select a folder, enter a name and description, and click Save.

To duplicate and edit batch properties based on a scheduled batch:

1 From the View panel, select Schedule, then select Batch Scheduler.

2 Select a Scheduled Batch select Edit, then Duplicate and Edit Properties.

3 In Schedule Batch, perform an action:
   - To duplicate properties for a new batch in the repository, search and select the batch and click Next.
   - To duplicate properties for the selected scheduled batch, click Next.

4 Edit the properties of the batch as needed. For example, you can change the Start Time or Destination settings.

5 Click Finish.

To modify a batch:

1 From the View panel, select Schedule, then select Batch Scheduler.

2 Select Edit, then Properties.

3 In Schedule Batch, select a batch and click Next.

4 Make changes, and click Finish.

To delete a batch:

1 From the View panel, select Schedule, then select Batch Scheduler.

2 In Batch Scheduler, select a batch, then select Edit, then Delete.

3 Click Yes.

Defining Prompts for a Batch

Prompts are requests for members in the report or book. If reports or books in a batch have prompts, the end user can select the members in the Batch Editor.

When users save the Batch, the Respond to Prompts dialog displays any/all prompts/variables contained in the artifacts within the Batch.
Identical Prompts and Variables

Since SAP BW variables are defined on a datasource and not in a Grid in a Report, the same variable can be used for all Grids in a Report, Book or Batch containing Reports and/or Books, whereas a prompt is explicitly defined on a row/column/page of a Grid. When users are prompted for a member/value to be used for a variable, they can optionally select to use the same member/value for all references to the datasource which contains the Variable. A response to prompts can also be applied with a single response to all references or specified for each member/values for each Grid, Report or Book.

When a variable exists and there is more then one reference to the data source, or when the same prompt exists in more then one grid, the Respond to Prompts dialog box shows a drop-down list where users choose whether they want to respond to prompts at the Grid, Report/Book or Batch level. The selections shown in the dropdown list depend on whether the Respond to Prompts dialog is shown while running a Report, or Book or from within the Batch editor. The drop-down list only appears when a selection is needed. For example, if running a Report with a single grid against a SAP data source with a variable, a drop-down selection is not needed to be shown. Similarly, if a Report, Book or Batch contains only a single Prompt, or the Prompts are different (different dimensions, default members, or choices list), the drop-down selection will not appear.

When running a Report, the drop-down selections are:

- Respond to Prompts at the Report Level (default)
- Respond to Prompts at the Grid Level

When running a Book, the drop-down selections are:

- Respond to Prompts at the Book Level (default)
- Respond to prompts at the Report Level
- Respond to prompts at the Grid Level

When editing a Batch, the drop-down selections is: Respond to Prompts at the Batch Level (Default) Respond to Prompts at the Report/Book Level Respond to Prompts at the Grid Level

- Respond to Prompts a the Batch Level (default)
- Respond to Prompts at the Report/Book Level
- Respond to Prompts at the Grid Level

The selections are only shown when necessary. The selection are not shown if there are multiple references to a variable or prompt.

If the user wants, they can respond to a prompt once, and the same value will be used for both responses, or they can select “Respond to Prompt at Grid Level” in the dropdown, press Apply and enter different values for each prompt listed.

The Source column shows what artifact the prompt is on. When identical prompts are found and only a single prompt response is presented, the Source column will show an asterisk (*) to indicate that the prompt response will apply to all prompts of that type.
The ability to select the level at which to respond to prompts is only available in EPM Workspace. In Oracle Hyperion Financial Reporting Studio, Fusion Edition, the Respond to Prompts dialog box always show all member selection prompts and a single reference to each variable.

To define prompts:

1. Select **File**, then **Open**, then **Document**.
2. Select a batch. The dimensions that are set up with a prompt for the reports are displayed in the **Member Selection** column of **Batch Editor**.
3. Select a dimension, then select **Edit**, then **Member Selection**.
4. In **Member Selection**, select the member you want to use in the report when the batch runs. See “Selecting Members” on page 189.
5. Click **OK** to return to **Batch Editor**.
6. Perform an action:
   - Optional. Schedule the batch. See “Designing Batches” on page 201.
   - Save the batch by selecting **File**, then **Save**, then **File**, then **Close**.

### Opening Batches

You open a batch to edit it or to schedule it.

To open a batch:

1. Select **File**, then **Open**, then **Document**.
2. From the **Type** drop-down list, select **Hyperion**, then **Financial Reporting Batch**.
3. Navigate to the folder in which the batch resides.
4. Select the batch file and click **Open**.

### Assigning File Permissions to Snapshots and Snapshot Books

To allow other users and groups to view snapshots and snapshot books in the repository that you create when running a batch, you need to assign access rights to the users and groups.

To assign or remove access to snapshots:

1. Click **Navigate**, then **Schedule**, then **Batch Scheduler**.
2. Select a batch, then select **Edit**, then **Properties**.
3. In **Schedule Batch**, click **Next** until the **Destinations** area of the **Schedule Batch** dialog is displayed.
4. Select **Save As Snapshot in Repository**.
5. Click **File Permissions**. For procedures, see step 1.
**Note:** If you remove all users, groups, and roles for a batch, then only an administrator can see the snapshot output generated by the batch in the repository.
Using Interactive Reporting Documents in EPM Workspace

EPM Workspace enables users to query relational databases and heterogeneous sources (for example, users of SQL Server, Oracle, flat files, Production Reporting/Web Analysis module content) and perform quick ad-hoc analysis by drilling down and pivoting on the data to see patterns or exceptions. Many features help users to analyze their data to conduct sales and key performance, financial, and forecasting analyses.

Three types of users can relational data source. “Developers” who have the database connectivity software may use a full 32-bit application. “Power users” without this connectivity or when there are more security concerns may be given access to query using a client connected to the database through a server. Users can further given permission to create content completely from scratch, using add-on software installed on their local machine and hosted by the web browser. “Information consumer users” typically use a “thin client” approach; no software is loaded for these users, who instead interact with a DHTML-based series of pages.

The topics in this section explain how use to an Interactive Reporting document (BQY) in EPM Workspace for Information consumer users.
Using the Toolbars

Use the Standard and Interactive Reporting toolbars to navigate through the EPM Workspace and work with common commands.

- “Standard EPM Workspace Toolbar” on page 208
- Standard Interactive Reporting Toolbar
- Navigation Toolbar
- Paging Toolbar

Standard EPM Workspace Toolbar

The Standard Toolbar is used for common EPM Workspace features:

Standard options include (from left to right):

1. Home displays the Start Page for EPM Workspace.
2. New Document displays the New Document Wizard, which enables you to create an Interactive Reporting document (BQY) for online analysis, collect highly formatted reports into a book, or batch highly formatted reports for scheduling.
3. Open Document launches the Open dialog box from which you can navigate to a file.
4. Explore lists the contents of the Repository, so that you can manage and control files and folders.
5. New Folder launches the Create New Folder dialog.
6. Copy enables users to copy a document or file from the content pane.
7. Cut enables users to cut a document or file from the content pane.
8. Paste enables users to paste a document or file from the content pane.
9. Go Up A Level enables users to move one level up the folder hierarchy.
10. Refresh displays the latest changes to the EPM Workspace display.
11. Properties enables a user to select a document or folder and display associated properties.
12. Logoff allows a user to log off without saving any information.
13. Help launches the HTML Help page in a new browser.

Standard Interactive Reporting Toolbar

The Standard Interactive Reporting toolbar is specific to those features used exclusively for Interactive Reporting documents:

Interactive Reporting toolbar commands include (from left to right):
1. Data Layout enables the data layout panes in the Content area.
2. Navigate Back displays the previous section.
3. Navigate Front displays the next section.
4. Dashboard Home displays the Dashboard Home section.
5. Page # displays the current page for the table reports. For all charts with the exception of pie, scatter and bubble, the current view of data points on the x and y axes is shown.
6. Page Left moves one page in the left direction in the report sections. To move to the first page in the left direction, select [Shift] + Click + left arrow. In the Chart section, this icon enables you to move one view in the left direction.
7. Page Up moves one page in the up direction in the report sections. To move to the top view, select [Shift] + Click + Up arrow. In the Chart section, this icon enables you to move one view up.
8. Page Down moves one page in the down direction in the report sections. To move to the bottom page, select [Shift] + Click + Down arrow. In the Chart section, this icon enables you to move one view down.
9. Page Right moves one page in the right direction in the report sections. To move to the first view in the right direction, select [Shift] + Click + right arrow. In the Chart section, this icon enables you to move one view right.
10. Refresh processes only the current section against the database server to dynamically retrieve the most current data set, with the exception of the Dashboard and Report sections. When the Refresh command is selected in the Dashboard and Report sections, all queries in the Interactive Reporting document (BQY) are refreshed. Queries are refreshed in the order in which they are displayed in the section catalog of the full client. For example, in a Interactive Reporting document (BQY) with three queries, Query1, Query2, and Query3, the queries are executed in that order when “Refresh All” is selected.
11. Export to PDF exports a section to Portable Document Format (PDF) and launches it inside your browser if the PDF MIME type is set in your browser. The PDF format is created by Adobe and can be viewed outside of your browser if you have Adobe Acrobat Reader installed. Adobe Acrobat Reader can be downloaded from Adobe’s web site at http://www.adobe.com/products/acrobat/readstep.html. If the PDF MIME type is not set in the browser, the browser “Save As” dialog box is invoked.
12. Export to XLS exports a section to MS Excel and launches it inside your browser if the mime type has been set to recognize the XLS file extension Thereafter, saving the file locally or manipulating the file is all done by way of the MS Excel application. If the mime type is not set to recognize the XLS file extension, you are prompted with a Save As Dialog and you must specify a local destination to save the XLS file for future viewing of the data with the MS Excel.
13. Export to XLS (*.mhtml) exports a section to Microsoft Office 2000 Web Archive (.mhtml or mhtml). Also known as MS HTML, this archive type format is a standard for including objects in the same file as the HTML code (for example .gif or jpeg files). Objects are encoded
using the MIME HTML Internet standard. You might use this file format if you plan to e-
mail the HTML as a single file.

14. Save preserves the file locally and launches the Interactive Reporting document (BQY) in the Interactive Reporting Web Client so that you can view and save the Interactive Reporting document (BQY) to your desktop for offline viewing. The Interactive Reporting document (BQY) can only be viewed by the full desktop or web client. If Interactive Reporting Web Client has not been installed, the browser is launched automatically.

15. Search enables users to find specific documents.

**Navigation Toolbar**

Section navigation controls on the toolbar are available to end users by using the Navigate Back, Navigate Forward, and Dashboard Home.

If the standard Interactive Reporting toolbar has been enabled, the Navigation toolbar is automatically disabled because it is a subset of the standard toolbar. However, the Navigation and Paging toolbars may be visible and enabled at the same time if the standard toolbar is disabled.

**Paging Toolbar**

Depending on how a report was designed, you may see an abbreviated version of the Interactive Reporting toolbar referred to as the Paging toolbar. This version of Interactive Reporting toolbar contains the paging controls: Page Left, Page Up, Page Down and Page Right.

If the standard Interactive Reporting toolbar has been enabled, the Paging toolbar is automatically disabled because it is a subset of the standard toolbar. However, the Navigation and Paging toolbars may be visible and enabled at the same time if the standard toolbar is disabled.

**Shortcut Menus**

Use shortcut menus to perform operations on objects that you need to update and maintain. Shortcut menus are context-sensitive menus that pop up.

For Windows users, shortcut menus are enabled by selecting an item and pressing [Shift] + [F10] on the keyboard, or by right clicking the mouse. If the shortcut menu is enabled on the keyboard, the menu opens at the upper, left most of the HTML frame.

If the shortcut menu is enabled by right clicking the mouse, the shortcut menu opens next to the cursor pointer where you right-clicked the mouse button within the selected area or on the item. Submenus derived from a shortcut menu are also available which group multiple and related commands. Once you make a selection from a shortcut or submenu, the menu is closed.

The table below lists the keyboard shortcuts:
<table>
<thead>
<tr>
<th>Keyboard Shortcut</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrow Keys</td>
<td>Moves the cursor up, down, left and right on the shortcut menu.</td>
</tr>
<tr>
<td>[Enter]</td>
<td>Confirms and accepts an action associated with a shortcut menu item.</td>
</tr>
<tr>
<td>[Esc]</td>
<td>Closes a shortcut menu that is opening. You can also perform this action by selecting or deselecting an item or pressing the [Tab] key.</td>
</tr>
</tbody>
</table>

**Alert Dialog**

An Alert dialog shows informational messages explaining why the alert opens. You are required to acknowledge the alert before continuing since no other window can be active while it opens. To dismiss the alert, click OK.

**Interacting with Interactive Reporting Documents**

This section describes how to work with an Interactive Reporting document (BQY):

- Understanding Interactive Reporting Document Files
- Interactive Reporting Database Connection File (OCE) Selection For Interactive Reporting Document (BQYs)
- Accessing Interactive Reporting Document Files
- Working with Interactive Reporting Document File Sections
- Refreshing Interactive Reporting Document File Sections
- Dashboard Home
- Saving Interactive Reporting Document Files

**Understanding Interactive Reporting Document Files**

An Interactive Reporting document file (BQY) is centered on data from queries (either relational or OLAP) or from imported data. Any number of queries and Data Models can supply the data in an Interactive Reporting document file (BQY). An Interactive Reporting document file (BQY) can contain multiple queries with each query retrieving its data from a different database including: relational databases, imported data files, local files and OLAP servers. The Data Model aspects of the Interactive Reporting document file (BQY) are not visible to the end-user, but the ability to refresh data that come from these sources is. An end-user can duplicate an existing query or create a query based on an existing query or create a query based on an existing Data Model.

Once a Interactive Reporting document file (BQY) has been created, it is saved to EPM Workspace Repository located on the server.

When the user selects and retrieves a Interactive Reporting document file (BQY) from the Section pane, the emphasis becomes one of viewing, refreshing, and analyzing of the Interactive
Reporting document file (BQY) instead of the query, Data Model, data layout, and report building of the Interactive Reporting document file (BQY).

Creating An Interactive Reporting Document File (BQY) From Another Interactive Reporting Document File (BQY)

You can create an Interactive Reporting document file (BQY) based on an existing Interactive Reporting document file. In this case, the new Interactive Reporting document file inherits the Interactive Reporting connection file (.oce) and sections associated with the original Interactive Reporting document file.

**Note:** To create a Interactive Reporting document file that uses another Interactive Reporting database connection file, or a new Interactive Reporting document file not associated with an existing one, see Interactive Reporting Database Connection File (OCE) Selection For Interactive Reporting Document (BQYs)

 aç

To create an Interactive Reporting document file (BQY) based on an existing Interactive Reporting document file (BQY):

1. **Select File, then New Document.**
   Select a Task opens.

2. **Select Create an Interactive Reporting Document.**
   Select Data Source opens.

3. **In the Data Source field, enter the name and path of the data source (Interactive Reporting document file (BQY), or click Browse to locate the file.**
   For more information about the Browse feature, see Selecting an Interactive Reporting Data Source

4. **In the Create As field, select either Web Client or HTML.**
   - Web Client—Creates the Interactive Reporting document file in Interactive Reporting Web Client using a connection file using a relational, CubeQuery, or OLAP Query data source.
   - HTML—Creates the Interactive Reporting document file in EPM Workspace.

5. **Click Finish.**
   A new Interactive Reporting document file (BQY) is created based on the selected Interactive Reporting document.
Interactive Reporting Database Connection File (OCE) Selection For Interactive Reporting Document (BQYs)

An Interactive Reporting document files (BQY) can be created using an Interactive Reporting database connection file (.oce) selected by the user. See table below for Interactive Reporting database connection file (.oce) eligibility:

<table>
<thead>
<tr>
<th>Interactive Reporting Database Connection File Type</th>
<th>Interactive Reporting Web Client</th>
<th>EPM Workspace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relational</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>CubeQuery</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>OLAPQuery</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

To create an Interactive Reporting document file (BQY) with an Interactive Reporting database connection file (.oce):

1. Select File, then New Document.
   Select a Task opens.

2. Select Create an Interactive Reporting Document, then Next.
   Select Data Source opens.

3. In the Data Source field, enter the name and path of the Interactive Reporting database connection file (.oce), or click Browse to locate the file.
   For more information about using the Browse feature, see Selecting an Interactive Reporting Data Source.

4. In the Create As field, select either Web Client or HTML.
   - Web Client—Creates the Interactive Reporting document in Interactive Reporting Web Client using a connection file using a relational, CubeQuery, or OLAP Query data source.
   - HTML—Creates the Interactive Reporting document file in EPM Workspace. If you select an Interactive Reporting database connection field .oce from a relational, or OLAP Query data source, this option is not available.

5. Click Finish.
   A new Interactive Reporting document file (BQY) is created based on the selected Interactive Reporting database connection file.

Selecting an Interactive Reporting Data Source

Use the Select dialog box to choose an Interactive Reporting document file (BQY) or Interactive Reporting database connection file (.oce) on which to base a new Interactive Reporting document file (BQY).
To select an Interactive Reporting data source:

1. **In the Look in field, select the Interactive Reporting document file (BQY) or Interactive Reporting database connection (.oce) from which to build a new Interactive Reporting document file (BQY)**

   The folders and files shown on this dialog have been published to the EPM Workspace Repository.

   The Name and Type fields display the file name and type (Interactive Reporting document file or Interactive Reporting database connection file).

2. **To specify additional parameters, select Options.**

   The Open As and Version fields are displayed.

3. **To create the Interactive Reporting document file in Interactive Reporting Web Client, select Interactive Reporting Web Client. To create a new Interactive Reporting document file in EPM Workspace, enter HTML.**

   The option(s) available in the Open As field depend on the Interactive Reporting database connection file. Interactive Reporting document files (BQYs) can be created by selecting an Interactive Reporting database connection file (.oce). in Interactive Reporting Studio and Interactive Reporting Web Client. In EPM Workspace, only an Interactive Reporting database connection file (.oce) for an Essbase query can be used to create a new Interactive Reporting document file. No Interactive Reporting database connection file (.oce) associated with a relational query can be used to create an Interactive Reporting document file in EPM Workspace.

4. **In the Version field, verify the version information.**

5. **Click OK.**

**Accessing Interactive Reporting Document Files**

Use the following procedure to open and close an Interactive Reporting document file.

1. **To open an Interactive Reporting document file**

   1. **Specify the URL of the EPM Workspace in your web browser.**

      The login dialog box opens.

   2. **Enter your user name and password and select Login.**

   3. **Open an Interactive Reporting document file (BQY).**

   An Interactive Reporting document can be opened:

   - from Explorer by navigating to an Interactive Reporting document file and double clicking it
   - by selecting the Interactive Reporting document file and clicking Open on the shortcut menu
   - selecting File, then Open.
• selecting Favorites and choosing the Interactive Reporting document (if it has been added to Favorites)

The Interactive Reporting document file opens in EPM Workspace. If a Dashboard section has been included in the Interactive Reporting document file, it opens in creation date order. Typically, a Dashboard section is shown first. If no Dashboard section has been included, the Interactive Reporting document file opens on the last saved section. If the last saved section is a Query or Data Model, or fails for some other reason, the Interactive Reporting document file attempts to open the next section from the Sections pane, working from the top to the bottom of the Sections pane until a section can be displayed.

To close an Interactive Reporting document file (BQY), select **File**, then **Close**.

If you have modified an Interactive Reporting document file, you are prompted to save any changes.

### Saving Interactive Reporting Document Files

To ensure that changes made to a Interactive Reporting document file are preserved after you have performed an analysis on it, use the Save features. The Save features in EPM Workspace enable you to save an Interactive Reporting document file to the EPM Workspace Repository (importing). To save an Interactive Reporting document file locally (offline analysis), see [Exporting an Interactive Reporting Document File in Native File Format](#).

### Saving an Interactive Reporting Document Files

When you modify an Interactive Reporting document (BQY) or an Interactive Reporting document job, you can save the changed Interactive Reporting document to the EPM Workspace Repository. The EPM Workspace Repository is an efficient way to manage Interactive Reporting document file, and distribute Interactive Reporting document files over a wide network for end-user query and reporting.

Saving the Interactive Reporting document file to the EPM Workspace Repository can be made either by saving it with changes to the original document (Save option), or by saving the Interactive Reporting document file, as a new document (Save As). If you do not have permission to overwrite an Interactive Reporting document file, use the Save As feature.

### Using the Save Command

Use the Save command to save the changes to the Interactive Reporting document file that you have permission to write to.
To save an Interactive Reporting document file to the EPM Workspace Repository, select File, then Save.

Optional: You can also click .

Using the Save As Command

Use the Save As command to save the changes you have made to the Interactive Reporting document file when you do not have permission to overwrite the Interactive Reporting document file, or you simply want to save and rename it with your changes.

To save as to the EPM Workspace Repository:

1. Select File, then Save As.
   
   The Save As dialog box opens.

2. Type the name of the Interactive Reporting document file in the Name field.

3. Type a description of the Interactive Reporting document file in the Description field.

4. Click .

Working with Interactive Reporting Document File Sections

Interactive Reporting documents are files created and used to retrieve information from a database, analyze the information, and build reports. Since Interactive Reporting document files are integrated query, analysis, and reporting tools, these documents have multiple sections, each of which governs one part of the query and reporting refresh. You create sections progressively as you query a database, retrieve results, and then generate reports.

Interactive Reporting document files are divided into multiple sections, each of which governs one step of the reporting procedure. Interactive Reporting document file sections are created progressively when a database is queried, results are retrieved, and reports are generated.

Each section occupies an independent window and performs distinct operations. You can move back and forth between sections at any time to rebuild your query or alter your result data. You can also position sections side-by-side in a Dashboard section.

The end-user does not need to have a strong technical understanding of databases. Data Model sections are not available, and these sections are not visible in the Sections pane. Each section occupies an independent window in the browser and shows discrete views of data. For example, the Pivot section resembles a spreadsheet or crosstab report that lets you perform drill down analysis of different data relationships. The Chart section graphically depicts summaries, trends, and relationships in your data.
When an Interactive Reporting document file is opened, the default home page is the Dashboard section. If the Dashboard Home section cannot be displayed, then the Interactive Reporting document file opens on the last saved section. If the last saved section is a Query or Data Model (which are not listed in the Section Navigation drop-down menu), or fails for some other reason, then the Interactive Reporting document file attempts to open the next section from the Sections pane, working from the top to the bottom of the Sections pane until a section can be displayed.

For more information on using Interactive Reporting document file sections, see:

- Sections Pane
- Selecting Interactive Reporting Document File Sections
- Adding Sections
- Moving Between Sections
- Duplicating Sections
- Renaming Sections
- Deleting Sections
- Refreshing Interactive Reporting Document File Sections
- Printing Sections
- Dashboard Home

**Sections Pane**

The Sections pane shows the sections available in the current Interactive Reporting document file:

- **Dashboard**—Upon opening an Interactive Reporting document file, a customized Dashboard section can appear as the Interactive Reporting document file front-end. Each button selection, item selection, or navigation sequence can invoke a script. Behind the scenes, Interactive Reporting refreshes the Dashboard script commands that can perform actions such as retrieve data, populate controls, hide objects, navigate to different sections, and specify report parameters.

- **Report**—Displays high-quality and professionally designed reports. These reports can span anywhere from a complex critical operational report to a results set, a Chart, and a Pivot table. Use the reports to help you evaluate your business, expand communications, and assist in the decision-making process.

- **Query**—Foundation of the Interactive Reporting document, the Query section enables you to connect to a relational database and download a prebuilt query or data model.

- **Results**—Retrieves data to your document and displays it in the Results sections as columns in a table.

- **Pivot**—Interactive table that quickly summarizes, or cross-tabulates, large amounts of data. You can rotate its rows and columns to see different summaries of the source data, or display the details for areas of interest.
Chart—Fully interactive, two- or three-dimensional view of your data that provides powerful ways to visually analyze your data

Table—Single-dimension report that displays your data in columns. Tables are often used as building blocks in other sections

OLAPQuery—Query section specifically designed for connecting to multidimensional databases

CubeQuery—Query section exclusively designed for connecting to and querying Essbase 9.x or greater database

By default, an Interactive Reporting document file has at least one Query section and one Results section. Each section occupies an independent window and performs distinct operations. You can move back and forth between sections at any time to rebuild your query or alter your result data.

**Selecting Interactive Reporting Document File Sections**

Sections associated with the Interactive Reporting document file are shown in the Sections pane.

- To select a section, click the desired section from the Sections pane.
- To scroll up and down through a section, use the scroll bar on the right side of the browser.

**Adding Sections**

A new section is added based on an existing query and results set.

- To insert a new section in an Interactive Reporting document file, select **Actions**, then **Insert**, and then **(New Section)**.

For example, to insert a new Chart, select **Actions**, **then Insert**, **then Chart**.

Interactive Reporting inserts the new section and adds a new section label to the Sections pane. The section label is based on the type of section added. A sequence number is added to the section label if a section with the same name already exists.

**Moving Between Sections**

Although each section occupies an independent window and performs distinct operations, you can move back and forth between sections at any time to rebuild your query or alter your results data. You can also position sections side-by-side in multiple windows.

You can easily navigate between sections to work on queries, results, and reports.
To move between sections, select the desired section from the Sections pane.
If necessary, use the up and down scrollbar to vertically through the Sections pane.

**Duplicating Sections**

A section that has been duplicated retains all of the content and formatting of the original section. In addition a new section is added to the Sections pane. The new section label is based on the original section label, but a sequence number is appended to the label. For example, if you duplicate a section named SalesChart three times, the Sections pane shows: SalesChart, SalesChart2, SalesChart3, and SalesChart4.

To duplicate a section, select the section to duplicate in the Sections pane and select **Duplicate** on the shortcut menu.
You can also duplicate a section by selecting a section from the Sections pane and choosing **Edit, then Section, then Duplicate**.

**Renaming Sections**

The first section that you create is given the default section name, for example, Query or Results. When you insert new sections of the same type as those that already exist, they are numbered sequentially, for example, Query2, Results2, and so on. To assign sections different or unique names based on your application, use the Rename command.

To rename a section:
1. In the Sections pane, select the section name to rename.
2. Select **Rename** on the shortcut menu.
   You can also select the section to be renamed and choose **Edit, then Edit, then Rename**.
   The Input Section Name dialog box opens.
3. Type the new name for the section and click **OK**.

**Deleting Sections**

You can delete a section, but do so with care. Some sections are dependent on other sections. Deleting one section could also delete one or more sections that you did not want to delete. Note that you cannot restore a deleted section.

To delete a section:
1. In the Sections pane, select the section to be deleted.
2. Select **Delete** on the shortcut menu.
   You can also select the section and choose Edit, then Section, then Delete.
The Confirm Deletion dialog box opens.

3 Click OK.

Dashboard Home

Upon opening a document, a customized Dashboard section can be displayed as the Interactive Reporting document file front-end. Each button selection, item selection, or navigation sequence can invoke a script. Behind the scenes, Interactive Reporting refreshes the Dashboard script commands that can perform actions such as retrieve data, populate controls, hide objects, navigate to different sections, and specify report parameters.

To display Dashboard Home, click.

Refreshing Interactive Reporting Document File Sections

You refresh a section to retrieve the most current data set from the database to Interactive Reporting document file. The Refresh command can be used in any of the query reporting sections. Once the data set has been refreshed in one section, all sections attached to the Interactive Reporting document file are refreshed as well.

By default, the Refresh Current command (refreshes the current object) in all sections except Dashboard and the Report section. In some cases more than one query may be refreshed, if for example, a report references results sets from multiple queries.

In the Dashboard and Report sections, the Refresh All command to refresh all queries in the Interactive Reporting document file is used. Although queries are not visible in to the end-user, they are executed in the order in which they display in the section catalog in the full client version. For example, in an Interactive Reporting document file with three queries, Query1, Query2, and Query3, the queries are executed in that order when the Refresh All command is selected.

If a variable filter has been set for the query by the designer of the Interactive Reporting document file, the filter selections must be resolved before the query is refreshed. At that time the user is prompted to select or enter filter values and complete the constraint.

To refresh a section, click.

Printing Sections

When you print a section, it is printed to a PDF file and launched inside your browser if the PDF MIME type is set in your browser. The PDF file can be viewed online, or printed if you need a hard copy of a report.

The PDF format is created by Adobe and can be viewed outside of your browser if you have Adobe Acrobat Reader installed. Adobe Acrobat Reader can be downloaded from Adobe’s web site at http://www.adobe.com/products/acrobat/readstep.html. If the PDF MIME type is not set in the browser, the browser “Save As” dialog box is invoked.
To export an Interactive Reporting document file to PDF, select File, then Print, and then PDF.

Optional: You can also print a section by clicking .

Tip: Printing a section and Exporting a Section as a PDF are equivalent features.

**Exporting Data**

Interactive Reporting document files can be exported in several formats, including:

- Exporting a Section as a .PDF
- Exporting a Section to MS Excel (.XLS)
- Exporting an Interactive Reporting Document File in Native File Format

**Exporting a Section as a .PDF**

Exporting a section to Portable Document Format (.PDF) allows you to preserve the layout and format of the original section and transfer it across multiple platforms (such as Windows, UNIX and the Macintosh). It also enables you to save, print and distribute the file easily and effectively.

To display and print a PDF file you must have Adobe® Acrobat® Reader™ installed. Acrobat Reader is a self-contained application that can behave as an Internet Browser plug-in or as a stand-alone application.

Acrobat Reader enables you to view, print and share a PDF file, but does not enable you to create or modify it. The Acrobat Reader is free and can be downloaded from Adobe’s web site.

When the Acrobat Reader has been installed, you might have to configure your browser to use it. For example you may need to associate Acrobat Reader as the application to read PDF files, or have the PDF display in a separate window instead of the same window. You open a PDF file by double clicking the PDF in the Explore module.

To save a PDF to your desktop for offline viewing, click the Acrobat Reader Save as Copy icon on the Acrobat Reader toolbar. You are prompted to specify the directory in which to save the file.

To print a PDF, click the Acrobat Reader Print icon. You are prompted to specify print parameters and to print the report.

If the Acrobat Reader has not been installed, the File download dialog opens. You can save the file to disk and open it from a location that you specify.
To export an Interactive Reporting document file to PDF, click the PDF icon.

Optional: You can also print an Interactive Reporting document file to PDF by selecting File, then Print via PDF.

### Exporting a Section to MS Excel (.XLS)

You can export a section to Microsoft Excel and launch it inside your browser if the mime type has been set to recognize the XLS file extension. From this point, you can save the file locally and work with the data directly in the Microsoft Excel application. If the mime type is not set to recognize the XLS file extension, you are prompted with a Save As Dialog and must specify a local destination to save the XLS file for future viewing of the data with the Microsoft Excel.

**Note:** If you need to export a section to MS Excel in Web Archive format, you must use EXCEL 2002 (Office XP) or EXCEL 2003.

To export an Interactive Reporting document file to Excel (XLS):

1. **Click Export to XLS.**
   - If the mime type has been set to recognize the section, it is launched automatically in Microsoft Excel.
   - If the XLS file extension is not recognized, the Save As dialog box opens. Complete Step 2.

2. **If desired, enter a new name for the section in the File Name field.**
3. **Select Microsoft Excel Workbook (.XLS) in the Save as Type field.**
4. **Select Save.**

### Exporting an Interactive Reporting Document File in Native File Format

When an Interactive Reporting document file is exported in native file format, the EPM Workspace checks if the Interactive Reporting Web Client has been installed and if so, launches the Interactive Reporting document file in a browser. The Interactive Reporting Web Client is a special application file placed in a web browser’s plug-in directory. Plug-ins add seamless functionality to a web browser, enabling the browser to open a plug-in’s particular file type as if it were an HTML file.

Any changes made to the Interactive Reporting document file are not replicated to the original Interactive Reporting document file selected from the document list in the EPM Workspace Repository (which resides on the server and can only be changed by importing the Interactive Reporting document file again).
To export a file in native file format, select **File**, then **Export**, and then **Native File Format**.

If the Interactive Reporting Web Client has been installed, make any desired changes and save the document to the EPM Workspace Repository. If you do not have permission to overwrite the Interactive Reporting document file, use the Save To Repository As command to rename the Interactive Reporting document file and save it to the repository.

If the Oracle’s Hyperion® Interactive Reporting Web Client has not been installed, the File Download dialog box opens. You can either open the Interactive Reporting document file from its current location, or you can export the file to disk and open it from an alternate location.

**Query Section**

The Query section is the foundation of any Interactive Reporting document file. An Interactive Reporting document file can contain multiple Query sections that can access a wide range of data sources (relational databases, OLAP servers, imported data sets, and local joins). Each Query section has its own Results section and can be associated with the same database or different databases (that is, the connection file or data model used is defined independently in each query).

This section includes the following topics:

- Interactive Reporting Database Connection Files (OCEs)
- Data Model
- Topics and Topic Items
- Query Restrictions
- Working with Queries
- Working with Items on the Request Pane
- Adding a Computed Item in Query
- Computed Items and Data Functions
- Data Functions
- Applying A Query Filter
- Applying Query Sorts
- Refreshing a Query

**Interactive Reporting Database Connection Files (OCEs)**

Whenever you use Interactive Reporting to query a relational database and retrieve information, the Interactive Reporting database connection file and data model are used to interact transparently with the database. The Interactive Reporting database connection file and data models are not visible to the end user in the EPM Workspace.

The Interactive Reporting connection file encapsulates and stores connection information used to connect Hyperion applications to a database. Interactive Reporting database connection files specify the database API (ODBC, SQL*Net, etc.), database software, the network address of the
database server, and your database user name. An end-user can specify the Interactive Reporting database connection file and database password and logon. It is required for an Interactive Reporting document file (BQY) to reference live information from the database.

Selecting an Interactive Reporting Database Connection File (.OCE)

To select an existing Interactive Reporting database connection file (.oce)

1. Navigate to the folder in which to place the file.
2. Select File, then Import, and then File.

   The first Import dialog box opens.

3. Click Browse, navigate to the folder where the desired Interactive Reporting connection file is located, select the file and click Open.

   The name of the selected Interactive Reporting connection file populates the File field on the Import dialog box.

4. Click Next.

   The second Import dialog box opens.

5. Specify any user name, password, and metadata information and click Finish.

   For more information on these settings, see “Setting Processing and Metadata Options.”

Data Model

You use a data model to interact with a database to create queries that specify which data to fetch from the database.

Data models make the database more accessible because they display database tables graphically as topics. They also:

- Substitute descriptive names for arcane database table and column names. Create custom views of the data.
- Add computed fields for performing calculations on the retrieved data.

Data Models are not visible in EPM Workspace. If a master copy of a data model has been associated with a query, you can link a query to it. See Inserting a New Query.

Topics and Topic Items

Topics are a visual representation of tables in a database. They are logical groupings of related information about a particular facet of your business, such as Customer or Sales. A list of topics is shown in the Catalog list.

A topic item is an individual items in a topic or metatopic.
You build queries by adding topics from the Catalog list to the Request pane. You can also drag and drop any topic item to the Request pane. When you refresh a query, data for all the topic items present on the Request pane are returned.

**Query Restrictions**

These Query features are either unavailable or restricted in scope in EPM Workspace

- The Query Log and Custom SQL options are not available.
- A subquery is indented in the Section pane, but it is displayed as a regular query in EPM Workspace. A subquery cannot be added in EPM Workspace.
- If an Interactive Reporting document file contains a union query, the first query is displayed. The Request and Filter panes in the Data Layout for the union query are read-only. In addition, there is no Union Controller line. A new Union Query section cannot be created in EPM Workspace.
- Local Results can be displayed, but a new local result table cannot be created in EPM Workspace.
- Derived queries can be displayed, but a new derivable query cannot be created in EPM Workspace.

**Inserting a New Query**

Use the Insert New Query dialog box to select the master data model for a relational query. Additionally if the Interactive Reporting document file (BQY) contains a query associated with an Essbase data source, you can select the Interactive Reporting database connection file (.oce).

**Note:** If the Interactive Reporting document file (BQY) contains only a relational query and no master data model, the Insert New Query dialog box is not available. In the case where a Interactive Reporting document file (BQY) contains a relational query linked to a master data model, and an Interactive Reporting database connection file (oce) associated with a CubeQuery, all options on the Insert New Query dialog box are available. Note that master data models are not available for a multidimensional Interactive Reporting database connection file (.oce).

To insert a new query with a master data model:

1. **Select Actions, then Insert, and then Query.**

   The Insert New Query dialog box is displayed.

2. **Check Master Datamodel and select the master data model to link to the query.**

   The master data model is a prebuilt, custom view of a database. The benefit of data models is that any changes to the master data model gets propagated to all dependent queries that are based on the master data model.

3. **Click OK.**
To select the Interactive Reporting database connection file (.oce) associated with Essbase:

1. Check Existing Essbase Connection and select the database connection file (.oce).
2. Click OK.

**Working with Queries**

All Query sections in the Interactive Reporting document file are displayed in the Section pane. For each Query section, you can build a query by adding topics to the Request pane. You can also apply filters to the data, or specify columns by which to sort the data that is returned from the database.

**Building Queries**

You build queries by selecting the data you want to retrieve from a visual representation of the database. Once you have selected the items to include in the query and refresh it, a results set is generated.

EPM Workspace offers three query methods for building queries:

- Duplicate and modify an existing Query section, which has been provided to you in the Section pane
- Link to a predefined data model, known as a Master Data Model (if the appropriate adaptive states have been granted)
- Select an Interactive Reporting database connection file (.oce) used to query an Essbase database

To build a query by linking to a Master Data Model:

1. Select Actions, then Insert, and then Query.
   The Insert Query dialog box is displayed.
2. Select a master data model and click OK.
   The Request, Filter and Sort panes are displayed.
3. In the Catalog list, expand the Tables by clicking +.
   A list of topics is displayed.
4. Expand a topic to view topic items by clicking +.
5. Drag a topic item to the Request pane.

Optional: You can also select the topic item in the Catalog list and click Add to Request on the shortcut menu.

Tip: You can also select a topic item and select Add Selected Items in the Catalog list or select Actions then Add to Request.
Optional: To add an entire a topic to the Request pane, select the topic and drag it to the Request pane.

6 To apply a sort, drag a topic item from the Request pane to the Sort pane.

For more information, see Applying Query Sorts.

7 To apply a filter (limit), drag a topic item to the Filters pane.

For more information, see Applying A Query Filter.

8 Select.

If you add more items than the Request pane can display, resize the browser.

➢ To duplicate a Query section, select the query to duplicate in the Sections list, and choose Duplicate on the shortcut menu.

EPM Workspace duplicates the section and adds a new section label to the Sections pane. The new section label is based on the original section label, but a sequence number is appended to the label. For example, if you duplicate a section named SalesChart three times, the Sections pane shows: SalesChart, SalesChart2, SalesChart3, and SalesChart4.

Working with Items on the Request Pane

As you build your query, you can add and remove item to and from the Request pane. This allows you to change the way in which the query refreshes and displays.

➢ Adding Request Items

➢ Removing Request Items

Adding Request Items

Queries are built by adding topic items from the Catalog list to the Request pane.

➢ To add a topic item to the Request pane, select the topic item in the Catalog list and choose Add to Request on the shortcut menu.

Removing Request Items

You can remove items in the Request pane to exclude the data from your query or results set.

➢ To remove an item from the Request pane, choose the desired item and select Delete on the shortcut menu.

Dependent sections that use the item are not affected by the removal of an item until the query is refreshed.
Note: Remove items with caution as a computed item or report may draw data from the item that you delete.

**Picture (BLOB Image) Support**

Pictures can be queried from a relational database if they are image data collected as a BLOB data type and stored as a binary unit in the database management system with ODBC connections. BLOB image files available to include: .JPEG, .BMP, .GIF, and .PNG image formats. Pictures can be dragged and dropped from a query table to the request line, displayed as strings in columns in the Results and Table sections, or shown graphically in the bands of the Report section. Dashboard developers can select images from results sets, not just static images from the file system.

The following restrictions apply to BLOB images in Interactive Reporting:

- The ODBC connection must use a server-defined join
- It is not possible to determine the data type of an image in advance

See also:

- “Adding Pictures in Query” on page 228
- “Working with Pictures in Results and Tables” on page 228
- “Working with Pictures in Reports” on page 229

**Adding Pictures in Query**

In the Query section, once BLOB images are retrieved as pictures, they are treated like any other table topic item. They can be dragged and dropped from the table directly to the request line. Only pictures in tables that have a primary key defined are included in a query. Pictures cannot be sorted in the Query section. If you add a non-BLOB image to the request line, a broken link to the image is displayed in the report section.

**Working with Pictures in Results and Tables**

A column is displayed in the Results and Table sections for every picture with a BLOB data type on the request line. Descriptive text is displayed instead of the image in each cell in the format <<Picture:unique id>>. The unique id is tooltip text if any has been specified, otherwise, the unique id is the primary key value.

**Adding Pictures in Computed Items**

A picture function is available in Computed Items so that you can associate an image with a computed column. In the Results and Table section, the picture is shown as descriptive text instead of the image in each cell in the format <<Picture:unique id>>. The unique id is tooltip text if any has been specified, otherwise the unique id is the Resource name. In the Reports section, the computed item containing the picture can be shown graphically, For example you
could use an “if else” statement to show an image if a certain set of conditions are met, and another criteria if the condition is not met:

```java
if (Amount_Sales >= 10000) {Picture ("C:\graphics\smile.gif") } else{Picture("C:\graphics\crying.gif") }
```

### Working with Pictures in Reports

The Report section can include pictures obtained from the database (BLOB data types) by using an embedded object (Results and Tables) or it can use static images from the Resource Manager. Pictures can be dragged from the Catalog and dropped into the report layout components: report table report body report group header report page header of footer. You cannot drag a picture into a Table Facts column. Once a picture has been added to the report, all images are sized to fit the bounding rectangle defined in the report, and pictures can be resized as needed. Pictures are sorted by the their underlying textual unique id (i.e. the text displayed in a table/result section), which is particularly useful when they are added to the report group headers (via outliner).

### Adding a Computed Item in Query

In the Query section, a computed item is a set of instructions to the database server. EPM Workspace uses the computing power of the database server to perform calculations as it retrieves data from the database.

For this reason, the Query section allows you to use computed items in a way that is not possible in the other sections. Instead of creating a new data item, the new values simply replace the original values in the data item as they are retrieved from the database.

Additionally, you can compute items using any topic item in the data model and any scalar functions provided by your RDBMS.

**Note:** You are unable to add computed items through shortcut menu in EPM Workspace. At least one Results or Table column must be present to enable the right-click (shortcut) menu which contains the option to add or modify a computed item. When no columns are present, select the menu option Actions, and then Add Computed Item to create a computed item.

To create a computed item in the Query section:

1. **Select an item in the Request pane and choose Actions, and then Computed Item.**

   The Computed Item dialog box is displayed.

   **Optional:** You can also select a request item and choose Add Computed Item on the shortcut menu. At least one Results or Table column must be present to enable the shortcut menu which contains the option to add or modify a computed item. When no columns are present, you must select the Add Computed Item from the Actions menu.

2. **Enter a name for the computed item in the Name field.**
The default name is *Computed*, which is numbered sequentially if there is more than one computed item. If you assign a name to a computed item that is identical to an existing scalar function name, EPM Workspace numbers the name starting with the number 2.

3 Select the data type of the computed item to build from the Data Type list box.

See also “Adjusting Data Types” on page 230.

4 Enter the definition of the computed item in the **Definition** text box.

- See “Operators” on page 231.
- Click **Reference** to display the Reference dialog box, and select items to place in the equation. See also “Reference” on page 234.

You can also type any portion of the equation or the entire equation directly into the **Definition** text box using JavaScript. The names are case sensitive, and you must replace spaces in item names with underscores (_).

5 When the equation is complete, click **OK**.

In the Query section, the computed item is displayed on the Request pane with its new name. When the query is refreshed, the computed item is listed in the Results Data Layout pane, and it is displayed as a column in the results set.

### Adjusting Data Types

Since computed items are new data items, confirm or change the data type of the item to preserve the precision of a mixed-data type computations, or to change the way a data item is handled (for example, interpreting number as strings). This ensures the correct handling of data in server computations.

Attention to data types is most important when computing items in the Query section. Here the computation is performed on the database server, and the computed item may be handled with an unanticipated data type.

Local calculations (Results or Pivot) are handled internally, and adjustment between 16- and 32-bit integers can be handled safely using the automatic or number data type specification.

Since computed items are new data items, confirm or change the data type of the item to preserve the precision of a mixed-data type computations, or to change the way a data item is handled (for example, interpreting number as strings). This ensures the correct handling of data in server computations.

Local calculations (Results or Pivot) are handled internally, and adjustment between 16- and 32-bit integers can be handled safely using the automatic or number data type specification.

**Table 46  Data Type Specifications**

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Automatic</strong></td>
<td>A data type is determined automatically given the data type of the reference items and the computations performed</td>
</tr>
<tr>
<td><strong>BLOB</strong></td>
<td>Binary large object which is truncated at 64,000 bytes. Blob data types can include image formats such as: jpeg, bmp, gif, and png.</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Data Type</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Byte</td>
<td>Variable data type of length determined by a single byte of computer storage. Bytes can store numeric values from 0 to 255, or a single text character</td>
</tr>
<tr>
<td>Date</td>
<td>Calendar date in server default format (typically mm/dd/yy)</td>
</tr>
<tr>
<td>Integer (16–bit)</td>
<td>Retains a 16-bit value (2 bytes). A 16-bit integer stores integer values from 0 to 16,777,216, and signed integers between 8,388,608 and -8,388,608</td>
</tr>
<tr>
<td>Integer (32–bit)</td>
<td>Retains a 32-bit value (4 bytes). A 32-bit integer has a range of 0 to 4,294,967,296 if unsigned. If signed, -2,147,483,648 to 2,147,483,647.</td>
</tr>
<tr>
<td>Long Text</td>
<td>Character data (long text) exceeding 255 bytes (use the string data type for text strings up to 255 characters). The maximum long text retrieved is 4000; characters anything greater than that is silently truncated</td>
</tr>
<tr>
<td>Packed Real</td>
<td>Real numbers packed for use with EDA middleware. The results in Interactive Reporting are the same as real numbers</td>
</tr>
<tr>
<td>Real</td>
<td>Decimal numbers up to 5 positions right of the decimal</td>
</tr>
<tr>
<td>String</td>
<td>Text strings to a maximum length of 256 characters</td>
</tr>
<tr>
<td>Time</td>
<td>Time in format set by user preference</td>
</tr>
<tr>
<td>TimeStamp</td>
<td>Date/time combination in format set by user preference</td>
</tr>
</tbody>
</table>

**Operators**

You can add operators in the Computed Item dialog box to add arithmetic or logical operators to a computation in the Definition text box. Operators are added at the insertion point. You can use any of the following types of operators:

- **Arithmetic Operators**
- **Comparison Operators**
- **Statements**
- **Logical Operators**

The following guidelines are applicable when using operators:

- Type the word null (no quotes) into the Expression text box to represent null values.
- Enclose all text string constant values and date constant values entered in expressions in single quotes. (Numbers can be entered without quotes.)
- To join items with a space or other character, reference or type items and strings into the Expression text box and join them with the + operator (for example, City + ‘,’ + State). To join without additional characters, use the Concat function.
- In division operations, the divisor may not be null or equal to zero. If a data item serves as the divisor in an expression (for example, 5000/Units_Sold) and includes null or zero values, first create a computed item using if/else logic to remove null and zero values, and then compute the item containing the division operation.
Two date items can be subtracted, but not added. The Add Month function adds an integer value to a date.

You cannot nest functions inside the `Sum`, `Cume`, `Chr`, and `Breaksum` functions.

**Arithmetic Operators**

Arithmetic operators take numerical values (either logical or variables) as their operands and return a single numerical value.

<table>
<thead>
<tr>
<th>Table 47 Arithmetic Operators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operator</strong></td>
</tr>
<tr>
<td>+</td>
</tr>
<tr>
<td>-</td>
</tr>
<tr>
<td>*</td>
</tr>
<tr>
<td>/</td>
</tr>
<tr>
<td>(</td>
</tr>
<tr>
<td>)</td>
</tr>
<tr>
<td>++</td>
</tr>
<tr>
<td>--</td>
</tr>
<tr>
<td>Mod (%)</td>
</tr>
</tbody>
</table>

**Tip:** If a computed item is displayed on a Request pane, and the definition of item uses subtraction, such as "Mytable.Column1-5", a SQL error can occur. The exact error depends on the database, but the most common error indicates an undefined name was used. Because databases allow hyphenated names, Interactive Reporting attempts to deal with such names intuitively. Thus, an item definition like "Mytable.Column1-5" is interpreted as a name. In order to ensure it is treated as subtraction, include a space on either side of the hyphen/subtraction operator. For example, entering the computed item definition as Mytable.Column1 - 5 ensures that the correct SQL is generated.

**Comparison Operators**

A comparison operator compares its operands and returns a logical value based on whether the comparison is true. The operands can be numerical or string values. When used on string values, the comparisons are based on the standard lexicographical ordering.
Note: The comparison operators in the following table are only available at the local metatopic level. For the examples in the table var1 has been assigned the value 3, and var2 has been assigned the value 4.

Table 48  Comparison Operators (Local Metatopic Level)

<table>
<thead>
<tr>
<th>Operator</th>
<th>Return “true” if the:</th>
</tr>
</thead>
<tbody>
<tr>
<td>==</td>
<td>Operands are equal</td>
</tr>
<tr>
<td></td>
<td>For example, 3 == var1</td>
</tr>
<tr>
<td>!=</td>
<td>Operands are not equal</td>
</tr>
<tr>
<td></td>
<td>For example, var1 != 4</td>
</tr>
<tr>
<td>&lt;</td>
<td>Left operand is less than the right operand</td>
</tr>
<tr>
<td></td>
<td>For example, var1 &lt; var2</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Left operand is less than or equal to the right operand</td>
</tr>
<tr>
<td></td>
<td>For example, var &lt;= var2, var2 &lt;= 5</td>
</tr>
<tr>
<td>&gt;</td>
<td>Left operand is greater than the right operand</td>
</tr>
<tr>
<td></td>
<td>For example, var2 &gt; var1</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Left operand is greater than or equal to the right operand</td>
</tr>
<tr>
<td></td>
<td>For example, var2 &gt;= var1, var1 &gt;= 3</td>
</tr>
</tbody>
</table>

Statements
Executes a set of statements if a specified condition is true. If the condition is false, another set of statements can be executed.

Table 49  If...else statement

<table>
<thead>
<tr>
<th>Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>If...else</td>
<td>if executes a set of statements if a specified condition is true. The specified condition may be another statement and can include other nested if statements. Braces, {}, must enclose multiple statements. If the condition is false, another set of statements can be executed if the optional else statement has been included in the script.</td>
</tr>
<tr>
<td></td>
<td>A sample if ... else statement looks likes this:</td>
</tr>
<tr>
<td></td>
<td>if (condition) {</td>
</tr>
<tr>
<td></td>
<td>statements1</td>
</tr>
<tr>
<td></td>
<td>}</td>
</tr>
<tr>
<td></td>
<td>else {</td>
</tr>
<tr>
<td></td>
<td>statements2</td>
</tr>
<tr>
<td></td>
<td>}</td>
</tr>
</tbody>
</table>
Logical Operators

Logical operators take Boolean (logical) values as operands and return a Boolean value.

Table 50  Logical Operators

<table>
<thead>
<tr>
<th>Operator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AND (&amp;&amp;)</td>
<td>Connects two conditional expressions and retrieves records only if each expression is true. Computed items are not retrieved if any condition belonging to a conditional expression is false. The AND logical operator is usually nested within another conditional expression, for example, expressions which use if and else statements. For example: if ((OS == 'Windows') &amp;&amp; (Item type == 'Modem')) {'Windows'} else {'other'}</td>
</tr>
<tr>
<td>OR (</td>
<td></td>
</tr>
<tr>
<td>NOT (!)</td>
<td>Computes and shows items more accurately stated in a negative way. In effect, all records are retrieved except those that fulfill the conditional expression. You enter the conditional expression with the NOT (!) logical operator preceding the conditional expression. The conditional expression can be a simple value or nested within other conditional expressions, for example, expressions using AND and OR. A combined condition expression that uses NOT is true if the conditional expression following NOT is false. A combined conditional expression is false if the conditional expression following NOT is true. For example, suppose you are looking to list all states that are not in the Northwestern region. In this case, enter the conditional expression: if (! (State == 'Northwestern Region')) {'Other Regions'}</td>
</tr>
</tbody>
</table>

Reference

Use the Reference dialog box to select the topics and topic item from which to build the computed item definition.

The Reference dialog box is split between topics in the left pane and topic items in the right pane. The topics displayed in the left pane are derived from the topics in the Request pane. The items displayed in the right pane are the values which make up each topic. Before you can select a topic to use in a computed item expression, you must select it and a topic item.

Computed Items and Data Functions

Computed items and data functions are fundamentally different, and the functions available in the Computed Item dialog box do not calculate data in the same way as data functions.

- Computed items calculate a fresh value for each original value, based on the computation (for example, Revenue calculated from Price and Units Sold). The new values are part of a
new data item or replace the original values. Computed items never reduce the original number of records.

- Data functions, by contrast, summarize groups of database records and replace the original values with new summary data. Because data functions summarize values, the number of records are frequently reduced.

**Data Functions**

Data functions compute aggregate values, including averages, maximums, counts and other statistics. These functions summarize groupings of data. You can use data functions to aggregate and compute data from the server before it reaches the Results section, or compute different statistics for aggregated Results totals and report items.

The effects of data functions are most dramatic in the Query section. For example, Dollars is an item of sales transaction records for your stores in London and Madrid. You can apply a data function to this item, consolidate the data, and calculate sum totals, average sale values, number counts of individual sales records, or minimum sale values with respect to each city, once the data is retrieved to Results.

To apply a data function, select the item or column, and choose **Data Function** on the shortcut menu.

Optional: You can also select the item or column and choose **Actions**, then **Data Function**, and select the (function).

<table>
<thead>
<tr>
<th>Table 51</th>
<th>Data Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Function</strong></td>
<td><strong>Returns</strong></td>
</tr>
<tr>
<td>None</td>
<td>Unaggregated values as stored in the database. This is the default in Query.</td>
</tr>
<tr>
<td>Sum</td>
<td>Sum of underlying values. This is the default in Results and report sections.</td>
</tr>
<tr>
<td>Average</td>
<td>Average of underlying values</td>
</tr>
<tr>
<td>Non-Null Average</td>
<td>Average of underlying values; null values excluded</td>
</tr>
<tr>
<td>Minimum</td>
<td>Lowest of underlying values</td>
</tr>
<tr>
<td>Maximum</td>
<td>Highest of underlying values</td>
</tr>
<tr>
<td>Count</td>
<td>Number of underlying values</td>
</tr>
<tr>
<td>CountDistinct</td>
<td>Number of distinct values in a column. This function is not supported by all database servers</td>
</tr>
<tr>
<td>Null Count</td>
<td>Number of nulls among underlying values</td>
</tr>
<tr>
<td>Non-Null Count</td>
<td>Number of underlying values; null values excluded</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>Standard deviation of values. This function is not supported by all database servers.</td>
</tr>
<tr>
<td>Variance</td>
<td>Variance of values. This function is available through Oracle servers only.</td>
</tr>
<tr>
<td>Function</td>
<td>Returns</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Weight</td>
<td>Use for computing weighted items in Pivot reports.</td>
</tr>
<tr>
<td>% of Column</td>
<td>Sum of all underlying values as a percentage of their respective surface column</td>
</tr>
<tr>
<td>% of Row</td>
<td>Sum of underlying values as a percentage of their respective surface row</td>
</tr>
<tr>
<td>% of Grand</td>
<td>Sum of underlying values as a percentage of all surface values in the report</td>
</tr>
<tr>
<td>% of Category</td>
<td>Group total percentage of the selected value</td>
</tr>
<tr>
<td>Increase</td>
<td>Calculates the increase between the previous two rows or columns</td>
</tr>
<tr>
<td>% Increase</td>
<td>Calculates the percentage increase between the previous two rows or columns</td>
</tr>
<tr>
<td>Title</td>
<td>Column names</td>
</tr>
</tbody>
</table>

Null values are empty values for which no data has been specified; null values are not equal to zero.

**Applying A Query Filter**

When building a query, you usually do not want to see information associated with every product. Instead you want to see information that relates only to a specific product or product line. Similarly, you may not want to see this information for every year the product has been available, but only for recent periods.

When you set a filter in the Query section, data is returned from the database only if it meets the specified conditions. For example, suppose you only want to see your most important customers who spend more than $400,000 per year, or who buy gardening products in the Midwest. By applying a filter you are instructing the database to “give me only the data which satisfies the following conditions” (sales > $400,000; or, state is in Midwest Region and Product Line = Garden).

In another example, a filter placed on Item Type (which includes an “=” (equal) operator and value “Keyboard”) returns only records associated with keyboard sales. Records associated with all other products are excluded from the results set. The data set could be expanded to include modem sales records by adding the value “Modem” to the filter expression.

Similarly, the filter “> 5000” applied to the Amount Sold item filters out all sales transactions less than or equal to $5,000. Alternately, the expression “between 5000, 10000” exclude transactions above $10,000 and eliminates any below or equal to 5,000.

Another advantage of Query filters is that you can apply a filter to any Topic item, even if the item is not on the Request pane. For example, if you request State, Year, and Units Sold, you can filter any of these items.

You can also place a filter on the Operating System if it appears in one of the topics in the Contents pane. For example, if you filter the Operating System to the UNIX only, the server retrieves only sales information related to the UNIX operating system. You do not need to place the Operating System on the Request pane.
To set a query filter:

1. Select a topic item in the Catalog list and select Add to Filter on the shortcut menu.
   
   Optional: You can also drag one or more topics from the Catalog list and drop them into the Filter pane.
   
   The Filter dialog box is displayed.

2. Define a pool of the potential filter values by selecting one of the following options:
   
   - “Show Values” on page 245 — Supplies database values associated with the item.
   - “Custom Values” on page 246 — Supplies an empty text box for entering custom values.
   - “Custom SQL” on page 247 — Supplies an empty text box for entering a Structured Query Language (SQL) clause to be included in the query statement.

3. If you are working with the Show Values or Custom Values options, select Include Null to include data where the data item has no value.
   
   Retrieves records where the filtered item has no value; for example a field in which no data has been entered. A null value is not equal to zero.
   
   If you are working with the Custom SQL option, skip the remaining steps, enter your Custom SQL and click Set.

4. Select the NOT check box to negate the operator it precedes.
   
   If you select NOT, the results of the equation are reversed.

5. Select a comparison operator to use for filtering values.
   
   For example, if you specify the > Greater Than and specify a value of 10,000, values greater than 10,000 are returned.
   
   For a list of valid comparison operators, see “Comparison Operators” on page 232.

6. Select the values to apply as a filter.

7. Select Set.
   
   To suspend a filter temporarily without deleting it, click Ignore.

### Variable Filters

A variable filter is a preset filter that is associated with the Interactive Reporting document file by the designer and resolved only when the query is refreshed. At that time, you are prompted to select or enter filter values and complete the constraint. A variable filter prompt is displayed only if one has been set in the underlying Interactive Reporting document file.

Variable filters work particularly well with custom lists. If a custom list has been created, you can respond to the prompt by simply selecting a value from the custom list. For example, you may have an Interactive Reporting document file you use monthly to monitor inventory levels.
Each time you use the Interactive Reporting document file, you run it separately for each product line you carry. You can accelerate the process by making the filter variable on the product line item, and create a custom values list. Each time you refresh the Interactive Reporting document file, you can select a new product line without redefining filters.

You can select from three types of filters from which to apply a variable constraint, including:

- “Show Values” on page 245 – Supplies database values associated with the item.
- “Custom Values” on page 246 – Supplies an empty text box for entering custom values.
- “Custom SQL” on page 247 – Supplies an empty text box for entering a Structured Query Language (SQL) clause to be included in the query statement.

If you do not need to select specific variable filters for the query, choose “Set” to accept the predefined filters and refresh the query. If you want to modify or add other values, complete steps 2 and 3 below.

To specify a variable filter.

1. **Click Refresh on the Interactive Reporting toolbar.**
   The Filter dialog box is displayed.

2. **If you are working with the Show Values or Custom Values options, select Include Nulls to include data where the data item has no value.**
   Retrieves records where the filtered item has no value; for example, a field in which no data has been entered. A null value is not equal to zero.
   If you are working with the Custom SQL option, skip the remaining steps, enter your Custom SQL and click Set.

3. **Select the NOT check box to negates the operator it precedes.**
   Selecting NOT reverses the results of the equation.

4. **Select a comparison operator to use for filtering value.**
   For example, if you specify the > Greater Than and then specify a value of 10,000, then values greater than 10,000 are returned.
   For a list of valid comparison operators, see “Comparison Operators” on page 232.

5. **Select the values to apply as a filter.**

6. **Select Set.**
   The filter is applied in the results set.
   To suspend a filter temporarily without deleting it, click Ignore.
   To see the result of setting the variable filter, select the Refresh command after the variable has been set.
Applying Query Sorts

Sorting simplifies the process of data analysis. After data is sorted, the answers to questions are often readily at your fingertips because sorting ranks data to reveal trends and margins. If you apply simple sort conditions in the Query section, the database server sorts the data while refreshing the query *before* it is retrieved to your document file.

Typically, you can place an ascending or descending order on a sort condition that you place on a column.

- To apply a sort to the query, drag one or more items in the Request pane and drop them into the Sort pane.
- Optional: A sort can also be applied by selecting an item and choosing Actions then Add to Sort.

When the query is refreshed, the request item is sorted in the results set.

- To sort in ascending order:
  1. Drag one or more items in the Request pane and drop them into the Sort Pane.
  2. Select Sort Ascending on the shortcut menu.

- To sort in descending order:
  1. Drag one or more items in the Request pane and drop them into the Sort pane.
  2. Select Sort Descending on the shortcut menu.

- To delete a sort, select the sort value to remove from Sort pane and choose Delete on the shortcut menu.

Deleting a sort returns the data to its original display.

Refreshing a Query

After you build your query and apply filters computations, sorts, and any other adjustments to further refine your request, refresh it to get the results of your query. Refreshing your query may take a few moments if your query is complex or if the data in linked report sections needs to be refreshed.

When you refresh your query, the data is retrieved to the Results section in tabular form. You can refresh your query at any time and in any section to refresh the data. You can also return to the Query section from any other section at any time to alter the query and refresh it.

- To refresh a query, click
- Optional: You can also select View, and then Refresh
Results and Tables

When you refresh a query or import data, the Interactive Reporting retrieves data to your browser and displays it in the Results section. Although the query may have accessed several different database tables, the results set is displayed as a single table. Each requested item is displayed as a column in the table and each database record is a row.

Use the Results section to:

- Verify that your query returned the correct information.
- Refine and extend the data set by applying filter conditions or create new computed or grouped items.
- Sort or use text and column formatting features to enhance the appearance of data results.
- Add summary totals or subtotals and compute them with data functions.
- Print or export the retrieved data to other applications.

All reports, including tables, pivots, charts, are based on the data that is retrieved to the Results section.

Interactive Reporting provides several ways for you to view the results of a database query for better analysis:

- Adding a Table
- Working with Columns and Rows
- Sorting Results/Table Items
- Number Formatting
- Applying a Results and Table Filter
- Results and Tables
- Show Values
- Results and Table Totals
- Adding Computed Items in Results and Tables
- Paging Through Results Data

Adding a Table

To create a table based on data in the Results section:

1. **Select Action**, then **Insert**, and then **Table**.
2. **Drag Results items from the Catalog list to the Table Data Layout**.
   
   The table columns are populated automatically.
Working with Columns and Rows

Columns and rows can formatted to your specific needs:

- Adding a Column
- Deleting a Column
- AutoSizing ColumnS
- Deleting a Row

Adding a Column

If you have removed a column from the results set, you can easily add it back. However, any data values derived from the re-added column are not automatically update an existing column either in the results/table section or another section, which draws from the results set.

➢ To add a column:
1. Select any column.
2. Select Add Column on the shortcut menu.

Deleting a Column

You may need to delete a column in order to view the data set in a new way or maybe you want to concentrate on selected columns of interest. This option is available for all columns. Note that column deletion should be approached with caution since other sections draw data values from the results set.

➢ To remove a column, choose the column and select Delete Column on the shortcut menu.

The column is deleted. If you need to add the column back to the Results section, select Add Column on the shortcut menu.

AutoSizing ColumnS

By default, Interactive Reporting truncates columns evenly and without regard to the length of data values. With the auto-size column width feature, you can automatically size any column to fit the text of the largest value in the column.

➢ To autosize a column:
1. Select a column.
2. Select Auto-Size Column Width on the shortcut menu.
Deleting a Row

You can delete a row if it is a grand total or break. Note that the grand total is shown in the last row on the last page of the table.

➢ To delete a row:
1. Select a row.
2. Select Delete Row on the shortcut menu.

Sorting Results/Table Items

Data in the Results section is sorted in the order returned by the database. You can change the order in which a column is sorted either in ascending or descending order.

➢ To sort a column:
1. Select the column you want to sort on.
   Selecting multiple columns invokes a “nested sort.”
2. Select Sort on the shortcut menu.
   The Sort submenu is displayed.
3. Select either the Ascending or Descending sort item.

➢ To delete the current sort order:
1. Select any column in the Results or Table section.
2. Select Sort on the shortcut menu.
   The Sort submenu is displayed.
3. Select Delete All.

Number Formatting

You can change the way numbers, currency values, and dates are displayed throughout or create new custom formats.
To apply number formatting, select the format from the Format drop down list box.

**Table 52 Formatting Categories**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category</strong></td>
<td>Select a category for which you want to display number formats. When you select a category, the formats for that category are displayed in the Format field. To create a custom format, select Custom and enter the desired format in the Format field. Enter symbols, decimals, commas, and so on to indicate how to display the format. For example, enter 'MM/DD/YY' to display the date as '01/01/99', or enter $$#.###.00$$ to show two dollar signs before the number and a decimal to mark the thousands' place. When you create a custom format, it appears as a category on the machine on which it was created. If an item already has a custom format applied to it, the custom format is in read-only mode.</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>Displays the format for the selected category. If you are creating a custom category, you can enter the desired format directly in the edit field.</td>
</tr>
</tbody>
</table>

The following table lists available numeric categories.

**Table 53 Numeric Categories**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number</strong></td>
<td>Sets the default format for real or integer values.</td>
</tr>
<tr>
<td><strong>Currency</strong></td>
<td>Applies currency formatting to the selected number object(s).</td>
</tr>
<tr>
<td><strong>Percentage</strong></td>
<td>Applied percentage formatting to the selected numeric object.</td>
</tr>
</tbody>
</table>

The following table lists the available formatting options and definitions along with examples for the above categories.

**Table 54 Formatting Options and Descriptions**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
</table>
| **0** | Integer placeholder or zero value. If a number has an integer value in this position relative to the decimal point, the inter is displayed. Otherwise a zero is displayed. | Apply 0 to show 123.  
Apply 0.00 to show 123.45. |
| **#** | Integer placeholder. If a number has an integer value in this position relative to the decimal point, the integer is displayed. Otherwise, nothing is displayed. | Apply #,#0 to show 1,234. |
| **()** | Formats with parenthesis options display negative values in parentheses. Otherwise, negative values are displayed with a minus sign. | Apply (#,#0) to show (1,234). |
| **;** | A semicolon operates as a separator between two number formats. The semicolon separates a positive integer and a negative integer. | Apply #,##0;(#,##0) to show 1, 234 or apply (1, 234) for a negative number. |
| **$ %** | Adds the respective character to numeric values in the same position relative to the decimal point. | Apply $#,##0.00 to show $1,234.56.  
Apply 0% to show 3%. |
| **m d yy** | Displays month, day, and year in respective positions for date-coded information. | Apply mm dd yy to show 05 07 99 |
| **- /** | Adds the respective character to date-coded values in the same position relative to variables. | Apply mm/dd/yy to show 06/23/99 |
Applying a Results and Table Filter

Because local filters only hide data from the display, they are a good way to filter the data set to reflect temporary and hypothetical situations. You can always remove the filter to return data to the display and make it available for reporting.

Applying filters to your results/table sets allows you to narrow your request. That way you can work with relevant data, saving time and conserving database and server resources.

You can add, modify and remove filters to columns in the Tables/Results section. The column to which the filter is applied must exist in the table, and a filter cannot be placed on a hidden column.

See also:

- Show Values
- Custom Values
- Custom SQL
- Modifying Filters
- Deleting Filters

To add a results/table filter.

1. Select a column on which to apply the filter.
2. Select Filter on the shortcut menu.
   The Filter submenu is displayed.
3. Select Apply/Modify on the Filter submenu.
   The Filter dialog box is displayed.
4. Define a pool of the potential filter values by selecting one of the following options:
   - “Show Values” on page 245 — Supplies database values associated with the item.
   - “Custom Values” on page 246 — Supplies an empty text box for entering custom values.
5. If you are working with the Show Values or Custom Values options, select Include Nulls to include data where the data item has no value.
   Retrieves records where the filtered item has no value; for example, a field in which no data has been entered. A null value is not equal to zero.
   If you are working with the Custom SQL option, skip the remaining steps, enter your Custom SQL and click Set.
6. Select the NOT check box to negate the operator it precedes.
   Selecting NOT reverses the results of the equation.
7. Select a comparison operator to use for filtering values.
   For example, if you specify the > Greater Than and then specify a value of 10,000, then values greater than 10,000 are returned.
   For a list of valid comparison operators, see “Comparison Operators” on page 232.
8. Select the values to apply as a filter.
9. Select Set.

The filter is applied in the results set.

To suspend a filter temporarily without deleting it, click Ignore.

**Show Values**

The Show Values feature provides a list of values derived from the content of the Results or Table section. Because Show Values retrieve every unique value available, it is best not to use this feature when the data item is large, consists mostly of unique values, or does not change frequently (for example, telephone numbers). In this situation, custom values are recommended when you want to avoid extra calls to the database.

The value list that initially displays was saved with the imported Interactive Reporting document file, and it is not the latest value list from the database.

To show the latest value list, select View, then Refresh.

➢ To specify a database filter value:

1. Select the Show Values tab.
2. Select Include Nulls to allow nulls to pass the filter and display in the data set.
3. Expand the Operator drop down and select a comparison operator for the filter expression.

Check Not to reverse an operator condition.

For example, if you specify the > Greater Than and then specify a value of 10,000, then values greater than 10,000 are returned. Values which pass the comparison test are included. Valid operators include:

<table>
<thead>
<tr>
<th>Operator</th>
<th>Retrieves Records Where the Filtered Item:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal (=)</td>
<td>Equals the specified value(s).</td>
</tr>
<tr>
<td>Not Equal (&lt;&gt;);</td>
<td>Does not equal the specified value(s).</td>
</tr>
<tr>
<td>Less Than (&lt;)</td>
<td>Less than the specified value(s).</td>
</tr>
<tr>
<td>Less or Equal (&lt;=)</td>
<td>Equal to or less than the specified value(s)</td>
</tr>
<tr>
<td>Greater Than (&gt;)</td>
<td>Is greater than the specified value(s).</td>
</tr>
<tr>
<td>Greater or Equal (&gt;=)</td>
<td>Is equal to or greater than the specified value(s)</td>
</tr>
<tr>
<td>Begins With</td>
<td>Begins with the specified value(s) up to and including the end value.</td>
</tr>
<tr>
<td>Contains</td>
<td>Contains the specified value(s) regardless of location.</td>
</tr>
<tr>
<td>Ends With</td>
<td>Ends with the specified value(s).</td>
</tr>
<tr>
<td>Operator</td>
<td>Retrieves Records Where the Filtered Item:</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Like (with wildcards)</td>
<td>Retrieves records where a text string is displayed and reflects the placement of the specified value(s). For example, a Name Like %ZE_ retrieves records for all employees whose names have the letters Ze followed by a single character at the end.</td>
</tr>
<tr>
<td>Is Null</td>
<td>Has no value; for example a field in which no data has been entered.</td>
</tr>
<tr>
<td>Between</td>
<td>Retrieves records where the value of the filtered item lies between (and does not equal) the specified values.</td>
</tr>
<tr>
<td>Not (with operator)</td>
<td>Negates the operator it precedes, reversing the results of the equation.</td>
</tr>
</tbody>
</table>

4 **Highlight the values to include as filters from the Values list.**

To select an individual value, highlight it in the Values pane.

To select multiple and contiguous values in the Values pane, hold the [Shift] and scroll down to or up to the items.

To select multiple, but non-contiguous values in the Values pane, hold the [Ctrl] key and highlight the items.

5 **Click Set.**

To suspend a filter temporarily without deleting it, click **Ignore.**

**Custom Values**

A Custom Values list can be used to set a filter and are created by or supplied to you. One reason to use custom lists with a distributed Interactive Reporting document file is that many data items change very rarely. For example, a Gender item has three consistent values (male, female, and unknown). A Product line item has many more items, but may only change every year or so. Under these circumstances, it makes sense for you to select from a custom values list.

The initial custom values shown in the values pane originate and are saved with the Interactive Reporting document file.

➢ To apply a custom value as a filter:

1 **Select Include Nulls to include data where the data item has no value.**

Retrieves records where the filtered item has no value; for example a field in which no data has been entered. A null value is not equal to zero.

2 **Select a comparison operator to use for filtering value.**

Select the NOT check box to negate the operator it precedes.

For example, if you select the > Greater Than operator and specify a value of 10,000, values greater than 10,000 are returned.

For a list of valid comparison operators, see “Comparison Operators” on page 232.

3 **In the Values field, enter the values to which you want to set as a filter.**

4 **To add the value, select +(the addition sign).**
To remove a value from the Values panel, highlight the item in the Values pane and click the - (subtraction sign).

5  Click Set.

To suspend a filter temporarily without deleting it, click Ignore.

**Custom SQL**

If you are familiar SQL, select the Custom SQL feature and type a SQL where clause to be included in the query statement.

▶ To add a custom SQL statement:

1  Select the Custom SQL tab.

2  Type your SQL where clause containing the expression to use for the filter in the Values pane.

3  Click Set.

   To suspend a filter temporarily without deleting it, click Ignore.

**Modifying Filters**

Once a filter exists for data in your query or results, you can later add or modify filter conditions.

▶ To modify a filter:

1  Select the column to which the filter has been applied.

2  Select Filter on the shortcut menu.

   The Filter submenu is displayed.

3  Select Apply/Modify on the Filter submenu.

   The Filter window is displayed.

4  Select the filter value and click Set.

   The following table provides a quick reference to the Modify Filter option:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set</td>
<td>Applies the filter value.</td>
</tr>
<tr>
<td>Ignore Filter</td>
<td>Ignores a filter without deleting it.</td>
</tr>
<tr>
<td>Cancel</td>
<td>Cancels any filter applied in the current sessions.</td>
</tr>
</tbody>
</table>

**Deleting Filters**

Deleting filters adds the original values that were filtered back into the data set.
To delete a filter, select the columns that has the filter value to be deleted and select Actions, then Filter, then Delete on the shortcut menu.

Results and Table Totals

Totals and subtotals can help to consolidate a large results set. If you need individual data records and plan to print the Results and Table section as a quick report, add totals and subtotals to break your report into manageable sections.

<table>
<thead>
<tr>
<th>Data Function</th>
<th>Returns the:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum</td>
<td>Sum of all underlying values.</td>
</tr>
<tr>
<td>Average</td>
<td>Average of all underlying values.</td>
</tr>
<tr>
<td>Maximum</td>
<td>Highest of underlying values.</td>
</tr>
<tr>
<td>Minimum</td>
<td>Lowest of underlying values</td>
</tr>
<tr>
<td>Count</td>
<td>Number of underlying values</td>
</tr>
</tbody>
</table>

Calculating a Grand Total for a Column

You can calculate a grand total for any numeric data column and specify the original total value with a new type of function. For example, by default the totals for a column are sums of the values in those columns. But you can change the totals to averages instead of sums. These Results/Table section functions include:

To apply a grand total to a column:

1. Select the column and choose Grand Total on the shortcut menu.

A submenu showing all available total functions is displayed.
2 Select a total function.

The grand total is displayed in a new row at the bottom of the last page in the selected column.

To remove all grand totals:
1 Select a column to which a grand total was applied and choose Grand Total on the shortcut menu.

A submenu showing all available total functions is displayed.
2 Select Delete All.

To remove a selected grand total:
1 Select the row to which a grand total was applied and choose Grand Total on the shortcut menu.

A submenu showing all available total functions is displayed.
2 Select Delete.

Calculating a Break Total for a Column

You can add subtotals to the same column by choosing another column of non-numeric data to serve as a “break column.” The break column is used as a reference point to determine where to break the data in the target column. The data in the subtotal column is subtotaled for each distinct range of identical values in the break column.

Once a break total is placed on one column, the break total is applied to all numeric columns. Like the total functions you can use when adding a grand total, a break total can also consist of different functions. These functions include:

<table>
<thead>
<tr>
<th>Data Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum</td>
<td>Sum of all underlying values</td>
</tr>
<tr>
<td>Average</td>
<td>Average of all underlying values</td>
</tr>
<tr>
<td>Maximum</td>
<td>Highest of underlying values</td>
</tr>
<tr>
<td>Minimum</td>
<td>Lowest of underlying values</td>
</tr>
<tr>
<td>Count</td>
<td>Number of underlying values</td>
</tr>
</tbody>
</table>

To apply a break total:
1 Select the column and choose Break Total on the shortcut menu.

A submenu showing all available break total functions is displayed.
2 Select a total function.

The default total function is “Sum”.

Break totals are displayed in the target column along with the break total function name.
To delete all break totals:
1. Select the column to which the break total was applied.
2. Select Break Total on the shortcut menu.
3. Select Delete All.

To remove a selected break total:
1. Select the row to which a break total was applied and choose Break Total on the shortcut menu.
   A submenu showing all available total functions is displayed.
2. Select Delete.

Adding Computed Items in Results and Tables

In the Results and reporting sections, computations are performed in the Interactive Reporting document file. The computations involve only the data in your results set or on the surface of a reporting section.

In these sections you can only create new computed items: you cannot modify original data items retrieved directly from the database.

Computed items in the Results and reporting sections differ in two respects:

- In the Results and Table sections, reference items are limited to the items that is displayed on the Request line.
- In the remaining reporting sections (excluding the Report Designer section), items in any data layout are available in the Reference dialog box. Computations in these sections work on the aggregated cell values that make up the core of the report. To perform computations on data before it is aggregated, compute the new item in the Results section.
- In the Report Designer section, the break totals of a table can be calculated.

To add a computed item in the Results and Table sections:
1. Select an item in the Request pane and choose Actions, and then Add Computed Item(s).
   The Computed Item dialog box is displayed.
   At least one Results or Table column must be present to enable the shortcut menu which contains the option to add or modify a computed item. When no columns are present, you must select the Add Computed Item from the Actions menu.
   2. Enter a name for the computed item in the Name field.
      The default name is Computed, which is numbered sequentially if there is more than one.
      If you assign a name to a computed item that is identical to an existing scalar function name, Interactive Reporting numbers the name starting with the number 2.
   3. Select the data type of the computed item from the Data Type list box.
      For information about data types, see “Adjusting Data Types” on page 230.
   4. Enter the definition of the computed item in the Definition text box.
You can type operators to insert arithmetic and logical operators at the insertion point. See also “Operators” on page 231.

Click Reference to display the Reference dialog box, and select items to place in the equation. See also “Reference” on page 234.

You can also type any portion of the equation or the entire equation directly into the Definition text box using JavaScript. The names are case sensitive, and you must replace spaces in item names with underscores (‘_’).

5 When the equation is complete, click OK.

Adjusting Data Types

Since computed items are new data items, confirm or change the data type of the item to preserve the precision of a mixed-data type computations, or to change the way a data item is handled (for example, interpreting number as strings). This ensures the correct handling of data in server computations.

Attention to data types is most important when computing items in the Query section. Here the computation is performed on the database server, and the computed item may be handled with an unanticipated data type.

Local calculations (Results or Pivot) are handled internally, and adjustment between 16- and 32-bit integers can be handled safely using the automatic or number data type specification.

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic</td>
<td>A data type is determined automatically given the data type of the reference items and the computations performed</td>
</tr>
<tr>
<td>Number</td>
<td>Numeric data type.</td>
</tr>
<tr>
<td>String</td>
<td>Text strings to a maximum length of 256 characters</td>
</tr>
<tr>
<td>Date</td>
<td>Calendar date in server default format (typically mm/dd/yy)</td>
</tr>
<tr>
<td>Picture</td>
<td>Picture (Blob) data types for image formats such as: jpeg, bmp, gif, and png.</td>
</tr>
</tbody>
</table>

Paging Through Results Data

By default Interactive Reporting shows a fixed number of rows in a table when a user views a page in a browser. For paging behavior when data extends beyond the vertical and horizontal rows shown on the page, see below.

<table>
<thead>
<tr>
<th>Paging Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Page</td>
<td>The tooltip shows the current page in the report.</td>
</tr>
<tr>
<td>Page Up</td>
<td>Moves one page up. To move to the top page, select [Shift] + Click + Up arrow.</td>
</tr>
</tbody>
</table>
### Chart Section

Charts are fully interactive, three-dimensional views of data. A chart is a graphical representation of a Pivot section. With a varied selection of chart types, and an arsenal of tools like grouping, drill-down and drill to detail, the Chart section is built to support simultaneous graphic reporting and ad-hoc analysis. You can add, move, cluster, focus and drill down into chart objects to gain customized views of the data.

- Understanding Chart Dimensions
- Legends
- Chart Types
- Two-dimensional Chart Types
- Multidimensional Chart Types
- Viewing Three-dimensional Bar Charts

### Understanding Chart Dimensions

A Chart can be referenced at three points: height, width and depth (x, y and z in Cartesian space). To understand the differences among charts, you have to distinguish between dimensions in space and dimensions of data. The two dimensions are distinct.

Data can either be represented in two or in three dimensional space. In two dimensions, data is represented along the x and y axis. In three dimensions, data is projected back along the z axis.

Two dimensions of data must be represented in two dimensional space. At least three dimensions of data are necessary to use the third spatial dimension.

But three or more dimensions of data can be represented in two dimensional space. For example, cluster and stack represent data categories in the bar chart of two spatial dimensions (x and y axes only).
Chart Data Layout Categories

The Chart Section opens with an initial plot area for the chart. Because you manage chart construction and manipulation is with the Chart data layout plotting, viewing and reviewing are easy and intuitive.

You construct a chart by dragging items from the Catalog pane to a data layout pane. At least one items must populate the data layout to plot a usable chart.

The data layout consists of the following items:

<table>
<thead>
<tr>
<th>Data Layout Pane</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Axis Slice</td>
<td>The X-Axis is used for those items to place on the x axis, which is a straight line on the chart. It is used as a qualitative data label for categorizing information. To place items on the x axis, use the X-Axis pane.</td>
</tr>
<tr>
<td>Stack Cluster Depth</td>
<td>The Stack Cluster or Depth pane represents the third dimension of data, that is, the z axis that projects out toward you or a location in space. This axis can either be qualitative or quantitative. For a Stack pane, each dimension of data of the charts is represented by only one bar. This bar consists of as many components as the data file has data rows, with the data from each row stacked onto the previous row. For example, a single bar can represent the amount of sales for CD-ROM drives in one year on top of a bar representing sales for other years. You can stack the bar charts vertically or horizontally. By stacking items and assigning a different color to each item, you can display trends among comparable or related items, or emphasize visually a sum of several indicators. For a Cluster pane, data extended in the third dimension is shown as clusters displayed in the foreground. This category creates a vertical column (and only a vertical column) for each data value. If the chart is showing multiple data series, the values are grouped based upon the category value. For example, use clustered bars to compare stores of different types. Alternatively, cluster bars can be used to compare two different values items, such as Amount of Sales and Units Sold. For the Depth, data extends the length of the chart along the z axis.</td>
</tr>
<tr>
<td>Data Layout Pane</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Fact</td>
<td>The <strong>Facts</strong> pane indicates height in the coordinate system. It is used as a quantitative label as a way of categorizing information on the y axis. For the <strong>Fact (Stack)</strong> pane, each dimension of numeric data is represented by only one bar, and shows the grouping along the y axis. This bar consists of as many components as the data file has numeric rows, with the numeric data from each row stacked onto the previous row. For example, a single bar can represent the amount of sales for CD-ROM drives in one year on top of a bar representing sales for other years. You can stack the bar charts vertically or horizontally. By stacking items and assigning a different color to each item, you can display trends among comparable or related items, or emphasize visually a sum of several indicators. For the <strong>Fact (Depth)</strong> pane, numeric data extends the length of the chart along the z-axis.</td>
</tr>
</tbody>
</table>

### Legends

A chart legend can be set on the x, y or z axis enabling you to shift your focus to data listed on a particular axis. This is a great way to view values on the selected axis without having to view another chart report.

The following three examples shows how to set the legend on different axes to alter the appearance and data shown by the same chart.

In the first example, the legend has been set on the x axis:

![First Example](image1.png)

In the second example, the legend has been set on the y axis:

![Second Example](image2.png)

In the third example, the legend has been set on the z axis:

![Third Example](image3.png)
To set the chart legend:

1. **Select the axis on which to set the legend.**

2. **Select Set Legend on** from the shortcut menu.

   The Axes drop-down list box is displayed.

3. **Select either the x, y or z axis.**

### Changing Chart Properties

You can change the properties of a chart to view it in different perspectives:

- **Chart Types**
- **Two-dimensional Chart Types**

### Chart Types

Chart types are defined by how they represent data graphically and how they plot values and labels along the x, y or z axes. There are thirteen chart types, each of which may be switched from a two-dimensional to a three-dimensional view (with the exception of the pie chart). Chart types include:

- **Pie Charts**
- **Stacked Bar Charts**
- **Clustered Bar Charts**
- **Pie Charts**
- **Bar Charts**
- **Scatter Charts**
- **Bubble Charts**
- **Area Charts**
- **Line Charts**
- **Time Aware Axis**
To change a chart type:
1 Select an item on the chart.
2 Select Change Chart Type on the shortcut menu.
3 Select another chart type from the submenu.

Two-dimensional Chart Types

Pie and bar charts (of the non-stacked variety) lend themselves to representing two dimensions of data. For example, imagine charting the amount of sales by product type. In pie charts, the two dimensions are represented by slices of a pie. In bar charts, the data is represented by bars along the x and y axes. Two-dimensional chart types include pie and bar charts.

- Pie Charts
- Scatter Charts
- Bubble Charts
- Bar Charts

Pie Charts

Pieces (slices) of the pie are drawn to depict the relative value of a measurable item category to the whole. Pie charts represent additional dimensions of data by further subdividing the pie.

Showing Negative and Positive Values

Pie slices can show both positive values and negative values.
To toggle the display of negative values, select a slice of the pie and select **Show Negative Values** on the shortcut menu.

**Showing Pie Percent**

Pie slice values can be expressed as a percentage.

To toggle the display of each pie slice value as a percentage, select a slice of the pie and choose **Show Pie Percentages** on the shortcut menu.

**Bar Charts**

Bar charts are the most common type of business chart and are especially useful for comparative analysis when you want to focus on comparing values and place less emphasis on time. Use a bar chart to illustrate comparisons among individual items.

In a vertical bar chart, items in the y axis form the chart bars. Items in the x axis and z axis itemize the bars.

![Vertical Bar Chart]

In a horizontal bar chart, items in the y axis form the chart bars, and items in the x and z axes itemize the bars.

![Horizontal Bar Chart]
Showing Bar Values

➤ To toggle the display of values, select a bar and choose Show Bar Values on the shortcut menu.

Scatter Charts

A scatter chart is useful for emphasizing scientific or statistical similarities rather than differences in your analysis. Scatter charts illustrate the relationship between pairs of numerical or quantitative values, which are combined into individual data points along the horizontal (y axis) and a vertical (x axis) axis. Data points are plotted in uneven intervals.

A scatter chart represents non-aggregated sources, that is, it retrieves data from the underlying Table/Reports section and does not reflect rolled up values (all other chart types retrieve their data from an aggregated source, and there is a one-to one correspondence between Charts and Pivots). For this reason, the Pivot This Chart feature is not available for a scatter chart.

Scatter charts can only contain a pair of fact or numeric values which are placed in the Y Axis and X Axis in the data layout. If you add only one fact item to the data layout, no scatter chart is rendered. In addition, label values cannot be added to the Y Axis or X Axis of the data layout.

The following feature limitations apply to scatter charts:

- Data functions are not available to scatter charts because this type of chart relies on non-aggregated data.
- The sort feature cannot be used for scatter chart items.
- The Pivot To Chart feature is not available.
- Drilling cannot be performed on a scatter chart.
- The focus feature cannot be used on scatter chart items.
- The Hide feature hides the whole data series in a scatter chart, and an individual item cannot be hidden.

Bubble Charts

Bubble charts are typically used to show three dimensions of data in a two dimensional chart. This type of chart often lends itself to the display of financial data because specific values can be visually represented in your chart by different bubble sizes. It is similar to scatter chart allowing you to plot data as a collection of bubbles. Bubble charts plot three values:

- a value set on the x-axis
- a value set on the y-axis
- a value that defines the size or width dimension of a bubble in proportion to the amount of data

Multiple data values can be plotted in the bubble chart.
Bubbles with zero size can be rendered using some small bubble size to prevent them from disappearing. Also there is an option to hide zero-size values if necessary.

Bubbles with negative values can also be displayed. These type of values are derived from their real absolute value, and the real negative value is depicted in the data label (although based on the positive value). You can optionally select not to show negative values.

The following feature limitations apply to bubble charts:

- Data functions are not available to bubble charts because this type of chart relies on non-aggregated data.
- The sort feature cannot be used for bubble chart items.
- The Pivot To Chart feature is not available.
- Drilling cannot be performed on a bubble chart.
- The focus feature cannot be used on bubble chart items.
- The Hide feature hides the whole data series in a bubble chart, and an individual item cannot be hidden.

To create a bubble chart:

1. In the Section pane, select the chart in which to generate the bubble chart.
2. Drag a fact value from the Catalog pane to the Y Axis of the data layout.
3. Drag a fact value from the Catalog pane to the X Axis of the data layout.
4. Drag a fact value from the Catalog pane to the Size pane of the data layout.

To show the real value of a data point, use the tool tip and hover over the data point.

To show grid lines on the scatter chart, click the plot area of the chart and select **Show X Axis Grid Lines** or **Show Y Axis Grid Lines**.

**Multidimensional Chart Types**

Frequently you may want to view data represented in more than two dimensions. For example, you may want to see how the sales of product types break down by years or quarter. There are numerous ways to chart three or more dimensions of data. You can project data into the third dimension of space. You can also represent the data in two spatial dimensions.

- Viewing Three-dimensional Bar Charts
- Clustered Bar Charts
- Stacked Bar Charts
- Area Charts
- Stacked Area Charts
- Line Charts
- Time Aware Axis
Ribbon Charts

Bar-Line (Combination) Charts

Viewing Three-dimensional Bar Charts

You can add more information to your bar chart by adding an additional item or items to the z axis of the chart. Using multidimensional charts, you can show various relationships between three or more items in easy-to-understand bar chart formats.

Clustered Bar Charts

Cluster bar charts can be used to juxtapose categories in one label item category. For example, use clustered bars to compare stores of different types. Clustered bars can also be used to compare two different value items, such as Amount of Sales and Unit sold.

You can change your chart perspective so that the z axis data extended in the third dimension is shown as clusters displayed in the foreground. This charting type is useful when z axis bars are hard to distinguish in standard bar formats.

Cluster charts can be used to juxtapose categories in one label item. For example, use clustered bars to compare stores of different types. Alternatively, cluster bars can also be used to compare two different value items, such as Amount of Sales and Unit Sold.

Clustered bar charts are only displayed in a vertical format.

Stacked Bar Charts

One way to represent the third dimension of data is through stacking. In this way, a single bar on the chart can show data for more than one category of data. For example, a single bar can represent amount of sales for CD-ROM drives in one year on top of a bar representing sales for other years. Stacked bar charts can stack vertically or horizontally.

The following is an example of a vertical stacked bar chart.
Area Charts

Area charts are essentially bar charts with discontinuous breaks removed along the horizontal axis. Data is not broken into discrete bars, but is displayed in a continuous ebb and flow as defined against the y axis. Consequently, area charts are particularly useful for emphasizing the magnitude of change over time. In addition, area charts can be used for the same purpose as bar charts.

Because area charts do not break data along the horizontal axis, they are most useful for charting three dimensions of data. The z axis should be used to either project data into a third-spatial dimension, or to track two categories of data in a stacked area chart.

In the area chart, items on the y axis determine the height of the line, and items on the x axis itemize the line sections. You can create multiple lines by adding items to the z pane.
Stacked Area Charts

Stacked area charts are essentially bar charts with the discontinuous breaks removed along the horizontal axis, and categories of data are “stacked” on top of each other. Data therefore is not broken into discrete bars, but is displayed in continuous ebb and flow as defined against the y axis. A stacked area chart is an excellent way to display data that shows the relationship of parts to the whole. Consequently, stacked area charts can be particularly useful for illustrating changes that are plotted over a period of time.

Line Charts

Line charts show trends in data at equal intervals and are effective for comparing highs and lows in a continuum. Items on the y axis determine the height of the line, and items in the X-Categories itemize the line sections. You can create multiple lines by adding items to the Z-Category.

Line charts have one advantage over bar charts. They do not enable one set of data to obstruct the representation of another. Since lines are thin compared to bars, the data displayed in the front does not block out the data behind.

As a result, data that is not easily represented in bar or area charts work well in line charts. Many more dimensions of data can be superimposed without impairing the effectiveness of the chart.
Time Aware Axis

The Time Aware Axis feature allows you to show dates in chronological order plotted at specific intervals within minimum and maximum bounds. To do this, the Time Aware Axis feature turns a discrete X-Axis into a continuous time interval. The distance between adjacent axis items is proportional to their time value difference (a non Time Aware Axis shows all items using the same difference between them). The Time Aware feature only implements an alternative visualization of source data and does not affect the way how the data is aggregated and computed items are calculated. That is, the data processing in chart section which includes dividing data into categories and calculating fact data does not depend on whether the Time Aware feature is activated. In particular, the behavior of the “Chart This Pivot”, “Pivot This Chart” and “Add Computed Item” actions do not change.

The Line Charts is the main application area of this feature; however it is available in almost all existing chart types. Scatter/Bubble charts do not include this option because they are already “time aware” (essentially, value aware) by nature. Both have two fact axes which are continuous by definition.

The Time Aware axis can only be used under specific conditions:

- The X axis should have a date/time category to display, which becomes a dedicated Time Scale category.
- Only one category should be on the X-Axis. If you add multiple categories, even if they are date/time categories, the feature is rendered inactive.
- The Time Aware axis is not available for pie, scatter and bubble charts.

The Time Aware Axis is considered active if the conditions in the list above are met, and the Time Aware option on the Label Axis dialog is not explicitly disabled. You can turn on or off the feature. If you turn off the feature, the X axis remains discrete as in previous versions. By default the feature is turned off for Interactive Reporting document files older than Release 9.3. Charts created in Release 9.3 and later have the feature enabled.
Note: Since the Time Aware Axis assumes that all axis labels are in ascending order, the sort order option is disabled.

To create a Time Aware axis:

1. Check the Time Aware option on the Label Axis tab of General properties.
2. Drag a date/time item from the Catalog pane to the X pane in the data layout.
3. Drag a value item from the Catalog pane to the Facts pane in the data layout.

Ribbon Charts

A ribbon chart is very similar to a line chart, but with a few visual differences. In ribbon chart, values in the y axis determine the height of the line, and values in the x axis itemize the line sections. You can create multiple lines by adding items to the z axis.

Bar-Line (Combination) Charts

Bar-Line charts (also known as Combination charts) combine some of the strengths of bar charts with the advantages of line charts. Solid bars can be used for the most important data against which other dimensions are represented in lines. In this way, emphasis is given to a portion of data based on its importance. A combination chart is especially useful for comparing two numeric values, such as amount and units of sales.
Note: A combination chart is most effective when the y axis contains only two value items. It represents one value as bars and the other value as a line. When more than two values are present, the chart alternates between bars and lines in depicting the values (1st, 3rd, 5th items are bars; 2nd, 4th, 6th items are lines).

Working with Charted Data

Interactive Reporting provides several ways for you to dynamically manage your chart data for better analysis. Review the following topics for information on:

- Adding Chart Items
- Removing Chart Items
- Focusing and Hiding Charted Data
- Grouping and Ungrouping Chart Labels
- Reference and Trend Lines

Adding a Chart

To create a Chart based on the Results section data:

1. Select **Actions**, then **Insert**, and then **Chart**.
2. Drag Results items from the Catalog List to the Chart data layout.
   The table columns are populated automatically.
3. Select a Chart type on the shortcut menu.

Adding Chart Items

Interactive charts consist of two layout elements: graphical elements (for example, Chart bars or pie slices) and axis labels. When you add items to a chart, they become values or dimensions in your report.
To add a chart item:

1. **Select a Chart item and choose Add item on the shortcut menu.**
   - The x axis, y axis and z axis submenus are displayed. The z axis submenu does not display for a pie chart.
2. **Select a data label from the x axis submenu.**
3. **Select a fact item from the y axis submenu.**
4. **Select a data label item from the x axis (or Z-Cluster for a clustered chart, or Z-Stack for a stacked chart) submenu to add a third dimension to the chart.**

### Removing Chart Items

Removing a plotted items in the Chart sometimes helps to simplify a chart display. However, you do need at least one fact item in order to display a chart accurately.

To remove a chart item:

1. **Select the item to be removed in the Chart from the data layout.**
2. **Select Delete on the shortcut menu.**
   - The chart is redrawn to reflect the new configuration of items in the chart.

### Refreshing Chart Values Manually

If a Chart section has been designed so that chart values can be refreshed manually, you can request an immediate refresh to the current section.

To refresh chart values manually, click anywhere on the chart and select **Refresh Chart** on the shortcut menu.

### Focusing and Hiding Charted Data

A straightforward way to refresh your view of a chart is to single out items for closer focus or to hide some of the charted elements. This allows you to concentrate on particular items of interest.

Focusing redraws the chart report to show only the item you have chosen. This feature is only available for items on the x axis or z axis.

The Show All command updates the chart to include all items removed by focusing. Note that this command is available only when a Chart item has been focused.

Generally, you should only hide items on the x or z axis. Hiding the y axis causes the entire fact to be hidden.

The Show Hidden Items command restores any hidden item.

To focus on a chart item:

1. **Select one or more item on which to focus.**
The selected items are displayed with a dotted outline.

2 **Select Focus** on the shortcut menu.

The chart is redrawn to display only the chart item selected.

- To show all items in a chart, select a chart item and choose **Show Hidden** on the shortcut menu.

- To hide charted data:
  1 **In the Chart**, select the objects to hide.
  
  The selected item(s) are displayed with a dotted outline.
  2 **Select Hide Item** on the shortcut menu.
  
  The chart is redrawn to hide the item.

- To show hidden items, select a chart item and choose **Show Hidden** on the shortcut menu.

**Grouping and Ungrouping Chart Labels**

You can merge Chart axis labels using the Group feature. When combined, the data associated with labels is aggregated, creating a new summary label category. With grouping, only your view of the data is changed. You can easily ungroup grouped categories and return to your original label values.

For example, your chart report is structured with data item Units (sold) dimensioned by Year and Quarter. You can group the first and second quarters together to summarize activity for the first half of the year. The data is aggregated in a new label.

This feature is available only for items on the x axis or z axis.

- To toggle the group axis labels feature:
  1 **Select the individual labels to be grouped.**
  
  (You can group contiguous or discontiguous labels, but the labels must be part of the same dimension item or axis.)
  2 **Select (Un)Group Items** on the shortcut menu.
  
  The selected labels, and their associated data values or chart objects, are combined. The resulting label is displayed with an asterisk (*) to indicate a grouping.

  To ungroup items, reselect the grouped items and choose **(Un)Group Items** on the shortcut menu.

**Reference and Trend Lines**

Use the Reference, and Trend line tools to visually reveal trends in your data set, and to make reasonable predictions about future values. These tools include:
Reference Line—A horizontal or vertical line drawn in the diagram to indicate a user defined computed value.

- Trend line—A line connecting two or more data points representing a linear regression model of data. Generally, the trend line slants because it reflects the movement of a value's increase or decrease over time.

**Reference Lines**

A Reference Line is a horizontal or vertical line drawn in the chart diagram to indicate a computed value. It is typically used to illustrate or compare a fixed value within a category of values. It can include an assigned statistical function (average, minimum or maximum). There can be several reference lines created for the same fact column having different statistical functions associated with each one. When the statistical function of a reference line is calculated, not only the data from current page, but also the data from all pages of a multi-page chart (or zoomed chart) are included. The category items that are hidden as a result of applying ‘Hide Items’ or ‘Focus on Item’ or ‘Drill Anywhere’ are not included.

Reference lines can be drawn on the top of visible graphic elements of a diagram (for example, bars or lines). By default the lines are drawn on the top. Reference lines can be shown with a text label, and reference line information in the legend. By default a reference line has a text label associated with it showing auto-generated text. This line is set automatically and cannot be adjusted by a user.

This example shows a fact based reference line associated with an Amount Sales fact column assigned to the Average function.

![](chart.png)

**2D and 3D Reference Lines**

Reference lines should be used primarily with two dimensional perspective, but are supported with a three dimensional (3D) perspective. If they are used with a 3-D perspective, several parallel lines are drawn along the Z-axis together with graphical data.
Reference Lines and Chart Types

The Stacked Bar, Stacked Area charts both allow axis-based and fact-based Reference lines. A single fact-bound Reference Line is drawn for summed stacked items.

A Pie chart cannot have any type of reference line.

The fact based reference line is always associated with a fact column. When the column is removed from the Chart data layout, the corresponding reference line is also removed. When the fact column is hidden or focused, the reference line is also hidden, or focused.

If the chart type is switched to another chart type, the Reference Lines is hidden. Switching back to the original chart type restores the lines.

Adding and Modifying Reference Lines

To add a reference line, select a chart item that represents a data fact and on the shortcut menu, select Add Reference Line.

To modify a reference line:
1. Double-click the reference line.
2. Select the Reference Line tab.
3. Select Fixed to assign an axis based reference line, or a fact item from the Fact drop-down.
4. To assign a statistical function to a fact based reference line, select a function from the Function drop-down list.
5. Enable Show in legend to show the reference line in the legend.
6. Enable Show label to show the reference line label.
   - For more information about general reference lines, see Reference Line General Properties.
7. Select the Label Format tab to select any label properties.
   - For more information about reference line label formats, see Reference Line Label Format Properties.
8. Select OK.

Trend Lines

Trend lines are used to track trends in a data series graphically. Interactive Reporting supports trend lines modeled after linear regression analysis. Generally the trend line is represented as a slanted line that crosses the diagram. For example, the trend line can demonstrate an increase or decrease of values over time. It may be accompanied with the calculated goodness of fit (R-squared) value.
Trend lines can be layered on top of the chart graphics (or Z axis for 3D charts), or positioned to the background. When data is processed to create the trend line, facts from all pages of the chart are included. Chart items hidden or focused explicitly by the user are not included.

Trend lines are always fact based, and only one trend line can be associated with a single fact column. In Scatter and Bubble charts, the trend line is bound to the data series.

2D and 3D Trend Lines

Trend lines should be used primarily with two dimensional perspective, but are supported with a three dimensional (3D) perspective. If they are used with a 3–D perspective, several parallel lines are drawn along the Z-axis together with graphical data.

Trend Lines and Chart Types

Trend lines can be added to most chart type including stacked charts (Bar and Area). The value of each stack is included when the trend equation is calculated. When the separate stackables of a full bar belong to different facts, then a single trend for all facts is drawn. The sum of separate facts (either positive or negative) is included when calculating the trend line equation.

Trend lines are most effect in Scatter, Bubble and Time Aware charts.

A trend line with a single category on the X axis is preferable. In cases where there are multiple categories on the X axis, it might be difficult to analyze the trend if the categories are unrelated.

Pie charts cannot have trend lines.

Adding a Trend Line

To add a trend line, select a chart item that represents a data fact and on the shortcut menu, select Add Trend Line.

Trend Line General Properties

Use the Trend Line Properties dialog box to select general trend line properties.
### Trend Line General Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fact</td>
<td>Select the fact item on which to assign the trend line. Multiple trend lines cannot be assigned to a single fact item.</td>
</tr>
<tr>
<td>Show in legend</td>
<td>Enable to show assigned text of the trend line and short line segment representing the actual color of the line in the legend.</td>
</tr>
<tr>
<td>Show label</td>
<td>Enable to show the label text on the diagram.</td>
</tr>
<tr>
<td>Bring to front</td>
<td>Positions the reference line in front of the chart item.</td>
</tr>
<tr>
<td>Send to back</td>
<td>Positions the reference line in back of the chart item.</td>
</tr>
</tbody>
</table>

### Trend Line Label Format Properties

Use the Trend Line Label Format dialog box to set up the line label and legend text.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Text Format for Plot Area or Legend)</td>
<td>Format text for the plot area (line label) or legend text from the drop-down. If the “Use the same format in plot area and legend” field is enabled, this option is disabled.</td>
</tr>
</tbody>
</table>
| (Custom Format)         | Specify a custom format for the plot area or legend. A custom format can combine constant text and generated strings to show the trend line name, the equation type, or a coefficient of determination (R-squared). Trend line formats default formats that can be customized include:  
  - Trend({[FC]})—Trend(<Fact name>)  
  - {ET}—Equation Type (Linear only)  
  - {R squared=[RS]}—Coefficient of determination (how good the fitness is), for example, R-squared=0.7349. |
| Use the same format in plot area and legend. | Enable to use same format for the plot area and legend. When this option is enabled, you cannot select separate formats for the plot area and legend. |
| Auto format             | The following Default, Equation type and R-squared fields can be enabled to reset the label text to auto-generated text on the line. Each field adds predefined tags to the text format. If no auto-format is enabled you can enter a custom format in the edit box. |
| Default                 | Shows the default text: “Trend(<Fact name>)”                                                                                           |
| Equation Type           | Shows the equation name in auto-generated text, for example: linear.  
  **Note:** As of Release 11.1.1 only the linear equation type is available. |
| R-squared               | Shows coefficient of determination (how good the fitness is, or how good the trend line conforms to the data) in a value range from 0–1, for example R-squared=0.7349. |
Reference Line General Properties

Table 61  Reference Line Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed</td>
<td>Enable to assign a fixed value to the reference line (axis based).</td>
</tr>
<tr>
<td>(edit box)</td>
<td>Specify the fixed value amount to use for the reference line. The amount must be numeric. It remains constant on the reference line, and does not depend on another item in the Fact pane of the data layout.</td>
</tr>
<tr>
<td>Fact</td>
<td>Select the fact based column for the reference line from the drop-down. Available columns are based on the columns in the data set.</td>
</tr>
<tr>
<td>Function</td>
<td>Select the function to apply to the fact based column. Available functions are:</td>
</tr>
<tr>
<td></td>
<td>• Average</td>
</tr>
<tr>
<td></td>
<td>• Maximum</td>
</tr>
<tr>
<td></td>
<td>• Minimum</td>
</tr>
<tr>
<td>Show in legend</td>
<td>Enable to show assigned text of the reference line and short line segment representing the actual color of the line in the legend.</td>
</tr>
<tr>
<td>Show label</td>
<td>Enable to show the label text on the diagram.</td>
</tr>
<tr>
<td>Bring to front</td>
<td>Positions the reference line in front of the chart item.</td>
</tr>
<tr>
<td>Send to back</td>
<td>Positions the reference line in back of the chart item.</td>
</tr>
</tbody>
</table>

Reference Line Label Format Properties

Use the Reference Line Label Format dialog box to define line label (plot area) and legend text properties.

Table 62  Reference Line Label Format Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Text Format for Plot Area or Legend)</td>
<td>Formats text for the plot area or legend from the drop-down. If the “Use the same format in plot area and legend field” is enabled, this option is disabled.</td>
</tr>
</tbody>
</table>
Property Description

(Custom Format) Specify a custom format for the plot area or legend.
A custom format can combine constant text and generated strings for a statistical function or the value of the reference line.

Constant text accepts the following tags:
- [FC]—fact name
- [VL]—value of reference line.

For example, the custom format: “Expected sales = [VL]” could return the results in the label or legend: “Expected sales = $26300000”. If the text for a tag cannot be generated (for example, the format is for an [FN] tag on an axis based reference line), the tag resolves in an empty string, and it is removed.

A custom format can include complex tags combining arbitrary text with one or more simple (and even complex) tags. A complex tag is bounded by curly braces ({}), for example, “[Sales [FN] = ][VL]”. If at least one of the tags inside the complex tag cannot be resolved, all complex tags result in an empty string.

A fact based reference line using the format above might be resolved in a “Sales Average = $126000” string, and for an axis based reference line it could be resolved in a “$126000” string.

The special delimiter tag, [DL] is available. This tag inserts a space in the resulting string if both the left and right tags are successfully resolved.

The complex tag, {; [DL] } inserts custom text as a delimiter. For example, the format “{[FN]([FC])} = [DL] [VL]” may result in one of the following strings depending on conditions:
- Average(Sales)
- Average(sales) = $126000

Auto format The following Default, Function and Value fields can be enabled to reset the label text to auto-generated text on the line. Each field adds predefined tags to the text format. If no auto-format is enabled you can enter a custom format in the edit box.

Default Show the default text: “<Function name>(<Fact name>) = <Value>”

Function Shows the statistical function in auto-generated text, for example: Average.

Value Shows the value of the reference line, for example: Value = 0.7348.

Working with Chart Facts

Data functions in the Chart section are particularly useful if you want your report to display different types of values. Data functions summarize groups of database records and replace the original values with new summary data.

For example, in the Pivot section, you can show either the total sale, average sale, or the maximum sale of each product by quarter. Each of these dimensions is based on the same underlying values. They differ only in the data function that is applied.

The following table shows the Chart Functions:
Table 63  Chart Data Functions

<table>
<thead>
<tr>
<th>Data Function</th>
<th>Returns the:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum</td>
<td>Sum of all underlying values.</td>
</tr>
<tr>
<td>Average</td>
<td>Average of all underlying values.</td>
</tr>
<tr>
<td>Count</td>
<td>Number of underlying values.</td>
</tr>
<tr>
<td>Count Distinct</td>
<td>Number of distinct values in a column.</td>
</tr>
<tr>
<td>Maximum</td>
<td>Highest of underlying values.</td>
</tr>
<tr>
<td>Minimum</td>
<td>Lowest of underlying values</td>
</tr>
<tr>
<td>Perc of Grand</td>
<td>Sum of underlying values as a percentage of all surface values in the report.</td>
</tr>
<tr>
<td>NonNullCount</td>
<td>Number of underlying values; null values are excluded.</td>
</tr>
</tbody>
</table>

To apply a data function:

1. Select a bar or row of facts (such as Amount).
2. Select **Data Function** on the shortcut menu.
   - A shortcut menu of available data functions is displayed.
     Optional: You can also select the item or column and choose **Actions**, then **Data Function**, and select the (function).
3. Select the function.
   - Each column is recalculated according to the data function applied to the underlying value.

### Paging Through the Chart

By default Interactive Reporting shows a fixed number of rows in a table when a user views a page in a browser. Often data extends beyond the vertical and horizontal rows shown on the page. To view your paging options, see the table below.

Table 64  Chart Paging Options

<table>
<thead>
<tr>
<th>Paging Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Page</td>
<td>Tooltip shows the current page.</td>
</tr>
<tr>
<td>Page Left</td>
<td>Moves one view in the left direction. To move to the first view in the left direction, select [Shift] + Click + left arrow.</td>
</tr>
<tr>
<td>Page Up</td>
<td>Moves one view up in the Chart sections. To move to the top view, select [Shift] + Click + Up.</td>
</tr>
<tr>
<td>Page Down</td>
<td>Moves one view in the down direction. To move to the first view in the down direction, select [Shift] + Click + Down arrow.</td>
</tr>
<tr>
<td>Page Right</td>
<td>Moves one view in the left direction. To move to the first view in the right direction, select [Shift] + Click + right arrow.</td>
</tr>
</tbody>
</table>
Pivot Section

Pivot tables are analytical tools that resemble spreadsheets or crosstab reports. Data can be sliced and diced for ad-hoc, interactive and multidimensional analysis. You can pivot your data at any time to change the way you view it, or you may drill down, or drill to detail to see how it all adds up or summarizes. Pivot tables also allow you to add, move, focus on and group dimensions to gain customized views of the data.

- Pivot Table Components
- Working with Pivot Data
- Focusing and Hiding Pivoted Data
- Working with Row and Column Labels
- Analyzing Pivot Data
- Working with Pivot Facts
- Paging Through Pivot Data

Pivot Table Components

A pivot table is composed of three components:

- **Facts**—Numeric values broken up in the body of the pivot table. Facts may also be referred to as data values.
- **Data Labels**—Column and row headings on the top and sides of the Pivot and define the categories by which the numeric values are organized
- **Dimensions**—Full row or column of labels

Working with Pivot Data

Interactive Reporting provides several ways for you to dynamically manage your pivot data for better analysis:

- Adding a Pivot Section
- Adding Pivot Items
- Deleting Pivot Items
- Auto-Sizing a Column
- Focusing and Hiding Pivoted Data
- Swinging Pivot Dimensions
- Grouping and Ungrouping Pivot Labels
Adding a Pivot Section

To create a table based on the Results section data:

1. Select Actionst, then Insert, and then Pivot.
2. Drag items from the Catalog list to the Pivot data layout.

If the data layout is not displayed, select View, then Data Layout.

Interactive Reporting populates the cells, rows and columns automatically.

Adding Pivot Items

You can add items from the results set to view and analyze different scenarios in your Pivot.

To add a pivot item:

1. From the Catalog list, select any item and click Add Items on the shortcut menu.

A shortcut showing Row, Column or Facts is displayed.
2. Select the value you want to add.

Deleting Pivot Items

To delete a pivot item:

1. Select the item to be removed from the Facts, Rows or Columns data layout.
2. Select Delete on the shortcut menu.

The Pivot is redrawn to reflect the new configuration of items.

Refreshing Pivot Values Manually

If a Pivot section has been designed so that pivot values can be refreshed manually, you can request an immediate refresh to the current section.

To refresh pivot values manually, click anywhere on the pivot and select Refresh Pivot on the shortcut menu.

Auto-Sizing a Column

By default, Interactive Reporting truncates columns evenly and without regard to the length of data values. With the Auto-Size Column Width feature, you can automatically size any column to fit the text of the largest value in the column.

To autosize a column:

1. Select the column.
2 Select Auto-Size Column Width on the shortcut menu.

Focusing and Hiding Pivoted Data

A straightforward way to refresh your view of a pivot table is to single out items for closer focus or to hide some of the pivot elements. This allows you to concentrate on particular items of interest.

Focusing redraws the pivot table to show only the item you have chosen to focus on.

The Show All Items command updates the pivot table to include all items removed by focusing. This command is available only when a pivot dimension label has been focused.

Hiding columns is a good way to temporarily suspend the display of a column.

➤ To toggle the focus on a pivot item:
1 Select one or more dimension labels (either side or top).
2 Choose Focus on the shortcut menu.
   The Pivot is redrawn to display only the chart object selected.

➤ To show all items, select a dimensional label and choose Show All on the shortcut menu.

➤ To hide pivoted data:
1 Select an item.
2 Select Hide Items on the shortcut menu.
   The Pivot is redrawn to hide the selected object.

➤ To restore a selected hidden item, select a pivot item and choose Show Hidden on the shortcut menu.

Working with Row and Column Labels

Row and column labels can be grouped and reoriented:

● Grouping and Ungrouping Pivot Labels
● Swinging Pivot Dimensions

Grouping and Ungrouping Pivot Labels

You can merge pivot labels using the Group feature. When combined, the data labels are aggregated, creating a new summary label category. With grouping, only your view of the data is changed. You can easily ungroup grouped categories and redisplay original label values.
For example, your pivot table is structured with data item Units (sold) dimensioned by Year and Quarter. You can group the first and second quarters together to summarize activity for the first half of the year. The data is aggregated in a new label.

➤ To toggle the group dimensional label feature:

1. **Select the individual labels to be grouped.**
   (You can group contiguous or discontiguous labels, but the labels must be part of the same dimension item or axis.)

2. **Select (Un)Group Items on the shortcut menu.**
   The selected labels, and their associated data values or chart objects, are combined. The resulting label is displayed with an asterisk (*) to indicate a grouping.
   To ungroup items, reselect the grouped items and choose (Un)Group Items on the shortcut menu.

### Swinging Pivot Dimensions

The swing feature allows you to re-orient the axes of a pivot table and view your data in new ways. When you “swing” a dimension, you can move it up, down or to the opposite axis. This feature is a powerful tool that makes pivot table reporting more powerful than a common spreadsheet.

**Note:** You can swing pivot dimensions by moving items within and between data layout panes,

➤ To swing a dimensional label:

1. **Select a dimensional label and choose Swing on the shortcut menu.**

2. **Select a direction.**
   Valid swing positions are:
   - Vertical
   - Horizontal
   - Up
   - Down
   - Left
   - Right
   - Before
   - After
   If you select the “before” swing positions, you must choose the dimension label before which you wish to place the selected label. This behavior applies to the “after” selection as well.
Working with Pivot Facts

Core numeric data that you slice and dice dimensionally in your analysis are called facts. Facts can be summed to create totals.

You can calculate totals for both columns and rows in a Pivot report. If you layered dimension items along the top or side labels of your report, you can calculate the totals for any level in the hierarchy. When you select an inner dimension for totaling, subtotals are created for each of the categories in the outer dimensions. Totals in the Pivot section include:

- **Total Function**
- **Cumulative Totals**
- **Surface Values**

Total Function

You can quickly add totals to your pivot table data. The new total value is created as an additional column. Total functions can be applied to:

- Underlying values from the original results sections
- Surface values displayed in the Pivot

Depending on which set of values you apply the total function, different results are yielded. Consider a simple pivot table with two values of 20 and 30. Each of these is already a total of underlying values (20 = 8 + 12 and 30 = 10 + 20). An average of the underlying value yields the result of 12.5 = (8 + 12 + 10 + 20) / 4). An average of the surface values yields the results 25 = (20 + 30) / 2).

To add totals to a Pivot:

1. Click a row or column label handle to select it.

   Selecting the outermost label creates a total; selecting an inner label creates a subtotal.

2. Select **Add Total** on the shortcut menu.

   A submenu of data functions is displayed.

3. Select a data function.

Cumulative Totals

By adding cumulative running totals to a pivot table, you can break totals by dimension to restart at each dimensional grouping in the report.

To add a cumulative calculation:

1. Select a fact item in the data grid of the Pivot.

2. Select **Add Cume** on the shortcut menu.

   The Add Cume shortcut menu is displayed.
Select a scope from the Add Cume shortcut menu.

A new data values item named “Cume of X” is displayed across each row of the report. The new cume item maintains a cumulative running sum of the original data values item.

**Note:** Cumulative totals are most effective when all dimensions are located on a row or column of the report, and data label column heads are placed orthogonally.

To modify a cumulative calculation:

1. Select a column in which a cume has already been place in the pivot table’s data grid.
2. Select **Modify Cume** on the shortcut menu.
   
   The Modify Cume submenu is displayed.
3. Select a scope from the **Modify Cume** shortcut menu.

**Surface Values**

You can use underlying or surface values when working with totals in Pivot sections. Underlying values refer to values from the original results section. Surface values refers to values in the actual report section. The two approaches yield different results, and produce values that may be displayed incongruous with the values in the report.

To understand this difference between underlying and surface values, consider a simple pivot table with two values of 20 and 30. Each of these is already a total of underlying values (20 = 8 + 12 and 30 = 10 + 20). An average of the underlying value yields the result of 12.5 = (8 + 12 + 10 + 20) / 4. An average of the surface values yields the results 25 = (20 + 30) / 2). By default, the surface value feature is not active.

To activate surface values, select a pivot item and **Surface Values** on the shortcut menu.

**Analyzing Pivot Data**

Data functions in the Pivot section are particularly useful if you want your report to display different types of values. Data functions summarize groups of database records and replace the original values with new summary data.

For example, in the Pivot section, you can show either the total sale, average sale, or the maximum sale of each product by quarter. Each of these dimensions is based on the same underlying values. They differ only in the data function that is applied.

<table>
<thead>
<tr>
<th>Data Function</th>
<th>Returns the:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sum</strong></td>
<td>Sum of all underlying values.</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>Average of all underlying values.</td>
</tr>
<tr>
<td>Data Function</td>
<td>Returns the:</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Count</td>
<td>Number of underlying values.</td>
</tr>
<tr>
<td>Count Distinct</td>
<td>Number of distinct values in a column.</td>
</tr>
<tr>
<td>Null Count</td>
<td>Number of nulls among underlying values.</td>
</tr>
<tr>
<td>Non-Null Count</td>
<td>Number of underlying values; null values are excluded.</td>
</tr>
<tr>
<td>Maximum</td>
<td>Highest of underlying values.</td>
</tr>
<tr>
<td>Minimum</td>
<td>Lowest of underlying values</td>
</tr>
<tr>
<td>% of Row</td>
<td>Sum of underlying values as a percentage of their respective surface row.</td>
</tr>
<tr>
<td>% of Column</td>
<td>Sum of underlying values as a percentage of their respective surface column.</td>
</tr>
<tr>
<td>% of Grand</td>
<td>Sum of underlying values as a percentage of all surface values in the report.</td>
</tr>
</tbody>
</table>

To apply a data function:

1. Select a row or column of facts (such as Amount).
2. Select Data Function on the shortcut menu.
3. Select a function.

Each column is recalculated according to the data function applied to the underlying value.

**Paging Through Pivot Data**

By default, Interactive Reporting shows a fixed number of rows in a table when a user views a page in a browser. Often data extends beyond the vertical and horizontal rows shown on the page. To view your paging options, see the table below.

<table>
<thead>
<tr>
<th>Paging Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Page</td>
<td>The tooltip shows the current page in the report.</td>
</tr>
<tr>
<td>Page Left</td>
<td>Moves one page in the up direction. To move to the top page, select [Shift] + Click + Up.</td>
</tr>
<tr>
<td>Page Up</td>
<td>Moves one page in the down direction. To move to the first page in the down direction, select [Shift] + Click + Down arrow.</td>
</tr>
<tr>
<td>Page Down</td>
<td>Moves one page in the left direction. To move to the first page in the right direction, select [Shift] + Click + right arrow.</td>
</tr>
<tr>
<td>Page Right</td>
<td>Moves one page in the left direction. To move to the first page in the left direction, select [Shift] + Click + left arrow.</td>
</tr>
</tbody>
</table>
Common Chart/Pivot Features

Interactive Reporting document file management features allow you to easily tailor the look of reports. The features shown below are common in the Chart and Pivot sections:

- Sorting Charts/Pivots
- Drill Anywhere into Charts/Pivots
- DrillDown into Dimensional Data

Sorting Charts/Pivots

In the Chart and Pivot sections, data is sorted alphabetically. You can override this default and sort dimensional data with reference to other data, rather than alphabetically.

For example, if a chart lists each type of item your company sells and the total amount sold of each, initially the item types are alphabetically ordered. But this data becomes more meaningful when you instead sort the item types with reference to the total sales revenue produced by each. This approach allows you to rank each product type from highest to lowest total sales.

When you want to apply a sort criteria there are three components used to define the sort condition:

- **Sort Items**—Item sorted in ascending or descending order. In the Chart section, sort items refers to the chart axes. In the Pivot section, sort items refers to the pivot dimensions.
- **Referential Items**—Numeric data item included in the Chart or Pivot section, and also the keyword “labels.” These selections provide two ways to sort the selected Chart or Pivot item.
  - **Sorting by labels**—Dimensional data items are sorted alphabetically by name when the chart section is created: this is equivalent to sorting by “labels.” When selected, the “labels” keyword indicates that the item chosen from the submenu are sorted by label or name rather than by reference to corresponding numeric data values in the report.
  - **Sorting by values**—Sorting by a numeric data item orders each value of the target item specified by its corresponding numeric value in the second list. Sorting by values produces an entirely different sort order. For example, your chart may list each state in which your company has made sales revenue and the total cost-of-sales for each. The data items are initially listed in alphabetical order, that is, sorted by “labels.” When you sort instead by cost-of-sales, the states are ranked in order by each corresponding cost-of-sales figure.
- **Functions**—Aggregate statistical functions available when you sort by values. The functions generally duplicate the data functions available in the chart section.

When you sort by values, dimensional data is sorted by the corresponding numeric values of the referenced item. (For example, sorting states by the sum total of the cost of good sold in each state).

➢ To specify a sort:

1. Select an item to sort in the Chart or Pivot sections.
2 Click either **Sort Ascending** or **Sort Descending** on the shortcut menu.

3 Select **Label** to sort the item alphabetically, or select the numeric value item as a sort reference.

4 If you selected a numeric value, choose an aggregate function on the shortcut menu.

**Drill Anywhere into Charts/Pivots**

The Drill Anywhere feature allows you to drill into and add items in the Chart and Pivot sections that are resident in the Results section, but have not been included in the Chart and Pivot you are viewing. Drill anywhere items are broken out as a new label item(s) automatically. The advantage of this feature is that it instantly allows you to add items to the data set to reflect temporary and hypothetical situations.

The extent to which you can drill into your data depends on how the original query was built, since Drill Anywhere retrieves data from the Results section.

➤ To drill anywhere into a Chart:

1 Select a pivot dimension or chart item for analysis.

2 Select **Drill Anywhere** on the shortcut menu.

   A shortcut of drill anywhere items displays.

3 Select an item on which to drill down.

   The report is redisplayed, breaking out the additional data as a new label item.

   **Note:** If no options are available in the Drill Anywhere drop down list, all available items have been referenced in the chart.

**DrillDown into Dimensional Data**

The DrillDown feature enables you to use a predefined drill-down path to go directly to the next item in a hierarchy when working with dimensional analysis. For example, you may need to find out if a particular product sells better in different regions of the country. Using a drill-down path, all you have to do is follow the drilldown path to discover which state or even city is a more appropriate market for your product.

➤ To drill down into a Pivot or Chart label:

1 Select any label for drill-down analysis.

   Because the drill-down into feature is not context sensitive, access the drill-down from any label shown.

2 Click **Drilldown into** on the shortcut menu.

   All available drill-down paths are displayed. Each drill-down path shows the topic which is being drilled into, and the label from which it was drilled.

3 Click the drill-down label.
After you specify the drill down label, the label is added to the data layout and breaks out the additional data according to the label selected for drill-down.

To drill up from data:
1. Click the label that has been drilled downed.
2. On the Pivot or Chart menu, select Drill Up.

The report is redisplayed, reversing the drill-down and displaying the original item.

**OLAPQuery Section**

The OLAPQuery section is designed for viewing and analyzing queries based on multidimensional databases (MDD). This section includes the following topics:

- Working with OLAP Data
- OLAP Data Functions

**Working with OLAP Data**

Interactive Reporting provides several ways for you to dynamically manage your OLAP data for better viewing analysis:

- OLAP Terminology
- Auto-Sizing a Column
- Sorting OLAP Dimensions
- Drilling into OLAP
- Drilling up

**OLAP Terminology**

**Cube**—Data in OLAP databases is stored in cubes. Cubes are made up of dimensions and measures. A cube may have many dimensions.

**Dimensions**—In an OLAP database cube categories of information are called dimensions. Some dimensions could be Location, Products, Stores, and Time.

**MDX**—MDX (Multi Dimensional eXpressions) is the language used to give instructions to OLE DB for OLAP-compliant databases. When an OLAP query section is built, <product Interactive Reporting is translating those into MDX instructions. When the query is refreshed, MDX is sent to the database server. The data the server returns to the Interactive Reporting document file is the collection of records that answers the query.

**Measures**—Measures are the numeric values in an OLAP database cube that are available for analysis. The measures could be margin, cost of goods sold, unit sales, budget amount, and so on.
Members—In a OLAP database cube, members are the content values for a dimension. In the location dimension, they could be San Francisco, Japan, Paris, 35 Main Street, Tokyo, USA, France, Rome, and so on. These are all values for location.

Multidimensional—Multidimensional databases create cubes of aggregated data that anticipate how users think about business models. These cubes also deliver this information efficiently and quickly. Cubes consist of dimensions and measures. Dimensions are categories of information. For example, locations, stores and products are typical dimensions. Measures are the content values in a database that are available for analysis.

Auto-Sizing a Column

By default Interactive Reporting truncates columns evenly and without regard to the length of data values. With the Auto-Size Column Width feature, you can automatically size any column to fit the text of the largest value in the column.

1. To auto-size a column:
   1. Select the column.
   2. Select Auto-Size Column Width on the shortcut menu.

Sorting OLAP Dimensions

In the OLAP section, data can be sorted in ascending or descending order.

1. To specify a sort:
   1. Select an item to sort in the OLAP sections.
   2. Select either Sort Ascending or Sort Descending on the shortcut menu.
   3. Select Label to sort the item alphabetically, or select the numeric value item as a sort reference.
   4. If you select a numeric value, choose an aggregate function on the Function shortcut menu.

Drilling into OLAP

The Drill Down feature retrieves data from the MDD cube following the hierarchy down to the granular level. When you find a specific item to learn more about, such as a product line, you can drill down into the item label. You can drill down on more than one item and additionally drill down on all items at the same time.

For a member drill down, any row or column label can be drilled into so that you can view the structure of the hierarchies for any particular dimension. Every time you select a specific label in a dimension row or column, you show only the data for that label value. When you select the dimension tab for a level, you show all the members of that dimension level.

For a measure drill down, you can show how different measures consolidate together. A drill down on a measure is done on a progressive basis, one level at a time on a 1 to n path (sequential rather than nested). For example, if Profit is the parent of Tax and Pre-Tax Profit, and Revenue
and Expenses are children of Pre-Tax Profit, then the Tax and Pre-Tax columns are drilled down first and you must select the Pre-Tax label to display the Revenue and Expense columns.

**Note:** You cannot set filters while in a drilled-down state on a dimension.

To drill down on a label:

1. **Select a label.**
2. **Click** Drill Down **on the shortcut menu.**
   
   You can select a label and choose Action, then Drill Down.

**Note:** Essbase only: For a measure drill down, you can show how different measures consolidate together. A drill down on a measure is done on a progressive basis, one level at a time on a 1 to n path (sequential rather than nested). For example, if Profit is the parent of Tax and Pre-Tax Profit, and Revenue and Expenses are children of Pre-Tax Profit, then the Tax and Pre-Tax columns are drilled down first and you must double-click the Pre-Tax label to display the Revenue and Expense columns.

**Drilling up**

If you used the drill-down feature, you return to your original view of the data by drilling up one level at a time. To drill up, you simply select the level to drill up.

To drill up on a label:

1. **Select the label that has been drilled down.**
2. **Select** Drill Up **on the shortcut menu.**
   
   **Optional:** You can also select a label and choose Action, then Drill Down.

**OLAP Data Functions**

Column or row totals added to your OLAPQuery are aggregates (literally, totals of totals), and can be recalculated using data functions. When applied to totals, data functions apply to the calculation to “surface” values.

When applied to surface values, data functions recalculate the values in the visible cells or “surface” of the OLAPQuery. For example, you can show the total sale, average sale, and maximum sale of each product by Quarter. Each of these dimensions is based on the same value. They only differ in the data function that is applied.

<table>
<thead>
<tr>
<th>Data Function</th>
<th>Returns the:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sum</strong></td>
<td>Sum of all values.</td>
</tr>
<tr>
<td>Data Function</td>
<td>Returns the:</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Average</td>
<td>Average of all values.</td>
</tr>
<tr>
<td>Count</td>
<td>Number of values.</td>
</tr>
<tr>
<td>Maximum</td>
<td>Highest of values.</td>
</tr>
<tr>
<td>Minimum</td>
<td>Lowest of values</td>
</tr>
<tr>
<td>% of Row</td>
<td>Surface values as a percentage of their respective row item.</td>
</tr>
<tr>
<td>% of Column</td>
<td>Surface values as a percentage of their respective column item.</td>
</tr>
<tr>
<td>% of Grand</td>
<td>Surface values as a percentage of all like values in the report.</td>
</tr>
</tbody>
</table>

To apply a data function:

1. Select a row or column of facts (such as Amount) on the shortcut menu.
2. Select Data Function.
   
   A list of available data functions is displayed.
   
   Optional: You can also select the item or column and choose Actions, then Data Function.
3. Select the function.
   
   Each column is recalculated according to the data function applied to the underlying value.

CubeQuery Section

The CubeQuery section is the Interactive Reporting interface with Essbase 7.x, and 9.x databases. It provides access to the cube in which multidimensional data can be analyzed and complex calculations can be applied before and after the query is processed. The data set from this section can be shown with relational data side-by-side in a dashboard report, or the data can be downloaded to a results set and joined to relational sources.

About Essbase

Analytic Services is a multidimensional database application that enables you to analyze multiple aspects of your business continually in comparison to one another. The Essbase database has the following characteristics:

- Works with multidimensional data and roll-up hierarchies in dimensions.
- Retrieves information from other systems.
- Handles some level of summarized data, not transaction.
- Adaptable to multiple reporting and analysis environments.
Additionally, the Essbase database uniquely blends an innovative technical design with an open, client-server architecture. Essbase can be used for a broad range of online analytical processing (OLAP) applications, including:

- Budgeting
- Forecasting and seasonal planning
- Financial consolidations and reporting
- Customer and product profitability analysis
- Price, volume and mix analysis
- Executive information systems

**About Multidimensional Database**

The Essbase multidimensional database stores and organizes data. It is optimized to handle applications that contain large amounts of numeric data and that are consolidation-intensive or computation-intensive. The database organizes data in a way that reflects how users want to view the data.

**Definition of Multidimensional**

A multidimensional database is an extended form of a two-dimensional data array, such as a spreadsheet, generalized to encompass many dimensions. Dimensions are composed of values called members, which are arranged in a hierarchical structure. A *dimension* is a perspective or view of a specific dataset. A system that supports simultaneous, alternate views of datasets is *multidimensional*. Dimensions are categories such as time, accounts, product lines, markets and so on. Each dimension contains additional categories that have various relationships one to another. Members are the names of the elements within a dimension. A dimension can contain an unlimited number of members.

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dimension</td>
</tr>
<tr>
<td>2</td>
<td>Member</td>
</tr>
</tbody>
</table>
Dimensions and Members

Dimensions and members describe the metadata structure of the database, which is also known as the Essbase outline. The Essbase outline determines how data is stored in Essbase. Following are typical examples of dimensions and their members:

- Time—Hours, Days, Months, Quarters, Years
- Measures—Profit, Inventory, Ratios
- Product—Individual products of the company
- Market—North, South, Central
- Scenario—Actual, Budget, Variance, Variance %

Non-aggregate Dimensions

Some dimensions are aggregates of their members. For example, 24 hours make a day, 7 days compose a week, 52 weeks make a year, and so on. In these cases, the Time dimension represents the sum of its components. However, some dimensional hierarchies are not the sums of their components. For example, the Measures dimension commonly comprises business measures such as Sales, Profit, and Cost of Goods Sold. When the dimension label cannot represent the sum of contents, a protocol replaces the dimension label with a member set. Essbase uses the first child in the dimension outline as the implied share instead of non-aggregate dimension labels.

Familial Relationships

To simplify the concept of hierarchical order, Essbase uses familial relationships.

- Parent—Direct ancestor of an element in a hierarchy; for example, Quarters are the parent of Months.
- Child—Direct descendant of any element in a hierarchy; for example, Months are children of Quarters.
- Descendants—Elements of greater detail; for example, Days are descendants of Weeks.
- Ancestors—Elements of more generality; for example, Weeks are ancestors to Days.
- Siblings—Members with the same parent
Hierarchical structure also can be described in terms of generations and levels. Dimension members on the same layer of the dimensional hierarchy are referred to collectively as generations or levels. The relationships are defined as follows:

- Generations—Counted down from the highest ancestor. The root member, or dimension name, is Generation 1. In the following figure, Market is Generation 1.
- Levels—Counted from bottom to top: Level 0, Level 1, Level 2, and so on. In the following figure, states are at Level 0.
- Leaf nodes—Lowest points in a hierarchy.
Attributes

In addition to dimension member names, locations, and relationships, Essbase stores characteristics, called attributes, about members. For example, the Product dimension indicates that in Women's Apparel, Shirts and Blouses, there is a cotton T-shirt; an attribute indicates that the cotton T-shirt is red, cyan, lime, or pink. Essbase does not store data for attribute dimensions as part of the multidimensional database but instead dynamically calculates it upon request. Attribute dimensions are displayed in dimension hierarchies, in the same manner as other dimensions, despite their data being stored differently.

Catalog List

The Catalog List displays one or all dimensions in a tree model. The tree can be expanded to display additional members, but generations are not included in the hierarchy. For cubes with many members in a dimension, paging facilitates navigation. The number of members that can be displayed in the Catalog and Member Selection is defined in the Number of members to display option in Query Options. The default is 50.
To display the Catalog in single-dimension mode, select a dimension from the Dimension Selection.

To expand the tree to display additional members in the dimension hierarchy, next to the dimension, click +.

To display the Catalog in all dimension, click .

## OLAPQuery and CubeQuery Data Layout Differences

OLAPQuery is the pre release 9.3 section used to query a multidimensional database. The data layout tool in OLAPQuery and CubeQuery have these differences:

<table>
<thead>
<tr>
<th>OLAPQuery Data Layout</th>
<th>CubeQuery Data Layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slicer</td>
<td>Filters</td>
</tr>
<tr>
<td>Side</td>
<td>Rows</td>
</tr>
<tr>
<td>Top</td>
<td>Columns</td>
</tr>
<tr>
<td>Filters from multiple members may be selected and applied from a single hierarchy.</td>
<td>One filter member can be selected per dimension. Filters for multiple members within the same dimension are not supported.</td>
</tr>
<tr>
<td>Measures are treated as distinct dimensions and can be placed only in the Facts pane of the data layout.</td>
<td>Measures can be placed in the Row, Column, and Filter panes of the data layout.</td>
</tr>
<tr>
<td>Member selection in the data layout is unavailable.</td>
<td>Member selections in the Row, Column and Filter panes of the data layout can be edited in the Member Selection dialog box.</td>
</tr>
<tr>
<td>Shortcut menu enables access to the Filter dialog box and Remove option.</td>
<td>Shortcut menu enables access to Remove option, Member Selection dialog box, Variable option and Filter option</td>
</tr>
</tbody>
</table>

## Building a CubeQuery

Before you can build a CubeQuery section, you need a published Interactive Reporting database connection file (.oce), and an Interactive Reporting document file (BQY).

To import a published Interactive Reporting database connection file (.oce):

1. **In Explore, select File, then Import File.**
   
The Choose File Import dialog box is displayed.

2. **Select Browse, navigate to the folder where the Interactive Reporting database connection file is located, and click Open.**
   
The File field is populated with the Interactive Reporting database connection file name.

3. **Click Next.**
   
The OCE Properties Import dialog box is displayed.
Specify a user name and password, and any appropriate data source access settings.

Click Finish.

To import an Interactive Reporting document file (BQY):

1 Select File, then Import.
   The Choose File Import dialog box is displayed.
2 Click Browse, navigate to the folder where the Interactive Reporting document file (BQY) is located, and click Open.
   The File field is populated with the Interactive Reporting document file name.
3 Click Next.
   The Interactive Reporting Properties Import dialog box is displayed.
4 Specify a connection option in the Apply Option to All Queries field
5 Select an Interactive Reporting database connection file (.oce) to associate with the Interactive Reporting document file in the Query/DataModel Connection drop-down, and specify an user name and password.
6 Click Finish.

To create a new CubeQuery section based on a previously published Interactive Reporting document file (BQY):

1 In Explore, select an Interactive Reporting document file (BQY) that contains a CubeQuery section.
2 Enter your name in the Host Name field and password in the Host Password field and click OK.
3 Select Actions, then Insert, and then Query.
   The Insert Query dialog box opens.
4 Check Existing Essbase Connection to select the current Interactive Reporting database connection file (.oce), or select another from the drop-down and click OK.
   A new Interactive Reporting document file is created.
5 To populate the Catalog List, select Actions, then Retrieve Dimensions.
   The Catalog List shows the dimensions available to add to the query.
6 If prompted, enter your database user name and password in the DB User Name and DB Password fields and click OK.
7 From the Catalog List, select a dimension.
   To toggle the Catalog List between single and all dimension modes, click .
8 In the Catalog List, select a member dimension and select Query, then Add to Rows or Query, then Add to Columns.

Note: Members from the same dimension cannot be split across columns, rows and filters.
In the Catalog List, select a measure dimension and select Query, then Add to Rows or Query, then Add to Columns.

To filter a member, select a member in the Catalog List and select Query, then Add to Filters.

Click Process.

**Note:** If missing values are not displayed, it is possible that the Suppress Missing and Suppress Zero options are enabled. These options are enabled by default and can be disabled in the Query Options

**DB Logon**

Use the DB Logon dialog box to specify the database name and password used to logon to the Essbase database.

- To specify the database logon, enter the database user name in the **DB User Name** field, and database password in the **DB Password** field and click **OK**.

Your database administrator retains a list of all valid logon names and passwords.

**Searching Members**

Member search is available for member names, aliases or both in one or more dimensions from the Catalog List. If the Catalog List shows members in single dimension mode, the Search is performed on a selected dimension. If all dimensions are displayed, Search is performed on all dimensions.

- To search members from the Catalog List:
  1. Select to search by name, alias, or both.
  2. Enter the text on which to search.
     - If you use wildcards in searches, only trailing wildcards are accepted (for example, Cola*), and not leading wildcards (for example, *-10).
     - The ?? (placement position) is a valid search criteria. The ? substitutes one occurrence of a character; and can be placed anywhere in the string.
  3. Click **Search**.
     - The search results are displayed in the Catalog List, and they can be added to the data layout.

- To close Search, select **X**.
  - The Search results are cleared.
**Member Selection**

An Essbase database may contain hundreds or even thousands of members. Use the Member Selection Browse and Search tabs to refine query member criteria for a selected dimension. The Member Selection dialog box includes dynamic selection functions such as children, descendants, bottom, siblings, or subsets (UDA, Attribute Dimensions, Level and Generation).

The Available pane lists the member hierarchy for the selected dimension. An additional node for substitution variables lists substitution variables for all dimensions; however, if they are selected from another dimension, an error appears when adding the substitution variables to the Selected pane.

The Selected pane lists all member selections. Selections can be a single member or a dynamic selection function (for example, children).

<table>
<thead>
<tr>
<th>Icon</th>
<th>Dynamic Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Member" /></td>
<td>Member</td>
<td>Currently selected member</td>
</tr>
<tr>
<td><img src="image" alt="Children" /></td>
<td>Children</td>
<td>Children of the selected member (one level below)</td>
</tr>
<tr>
<td><img src="image" alt="Descendants" /></td>
<td>Descendants</td>
<td>Descendants of the selected member</td>
</tr>
<tr>
<td><img src="image" alt="Bottom" /></td>
<td>Bottom</td>
<td>Descendants of the selected member on the lowest level of the hierarchy (Level 0)</td>
</tr>
<tr>
<td><img src="image" alt="Siblings" /></td>
<td>Siblings</td>
<td>Members on the same level with the same parent as the selected member</td>
</tr>
<tr>
<td><img src="image" alt="Same Level" /></td>
<td>Same Level</td>
<td>Dimension members on the same level as the selected member</td>
</tr>
<tr>
<td><img src="image" alt="Same Generation" /></td>
<td>Same Generation</td>
<td>Dimension members on the same generation as the selected member</td>
</tr>
</tbody>
</table>

**Browsing Members**

Use the Member Selection Browse tab to navigate through and select individual members to include in the query.

➤ To browse and select members:

1. **In the data layout, on the shortcut menu, select a dimension member and select Edit.**
   
   The Member Selection dialog box is displayed.

2. **Select Browse.**

3. **Select a member and click + to the left of the member name to expand it.**

4. **To include an individual member in the query, select the member in the Available pane and click ![Add](image).**
   
   The member is added to the Selected pane.
To include a dynamic function, on the shortcut menu, select the member in the Available pane and select the function from the submenu:

- Member
- Children
- Descendants
- Bottom
- Siblings
- Same Level
- Same Generation
- Disable or Enable (selected members only)

Click **OK**.

To change the member function in the Selected pane:

1. **Select the member to modify.**
   
   Use Shift + click to select multiple and consecutive items. Use Ctrl + click to select multiple, but nonconsecutive items.

2. **To include or exclude a member (for example, “Member+Children” versus “Children”), select the check box next to the member name.**

3. **Click **OK**.**

To clear an item used in the query without removing it from the Selected pane:

1. **Select the item and choose Disable from the shortcut menu.**

2. **Click **OK**.**

To remove a member or member element:

1. **Select the member in the Selected pane and click .**
   
   Use Shift + click to select multiple and consecutive items. Use Ctrl + click to select multiple, but nonconsecutive items.
   
   The member is moved from the Selected pane.

2. **Click **OK**.**

To remove all members and member elements, select .

The Selected pane is depopulated.

To toggle between including or excluding a member:

1. **Select a member in the Selected pane.**

2. **Select Disable to exclude a member, or Enable to include a member.**
Substitution Variables

Substitution variables define global variables that represent Essbase-specific values. For example, CurMonth can be a substitution variable for displaying the latest time period. Rather than constantly updating queries when a value changes, you change only the value for the substitution variable on the server. Essbase creates substitution variables, but you can specify a substitution variable when selecting members.

To add a substitution variable:

1. Select a member in the data layout and select Edit on the shortcut menu.
   The Member Selection dialog box is displayed.
2. Select Browse.
3. In the Available pane click + to expand the Substitution Variable node.
4. To include a substitution variable, select the member in the Available pane and click ...
5. To include a dynamic function on a substitution variable, on the shortcut menu, select the member in the Available pane and select the desired function from the sub-menu:
   - Member
   - Children
   - Descendants
   - Bottom
   - Siblings
   - Same Level
   - Same Generation
   - Select Next/Previous
   - Subsets
6. Click OK.

Variables

A variable is a constraint placed on the query when the query is processed.

To use all selected members as a variable (the user is prompted for the values when the query is processed:

1. In the data layout, select a dimension member and select Edit on the shortcut menu.
2. Select Use as variable.
3. Click OK.
Searching Members

To search for members:

1. In the data layout, right click a dimension and select Edit.
2. Select Search.
3. From the Member Type, select the type of member to search:
   - Name—Member Name
   - Alias—Alternate Names for database members
   - Both—Member Name and Alias Name

   **Note:** To search on alias names, enable the Use Alias Tables option and select an alias table in Query Options.

4. Enter the text string or numeric value to search (a member name or pattern).

   Trailing asterisks and wildcard strings are acceptable. Examples of value text strings: Ja*, M?n, and M??n. Examples of invalid text strings: *-10 and J*n.

5. To locate all member within the selected dimension that matches the text string or numeric value, click .

   The results of the search populate the Available pane.

6. **Optional:** To add a member to the Selected pane, click .

7. Click OK.

Filter Member Selection

All data object intersections are relative to filter member selections, which focus intersections and data values, and, consequently, analysis. Filter-axis dimensions are by default represented by the highest aggregate member defined in the data source. To focus analysis on members other than the highest aggregate, you can select one filter member per dimension. Filter member selections do not rearrange dimensions or reorganize pages but focus analysis on intersections.

Use Filter Selection tabs to navigate through, search, or select the members to use in a filter definition.

Browsing Filter Members

Use the Filter Selection Browse tab to navigate through and select individual members to use as a filter.

To browse and select members:

1. In the Filter pane of the data layout, select a dimension member and select Edit on the shortcut menu.

   The Filter Selection dialog box opens.
2 Select Browse.
3 Select a member and click + to the left of the member name to expand it.

4 To include a member as a filter in the query, in the Available pane, select the member and click . The member is added to the Selected pane.

5 To include a member as a dynamic function, in the Available pane, select the member and select Member on the shortcut menu.

6 Click OK.

Searching Filter Members

Use the Search tab of Filter Selection dialog to search for members within selected dimensions.

**Note:** Only the member names and aliases are displayed and not the fully qualified name (for example, [West].[Salem]) in the Member Selection, Catalog or query results.

To search for members:

1 In the Filter pane of the data layout, right click a member and select Edit.
2 Select Search
3 From the Member Type, select the type of filter member to search:
   - Name—Member Name
   - Alias—Alternate Names for database members
   - Both—Member Name and Alias Name
4 Type the text string or numeric value to search in the text box.
   Trailing asterisks and wildcard strings are acceptable. Examples of value text strings: Ja*, M?n, and M??n. Examples of invalid text strings: *-10 and J*n.
5 Click to locate all members within the selected dimension that match the text string or numeric value.
   Hovering the mouse over an item in the Location column shows a tooltip with the member’s full location path.
   The results of the search populate the Available pane.

6 Optional: To add a member to the Selected pane, click .
7 Click OK.

**Note:** To add a different member as a filter, first remove the selected member.
Note: A Search by Alias name searches the currently selected Alias Table in Query Options when the Use Aliases option is enabled.

Navigating CubeQuery

For navigating and maintaining data in the CubeQuery section, see:
- Keep Only
- Remove Only
- Suppressing Missing and Zero Values
- Drilling
- Drilling to Shared Members

Keep Only

Focuses one member by allowing you to clear all other dimension member selections except the selected member from the results set. Non-kept members are not available on the Member Selection dialog box.

➢ To keep specific set members:

1. **Select one member or a range of members.**
   - Use Ctrl + click to keep nonadjacent cells.
2. **Select a dimension label and select Keep Only on the shortcut menu.**
   - Only the selected members are shown.

Remove Only

Clears a dimension member to remove it from the query result set. At least one member must be retained to use this feature. Removed members are not included in the results set, but display on Member Selection dialog box as excluded from the query (flagged with a - or minus sign). To add a member again to the query, the exclusion must be removed from the Selected pane.

➢ To remove a selected member:

1. **Select one member or a range of members.**
   - Use Ctrl + click to remove nonadjacent cells.
2. **Select a dimension label and select Remove Only on the shortcut menu.**
   - The member is removed from the report and the query. To add the member to the query again, add it from the Catalog to the data layout, or select it on the Member Selection dialog box.
Suppressing Missing and Zero Values

Suppressing missing and zero values in rows and columns prevents irrelevant information from being returned, reduces network traffic, and increases query speed. Query options box enables you to customize how CubeQuery handles missing and zero values, including the text label displayed for these values by default.

- To suppress missing values in rows, select a row and select **Suppress, then Missing rows** on the shortcut menu.
  
  By default missing values are blank.

- To suppress missing values in columns, select a column and select **Suppress, then Missing columns** on the shortcut menu.

- To suppress zero values in rows, select a row and select **Suppress, then Zero rows** on the shortcut menu.
  
  By default zero values are shown as 0 (zero).

- To suppress zero values in columns, select a column and select **Suppress, then Zero columns** on the shortcut menu.

Drilling

Drilling increases or decreases the display of report detail for dimensions with large amounts of level data. It can consist of drilling down (in many forms) or drilling up. Drilling down retrieves more detailed data within a dimension. You can drill down into more detailed data until the lowest level of a dimension as defined in the database outline is reached.

A before and after drill down example is shown below:

Before drilling:

<table>
<thead>
<tr>
<th>Market</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct</td>
<td>12,686</td>
</tr>
</tbody>
</table>

After drilling:

<table>
<thead>
<tr>
<th>Market</th>
<th>Audio</th>
<th>Visual</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct</td>
<td>3,803</td>
<td>6,883</td>
<td>12,686</td>
</tr>
</tbody>
</table>

In this example, for Oct, you can drill down to Audio and Visual. Drilling up is the opposite of drilling down, where you move up the hierarchy within a dimension to less detailed data. Query
Options enables you to customize the behavior of the drill level. Shortcut menus also control the drill levels.

**Note:** You cannot drill down on a Date Time Series member.

To drill down to more detail:

1. **Select the member.**
2. **Double-click the member to drill down using the default Drill Level as defined in Query Options.**

**Tip:** You can also select a member, and select Drill, then Down to drill down using the default drill level defined in Query Options on the shortcut menu.

Additional drill down options include:

- **Down**—Drills down to more dimension detail using the default drill level defined in Query Options.
- **Up**—Drills up to less dimension detail.
- **Next**—Drills down to the children. This is the default Drill Level. For example, a drill on Year retrieves Qtr1, Qtr2, Qtr3, and Qtr4.
- **Bottom**—Drills down to the lowest level of members in a dimension. For example, a drill on Year retrieves Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, and Dec.
- **All Descendants**—Retrieves data for all descendants. For example, a drill on Year retrieves all quarterly and monthly members.
- **Siblings**—Retrieves data for siblings. For example, a drill on Jan retrieves Jan, Feb, and Mar.
- **Same Level**—Retrieves data for all members at the same level. For example, a drill on Sales might retrieve values for COGS, Marketing, Payroll, Misc, Opening Inventory, Additions, Ending Inventory, Margin %, and Profit %.
- **Same Generation**—Retrieves data for all members of the same generation as the selected member or members. For example, a drill on Sales retrieves COGS, Marketing, Payroll, and Misc.

**Sample Drill Through To Relational**

The sample below shows the drill through feature applied to a CubeQuery with multiple dimensions in the rows.

The initial CubeQuery section includes:

**Rows**

<table>
<thead>
<tr>
<th>Jan, Feb, March</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 (children)</td>
</tr>
</tbody>
</table>
### 200 (children)

**Columns**

- East (children)
- 100 (children)
- 200 (children)

**Filters**

- Sales

<table>
<thead>
<tr>
<th></th>
<th>New York</th>
<th>Massachusetts</th>
<th>Florida</th>
<th>Connecticut</th>
<th>New Hampshire</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jan</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-10</td>
<td>678</td>
<td>494</td>
<td>210</td>
<td>310</td>
<td>120</td>
</tr>
<tr>
<td>100-20</td>
<td></td>
<td></td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>679</td>
<td>494</td>
<td>410</td>
<td>310</td>
<td>213</td>
</tr>
<tr>
<td>200-10</td>
<td>61</td>
<td>126</td>
<td>190</td>
<td>180</td>
<td>90</td>
</tr>
<tr>
<td>200-20</td>
<td></td>
<td></td>
<td>180</td>
<td></td>
<td>130</td>
</tr>
<tr>
<td>200-40</td>
<td>490</td>
<td>341</td>
<td></td>
<td></td>
<td>85</td>
</tr>
<tr>
<td>200</td>
<td>551</td>
<td>467</td>
<td>370</td>
<td>310</td>
<td>155</td>
</tr>
<tr>
<td><strong>Feb</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-10</td>
<td>646</td>
<td>470</td>
<td>200</td>
<td>325</td>
<td>114</td>
</tr>
<tr>
<td>100-20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>101</td>
</tr>
<tr>
<td>100-30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>645</td>
<td>470</td>
<td>406</td>
<td>325</td>
<td>215</td>
</tr>
<tr>
<td>200-10</td>
<td>61</td>
<td>128</td>
<td>220</td>
<td>165</td>
<td>104</td>
</tr>
<tr>
<td>200-20</td>
<td></td>
<td></td>
<td>180</td>
<td></td>
<td>130</td>
</tr>
<tr>
<td>200-40</td>
<td>580</td>
<td>340</td>
<td></td>
<td></td>
<td>65</td>
</tr>
<tr>
<td>200</td>
<td>641</td>
<td>460</td>
<td>400</td>
<td>265</td>
<td>172</td>
</tr>
<tr>
<td><strong>Mar</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-10</td>
<td>675</td>
<td>482</td>
<td>210</td>
<td>369</td>
<td>119</td>
</tr>
<tr>
<td>100-20</td>
<td></td>
<td></td>
<td>214</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>107</td>
</tr>
<tr>
<td>100</td>
<td>675</td>
<td>482</td>
<td>424</td>
<td>369</td>
<td>226</td>
</tr>
<tr>
<td>200-10</td>
<td>63</td>
<td>125</td>
<td>227</td>
<td>160</td>
<td>107</td>
</tr>
<tr>
<td>200-20</td>
<td></td>
<td></td>
<td>188</td>
<td></td>
<td>124</td>
</tr>
<tr>
<td>200-40</td>
<td>523</td>
<td>320</td>
<td></td>
<td></td>
<td>75</td>
</tr>
<tr>
<td>200</td>
<td>586</td>
<td>450</td>
<td>415</td>
<td>274</td>
<td>182</td>
</tr>
</tbody>
</table>

The relational section includes:
The initial results of the relational query are:

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Na</th>
<th>Month</th>
<th>State</th>
<th>City</th>
<th>Sales</th>
<th>Cogs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100-10</td>
<td>Jan</td>
<td>Colorado</td>
<td>Aspen</td>
<td>188</td>
<td>73</td>
</tr>
<tr>
<td>2</td>
<td>100-20</td>
<td>Diet Cola</td>
<td>Jan</td>
<td>Colorado</td>
<td>Aspen</td>
<td>178</td>
</tr>
<tr>
<td>3</td>
<td>100-30</td>
<td>Caffeine Free Cola</td>
<td>Jan</td>
<td>Colorado</td>
<td>Aspen</td>
<td>169</td>
</tr>
<tr>
<td>4</td>
<td>200-10</td>
<td>Old Fashioned</td>
<td>Jan</td>
<td>Colorado</td>
<td>Aspen</td>
<td>29</td>
</tr>
<tr>
<td>5</td>
<td>200-20</td>
<td>Diet Root Beer</td>
<td>Jan</td>
<td>Colorado</td>
<td>Aspen</td>
<td>141</td>
</tr>
<tr>
<td>6</td>
<td>100-10</td>
<td>Cola</td>
<td>Feb</td>
<td>Colorado</td>
<td>Aspen</td>
<td>167</td>
</tr>
<tr>
<td>7</td>
<td>100-10</td>
<td>Cola</td>
<td>Mar</td>
<td>Colorado</td>
<td>Aspen</td>
<td>166</td>
</tr>
<tr>
<td>8</td>
<td>100-10</td>
<td>Cola</td>
<td>Apr</td>
<td>Colorado</td>
<td>Aspen</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>100-10</td>
<td>Cola</td>
<td>May</td>
<td>Colorado</td>
<td>Aspen</td>
<td>121</td>
</tr>
<tr>
<td>10</td>
<td>100-10</td>
<td>Cola</td>
<td>Jun</td>
<td>Colorado</td>
<td>Aspen</td>
<td>84</td>
</tr>
</tbody>
</table>

The following topic mappings are defined for the drill through:

**Table 68  Mapping of Relational topics to OLAP Dimensions for Drill Through**

<table>
<thead>
<tr>
<th>Relational</th>
<th>OLAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Details.State</td>
<td>Market</td>
</tr>
<tr>
<td>Details.Product</td>
<td>Product</td>
</tr>
<tr>
<td>Details.Month</td>
<td>Year</td>
</tr>
</tbody>
</table>

When the context of New York is 100-10, and Jan. is passed in the CubeQuery, these results are displayed in the relational query:
Drilling to Shared Members

You can drill down or drill up on a member that has a shared member defined in the Essbase outline. Essbase determines which members are eligible — the base member or the shared member, and returns drilled or stored members based on the drill path.

This is an Essbase outline:

```
Product
100
  150 (stored member)
    100-10
    100-20
Brand1
  150 (shared member)
```

The stored member 150 has children; the shared member 150 does not. Drilling up and down on 150 gives different results:

- Drilling down on 150 returns nothing if it is interpreted as the shared member; or, returns 100-10 and 100-20 if it is interpreted as the regular member.
- Drilling up on 150 returns Brand1 if it is interpreted as the shared member; or returns 100 if it is interpreted as the regular member.

The proximity of the shared member to the regular member gives different results when drilling down. When drilling up on a member that has a shared member, Analytic Server looks at the members to determine which one is being queried. For example, drilling up on 100-20 sometimes returns Diet and returns 100. depending on whether Diet or 100 is closest to the member 100-20. If 100-20 is alone, then Essbase determines that this is the regular member. If Diet is closer, then 100-20 may be interpreted as the shared member.

Drill Through

The Drill Through feature enables users to drill from a data cell or meta data label in a CubeQuery section to an existing relational query section within the same Interactive Reporting document.
file. In CubeQuery, drill through “blue indicators” may have been enabled to indicate data cells and metadata labels where drill can be executed. The indicators are displayed for the top/left cell or member label because all data cells and all member labels in a dimension can be drilled on. Drill Through has these characteristics:

- Essbase dimensions are mapped to the target relational fields, so that the member context in the Essbase query can be passed to the relational query as a filter. Drill through to fact items is not available because facts are defined in the relational query section only.
- Drill Through be accomplished at any level of Essbase members in the hierarchy.
- You can drill a to new or existing Results section.

To execute a drill through:

1. Select a single cell or member label and select Actions, then Drill through.

A Drill through can only be performed on one label or cell at a time. If multiple metadata labels and/or cells are selected, the option to drill through is not be available.

The Drill to Results dialog box is displayed.

This dialog box is only displayed if the option “Existing Results” was selected when the Drill Through option was defined. You are prompted to enter a user name and password to the relational query.

By default there are new results, and the dialog box is not shown.

2. Select the target Results section and click OK.

### Using Swing

Use the Swing feature to swap dimensions between rows and columns from the query. This feature enables you to view your data in new ways, and easily compare the new data to data in the originating table. You swing dimensions by dragging the dimension headers (either column or row) from one position to another using the swing handles. By default swing handles are transparent. They only appear when you select a dimension header. When the swing handle appears, it is shown in white with a light grey handle. Once the selection is off, the handle is transparent again.

To swing a dimension column:

1. Select a dimension column header (number 1 below) by clicking on the border to the left of the header.

The swing handle (number 2 below) is displayed to the right of the rows. In this example the Scenario dimension header is selected.
2 Select the swing handle and drag it to the new position (left/bottom or right/top).

In the example, the handle has been swung downward and to the left of the Product dimension:

<table>
<thead>
<tr>
<th></th>
<th>Actual Qtr1</th>
<th>Qtr2</th>
<th>Qtr3</th>
<th>Qtr4</th>
<th>Budget Qtr1</th>
<th>Qtr2</th>
<th>Qtr3</th>
<th>Qtr4</th>
</tr>
</thead>
<tbody>
<tr>
<td>100–10</td>
<td>5,096</td>
<td>5,802</td>
<td>6,583</td>
<td>8,106</td>
<td>6,510</td>
<td>7,410</td>
<td>8,223</td>
<td>6,760</td>
</tr>
<tr>
<td>100–20</td>
<td>1,359</td>
<td>1,534</td>
<td>1,528</td>
<td>1,297</td>
<td>2,240</td>
<td>2,480</td>
<td>2,470</td>
<td>2,340</td>
</tr>
<tr>
<td>100–30</td>
<td>592</td>
<td>440</td>
<td>430</td>
<td>544</td>
<td>1,040</td>
<td>770</td>
<td>753</td>
<td>950</td>
</tr>
<tr>
<td>100</td>
<td>7,048</td>
<td>7,872</td>
<td>5,511</td>
<td>7,937</td>
<td>9,700</td>
<td>10,660</td>
<td>1,440</td>
<td>16,050</td>
</tr>
<tr>
<td>200–10</td>
<td>1,697</td>
<td>1,734</td>
<td>1,833</td>
<td>1,887</td>
<td>2,630</td>
<td>2,730</td>
<td>2,900</td>
<td>3,360</td>
</tr>
<tr>
<td>200–30</td>
<td>1,153</td>
<td>1,231</td>
<td>1,159</td>
<td>1,093</td>
<td>1,240</td>
<td>1,370</td>
<td>1,300</td>
<td>1,140</td>
</tr>
<tr>
<td>200</td>
<td>908</td>
<td>908</td>
<td>814</td>
<td>1,364</td>
<td>1,010</td>
<td>1,166</td>
<td>930</td>
<td>1,480</td>
</tr>
<tr>
<td>200</td>
<td>6,721</td>
<td>7,059</td>
<td>7,005</td>
<td>7,198</td>
<td>8,480</td>
<td>8,840</td>
<td>8,830</td>
<td>9,800</td>
</tr>
</tbody>
</table>

As a result, the Scenario dimension is positioned to the left of the Product dimension:
To swing a row dimension:

1. Select an entire dimension row header.

   The swing handle is displayed at the bottom of the query:

```
<table>
<thead>
<tr>
<th>Actual</th>
<th>Qtr1</th>
<th>Qtr2</th>
<th>Qtr3</th>
<th>Qtr4</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-10</td>
<td>5,096</td>
<td>5,892</td>
<td>6,503</td>
<td>5,206</td>
</tr>
<tr>
<td>100-20</td>
<td>1,389</td>
<td>1,534</td>
<td>1,828</td>
<td>1,267</td>
</tr>
<tr>
<td>100-30</td>
<td>593</td>
<td>446</td>
<td>400</td>
<td>544</td>
</tr>
<tr>
<td>100</td>
<td>7,048</td>
<td>7,872</td>
<td>8,511</td>
<td>7,037</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Budget</th>
<th>Qtr1</th>
<th>Qtr2</th>
<th>Qtr3</th>
<th>Qtr4</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-10</td>
<td>6,510</td>
<td>7,410</td>
<td>8,220</td>
<td>5,769</td>
</tr>
<tr>
<td>100-20</td>
<td>2,240</td>
<td>2,460</td>
<td>2,470</td>
<td>2,340</td>
</tr>
<tr>
<td>100-30</td>
<td>1,040</td>
<td>770</td>
<td>750</td>
<td>950</td>
</tr>
<tr>
<td>100</td>
<td>7,970</td>
<td>10,660</td>
<td>11,440</td>
<td>10,050</td>
</tr>
<tr>
<td>200-10</td>
<td>2,630</td>
<td>2,730</td>
<td>2,900</td>
<td>3,380</td>
</tr>
<tr>
<td>200-20</td>
<td>3,600</td>
<td>3,640</td>
<td>3,700</td>
<td>3,790</td>
</tr>
<tr>
<td>200-30</td>
<td>1,240</td>
<td>1,370</td>
<td>1,300</td>
<td>1,140</td>
</tr>
<tr>
<td>200-40</td>
<td>1,010</td>
<td>1,100</td>
<td>930</td>
<td>1,490</td>
</tr>
<tr>
<td>200</td>
<td>8,480</td>
<td>8,840</td>
<td>8,830</td>
<td>9,800</td>
</tr>
</tbody>
</table>
```
<table>
<thead>
<tr>
<th></th>
<th>Qtr1</th>
<th>Qtr2</th>
<th>Qtr3</th>
<th>Qtr4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-10</td>
<td>5,096</td>
<td>5,920</td>
<td>6,583</td>
<td>5,206</td>
</tr>
<tr>
<td>100-20</td>
<td>1,359</td>
<td>1,534</td>
<td>1,520</td>
<td>1,287</td>
</tr>
<tr>
<td>100-30</td>
<td>595</td>
<td>446</td>
<td>400</td>
<td>544</td>
</tr>
<tr>
<td>100</td>
<td>7,040</td>
<td>7,072</td>
<td>6,511</td>
<td>7,037</td>
</tr>
<tr>
<td>200-10</td>
<td>1,697</td>
<td>1,734</td>
<td>1,603</td>
<td>1,887</td>
</tr>
<tr>
<td>200-20</td>
<td>2,963</td>
<td>3,079</td>
<td>3,149</td>
<td>2,834</td>
</tr>
<tr>
<td>200-30</td>
<td>1,153</td>
<td>1,231</td>
<td>1,159</td>
<td>1,093</td>
</tr>
<tr>
<td>200-40</td>
<td>908</td>
<td>986</td>
<td>614</td>
<td>1,384</td>
</tr>
<tr>
<td>200</td>
<td>6,721</td>
<td>7,030</td>
<td>7,005</td>
<td>7,198</td>
</tr>
<tr>
<td>Budget</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-10</td>
<td>6,510</td>
<td>7,410</td>
<td>8,220</td>
<td>6,760</td>
</tr>
<tr>
<td>100-20</td>
<td>2,240</td>
<td>2,480</td>
<td>2,470</td>
<td>2,340</td>
</tr>
<tr>
<td>100-30</td>
<td>1,040</td>
<td>770</td>
<td>750</td>
<td>950</td>
</tr>
<tr>
<td>100</td>
<td>9,790</td>
<td>10,660</td>
<td>11,440</td>
<td>10,050</td>
</tr>
<tr>
<td>200-10</td>
<td>2,630</td>
<td>2,730</td>
<td>2,900</td>
<td>3,380</td>
</tr>
<tr>
<td>200-20</td>
<td>3,600</td>
<td>3,640</td>
<td>3,700</td>
<td>3,790</td>
</tr>
<tr>
<td>200-30</td>
<td>1,240</td>
<td>1,370</td>
<td>1,300</td>
<td>1,140</td>
</tr>
<tr>
<td>200-40</td>
<td>1,010</td>
<td>1,100</td>
<td>930</td>
<td>1,480</td>
</tr>
<tr>
<td>200</td>
<td>8,480</td>
<td>8,840</td>
<td>8,830</td>
<td>8,800</td>
</tr>
</tbody>
</table>

2. Select and drag the swing handle to the new position (left/right or right/top).

In this example the handle is swing to the right and upward of the query:
The result of the swing is:

Note that the Product dimension is positioned under the Year dimension.

**Downloading to Results**

The Download Database Totals feature creates only one column per dimension, and includes all members, and the corresponding data, in the Results set. In addition, a column with each dimension’s parent members is also included in the results. By default this option is disabled. Once this option is enabled, any existing Results set is deleted. If this option is enabled through Tools, then Options, then Program Options, then OLAP, the option is enabled also in a newly created CubeQuery section.

Note: If you use the Download to Results feature, only separate columns in the Results set are created for every generation in every dimension. In addition, only the lowest level member values are imported, with any ancestors for each member (included in the original query) appearing in additional columns.
In the following example:

- All *Product* members, in the query, are listed in only one column and not separated into multiple columns based on Generation. In addition the data values for the upper level Product members are also included in the results.

- Each dimension has an additional column that displays parent members for each member in the query.
  - The *Year* dimension members Qtr1, Qtr2, etc. have their parent member (*Year*) displayed in the “Year Parent” column.
  - The *Scenario* dimension members Actual and Budget have their parent member (*Scenario*) displayed in the “Scenario Parent” column.
  - The *Product* dimension members have their respective parent members displayed in the “Product Parent” column.

<table>
<thead>
<tr>
<th></th>
<th>Category</th>
<th>Product SKU</th>
<th>Gen2, Scenario</th>
<th>Gen2, Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
<td>100-10</td>
<td>Actual</td>
<td>Qtr1</td>
<td>5,096</td>
</tr>
<tr>
<td>2</td>
<td>100</td>
<td>100-20</td>
<td>Actual</td>
<td>Qtr1</td>
<td>1,359</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>100-30</td>
<td>Actual</td>
<td>Qtr1</td>
<td>593</td>
</tr>
<tr>
<td>4</td>
<td>200</td>
<td>200-10</td>
<td>Actual</td>
<td>Qtr1</td>
<td>1,697</td>
</tr>
<tr>
<td>5</td>
<td>200</td>
<td>200-20</td>
<td>Actual</td>
<td>Qtr1</td>
<td>2,963</td>
</tr>
<tr>
<td>6</td>
<td>200</td>
<td>200-30</td>
<td>Actual</td>
<td>Qtr1</td>
<td>1,153</td>
</tr>
<tr>
<td>7</td>
<td>200</td>
<td>200-40</td>
<td>Actual</td>
<td>Qtr1</td>
<td>908</td>
</tr>
<tr>
<td>8</td>
<td>100</td>
<td>100-10</td>
<td>Budget</td>
<td>Qtr1</td>
<td>5,510</td>
</tr>
<tr>
<td>9</td>
<td>100</td>
<td>100-20</td>
<td>Budget</td>
<td>Qtr1</td>
<td>2,240</td>
</tr>
<tr>
<td>10</td>
<td>100</td>
<td>100-30</td>
<td>Budget</td>
<td>Qtr1</td>
<td>1,040</td>
</tr>
<tr>
<td>11</td>
<td>200</td>
<td>200-10</td>
<td>Budget</td>
<td>Qtr1</td>
<td>2,630</td>
</tr>
<tr>
<td>12</td>
<td>200</td>
<td>200-20</td>
<td>Budget</td>
<td>Qtr1</td>
<td>3,600</td>
</tr>
<tr>
<td>13</td>
<td>200</td>
<td>200-30</td>
<td>Budget</td>
<td>Qtr1</td>
<td>1,240</td>
</tr>
<tr>
<td>14</td>
<td>200</td>
<td>200-40</td>
<td>Budget</td>
<td>Qtr1</td>
<td>1,010</td>
</tr>
<tr>
<td>15</td>
<td>100</td>
<td>100-10</td>
<td>Actual</td>
<td>Qtr2</td>
<td>5,892</td>
</tr>
<tr>
<td>16</td>
<td>100</td>
<td>100-20</td>
<td>Actual</td>
<td>Qtr2</td>
<td>1,534</td>
</tr>
<tr>
<td>17</td>
<td>100</td>
<td>100-30</td>
<td>Actual</td>
<td>Qtr2</td>
<td>446</td>
</tr>
<tr>
<td>18</td>
<td>200</td>
<td>200-10</td>
<td>Actual</td>
<td>Qtr2</td>
<td>1,734</td>
</tr>
</tbody>
</table>

To download the query to results, select **Actions, then Download to Results**.

The behavior of the Download to Results feature varies for different components in CubeQuery:

- **Shared Members**
- **Separate Columns for Metadata Labels**
- **Measure Behavior in Columns and Rows**
- **Ragged Hierarchies**
- **Shared Members**
**Shared Members**

Separate columns for metadata labels are displayed for each Essbase generation in the hierarchy.

### Table 69  CubeQuery Requested Items (Profit Member Applied In the Filter)

<table>
<thead>
<tr>
<th>Product</th>
<th>Qtr1</th>
<th>Qtr2</th>
<th>Qtr3</th>
<th>Qtr4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cola</td>
<td>5096</td>
<td>5892</td>
<td>6583</td>
<td>5206</td>
</tr>
<tr>
<td>Diet Cola</td>
<td>1359</td>
<td>1534</td>
<td>1528</td>
<td>1287</td>
</tr>
<tr>
<td>Caffeine Free Cola</td>
<td>593</td>
<td>446</td>
<td>400</td>
<td>544</td>
</tr>
<tr>
<td>Cola</td>
<td>7048</td>
<td>7872</td>
<td>8511</td>
<td>7037</td>
</tr>
<tr>
<td>Old Fashioned</td>
<td>1697</td>
<td>1734</td>
<td>1883</td>
<td>1887</td>
</tr>
<tr>
<td>Diet Root Beer</td>
<td>2963</td>
<td>3079</td>
<td>3149</td>
<td>2834</td>
</tr>
<tr>
<td>Sarsaparilla</td>
<td>1153</td>
<td>1231</td>
<td>1159</td>
<td>1093</td>
</tr>
<tr>
<td>Birch Beer</td>
<td>908</td>
<td>986</td>
<td>814</td>
<td>1384</td>
</tr>
<tr>
<td>Root Beer</td>
<td>6721</td>
<td>7030</td>
<td>7005</td>
<td>7198</td>
</tr>
</tbody>
</table>

### Table 70  Results Set

<table>
<thead>
<tr>
<th>Category</th>
<th>Product SKU</th>
<th>Year</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colas</td>
<td>Cola</td>
<td>Qtr1</td>
<td>5096</td>
</tr>
<tr>
<td>Colas</td>
<td>Diet Cola</td>
<td>Qtr1</td>
<td>1359</td>
</tr>
<tr>
<td>Colas</td>
<td>Caffeine Free Cola</td>
<td>Qtr1</td>
<td>593</td>
</tr>
<tr>
<td>Root Beer</td>
<td>Old Fashioned</td>
<td>Qtr1</td>
<td>1697</td>
</tr>
<tr>
<td>Root Beer</td>
<td>Diet Root Beer</td>
<td>Qtr1</td>
<td>2963</td>
</tr>
<tr>
<td>Root Beer</td>
<td>Sarsaparilla</td>
<td>Qtr1</td>
<td>1153</td>
</tr>
<tr>
<td>Root Beer</td>
<td>Birch Beer</td>
<td>Qtr1</td>
<td>908</td>
</tr>
</tbody>
</table>

If only one generation of the hierarchy is in the query, additional columns do not show the parent members in the Results section as shown below:

### Table 71  CubeQuery Requested Items (Profit Member is in the Columns)

<table>
<thead>
<tr>
<th>Product</th>
<th>Profit</th>
<th>Qtr1</th>
<th>Qtr2</th>
<th>Qtr3</th>
<th>Qtr4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cola</td>
<td>5096</td>
<td>5892</td>
<td>6583</td>
<td>5206</td>
<td></td>
</tr>
<tr>
<td>Diet Cola</td>
<td>1359</td>
<td>1534</td>
<td>1528</td>
<td>1287</td>
<td></td>
</tr>
<tr>
<td>Product SKU</td>
<td>Qtr1</td>
<td>Qtr2</td>
<td>Qtr3</td>
<td>Qtr4</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>Caffeine Free Cola</td>
<td>593</td>
<td>446</td>
<td>400</td>
<td>544</td>
<td></td>
</tr>
<tr>
<td>Old Fashioned</td>
<td>1697</td>
<td>1734</td>
<td>1883</td>
<td>1887</td>
<td></td>
</tr>
<tr>
<td>Diet Root Beer</td>
<td>2963</td>
<td>3079</td>
<td>3149</td>
<td>2834</td>
<td></td>
</tr>
<tr>
<td>Sarsaparilla</td>
<td>1153</td>
<td>1231</td>
<td>1159</td>
<td>1093</td>
<td></td>
</tr>
<tr>
<td>Birch Beer</td>
<td>908</td>
<td>986</td>
<td>814</td>
<td>1384</td>
<td></td>
</tr>
<tr>
<td>Dark Cream</td>
<td>2544</td>
<td>3231</td>
<td>3355</td>
<td>3065</td>
<td></td>
</tr>
</tbody>
</table>

**Table 72 Results Set**

<table>
<thead>
<tr>
<th>Product SKU</th>
<th>Quarter</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cola Qtr1</td>
<td></td>
<td>5096</td>
</tr>
<tr>
<td>Cola Qtr2</td>
<td></td>
<td>5892</td>
</tr>
<tr>
<td>Cola Qtr3</td>
<td></td>
<td>6583</td>
</tr>
<tr>
<td>Cola Qtr4</td>
<td></td>
<td>5206</td>
</tr>
<tr>
<td>Diet Cola Qtr1</td>
<td></td>
<td>1359</td>
</tr>
<tr>
<td>Diet Cola Qtr2</td>
<td></td>
<td>1534</td>
</tr>
<tr>
<td>Diet Cola Qtr3</td>
<td></td>
<td>1528</td>
</tr>
<tr>
<td>Diet Cola Qtr4</td>
<td></td>
<td>1287</td>
</tr>
<tr>
<td>Caffeine Free Cola Qtr1</td>
<td></td>
<td>593</td>
</tr>
<tr>
<td>Caffeine Free Cola Qtr2</td>
<td></td>
<td>446</td>
</tr>
<tr>
<td>Caffeine Free Cola Qtr3</td>
<td></td>
<td>400</td>
</tr>
<tr>
<td>Caffeine Free Cola Qtr4</td>
<td></td>
<td>544</td>
</tr>
</tbody>
</table>

**Measure Behavior in Columns and Rows**

In the CubeQuery section, the measure dimension is handled like any other dimension (it can be placed in rows or columns), but a separate results set column is created for each Measure member, whether it is in a row, column, or filter.

**Table 73 Measures in CubeQuery**

<table>
<thead>
<tr>
<th></th>
<th>Qtr1</th>
<th>Qtr2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>Cola</td>
<td>14585</td>
</tr>
<tr>
<td></td>
<td>Diet Cola</td>
<td>7276</td>
</tr>
</tbody>
</table>
Table 74  Measures in Results Set

<table>
<thead>
<tr>
<th>Product SKU</th>
<th>Quarter</th>
<th>Sales</th>
<th>COGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cola</td>
<td>Qtr1</td>
<td>14585</td>
<td>5681</td>
</tr>
<tr>
<td>Diet Cola</td>
<td>Qtr1</td>
<td>7276</td>
<td>3496</td>
</tr>
<tr>
<td>Caffeine Free Cola</td>
<td>Qtr1</td>
<td>3187</td>
<td>1493</td>
</tr>
</tbody>
</table>

If no Measures are in the row, column or filter, all data values appear in a Value column.

Table 75  Values Column in Results Set

<table>
<thead>
<tr>
<th>Product SKU</th>
<th>Quarter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cola</td>
<td>Qtr1</td>
<td>14585</td>
</tr>
<tr>
<td>Diet Cola</td>
<td>Qtr1</td>
<td>7276</td>
</tr>
<tr>
<td>Caffeine Free Cola</td>
<td>Qtr1</td>
<td>3187</td>
</tr>
</tbody>
</table>

Ragged Hierarchies

Typically in Essbase, an individual hierarchy has the same number of members above it as any other member at the same level. In a ragged hierarchy, the logical parent member for one member is not in the level directly above the member. When downloading to results a query that has a ragged member selection, and where some parent members are not expanded to details, a warning message is displayed: "Note that if the source query results are not fully expanded and/or symmetric, invalid flattened results might be returned." This message is necessary to show "parent context" or shared member parents need to exist in the query in order to determine that they are shared for the results set.

In the following example Qtr2 does not have children in the query. Because only the lowest level members are included in the query, the results set includes: Jan, Feb, Mar, and Qtr2. For the “month” value for Qtr2, the label is blank.

Table 76  Ragged Hierarchy in CubeQuery Section

<table>
<thead>
<tr>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
</tr>
<tr>
<td>Feb</td>
</tr>
</tbody>
</table>
### Table 77  Ragged Hierarchy in Results Set

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Month</th>
<th>Gen1,Product</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qtr1</td>
<td>Jan</td>
<td>Product</td>
<td>8024</td>
</tr>
<tr>
<td>Qtr1</td>
<td>Feb</td>
<td>Product</td>
<td>8346</td>
</tr>
<tr>
<td>Qtr1</td>
<td>Mar</td>
<td>Product</td>
<td>8333</td>
</tr>
<tr>
<td>Qtr2</td>
<td>(blank)</td>
<td>Product</td>
<td>27107</td>
</tr>
</tbody>
</table>

If a child member does not have a parent member in the original query, the parent or any other ancestor is included in the Results set:

### Table 78  Ragged Hierarchy in CubeQuery Section

<table>
<thead>
<tr>
<th>Product</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>8024</td>
</tr>
<tr>
<td>Feb</td>
<td>8346</td>
</tr>
<tr>
<td>Mar</td>
<td>8333</td>
</tr>
<tr>
<td>Qtr1</td>
<td>24703</td>
</tr>
<tr>
<td>Dec</td>
<td>8780</td>
</tr>
</tbody>
</table>

### Table 79  Ragged Hierarchy in Results Set

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Month</th>
<th>Gen1,Product</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qtr1</td>
<td>Jan</td>
<td>Product</td>
<td>8024</td>
</tr>
<tr>
<td>Qtr1</td>
<td>Feb</td>
<td>Product</td>
<td>8346</td>
</tr>
<tr>
<td>Qtr1</td>
<td>Mar</td>
<td>Product</td>
<td>8333</td>
</tr>
<tr>
<td>Qtr4</td>
<td>Dec</td>
<td>Product</td>
<td>8780</td>
</tr>
</tbody>
</table>

### Shared Members

Shared member data can be included in a query, or their totals can be excluded. Each shared member column in the Results set corresponds to an Essbase Generation/Field in the Results set and query. For Shared Members, the parent context must exist in the query. In other words, if
the parent of a shared member is not in the query, the Download to Results feature does not recognize that it is a shared member and determines the parent. That is, the parents of a shared member must exist in the query in order to determine that they are shared for the results set. For example, in the Sample Basic Product dimension, for the second instance of “100-20” (shared member) to be properly accounted for in the Download to Results, its parent “Diet” must be included in the query such as “Diet (Children)”.

**Note:** Shared members are in bold below.

<p>| Qtr1  |<br />
|-------|-------|
| 100-10   | 5096  |
| 100-20   | 1359  |
| 100-30   | 593   |
| 100     | 7048  |
| 200-10   | 1697  |
| 200-20   | 2963  |
| 200-30   | 1153  |
| 200-40   | 908   |
| 200     | 6721  |
| 300-10   | 2544  |
| 300-20   | 690   |
| 300-30   | 2695  |
| 300     | 5929  |
| 400-10   | 2838  |
| 400-20   | 2283  |
| 400-30   | -116  |
| 400     | 5005  |
| <strong>100-20</strong> |       |
| <strong>200-20</strong> |       |
| <strong>300-30</strong> |       |
| Diet    | 7017  |</p>
<table>
<thead>
<tr>
<th>Product SKU, Shared</th>
<th>Gen1, Product</th>
<th>Category</th>
<th>Product SKU</th>
<th>Quarter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product 100</td>
<td>100–10</td>
<td>Qtr1</td>
<td>5096</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product 100</td>
<td>100–20</td>
<td>Qtr1</td>
<td>1359</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product 100</td>
<td>100–30</td>
<td>Qtr1</td>
<td>593</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product 200</td>
<td>200–10</td>
<td>Qtr1</td>
<td>1697</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product 200</td>
<td>200–20</td>
<td>Qtr1</td>
<td>2963</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product 200</td>
<td>200–30</td>
<td>Qtr1</td>
<td>1153</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product 200</td>
<td>200–40</td>
<td>Qtr1</td>
<td>908</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product 300</td>
<td>300–10</td>
<td>Qtr1</td>
<td>2544</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product 300</td>
<td>300–20</td>
<td>Qtr1</td>
<td>690</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product 300</td>
<td>300–30</td>
<td>Qtr1</td>
<td>2695</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product 400</td>
<td>400–10</td>
<td>Qtr1</td>
<td>2838</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product 400</td>
<td>400–20</td>
<td>Qtr1</td>
<td>2283</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product 400</td>
<td>400–30</td>
<td>Qtr1</td>
<td>-116</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>100–20</strong></td>
<td>Product Diet</td>
<td>100–20</td>
<td>Qtr1</td>
<td>1359</td>
<td></td>
</tr>
<tr>
<td><strong>200–20</strong></td>
<td>Product Diet</td>
<td>200–20</td>
<td>Qtr1</td>
<td>2963</td>
<td></td>
</tr>
<tr>
<td><strong>300–30</strong></td>
<td>Product Diet</td>
<td>300–30</td>
<td>Qtr1</td>
<td>2695</td>
<td></td>
</tr>
</tbody>
</table>

If multiple generation dimensions have shared members, one “shared” indication per dimension is created:

**Note:** Shared members are in bold below.

<table>
<thead>
<tr>
<th>Qtr1</th>
<th>100–10</th>
<th>5096</th>
</tr>
</thead>
<tbody>
<tr>
<td>100–20</td>
<td>1359</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>7048</td>
<td></td>
</tr>
</tbody>
</table>
Table 83  Multiple Dimensions with Shared Members in Results set

<table>
<thead>
<tr>
<th>Scenario, Gen2, Shared</th>
<th>Scenario, Gen2</th>
<th>Product SKU, Shared</th>
<th>Category</th>
<th>Product SKU</th>
<th>Quarter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual</td>
<td>Actual</td>
<td>100-10</td>
<td></td>
<td>100-10</td>
<td>Qtr1</td>
<td>5096</td>
</tr>
<tr>
<td>Actual</td>
<td>Actual</td>
<td>100-20</td>
<td></td>
<td>100-20</td>
<td>Qtr1</td>
<td>1359</td>
</tr>
<tr>
<td>Actual</td>
<td>Actual</td>
<td>100-20</td>
<td>Diet</td>
<td>100-20</td>
<td>Qtr1</td>
<td>1359</td>
</tr>
<tr>
<td>Budget</td>
<td>Budget</td>
<td>100-10</td>
<td></td>
<td>100-10</td>
<td>Qtr1</td>
<td>6510</td>
</tr>
<tr>
<td>Budget</td>
<td>Budget</td>
<td>100-20</td>
<td>Diet</td>
<td>100-20</td>
<td>Qtr1</td>
<td>2240</td>
</tr>
<tr>
<td>Actual</td>
<td>Actual</td>
<td>100-10</td>
<td></td>
<td>100-10</td>
<td>Qtr1</td>
<td>5096</td>
</tr>
<tr>
<td>Actual</td>
<td>Actual</td>
<td>100-20</td>
<td></td>
<td>100-20</td>
<td>Qtr1</td>
<td>1359</td>
</tr>
</tbody>
</table>

If a dimension contains shared members at multiple generations, a column is added to the Results set for each CubeQuery generation and Results set column:

**Note:** Shared members are in bold below.
### Table 84  Shared Members At Multiple Generation Level in the CubeQuery Section

<table>
<thead>
<tr>
<th>Qtr1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>100–10</td>
<td>5096</td>
</tr>
<tr>
<td>100–20</td>
<td>1359</td>
</tr>
<tr>
<td>100–30</td>
<td>593</td>
</tr>
<tr>
<td>100</td>
<td>7048</td>
</tr>
<tr>
<td>...</td>
<td></td>
</tr>
<tr>
<td>400–10</td>
<td>2838</td>
</tr>
<tr>
<td>400–20</td>
<td>2283</td>
</tr>
<tr>
<td>400–30</td>
<td>-116</td>
</tr>
<tr>
<td>400</td>
<td>5005</td>
</tr>
<tr>
<td><strong>100–20</strong></td>
<td>1359</td>
</tr>
<tr>
<td><strong>200–20</strong></td>
<td>2963</td>
</tr>
<tr>
<td><strong>300–30</strong></td>
<td>2695</td>
</tr>
<tr>
<td>Diet</td>
<td>7017</td>
</tr>
<tr>
<td><strong>400</strong></td>
<td>5005</td>
</tr>
<tr>
<td>Product</td>
<td>24703</td>
</tr>
</tbody>
</table>

### Table 85  Shared Members at Multiple Generation Level in the Results Set

<table>
<thead>
<tr>
<th>Category, Shared</th>
<th>Product SKU, Shared</th>
<th>Gen1, Product</th>
<th>Category</th>
<th>Product SKU</th>
<th>Quarter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Product</td>
<td>100</td>
<td>100–10</td>
<td>Qtr1</td>
<td></td>
<td>5096</td>
</tr>
<tr>
<td></td>
<td>Product</td>
<td>100</td>
<td>100–20</td>
<td>Qtr1</td>
<td></td>
<td>1359</td>
</tr>
<tr>
<td></td>
<td>Product</td>
<td>100</td>
<td>100–30</td>
<td>Qtr1</td>
<td></td>
<td>593</td>
</tr>
<tr>
<td></td>
<td>...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Product</td>
<td>400</td>
<td>400–10</td>
<td>Qtr1</td>
<td></td>
<td>2838</td>
</tr>
<tr>
<td></td>
<td>Product</td>
<td>400</td>
<td>400–20</td>
<td>Qtr1</td>
<td></td>
<td>2283</td>
</tr>
<tr>
<td></td>
<td>Product</td>
<td>400</td>
<td>400–30</td>
<td>Qtr1</td>
<td></td>
<td>-116</td>
</tr>
<tr>
<td><strong>100–20</strong></td>
<td>Product</td>
<td>Diet</td>
<td>100–20</td>
<td>Qtr1</td>
<td></td>
<td>1359</td>
</tr>
<tr>
<td><strong>200–20</strong></td>
<td>Product</td>
<td>Diet</td>
<td>200–20</td>
<td>Qtr1</td>
<td></td>
<td>2963</td>
</tr>
<tr>
<td><strong>300–30</strong></td>
<td>Product</td>
<td>Diet</td>
<td>300–30</td>
<td>Qtr1</td>
<td></td>
<td>2695</td>
</tr>
<tr>
<td>Category, Shared</td>
<td>Product SKU, Shared</td>
<td>Gen1, Product</td>
<td>Category</td>
<td>Product SKU</td>
<td>Quarter</td>
<td>Value</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------------</td>
<td>---------------</td>
<td>-----------</td>
<td>-------------</td>
<td>---------</td>
<td>-------</td>
</tr>
<tr>
<td>400</td>
<td></td>
<td>Product</td>
<td>400</td>
<td></td>
<td>Qtr1</td>
<td>5005</td>
</tr>
</tbody>
</table>

**Download Database Totals**

The Download Database Totals feature creates only one column per dimension, and includes all members, and the corresponding data, in the Results set. In addition, a column with each dimension’s parent members is also included in the results. By default this option is disabled. Once this option is enabled, any existing Results set is deleted. If this option is enabled through *Tools, then Options, then Program Options, then OLAP*, the option is enabled also in a newly created CubeQuery section.

**Note:** If you use the Download to Results feature, only separate columns in the Results set are created for every generation in every dimension. In addition, only the lowest level member values are imported, with any ancestors for each member (included in the original query) appearing in additional columns.

In the following example:

- All *Product* members in the query, are listed in only one column and not separated into multiple columns based on Generation. In addition, the data values for the upper level Product members are also included in the results.

- Each dimension has an additional column that displays parent members for each member in the query.
  - The *Year* dimension members Qtr1, Qtr2, etc. have their parent member (Year) displayed in the “Year Parent” column.
  - The *Scenario* dimension members Actual and Budget have their parent member (Scenario) displayed in the “Scenario Parent” column.
  - The *Product* dimension members have their respective parent members displayed in the “Product Parent” column.
If you open an Interactive Reporting version 11.1.1 document that contains data in Results downloaded from a CubeQuery with version 9.3.1, the existing Results data is not visible. Furthermore, using the “download to results” feature with an Interactive Reporting document created with Interactive Reporting version 11.1.1, the result set will not be the same as it was with version 11.1.1.

To enable download database totals:

1. Select Query, then Query Options.
   
The Query Options dialog box is displayed.

2. Select the Global tab.

3. Enable Download Database Totals and click OK.

Relational Aggregation

When selecting Download Database Totals, aggregations are disabled for all the sections dependent on the Results with database totals. This feature protects users from performing aggregations, where the results maybe double counted. Enabling the option Allow Relational Aggregation allows usage of aggregation in the following sections:

- Break/Grand Totals in Results section
- Data Functions, Totals, Cume in Pivot
- Data Functions in Chart
- Data Functions, Break Totals, Show Column Totals in Report.
To set relational aggregation:

1. Select Query Options, then Global.
2. Enable Allow Relational Aggregation and click OK.

**Formatting CubeQuery Items**

Common formatting options are available for CubeQuery items on the Format and shortcut menus including:

- **Auto-size Width**—By default columns and rows are distributed evenly and without regard to the length of data values, which may be truncated. With the auto-size width feature, you can automatically size any column or rows horizontally to fit the text of the largest value in the column.

- **Auto-size Height**—By default columns and rows are distributed evenly and without regard to the length of data values, which may be truncated. With the auto-size height feature, you can automatically size any column or rows vertically to fit the text of the largest value in the column.

- **Number Format**—Options for changing the way numbers, currency values, and dates are displayed throughout or create new custom formats. See Number Formatting.

To auto-size the width of a row or column, select the row or column label and choose Auto-Size Width.

To auto-size the height of a row or column, select the row or column label and choose Auto-Size Height.

**Query Options**

Use the Query Options to define global and local display behavior and drill options. The Query Options dialog box comprises the Global, Display, and Drill tabs.

To display query options, select Actions, then Query Options.

**Global Options**

Use the Global tab to set global display behavior in the CubeQuery section.

<table>
<thead>
<tr>
<th>Design Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-Refresh Query</td>
<td>Queries the database automatically when an item is added to or removed from the data layout, or when the Suppress and Replace options in Query Options are changed. If Auto-Refresh is disabled, you must click Process to query the database whenever you make a change in the data layout.</td>
</tr>
<tr>
<td>Catalog Display Options</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| Number of members to display | Sets the maximum number of members to display in the Catalog List and Member Selection. The number can be:  
  - unlimited  
  - 5  
  - 10  
  - 20  
  - 50  
  - 100  
  - 250  
  - 500  
The default number of members is 50. In both the Catalog List and Member Selection, the “more...” node expands to the next set of members. |

<table>
<thead>
<tr>
<th>Results Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Download Database Totals</td>
<td>Download Database Totals creates only one column per dimension, and includes all members, and the corresponding data, in the results set. In addition, a column with each dimension's parent members is included. By default this option is disabled.</td>
</tr>
</tbody>
</table>
| Allow Relational Aggregation | Enables relational aggregation in the following sections:  
  - Break/Grand Totals in Results section  
  - Data Functions, Totals, Cume in Pivot  
  - Data Functions in Chart  
  - Data Functions, Break Totals, Show Column Totals in Report.  
  When the Download Database Totals option (see above) is enabled, aggregations are disabled for all the sections dependent on the Results sets with database totals. This option protects users from performing aggregations, where the results may be counted twice. By default this option is disabled. |
| Include Consolidation Information | Enabling this option includes consolidation type/unary operator information of all members from the Data Layout when Download To Results is executed. Disabling the option excludes the consolidation type/unary operator information for each member. By default this option is disabled for newly inserted CubeQuery sections. |

## Display Options

Use the Display tab to set row and column suppression criteria, alias information, replacement values, and label indentation.

<table>
<thead>
<tr>
<th>Suppress</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#Missing Rows</td>
<td>Suppress the return of data rows that contain only missing values. If one value is in the row, the row is not suppressed. By default, this option is enabled.</td>
</tr>
<tr>
<td>Zero Rows</td>
<td>Suppress the return of data rows that contain only zeros. By default this option is disabled.</td>
</tr>
<tr>
<td>Shared Members</td>
<td>Suppress the return of members tagged as shared. By default, this option is disabled.</td>
</tr>
<tr>
<td>#Missing Columns</td>
<td>Suppress the return of data columns that contain only missing data. By default this option is enabled.</td>
</tr>
<tr>
<td>Supress</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Zero Columns</td>
<td>Suppress the return of data columns that contain only zeros. By default this option is disabled.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aliases</th>
<th>Description</th>
</tr>
</thead>
</table>
| Use Aliases      | Display aliases when performing database retrievals rather than database member names. Aliases are alternate names for database members. You can retrieve data that uses the database name, which is often a stock number or product code, or an alias, which can be more descriptive.  
When this setting is updated, this message is displayed: "The OLAP Tree will be updated automatically with new Alias information and the OLAP Query will be re-processed." |
| Select an Alias Table | Specify the alias table to use for alias names. Each database can contain one or more alias tables. |

<table>
<thead>
<tr>
<th>Replacement</th>
<th>Description</th>
</tr>
</thead>
</table>
| #Missing Label   | Specify a label for missing values. For example, you might enter:  
#Missing  
By default, the replacement value for a missing label is blank. |
| #NoAccessLabel   | Specify a label for values from the Essbase cube to which a user does not have security access. For example, you might enter:  
NoAccess |
| Zero Label       | Specify a label for zero values. By default the replacement value for a zero label is blank. |

**Table 86  Label Indentation**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
</table>
| Indent Each Generation By | Select the number of characters by which each generation in the hierarchy is indented. For example, you can change the following indentation from 1 to 3. This option can take options from 0 to 25.  
indentation at 1:  
100–10  
100–20  
100–30  
indentation at 3:  
100–10  
100–20  
100–30  
100 |

**Drill Options**

Use the Drill tab to define the next level of data displayed when you drill down in a CubeQuery.
Additionally, the Member Retention option group contains items that enable you to customize drilling retention characteristics.

<table>
<thead>
<tr>
<th>Drill Level</th>
<th>Description</th>
</tr>
</thead>
</table>
| (Drill Level drop-down) | Defines the next level of data displayed when you drill down from the Query menu, or when you double click a member. Any drill down selection made from the shortcut menu overrides the selection made here. For example, if you select Bottom Level, data for the lowest level of members in a dimension is retrieved. A drill-down on Year retrieves: Jan, Feb, Mar, Apr, Ma, Ju, Jul, Aug, Sep, Oct, Nov, and Dec. Valid drill down levels are:  
  - Next Level  
  - Bottom Level  
  - All Descendants  
  - Sibling  
  - Same Level  
  - Same Generation |

<table>
<thead>
<tr>
<th>Member Retention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Include Selection</td>
<td>Retains the selected member along with the other members retrieved as a result of a drill down. For example, if you drill down on Qtr1, the data for Jan, Feb, and Mar, as well as Qtr1, is retrieved. When this option is disabled, the data for only for Jan, Feb, and Mar, is retrieved: Qtrl is eliminated. By default this option is enabled.</td>
</tr>
<tr>
<td>Within Selected Group</td>
<td>Applies (drilling) to only the group of members in which the selection is made. By default this setting is disabled. It is meaningful only when the report contains two or more dimensions of data down a report as rows or across a report as columns. This type of report is considered asymmetric, which is characterized by groups of nested members that differ by at least one member.</td>
</tr>
<tr>
<td>Remove Unselected Groups</td>
<td>Removes all dimension groups that are not in the selected group.</td>
</tr>
</tbody>
</table>

**Launching Smart View from CubeQuery**

A CubeQuery section can be exported to Oracle® Hyperion® for Office is a centralized interface which enables simultaneous use of multiple Oracle Hyperion products, and improves integration with Microsoft Office. You can export a CubeQuery section to Microsoft Excel as query-ready HTML. When you export content as query-ready HTML, the current page of the current CubeQuery section is converted to HTML and Hyperion-specific formatting is removed. This enables you to re-query the data source independent of the Web application. For more information about exporting a CubeQuery with , see Oracle® Hyperion For Office, Fusion Edition, Release 11.1.1.

**Note:** You cannot export content as query-ready HTML to a Firefox browser.
To launch Smart View from a CubeQuery section, select Actions, then Launch Smart View.


Dashboards

The Dashboard section is a streamlined, push button approach to querying a database. Dashboards are ideal for users who do not have the time to build a query or design a report section. Up to the minute thumbnail views of data allow you to explore what is behind trends and indicators.

On opening the file, you have a customized dashboard, which may show Gauges, Live Charts embedded reports and navigational buttons and boxes that allow you to retrieve data, and populate controls.

Each button selection, item selection, or navigation sequence can invoke a script created by a Designer. Behind the scene, Interactive Reporting refreshes the Dashboard script commands that allow you to retrieve data, populate controls, hide objects, navigate to different sections, and specify report parameters.

Embedded Section Objects

Results, Pivot, Chart, Table, OLAP, and CubeQuery sections can be embedded in any Interactive Reporting documents and viewed in EPM Workspace. Data is updated in EPM Workspace as it is updated in the original sections.

The limitations to Interactive Reporting document files embedded in a dashboard through an embedded browser or hyperlink control include:

- Online help is available through a toolbar or a dialog box.
- Number formatting options are not available.
- The Reference sub dialog box of the Computed Item dialog box is not available.

Embedded sections are added to the EPM Workspace in three modes:

- View-only—Can view static reports (The reports are displayed as thumbnails in the dashboard section—as currently defined in the native-report section. Users cannot interact with the reports.
- Hyperlink—Can navigate to original sections by clicking thumbnails.
- Active-Embedded section objects in active mode enables users to interact with reports. Selecting a live report activates it in-place for object specific functions such as drill down, pivoting, and other analysis.
**View-Only Embedded Section Objects**

Embedded section objects in view-only mode are designed to be static objects—that is, users cannot interact with the report beyond viewing its content. Only actions performed on the parent section of the embedded section object update it. Scroll bar behavior for view only objects depend on the scroll bar settings defined for the object:

- vertical and horizontal scroll bars always appear, and adjacent to but outside the defined object’s container boundary and do not obstruct the object
- vertical and horizontal scroll bars only appear when the object has focus (when the user selects the object). The scroll bars continue to show until the user selects another object, or tool bar.

**Active Embedded Section Objects**

Active embedded section objects allow you to select the embedded section object and perform selected tasks as you might with other object in the non-dashboard sections. This interaction is provided on the shortcut menus or the object, or by selecting embedded section object and clicking Shift+F10. Actions performed on the active embedded section object update the parent section, as do actions made by the parent section to the embedded section object.

Available options depend on the object and which tasks have been associated with it by the designer: The following list shows the default shortcut menu options for each embedded section object.

**Embedded Results Section Object shortcut menu options:**
- Sort Ascending
- Sort Descending
- Auto-size Column

**Embedded Pivot Section Object shortcut menu options:**
- Drill Anywhere (with sub-menu listing available columns from parent Results/Table)
- Drill Up
- Focus on Items
- Hide Items
- Show Hidden Items
- Show All Items
- Auto-Size Column Width
- Swing
  - Horizontal
  - Vertical
  - Up
  - Down
Left

Right

Before (submenu is also launched listing all top and side labels, listing them in a top-down, left-right order)

After (submenu is also launched listing all top and side labels, listing them in a top-down, left-right order)

- Sort Ascending
- Sort Descending
- Refresh Pivot

Embedded Chart Section Object shortcut menu options:

- Drill Anywhere
- Drill Up
- Focus on Items
- Hide Items
- Show Hidden Items
- Show All Items
- (Un)Group
- Show Negative Values
- Show Label
- Add Trend Line
- Sort
  - Ascending
  - Descending
- Zoom
  - Zoom In
  - Zoom out
  - Return to original
- Refresh Chart

Embedded OLAPQuery/CubeQuery Section objects (the list of available speed menu options is context sensitive and depends on what component of the report is selected, for example label, measure, handle. It also depends on the state when the component selection is made. For example if items have been hidden, if additional levels are available for drill down, and so on).

- Keep Only
- Remove Only
- Drill
• Down
• Up
• Next
• Bottom
• All Descendants
• Siblings
• Same Level
• Same Generation

• Drill
  • Down
  • Up
  • Next
  • Bottom
  • All Descendants
  • Siblings
  • Same Level
  • Same Generation

• Suppress
  • Missing rows
  • Missing Columns
  • Zero rows
  • Zero columns

• Drill-Through

• Column Width

• Row height

Scroll bar behavior for view only objects depend on the scroll bar settings defined for the object:

• vertical and horizontal scroll bars always appear, and adjacent to but outside the defined object’s container boundary and do not obstruct the object

• vertical and horizontal scroll bars only appear when the object has focus (when the user selects the object). The scroll bars continue to show until the user selects another object, or the tool bar.

**Report Section**

The Report section allows you to view high-quality and professionally designed reports. These reports can span anywhere from a complex critical operational report to a results sets, a chart,
and a pivot table. Use the reports in this section to help you evaluate your business, expand communications, and assist in the decision-making process.

The reports found here are dynamic and provide you with an almost unfiltered framework from which to view and analyze data. You can resort and apply data functions, which allow you to display different types of values.

**Paging Through the Report**

By default Interactive Reporting shows a fixed number of rows in a table when a user views a page in a browser. Often data extends beyond the vertical and horizontal rows shown on the page. To view your paging options, see the table below.

<table>
<thead>
<tr>
<th>Paging Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Page</td>
<td>The tooltip shows the current page in the report.</td>
</tr>
<tr>
<td>Page Left</td>
<td>Moves one page in the left direction. To move to the first page in the left direction, select [Shift] + Click + left arrow.</td>
</tr>
<tr>
<td>Page Up</td>
<td>Moves one page up. To move to the top page, select [Shift] + Click + Up.</td>
</tr>
<tr>
<td>Page Down</td>
<td>Moves one view in the down direction. To move to the first page in the down direction, select [Shift] + Click + Down arrow.</td>
</tr>
<tr>
<td>Page Right</td>
<td>Moves one page in the right direction. To move to the first page in the right direction, select [Shift] + Click + right arrow.</td>
</tr>
</tbody>
</table>
To view a Production Reporting document in EPM Workspace:

1. Run an Production Reporting job in EPM Workspace.
2. Double-click the job output and view the available output formats.

   Depending on the output formats selected when you ran the job, see “Output Options” on page 483, you can select from some or all of the following output formats:

   - Comma Separated Value file (CSV)
   - HP Printer file (PCL)
   - HTML file (HTML)
   - Interactive Reporting Data file (BQD)
   - Line Printer file (LP)
   - Listing file (LIS)
   - Microsoft Excel file (XLS)
   - Microsoft Word File (DOC)
   - Portable Document Format file (PDF)
   - PostScript file (PS)
   - PowerPoint file (PPT)
   - SQR Production Reporting Document (SPF)
   - Production Reporting Log file (LOG)
   - Production Reporting Output file (XML)

3. Select the desired output format and click Open.
Viewing Functionality for HTML Reports

When you view a Production Reporting document in an HTML format, you can navigate from page to page, move to a specific page, or browse with a table of contents.

Using the Navigation Bar

The navigation bar provides options for navigating to different pages within the HTML report and for viewing the report in multiple output formats.

Exporting Report Information from the Navigation Bar

The navigation bar displays icons for viewing an HTML report in different file formats. The icons that appear on the navigation bar are defined in the Navigation Bar tab in the SQR Production Reporting Studio preferences. (See the Hyperion SQR Production Reporting Studio User’s Guide for more information.) Table 88 describes the export options on the navigation bar.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Display Table of Contents</td>
<td>Displays the Table of Contents frame.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Display PDF file</td>
<td>Displays the report in a Portable Document Format (PDF) and launches it in a new browser window.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Download the Data in CSV (comma-delimited) format</td>
<td>Downloads the report data in a Comma Separated Value format (CSV) and displays it in a new browser window.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Download the Data in BQD format</td>
<td>Downloads the report data in a Brio Query Data format (BQD) format and displays it in a new browser window.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Display XML file</td>
<td>Displays the report in an XML format and launches it in a new browser window.</td>
</tr>
</tbody>
</table>

Note: The HTML navigation bar only displays a subset of all the available output formats. See “Viewing a Production Reporting Document” on page 331.

Using the Navigation Bar to Move Among Pages

You can navigate among the pages of a multi-page HTML report by using the paging options on the navigation bar. Table 89 describes the navigation options on the navigation bar.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Go to First Page</td>
<td>Displays the first page of the report in the current browser window.</td>
</tr>
</tbody>
</table>
Navigating with the Table of Contents

The table of contents offers standard functionality for navigating through a document. Figure 4 shows an HTML report with the table of contents displayed.

Figure 4  Table of Contents Displayed for an HTML Report
Presentations

Presentations, playlists of Web Analysis documents, enable documents to be grouped, organized, ordered, distributed, and reviewed. Presentations are lists of pointers that reference repository documents, not documents copied into sets.

Presentation properties govern display and content; file properties control identification, access, and security.

Presentation Access and File Permissions

Because file permission and presentation access operate independently, presentations may be distributed to users who cannot access the documents within them.

Documents for which users do not have list file permission are not listed; documents for which users do not have read file permission cannot be opened.

File permissions that withhold document access prevent all access, directly or through presentations. Presentation permissions that withhold access do not prevent direct document access.

User and Group Permissions

Users can access presentations assigned to them or the groups to which they belong.

Both presentations and the documents within them must be assigned to groups. Otherwise, group members can access the presentations but not the documents within them (unless granted individual access).

To mitigate the risk of conflicting permissions, store presentations and their documents in the same folder. Whenever possible, distribute documents and presentations to groups. It is easier to set permissions for all files in a folder and all users in a group than to manage permissions for individual files and users.

Document and Folder References

You can add two kinds of references to presentations:
● Document—When you add documents directly to a presentation, a reference to a unique
document identifier is created in the presentation. Wherever the document is moved, the
presentation can locate and present the document.

● Folders—When you add folders to a presentation, the folder reference is directly added to
Presentation Content, but documents in the folder are dynamically referenced. Documents
added or removed from the folder are automatically added or removed from presentations
referencing that folder.

Note: You cannot dynamically include descendant folders, or presentations in target
presentations. When adding a folder to a presentation, only documents immediately
in the selected folder are dynamically added to the target presentation.

Benefits and Considerations
Folder references simplify presentation maintenance because Web Analysis synchronizes
presentation playlists with referenced folder content. You can also change folder content without
editing its presentation. You must limit write access to the folder to prevent other users from
inadvertently adding content to a folder, and subsequently your presentation.

While document references are less flexible and require more maintenance, presentation content
is fixed.

Reference Reconciliation
When presentations are opened, Web Analysis first attempts to reconcile document references,
and then folder references.

If files are copied and the original file deleted, Web Analysis cannot locate the unique file
identifier. In this case, Web Analysis searches for files of the correct name at the same location.
When a reference cannot be found by means of identifier or location, the reference displays as
red in the Presentation Wizard.

Opening Presentations
Options for opening presentations:

● Select File, then Open, then Document or the open toolbar button, and select a presentation
file from the Open dialog box.

● Right click the document and Select Open As
  ○ Click HTML to open the document in an HTML editor.
  ○ Click Web Analysis Studio to open the document in Web Analysis Studio.

● Use the view pane Tools menu or Explore toolbar button to access the Explore module, and
  navigate to and select a presentation from a repository location.
To open a presentation, using the Open dialog box:

1. Perform an action:
   - Select File, then Open, then Document.
   - Select the open button.
     The Open dialog box displays. It lists current folder content, as specified by Look in.
   - Right click the document and Select Open As
     - Click HTML to open the document in an HTML editor.
     - Click Web Analysis Studio to open the document in Web Analysis Studio.

2. Optional: From Type, select All Files or Hyperion, then Presentation.

3. Navigate to the presentation:
   - From Look In, select a location from the drop down list.
   - Click the Go Up A Level button to display the contents of the parent folder in the selection frame.
     As you navigate, the selection frame lists the files and folders indicated by the Files of Type list.

4. Select the presentation.

5. Click OK.

   If the first presentation document uses a database connection requiring log on, the Database Login dialog box is displayed.

6. If prompted by the Database Login dialog, enter a valid user name and password, select Save User ID and Password, and click OK.

   The selected presentation (and any other selections) display as content tabs below the content area. The first presentation document is opened and displayed as the current document.

Notes on Opening Presentations

- In the Open dialog box, you can select documents, presentations, or both. Multiple files are opened in the order that the Selection frame lists them. The order of documents inside the presentation is observed in the context of the other files being opened.

- If multiple presentations contain multiple instances of a document, only the first instance is opened. It may seem that the document did not open or that documents opened in the wrong order. Only one instance of a document can be opened (and modified) at a time.

Closing Presentations

Unchanged files close. Changed repository files prompt for changes to be saved. Files not previously saved to the repository trigger the Save As dialog box.
To close all opened documents, select File, then Close All.

**Web Analysis Documents**

Web Analysis documents display in data objects the data values returned from data sources. A document can have multiple data objects, and data objects have a display type:

- Spreadsheet
- Chart
- Pinboard
- SQL spreadsheet
- Freeform grid

You can review all display types, but you can create spreadsheets and charts only by using the new document wizard.

To create a document you are required to specify:

- Data source—provides data values
- Data object—displays these values
- Query—gets data values from the data source and returns them to the data object.

Properties customize each of these elements.

The database connection wizard specifies the type of data source, logon credentials, database applications, dimension formatting and drill-through properties.

Each data object can be set to a display types that features specific formatting options.

Queries can be explicit, requesting information on particular dimension members, or dynamic, requesting information about any dimension member that satisfies a set of criteria.

You have two document creation options:

- Use the new document wizard
- Modify Web Analysis documents and save them under new names or to new locations

**Creating Web Analysis Documents**

A wizard guides you through creating Web Analysis spreadsheets and charts. The wizard requires a database connection. You must know where this database connection is located, and have permission to use it.

To create a document, using the new document wizard:

1. Select File, then New, then Document, or select the toolbar New Document button.
Depending on the modules installed, you may be prompted to indicate the kind of document you want to create.

2 Optional: To create a Web Analysis document, select Create a Web Analysis document, and click Next.

If you are not prompted, proceed to the next step.

The content area displays Select a Data Source. Because the repository stores document definitions and not document data, you must identify a data source and the parameters for connecting to it.

3 Perform one:
   - In the text area, enter the path, including the file name, from the root directory (/) to a database connection.
   - Click Browse, select a database-connection file from the Open dialog box, and click OK.

4 Optional: Select Use my active POV, to populate the query from a predefined point of view definition, and click Next.

Performing this step enables you to load members from predefined point of view definitions and to insert dimensions and members with one click. You can define many point of view definitions, but Use my active POV applies only the definition set in user preferences as the current point of view.

5 Optional: Select Automatically select one dimension, to populate and display a simple spreadsheet, and click Finish.

Performing this step skips the remaining steps, and uses the highest aggregate members of the time and measures dimensions to populate spreadsheet row and column axes (the quickest method to use the new document wizard to display a spreadsheet).

Selecting Automatically select one dimension and Use my active POV and clicking Finish, skips the remaining steps and displays a simple spreadsheet using the current point of view definition.

6 Optional: Select Use Cube Navigator instead of Wizard and click Next to view the Select Layout dialog box.
   - Select a layout and click OK
     
     The Cube Navigator dialog box is displayed.
   - Select the appropriate dimensions and members and click OK to render the report.

7 Click Next.

In Select Row Dimension, you must select the dimensions to be used on the Rows axis. You are required to have at least one row axis dimension and one column axis dimension.

8 To move a dimension name from Filters to Rows, select the name, and click the right arrow.

The dimension name is displayed in the Rows frame. If no point of view definition was previously applied, the highest aggregate member of the dimension is used. If a point of view definition was applied, its members are used.
9 Optional: To select members, in Rows, double-click a dimension name.

The Dimension Browser dialog box displays. The dimension is presented as a node tree in the Browse frame. You select members from the Browse frame and move them to the Selections frame, using the following methods:

- To expand or contract the hierarchy, click the plus sign (+) or minus sign (-) nodes, or double-click the dimension name.
- To select members, right-click the dimension name, and select Select Member. Member names are displayed in the Selections list.
- To select members dynamically, right-click a member name, and select an advanced member selection method.
- Set the label mode for each dimension to the default label, an ID label, or the alias table description set in database connection properties.

For descriptions of Dimension Browser dialog box options, see “Selecting Members” on page 344.

10 After indicating row-axis dimensions and selecting members, click Next.

11 Using the methods used to define the row axis, move a dimension name from Filters to Columns.

12 Optional: To select members, double-click a dimension name in Columns.

13 Using Dimension Browser methods, select members, set options, and click OK.

14 Click Next.

In Step 5, you select page-axis dimensions. Although document intersections are relative to member selections, you can organize row and column intersections by page members.

15 Optional: Using the methods used to define row and column axes, move a dimension name from Filters to Pages.

16 Optional: Using Dimension Browser methods, select page members.

17 Click Next.

In Step 6, you select filter-axis members.

All dimensions participate in all spreadsheet intersections, regardless of the axes to which dimensions are assigned. Intersection arrangement is defined by row, column, and page axes. Data values displayed at intersections are determined by member selections.

All data-object intersections are relative to filter member selections, which focus intersections, data values, and, consequently, data-object analysis.

Filter-axis dimensions are by default represented by the highest aggregate member defined in the data source outline. If a point of view definition was applied, its member selections are used. If you select Filter members, all intersections are relative to the selections.

18 Optional: To display the Dimension Browser for Filter axis dimensions, double-click a dimension name.

19 Optional: Using Dimension Browser methods, select Filter axis members, and click OK.

20 Click Next.

21 Optional: Select a layout option:
Chart—displays the result set as a chart data object.

Spreadsheet—displays the result set as a spreadsheet data object.

Vertical Combination—displays the result set as both a chart data object and a spreadsheet data object stacked vertically.

Horizontal Combination—displays the result set as both a chart data object and a spreadsheet data object arranged side-by-side.

You can change the display type of Vertical and Horizontal Combination layouts; for example, you can convert the spreadsheet to another chart type. The objects, however, are linked and maintain a coordinated context.

22 Click **Finish** to submit the query to the data source.

The data source is queried. The result set returned displays as a data object (or objects) on a Web Analysis document.

---

**Creating Documents from Documents**

When you save documents with new names or to new locations, you use data sources, data objects, and queries defined in existing documents, leveraging documents to save time and effort. You can modify documents before you save them to new names or locations.

To create a document from a document:

1. **Perform one:**
   - Select File, then Open, then Document.
   - Select the open button.
     - The Open dialog box displays. A selection frame lists contents of the current folder, specified by Look in.
   - Right click the document and Select **Open As**
     - Click HTML to open the document in an HTML editor.
     - Click Web Analysis Studio to open the document in Web Analysis Studio.

2. **Optional:** From Type, select All Files or Hyperion, then Web Analysis Document.

3. Navigate to the document to be copied.

4. Select the document, and click **Open**.
   - If the document uses a database connection requiring log on, the Database Login dialog box displays.

5. If prompted by the Database Login dialog, enter a valid user name and password, select Save User ID and Password, and click **OK**.
   - The selected document displays.

6. **Modify the document.**

7. **Perform one:**
Select File, then Save As.  
Click the toolbar Save As button.  

The Save As dialog box displays. A selection frame lists the contents of the current folder, as specified by Look in.

8 Navigate to the folder into which to save your modified document.

9 Optional: After you navigate to the location to save the file, enter a new filename in Name.

10 Click Save.

The modified document is saved to the specified location with the specified name.

Modifying Queries

Data Layout is a query editing interface. Data Layout displays dimensions returned by the database connection, arranged on four axes:

- Rows
- Columns
- Pages
- Filters

Database connections return three types of dimensions.

<table>
<thead>
<tr>
<th>Table 90</th>
<th>Dimension Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Icon</td>
<td>Dimension Type</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Standard</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Attribute</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Attribute Calculations</td>
</tr>
</tbody>
</table>

All queries must have at least one dimension assigned to the row axis and one dimension assigned to the column axis; multiple dimensions can be nested on one axis. You can organize row and column dimensions by assigning dimensions to the page axis. Dimensions not assigned to rows, columns, and pages are in the filter axis.

All dimensions, regardless of the axes to which they are assigned, participate in all intersections displayed by a data object. You use Data Layout to arrange dimensions, to specify level of detail, and to set query options.

Note: All data objects start as spreadsheets. Charts and pinboards are organized by the four axes, despite using different metaphors to display data.
To redefine the query and dimension layout of the current data object of the current document, click the toolbar Data Layout button.

To move a dimension between axes, drag the dimension to the other axis.

To select members, double-click the dimension name.

Dimension Browser is displayed. See “Selecting Members” on page 344.

Modifying Filter Dimensions

All data-object intersections are relative to filter member selections, which focus intersections and data values, and consequently, analysis.

Filter-axis dimensions are by default represented by the highest aggregate member defined in the data source outline. To focus analysis on members other than the highest aggregate, you can select filter members.

Filter member selections do not rearrange dimensions or reorganize pages, but focus analysis on specific intersections.

Selecting Members

Dimension Browser, an interface for selecting members and refining database queries, is used with the new document wizard, Cube Navigator dialog box, Information panel, or on its own.

The Dimension Browser presents dimensions as a node tree in the Browse frame. You must select dimension members from this Browse frame and move them to the Selections frame.

Members can be selected individually, by familial relationships, by data-source-specific option, or from predefined selection lists.

To access Dimension Browser:

- Right-click a member label on a data object, and select Browse.
- In the view pane Information panel, select a dimension name.
- Click the Data Layout button, and double-click a dimension name.
- In the new document wizard, double-click a dimension name.

To expand or collapse hierarchies in Dimension Browser, click the plus sign (+) or minus sign (-) nodes, or double-click a dimension name.

To select a member, right-click the member, and select Select Member.

The member name is displayed in the Selections list. You cannot select the database connection name at the top of the node tree.
To select a member dynamically in Dimension Browser, right-click the member, and select an advanced member selection method from the list. See “Advanced Member Selection” on page 345.

To remove a member from the Selections list, perform an action:
- Right-click the member in the Browse or Selections list, and deselect the selected selection method.
- Select the member in the Selections list, and click Remove.

To remove all members from the Selection list, click Remove All.

To preview members returned by advanced member selection, before you quit Dimension Browser, click Preview.

To set dimension label mode, select a Dimension Labels option.
- Use Default
- Descriptions—the current alias table
- IDs—the unique ID label
- Both—ID label and description (used in Financial Management)

The label displayed by description is drawn from the alias table specified by the active user’s database preferences. You can set an alias table for each Active Preferences user ID or group ID. Users can specify label mode in specific dimensions, using Dimension Browser.

Advanced Member Selection

In dimensions with large member sets, users can define selections by using the Dimension Browser right-click menu. Right-clicking member names enables selection by familial relationship and data-source-specific options.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select Member</td>
<td>Selects the currently member</td>
</tr>
<tr>
<td></td>
<td>Also Select Children</td>
<td>Selects the current member and its children</td>
</tr>
<tr>
<td></td>
<td>Also Select Descendants</td>
<td>Selects the current member and its descendants</td>
</tr>
<tr>
<td></td>
<td>Select Parent</td>
<td>Selects the parent of the current member</td>
</tr>
<tr>
<td></td>
<td>Also Select Ancestors</td>
<td>Selects the current member and its ancestors</td>
</tr>
<tr>
<td>Icon</td>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Also Select Siblings</td>
<td>Selects the current member and members on its level and of its parent.</td>
</tr>
<tr>
<td></td>
<td>Select Dim Bottom</td>
<td>Selects lowest-level members</td>
</tr>
<tr>
<td></td>
<td>Select Dim Top</td>
<td>Selects the highest ancestor</td>
</tr>
<tr>
<td></td>
<td>Also Select Level</td>
<td>Selects the current member and all members on its level</td>
</tr>
<tr>
<td></td>
<td>Also Select Generation</td>
<td>Selects the current member and all members of its generation</td>
</tr>
<tr>
<td></td>
<td>Also Select Previous</td>
<td>Displays the Previous Selection dialog box, typically used to select previous members at the current level</td>
</tr>
<tr>
<td></td>
<td>Also Select Subset</td>
<td>Displays the Subset dialog box, used to select an Analytic Services member subset.</td>
</tr>
<tr>
<td>No Icon</td>
<td>Substitution Variables</td>
<td>Displays the Substitution Variables dialog box, used to set a substitution variable as the dimension selection</td>
</tr>
<tr>
<td>No Icon</td>
<td>User Defined Fields</td>
<td>When Financial Management is used as a data source, displays the User Defined Fields dialog box, in which you can specify one of three pre-defined attribute values, select members featuring the specified attribute values, and compose compound selection statements with AND and OR</td>
</tr>
<tr>
<td>No Icon</td>
<td>Dynamic Time Series</td>
<td>Displays the Analytic Services Dynamic Time Series menu (for example: History To Date, Quarter To Date)</td>
</tr>
<tr>
<td>No Icon</td>
<td>Search</td>
<td>Displays the Search dialog box, in which you use search criteria to locate members of large dimensions (adds found members to the Selection list)</td>
</tr>
<tr>
<td>No Icon</td>
<td>Find In Tree</td>
<td>Locates members in large dimensions; expands the dimension hierarchy but does not add found members to the Selection list</td>
</tr>
</tbody>
</table>

**Advanced Member Selection by Data Source**

Different data sources support different member selection methods.
<table>
<thead>
<tr>
<th>Data Source</th>
<th>Advanced Member Selection Methods</th>
</tr>
</thead>
</table>
| Analytic Services | ● Also Select Children  
● Also Select Descendants  
● Select Parent  
● Also Select Ancestors  
● Also Select Siblings  
● Select Dim Bottom  
● Select Dim Top  
● Also Select Level  
● Also Select Generation  
● Also Select Previous  
● Select Subset  
● Substitution Variables  
● Dynamic Time Series  
● Search  
● Find in Tree |
| SAP BW | ● All Members  
● Select Dim Top  
● Select Dim Bottom  
● Also Select Descendants  
● Select Parent  
● Also Select Ancestors  
● Also Select Children  
● Also Select Siblings  
● Also Select Level  
● Select At Level  
● Also Select Previous  
● Also Select Next  
● Dynamic Time Series  
● Select Top/Bottom  
● Filter on Member Properties  
● Find in Tree |
Consider relational-hierarchy implications in advanced member selections on relational data sources. When highest ancestors are selected, default members, rather than aggregations, may be used. For example, the relational hierarchy may equate Also Select Children and Also Select Descendants.

### Searching for Members

Analytic Services and Financial Management users can locate members in large dimensions by using search criteria. Searches can be conducted inside Dimension Browser (during query creation) or from the data-object right-click menu (during document analysis).

1. **Right-click a member.**
2. **Select Search.**
3. **Enter search criteria in the text boxes.**

<table>
<thead>
<tr>
<th>Search Criteria</th>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member</td>
<td></td>
<td>Searches by text string</td>
</tr>
<tr>
<td>Mode</td>
<td>ID</td>
<td>Searches by member name</td>
</tr>
</tbody>
</table>
Search Criteria | Control | Description
--- | --- | ---
Description |  | Searches by member alias
Both |  | Searches by ID and description (Financial Management data sources only)
Find In Tree |  | If Expand Tree is selected, adds found members to the Selections list and expands the Browse node tree to display the members in the hierarchy (only the first search-criteria instance is selected)
If Expand Tree is not selected, adds found members to the Selections list
Range |  | Searches the entire dimension or down the hierarchy from the right-clicked member
Option | Whole | Searches for the whole member name or alias
Substring |  | Searches for the first, last, or middle part of the member name, in the order entered in the member text box
Beginning |  | Searches for the start of the member string
Ending |  | Searches for the end of the member string.

4 Click OK.

To search for Analytic Services members in a Web Analysis data object:
1 Right-click a member, and select Search from the right-click menu.
2 Enter search criteria in the text boxes, and click OK.

**Note:** Search performance is directly related to size and complexity of the dimension hierarchy.

### Searching for SAP BW Characteristics

SAP BW users can locate characteristics in large dimension hierarchies by using search criteria. The searches can be conducted only inside Dimension Browser during composition of a query.

To locate SAP BW members in Dimension Browser:
1 Right-click a member.
2 Select Search.
3 Enter search criteria in the text boxes.

<table>
<thead>
<tr>
<th>Search Criteria</th>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>ID</td>
<td>Searches by member technical name</td>
</tr>
<tr>
<td>Description</td>
<td></td>
<td>Searches by member alias</td>
</tr>
<tr>
<td>Search Criteria</td>
<td>Control</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>Search Criteria</td>
<td></td>
<td>Searches using an operand:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Equal To</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● &gt;=</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● &lt;=</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● &gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● &lt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Between</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Contains Pattern</td>
</tr>
<tr>
<td>Filtered Members</td>
<td></td>
<td>Searches by text string.</td>
</tr>
<tr>
<td>Execute</td>
<td></td>
<td>Runs the search function</td>
</tr>
<tr>
<td>Selected Members</td>
<td></td>
<td>Displays members of the search result set</td>
</tr>
<tr>
<td>Add</td>
<td></td>
<td>Moves the selected member from the Filtered Members list to the Selected Members list.</td>
</tr>
<tr>
<td>Remove</td>
<td></td>
<td>Moves the selected member from the Selected Members list to the Filtered Members list</td>
</tr>
<tr>
<td>Add All</td>
<td></td>
<td>Moves all filtered members to the Selected Members list</td>
</tr>
<tr>
<td>Remove All</td>
<td></td>
<td>Moves all selected members to the Filtered Members list</td>
</tr>
<tr>
<td>OK</td>
<td></td>
<td>Adds the Search Selected Members list to the Dimension Browser Selections list</td>
</tr>
</tbody>
</table>

4 **Click Execute** to run the search function using the criteria specified in the Mode and Search Criteria group boxes.

The search result set is displayed in the Filtered Members box.

5 **Select members from the Filtered Members list, and click Add to add them to the Selected Members list.**

Only Selected Members list members are added are added to the Dimension Browser Selections list when you click OK.

6 **Click OK.**

## Locating Members

In large or complex dimension hierarchies, you can locate known members to select other members, rather than composing search strings for unknown members.

➤ To find a known member in the dimension hierarchy:

1 **In Dimension Browser, from Selections, right-click a member.**

2 **Select Find In Tree.**
In the Browse frame, the dimension hierarchy is expanded, and the first instance of the selected member is highlighted. You can now select members based on their relationship to the selected member.

**Selecting Members Using Analytic Services Subsets**

Analytic Services users can define rules that select dimension member subsets by criterion. These rules are composed of the following items:

- UDA — user-defined attributes
- Generation — generation within the dimension hierarchy
- Level — level within the dimensional hierarchy
- Expression — pattern of wildcard characters
- Attribute dimensions — database-defined attributes
- Conditional logic — advanced subset member selection criteria

You can search all selected member descendants using a maximum of 50 subset conditions. Subset criteria are saved by document in the repository. Because the filter panel cannot accommodate lengthy selection lists, subset member selections made in Filters are summarized with a description.

➢ To define a member subset selection:

1. **In Dimension Browser, right-click a member.**
2. **Select Select Subset.**
   The Subset dialog box displays. At the top, it indicates dimension members against which the rule is applied. Use the Individual Selection Rule control to compose a rule by selecting components from drop down lists.
3. **Select a type: UDA, Generation, Level, Expression, or Attribute.**
4. **Select an operand:** is (=) or is not (not equal).
5. **From the last list, select a value.**
6. **Click Add.**

You must add the rule to Total Subset Definition for it to be used. You can define compound and conditional rules by adding multiple rules to the definition and using the Advanced button to connect them.

<table>
<thead>
<tr>
<th>Option</th>
<th>Submenu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add</td>
<td></td>
<td>Rule added to Total Subset Definition</td>
</tr>
<tr>
<td>Update</td>
<td></td>
<td>Rule replaced by another rule</td>
</tr>
<tr>
<td>Validate</td>
<td></td>
<td>Parenthetical syntax of Total Subset Definition verified</td>
</tr>
<tr>
<td>Option</td>
<td>Submenu</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Remove</td>
<td></td>
<td>Rule deleted from Total Subset Definition</td>
</tr>
<tr>
<td>Remove All</td>
<td></td>
<td>All rules deleted from Total Subset Definition</td>
</tr>
<tr>
<td>Connect</td>
<td>And</td>
<td>AND inserted at end (AND is used by default when multiple rules are added to the definition.)</td>
</tr>
<tr>
<td></td>
<td>Or</td>
<td>OR inserted at end</td>
</tr>
<tr>
<td>Move</td>
<td>Move Up</td>
<td>Rule moved up in Total Subset Definition</td>
</tr>
<tr>
<td></td>
<td>Move Down</td>
<td>Rule moved down in Total Subset Definition</td>
</tr>
<tr>
<td>Parenthesis</td>
<td>Add (</td>
<td>Open parenthesis inserted at beginning</td>
</tr>
<tr>
<td></td>
<td>Add )</td>
<td>Close parenthesis inserted at end</td>
</tr>
<tr>
<td></td>
<td>Remove (</td>
<td>Open parenthesis deleted</td>
</tr>
<tr>
<td></td>
<td>Remove )</td>
<td>Close parenthesis deleted</td>
</tr>
<tr>
<td></td>
<td>Remove All ()</td>
<td>All parentheses deleted from Total Subset Definition</td>
</tr>
<tr>
<td>Substitution Variable</td>
<td></td>
<td>Substitution Variable dialog box presented, enabling you to select a predefined substitution variable for the rule value</td>
</tr>
</tbody>
</table>

### 7 Optional: To compose a compound subset definition, repeat steps 3 through 6.

### 8 Click OK.

**Wildcard Characters**

Supported wildcard characters include the question mark (?) and the asterisk (*), which can be used only once in an expression and only at the end of a text string.

**Expressions**

Subset queries defined by expressions are not dependent upon label mode, returning all strings satisfying the expressions regardless of the alias table. Users must determine whether value sources are ID, description, or from alias tables and refine queries as needed.

**UDAs**

Web Analysis enables Analytic Services users to create user-defined attributes (UDAs), words or phrases associated with and defining characteristics of members, for member subsets.

**Selecting Financial Management User-Defined Fields**

Financial Management users can select members with specified attribute criteria. User-defined fields define compound selection rules for attributes of a specified value.
To define a user-defined field selection:

1. In Dimension Browser, right-click a member.
2. Select User Defined Field.
   The User Defined Field Selection dialog box is displayed. The controls at the top prompt you to compose a rule.
3. Select a field: UserDefined1, UserDefined2, or UserDefined3.
   The equal sign is the sole operand for the rule.
4. Enter a value.
5. Click Add.
   To be used, the individual rule must be added to the Selection Criteria. Define compound and conditional rules by adding multiple rules to the frame, and using Advanced options to connect them.

Table 96  Advanced User-Defined Field Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Submenu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add</td>
<td></td>
<td>Rule added to Selection Criteria</td>
</tr>
<tr>
<td>Update</td>
<td></td>
<td>Rule replaced by another rule</td>
</tr>
<tr>
<td>Remove</td>
<td></td>
<td>Rule deleted from Selection Criteria</td>
</tr>
<tr>
<td>Remove All</td>
<td></td>
<td>All rules deleted from Selection Criteria</td>
</tr>
<tr>
<td>Connect</td>
<td>And</td>
<td>AND inserted at end (AND is used by default when multiple rules are added to the definition.)</td>
</tr>
<tr>
<td></td>
<td>Or</td>
<td>OR inserted at end</td>
</tr>
<tr>
<td>Move</td>
<td>Move Up</td>
<td>Rule moved up in Selection Criteria</td>
</tr>
<tr>
<td></td>
<td>Move Down</td>
<td>Rule moved down in Selection Criteria</td>
</tr>
<tr>
<td>Parenthesis</td>
<td>Add (</td>
<td>Open parenthesis inserted at beginning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Add ) Close parenthesis inserted at end</td>
</tr>
<tr>
<td></td>
<td>Remove (</td>
<td>Open parenthesis deleted</td>
</tr>
<tr>
<td></td>
<td>Remove )</td>
<td>Close parenthesis deleted</td>
</tr>
</tbody>
</table>

6. Optional: To compose compound subset definitions, repeat steps 3 through 5.
7. Click OK.

Filtering by SAP BW Member Properties

SAP uses the term member properties to refer to member attributes. You can select SAP BW members and filter them by their member properties. You select the members and then define filtering definitions on the selections.
To select SAP BW members by their member properties:

1. **In Dimension Browser**, select a member.
   
   The member is displayed in the Selection frame.

2. Right-click the member, and select **Filter on Member Properties**.
   
   The Member Properties dialog box is displayed. The controls at the top prompt you to compose a rule.

3. From the list, select a member property.

4. Select an operand.

5. In the text area, enter a value for the member property.

6. Click Add.
   
   You must add the rule to the filter definition for it to be used. You can use multiple rules to create compound definitions.

<table>
<thead>
<tr>
<th>Option</th>
<th>Submenu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add</td>
<td></td>
<td>Rule added to the filter definition</td>
</tr>
<tr>
<td>Update</td>
<td></td>
<td>Rule replaced by another rule</td>
</tr>
<tr>
<td>Remove</td>
<td></td>
<td>Rule deleted from the filter definition</td>
</tr>
<tr>
<td>Remove All</td>
<td></td>
<td>All rules deleted from the filter definition</td>
</tr>
<tr>
<td>Parenthesis</td>
<td>Add (</td>
<td>Open parenthesis inserted at beginning</td>
</tr>
<tr>
<td></td>
<td>Add )</td>
<td>Close parenthesis inserted at end</td>
</tr>
<tr>
<td></td>
<td>Remove (</td>
<td>Open parenthesis deleted</td>
</tr>
<tr>
<td></td>
<td>Remove )</td>
<td>Close parenthesis deleted</td>
</tr>
<tr>
<td>Connect</td>
<td>And</td>
<td>AND inserted at end (AND is used by default when multiple rules are added to the definition.)</td>
</tr>
<tr>
<td></td>
<td>Or</td>
<td>OR inserted at end</td>
</tr>
<tr>
<td>Move</td>
<td>Move Up</td>
<td>Rule moved up in the filter definition</td>
</tr>
<tr>
<td></td>
<td>Move Down</td>
<td>Rule moved down in the filter definition</td>
</tr>
</tbody>
</table>

7. **Optional**: To compose compound definitions, repeat steps 3 through 6.

8. Click **OK**.

**Using SAP BW Select Top/Bottom**

SAP BW enables you to limit the size of and rank query result sets. You select members and then define filtering definitions on the selections.
To limit and rank SAP BW members as part of the query:

1. In Dimension Browser, select a member.
   The member is displayed in the Selection frame.

2. Right-click the member, and select Select Top/Bottom.
   The Top/Bottom dialog box is displayed.

3. Select Top or Bottom.
   You cannot select both, as you can with Analytic Services.

4. From Using Function, select Percent, Sum, or Count.
   You can determine rank by only one method.

5. In the text area, enter a value for the selected method.
   For Percent, use a value between one and one hundred. For Sum, enter a threshold. All
   member values summed up to and including the threshold are returned. For Count, provide
   an integer, to indicate how many top or bottom members to return.

6. In Order By, select a dimension.
   Because all dimensions participate in all intersections, you must identify the intersection by
   which the selected dimension is ranked.

7. Optional: Click Selection.
   Dimension Browser for the Order By dimension is displayed. You can select a member of
   the Order By dimension by which to rank the selected dimension.

8. Click OK.

Selecting Financial Management Member Lists

Member lists are predefined variables, used for frequently changing information, created using
Financial Management, and identified by variable names.

To use a Financial Management member list in a Dimension Browser member selection:

1. In Dimension Browser, right-click a member.

2. Select Member List.

3. From Choose Member List, select a member list.

4. Click OK.

Selecting Substitution Variables

Substitution variables are predefined variables, used for frequently changing information, created using Analytic Services, and identified by variable names.
Substitution variables simplify document maintenance, enabling fluctuating values to be adjusted centrally (in Analytic Services) and to be referenced dynamically (by Web Analysis documents).

To use a substitution variable in a Dimension Browser member selection:

1. In Dimension Browser, right-click a member.
2. Select Substitution Variable.
3. Select a substitution variable.
4. Click OK.

Multiple Substitution Variables

Multiple substitution variables can be used using Subset Member Selections.

Syntax Tips

Substitution variables have specific rules and syntax requirements:

- For substituted values, use dimension or member names.
- Do not use ampersands (&) as the first character of member names.

Analysis Tools and Substitution Variables

When member selections defined by substitution variables are used in analysis tool definitions, the variables are resolved to their current values, ensuring accurate aggregations, comparisons, and calculations, regardless of the substitution-variable definition.

Selecting Personal Variables

Personal variables, containers for ad hoc collections of otherwise unrelated members, enable users to define and name complex member selections. To leverage personal variables, you must be presented with relevant dimensions and database connections.

Defining personal variables does not include them in queries. You select personal variables from Dimension Browser when you define queries.

To use a personal variable in a query, select the personal variable definition from the Dimension Browser Browse panel.

Applying Point of View (POV)

POV database preferences enable users to insert dimensions and members into the documents of others. Definitions must be defined and activated for specific database connections.
When a POV is activated, the Use Point of View check box in the new document wizard is enabled. Documents created when Use Point of View is selected use the active POV.

EPM Workspace users cannot create or activate POV definitions. But, they can select database connections with activated POV definitions and apply the definitions to documents that they are creating. EPM Workspace users cannot apply POV definitions to documents.

POV definitions consist of axes and member selections. Entire definitions are used when documents are created with activated POVs.

If all POV member selections are custom filters, you may not see changes in your document. You can check Point of View, of the view pane Information tab, to see which POV, if any, is applied.

- Using POV definitions is a three-part process:
  1. Use Web Analysis Studio to create a POV definition.
  2. Use Web Analysis Studio to activate the definition.
  3. Set a document (existing or newly created) to use the definition.

- To apply an activated POV definition to a new document:
  1. Perform an action:
     - Select File, then New Document.
     - Click the new button.
     - The steps for creating documents are displayed.
  2. Click Browse.
  3. From the Open dialog box, select the file of the database connection that uses the activated POV definition that you want to use, and click OK.

**Defining Dynamic Time Series Selections**

You can select Dynamic Time Series (DTS) definitions, created in Analytic Services, for query selection statements. To define time periods, users select DTS definitions and time members.

**Time Substitution Variables**

You can select DTS substitution variables.

Substitution variables are predefined placeholders, used for frequently changing information, identified by variable names, and having temporary values that define data type. When substitution variables are used, temporary values are replaced by current values. Substitution variables are stored at the database level in Analytic Services.

- To define a DTS selection:
  1. In Dimension Browser, right-click a time member.
2 Select Dynamic Time Series.
   The Dynamic Time Series dialog box is displayed, listing DTS definitions as option buttons and substitution variables in a list.

3 Select a DTS definition option.

4 Perform an action:
   - Select the Substitution Variables tab, and then select a substitution variable.
   - Select the Members tab, and then select a member to represent the date in the X-to-date definition.

5 Click OK.

Defining Previous Member Selections

Selecting Also Select Previous from the Dimension Browser right-click menu displays the Also Select Previous dialog box, used to select previous members at one dimension level.

To define a previous member selection:

1 In Dimension Browser, in Browse, right-click a member.

2 Select Also Select Previous.
   The Also Select Previous dialog box is displayed.

3 Specify how many previous members to retrieve.

4 Click OK.
   Dimension Browser is displayed. The member that you right-clicked is displayed in the Selections list with the Also Select Previous icon.

Navigating Data Objects and Sources

Web Analysis documents can contain a variety of data objects:

- Spreadsheets
- Charts
- Pinboards
- SQL spreadsheets
- Freeform grids

Despite their diversity, data objects are not static. You can rearrange, expand, change, and concentrate dimension intersections. These methods, called navigation methods, enable travel through dimensional hierarchies.

Navigation methods are specific to data object and data source.
Table 98  Supported Data Sources

<table>
<thead>
<tr>
<th>Type</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>OLAP</td>
<td>Analytic Services</td>
</tr>
<tr>
<td></td>
<td>IBM DB2 OLAP Server</td>
</tr>
<tr>
<td></td>
<td>SAP BW</td>
</tr>
<tr>
<td>Hyperion</td>
<td>Financial Management</td>
</tr>
<tr>
<td></td>
<td>Planning</td>
</tr>
<tr>
<td>Relational</td>
<td>IBM DB2 Enterprise Server Edition</td>
</tr>
<tr>
<td></td>
<td>Microsoft SQL Server</td>
</tr>
<tr>
<td></td>
<td>Oracle</td>
</tr>
<tr>
<td></td>
<td>Teradata</td>
</tr>
<tr>
<td></td>
<td>Other JDBC RDBMS</td>
</tr>
</tbody>
</table>

OLAP data sources support the navigation methods described in this chapter. Other Hyperion data sources and relational data sources support fewer navigation methods.

Navigation Methods

EPM Workspace uses various navigation methods:

Table 99  Navigation Methods

<table>
<thead>
<tr>
<th>Navigation</th>
<th>Description</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Move</td>
<td>Relocates dimensions on data-layout axes</td>
<td>Position dimensions on or between axes, using the Data Layout dialog box, Information panel, or new document wizard</td>
</tr>
<tr>
<td>Paging</td>
<td>Maintains dimensions on their row and column axes, while changing their intersections on the page axis</td>
<td>Click or scroll the Page Control panel. See “Paging” on page 360.</td>
</tr>
<tr>
<td>Keep Only</td>
<td>Retains one member of the selected dimension, while deselecting all other members</td>
<td>Right-click a member and select Keep Only. See “Keep Only” on page 361</td>
</tr>
<tr>
<td>Remove Only</td>
<td>Deselects the selected member, removing it from the query result set</td>
<td>Right-click a member, and select Remove Only. See “Remove Only” on page 361.</td>
</tr>
<tr>
<td>Drilling</td>
<td>Increases or decreases dimension detail by displaying or not displaying members in the hierarchy</td>
<td>Double-click members. You can customize drilling behavior. See “Drilling” on page 361.</td>
</tr>
<tr>
<td>Drill-Linking</td>
<td>Navigates to other documents or executables</td>
<td>Click a linked cell and pass the cell and the dimension context to another data object or document</td>
</tr>
<tr>
<td>Custom Controls</td>
<td>Define Web Analysis navigation</td>
<td>Use a custom document component to change the query. While Web Analysis users can use custom document components, you can only create these components in the Web Analysis Studio.</td>
</tr>
</tbody>
</table>
Repositioning Dimensions

You can rearrange intersections by repositioning dimensions on or between axes.

To reposition a dimension, using the Data Layout dialog box, click the data layout button, and drag the dimension from its current positions to another position on the current axis or to another axis.

Note: Document creators use Properties to lock the ability to swap and move dimensions.

To reposition a dimension, using the view pane Information panel:

1. Select View, then View Pane.
2. Click the information panel button to make Information the current tab.
3. Scroll to the Filter, Page, Row, and Column trees to review placement of the current data object.
4. Drag the dimension from one axis tree to another axis tree.

Note: You must have at least one row and one column dimension. If repositioning leaves a row or column axis empty, use Data Layout to rearrange the dimension layout.

Paging

Paging maintains dimensions on row and column axes, while changing their intersections on the Page axis.

You can jump or scroll through pages of intersections by using the Page Control panel.

To display the Page Control panel, select View, then Pages.

The Page Control panel displays in the content area above the relevant data object, organizing Page axis intersections so that each page is relevant to one Page member.

To navigate the Page dimension, perform an action:

- Click < and > to move up and down in the page series.
- From the list box, select a page member by name.
Pages

Think of the Page axis as the Z-axis of a three-dimensional graph. Visualize a stack of spreadsheets. You navigate the stack to compare values among pages. The spreadsheets represent Page axis dimensions, and the pages represent Page axis members or member combinations.

Multiple-Page and Single-Page List Boxes

When you work with page dimension combinations, the Page Control panel can display multiple-page list boxes, which display all possible page combinations, whether or not data exists. Single-page list boxes omit page combinations that do not contain data. Oracle recommends using single-page list boxes when working with sparse dimensions.

To separate or combine Page dimensions into multiple-page list boxes, click Toggle Multipage.

Keep Only

Keep Only deselects all but one member of the selected dimension.

To deselect all but one member of a dimension, right-click the member, and select Keep Only.

Remove Only

Remove Only deselects a member, removing it from the query result set.

To remove one member from the query result set, right-click a member, and select Remove Only.

Drilling

Drilling increases or decreases data-object detail by changing the member display. Because drilling is customizable, the term drilling refers to almost any hierarchical navigation prompted by clicking a dimension label.

Three types of drilling options:

- Drilling options specify the result set.
- Expand on Drill specifies whether the result set replaces or augments the currently displayed members.
- The Selected Member data-display option specifies whether the drilled member is included in the result set.
Drilling Options

Web Analysis Studio features these default drilling behaviors:

- Drill Down includes a member’s children in the display.
- Drill Up includes a member’s parent in the display.
- Drill to Top includes the highest ancestor in the display.

You can customize drilling by setting drilling options. Drilling options are set for the current document through the data object shortcut menu (Drill > Drill Options). Drilling options can also be set for all subsequently created documents through Drilling preferences.

This table describes Web Analysis Studio drilling options:

<table>
<thead>
<tr>
<th>Drilling Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drill to Next Level</td>
<td>Includes the children of the drilled member in the display.</td>
</tr>
<tr>
<td>Drill to Descendants</td>
<td>Includes all descendants of the drilled member in the display.</td>
</tr>
<tr>
<td>Drill to Dim Bottom</td>
<td>Includes the lowest level descendants of the drilled member in the display.</td>
</tr>
<tr>
<td>Drill to Siblings</td>
<td>Includes members at one level who share a parent with the drilled member.</td>
</tr>
<tr>
<td>Drill to Same Level</td>
<td>Includes all members on the drilled member’s level.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Hyperion defines levels as hierarchical layers counted up from the lowest descendant (Level 0). Other data sources define levels differently. Asymmetric hierarchies may also yield unexpected results.</td>
</tr>
<tr>
<td>Drill to Same Generation</td>
<td>Includes all members on the drilled member's generation.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Hyperion defines generations as hierarchical layers counted down from the highest ancestor (Generation 0). Other data sources define generations differently.</td>
</tr>
</tbody>
</table>

Drilling options are data-source specific. Drilling options that are not supported by the data source default to Drill to Next Level.

Expand on Drill

The Expand on Drill drilling option sets the drilling return set to augment or replace currently displayed dimension members. You can set Expand on Drill for the current document through the data object shortcut menu (Drill, then Drill Options). Expand on Drill can also be set for all subsequently created documents through Drilling preferences.

When Expand on Drill is selected the drilling return set is added to currently displayed dimension members. When Expand on drill is disabled the drilling return set replaces currently displayed dimension members.
Selected Member Data Display Option

The Selected Member data display option specifies that the query result set should include the member from which advanced member selections are defined.

For example: If you specify Also Select Children on the Year dimension member and Selected Member is enabled, Year and all of its children are returned by the query. When Selected Member is disabled, only the children of year are returned.

This Selected Member functionality also impacts the drilling result set, by including or excluding the drilled member in the drilling result set.

Additionally, you can enable the Selected Member First data display option, to ensure that the drilled member is listed above the drilling result set.

Drilling Variations

These data display and drilling option combinations result in drilling return sets that differ. If you are aware of this dynamic you are better prepared to receive the intended drilling return set.

Table 101  Drilling Variations

<table>
<thead>
<tr>
<th>Drilling Variation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drilling down with Expand Drilling enabled and Data Display, then Selected Members disabled</td>
<td>Augments current member selections with the drilled return set and removes the drilled member.</td>
</tr>
<tr>
<td>Drilling down with Expand Drilling enabled and Data Display, then Selected Members enabled</td>
<td>Augments current member selections with the drilled return set and includes the drilled member.</td>
</tr>
<tr>
<td>Drilling down with Expand Drilling disabled and Data Display, then Selected Members disabled</td>
<td>Replaces the current member selections with the drilled return set and removes the drilled member.</td>
</tr>
<tr>
<td>Drilling down with Expand Drilling disabled and Data Display, then Selected Members enabled</td>
<td>Replaces the current member selections with the drilled return set and includes the drilled member.</td>
</tr>
</tbody>
</table>

Default Drilling Behavior

Default drilling behavior for Web Analysis documents:

- Drill Down displays children.
- Drill Up displays parents.
- Drill to Top displays the highest ancestor.

Drilling options are data-source specific. If, in user preferences, you set drilling options that are not supported by the current data source, drilling defaults to Drill to Next Level.

Drill-Linking

Drill-linking enables you to navigate to other documents by clicking cells with preplaced links.
Drill-linking differs from both drilling and linked reporting objects. Drilling navigates the dimensional hierarchy. Drill-linking passes the current member selection to other documents and executables. Linked reporting objects are linked to cell notes, file attachments, and URLs.

### Changing Display Types

Documents display data values returned from data sources in data objects. Web Analysis documents can have multiple data objects, and each data object can have a different display type:

- Spreadsheet
- Chart
- Pinboard
- SQL spreadsheet
- Freeform grid

Each display type has numerous prerequisites. Because SQL spreadsheets and freeform grids can be created only in Web Analysis Studio, you cannot change them.

Pinboards require traffic lighting definitions, so you can change spreadsheets or charts to pinboards, only if the pinboard definition is defined.

To change the display type of the current document, select **Format**, then **Display Type** then, select a display type or chart type.

**Note:** Web Analysis Studio users can lock the display type to prevent subsequent users from altering a document.

### Data Display Options

Each display type has data display options specifying document behavior. For suppression—suppresses rows with missing data, rows with zeroes, and in the case of Analytic Services, rows with shared members. Suppression can be set from the Cube Navigator dialog box, Data Display shortcut menu or OLAP Server preferences.

<table>
<thead>
<tr>
<th>Data Display Option Submenu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected Member</td>
<td>Displays the explicit member selection made in the query. This member selection can be previewed in the Information panel, or Dimension Browser. Selected Member provides a method for displaying this information in data objects.</td>
</tr>
<tr>
<td>Selected Member First</td>
<td>When Selected Member is active, enables you to position the explicit member selection made in the query definition first (from left to right, or top to bottom).</td>
</tr>
</tbody>
</table>
### Data Display Option Submenu

<table>
<thead>
<tr>
<th>Data Display Option</th>
<th>Description</th>
</tr>
</thead>
</table>
| Suppress            | Omits data, as specified, from the query result set:  
  - Missing Rows  
  - Missing Columns  
  - Shared Members  
  - Zero Rows |
| Default Label Mode  | Toggles between label modes:  
  - Descriptions  
  - IDs  
  - Both (Financial Management option) |
| Dimension-Specific Label Mode | Toggles between label mode options:  
  - Use Default  
  - Descriptions  
  - IDs  
  - Both (Financial Management option) |

### Dimension Header Sorting
Orders the selected dimension per the order option:
- Default  
- Ascending  
- Descending  
- Level (OLAP specific)  
- Generation (OLAP specific)  
- Selection Order (Relational specific)

The Default option is the order in which dimension members are naturally ordered by data source outlines. Using this option may offer improved performance.

### Show Linked Reporting Object Indicators
Shows or hides small cell triangles indicating the presence of Linked Reporting Objects. Triangles persist for related content.

---

**Saving Selections to the User POV**

User POV enables users to select members in Filters, Pages, Rows, and Columns (Data layout and/or member selection controls) and applies them to multiple reports.

Note the report needs the following to utilize the User POV:

- “Use User POV” is enabled in the Data Layout dialog in the Web Analysis Studio.
- A dimension member selection needs to include “User POV” as a selection.

This is exposed through the current POV functionality, where UserPOV is the name of another POV that is created and utilized in reports. The UserPOV exist for all database connections and can be set at user level only.
To set a UserPOV, right click a spreadsheet and select Save Selection to save the dimension member selections to the UserPOV.

**Pinboards**

Pinboards are custom, graphic representations of multiple dimensions. Pinboard dimensions are represented by graphics, pin icons on graphics, and color (or state).

**Pinboards Prerequisites**

Because pins change image or color dynamically, based on traffic-lighting cues, you must create the spreadsheet and apply traffic lighting before creating the pinboard in Web Analysis Studio.

**Pinboard Series**

A pinboard series enables drilling from one pinboard to another. You create the first pinboard and then use the Web Analysis Studio Pinboard Designer right-click menu to generate subsequent pinboards, each of which uses the children of the preceding pinboard. The pinboard that represents the dimension bottom is the last in the series.

**Pins**

You can use the default pins provided by Web Analysis Studio or use Pin Designer to create pins. Pins change their image or color, based on traffic lighting.

**Figure 5 Default Pin, Image Pin, and Color Pin**

![Default Pin, Image Pin, and Color Pin](image)

**Traffic-Lighting Control Panel**

If multiple traffic-lighting definitions are defined on a document, the pinboard display type displays a traffic-lighting control panel, which enables you to scroll through the traffic-lighting definitions.

**SQL Spreadsheets**

SQL spreadsheet data objects enable users to query relational data sources and display the returned data values on custom documents:

- SQL spreadsheets can be created only on custom documents.
- You must understand how to compose SQL queries to create SQL spreadsheets.
You must be able to connect to a relational data source using supported JDBC drivers.

Alternatives for accessing relational data:

- In Web Analysis Studio, you can create a relational database connection to be used by spreadsheets, charts, and pinboards.
- You can use freeform grids, which leverage custom document database connections, to combine data values from multiple data sources in one data object.
- In Web Analysis Studio, you can create a relational drill-through connection from an OLAP database connection to a relational data source.
- You use the Related Content dialog box to leverage pre-defined Analytic Integration Services drill-through reports.

**Freeform Grids**

Freeform grids present OLAP, relational, and manually entered data on a data object, enabling you to leverage multiple data sources in integrated, dynamic calculations.

Freeform grids are comprised of rows and columns; page dimensions are not visually represented. You can use OLAP database connections with members assigned to the page axis, but you cannot navigate through page dimensions unless you create additional subscription controls. In short, only the first page of a multidimensional cube is displayed.

**Resizing the Display**

You can resize large Web Analysis documents in the content area:

- **Auto-Resize** — attempts to fit the current data object into the current content area
- **Custom Resize** — fits the current data object to a manually specified pixel area

To auto-resize the current data object, select Format, then Auto-Resize.

To size the current data object to a specified size, select Format, then Custom Resize, and, when the Custom Resize dialog box is displayed, enter the preferred number of horizontal and vertical pixels.

**Managing Analysis Tools**

You can leverage tools, advanced-analytical-formatting and data-source-specific, from the EPM Workspace. Analysis tools expedite comparisons, visually organize data, and promote structures and conclusions.

Analysis tools are data-source-specific; not all tools are available in all data objects.
Analysis tools are centrally organized and applied by Analysis Tools Manager, accessed using the data-object, right-click menu. Analysis Tools Manager features an Ordered By panel, which shows the number and order of tool definitions activated on the current data object.

You can create analysis tools, using the data-object, right-click menu.

### Table 103  Analysis Tools

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic Lighting</td>
<td>Displays the Traffic Lighting dialog box, used to color-code member values based on fixed limits or value comparison. Traffic Lighting visually associates member values, whether or not they are sorted or ranked.</td>
</tr>
<tr>
<td>Sorting</td>
<td>Displays the Sorting dialog box, used to order the query result set.</td>
</tr>
<tr>
<td>Retrieve Only Top/Bottom</td>
<td>Displays the Retrieve Only Top/Bottom dialog box, used to limit and rank the query result set.</td>
</tr>
<tr>
<td>Restrict Data</td>
<td>Displays the Restrict Data dialog box, used to restrict the query result set based on criteria.</td>
</tr>
<tr>
<td>Calculations</td>
<td>Displays the Calculations dialog box, used to create calculated rows and columns.</td>
</tr>
<tr>
<td>Show/Hide Only</td>
<td>Displays the Show/Hide dialog box, used to filter data by color, value, and member.</td>
</tr>
<tr>
<td>Data Formatting</td>
<td>Displays the Data Formatting dialog box, used to format data values based on member or value criteria.</td>
</tr>
</tbody>
</table>

### Related Content Definitions

Related Content definitions can be managed from the Related Content dialog box and Analysis Tools Manager. Edits, including remove and remove all, made in the Related Content dialog box change definition content but do not impact definition existence. In Analysis Tools Manager, you can activate, deactivate, reorder, and remove, but not edit, definitions.

### Order of Definitions

The order in which Analysis Tools definitions are applied affects data object behavior. Users can edit application order by moving Analysis Tools definitions up and down in the Ordered By panel.

### Default Analysis Tools Definitions

Analysis Tools Manager displays default formatting, measures formatting, and spreadsheet option definitions at the top of the Ordered by list panel. Definitions originating from user preferences, database connection properties, and data object properties are applied before Analysis Tools definitions and can be edited, but not removed or disabled.
Activating and Deactivating Analysis Tools Definitions

You can activate and deactivate Analysis Tools definitions without removing them from Analysis Tools Manager; thus, you can use many different Analysis Tools combinations.

To deactivate an Analysis Tools definition, in the Ordered By panel, select the appropriate Active check box.

Show/Hide Only

You use the Show/Hide Only analysis tool to include or exclude members in or from data objects. Using member name, traffic lighting color, or data value criteria, you enabled focused, value-based analysis.

The Information panel displays the Show/Hide Only definitions that restrict or display current-document information.

Asymmetrical Analysis

Asymmetric documents feature nested dimensions that differ (by at least one member) across an axis. You can hide rows, columns, and chart objects and thus enable asymmetrical analysis.

Multiple Show/Hide Only Definitions

Multiple Show/Hide Only definitions are applied in order, enabling simultaneous control by member, color, and values.

Differences in Show/Hide Only Definitions

Different types of Show/Hide Only definitions operate differently:

- Calculations displays or hides all calculated members.
- Members displays or hides specified members of the dimension right-clicked in the document.
- Values displays or hides members on the axis opposite the dimension right-clicked in the document.
- Colors displays or hides members on the axis opposite the dimension right-clicked in the document.

Show/Hide Only definitions are created in the Show/Hide Only dialog box.
Creating Show/Hide Only Definitions

To create a Show/Hide Only definition:

1. Right-click a member, and select Analysis Tools, then Show/Hide Only.
   The Show/Hide Only dialog box is displayed.

2. From Select Method, select Show or Hide.

3. Define a Show/Hide Only definition option:
   - To show or hide calculated members, in Where, select Calculations.
   - To show or hide specific members, in Where, select Members, and, from Members, select members.
   - To show or hide members, if any member satisfies the specified condition.
     a. In Where, select Any Values.
     b. From Members, select members.

---

Table 104  Show/Hide Only Dialog Box

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>Description</td>
</tr>
</tbody>
</table>
| Select Method | Show—Displays items that satisfy definition criteria  
                 Hide—Hides items that satisfy definition criteria |
| Where       | Calculations—Shows or hides all calculated members                          |
| Member      | Bases definitions on specified, current-axis members                        |
| Any Values  | Tests whether any opposite-axis member contains values that satisfy current-axis criteria |
| All Values  | Tests whether all opposite-axis members contain values that satisfy current-axis criteria |
| Any Colors  | Tests whether any opposite-axis member contains colors that satisfy current-axis criteria |
| All Colors  | Tests whether all opposite-axis members contain colors that satisfy current-axis criteria |
| Set Condition | Operator menu—Enables selection of a criteria operator: Greater than (>), Greater Than or Equal To (>=), Equal to (=), Less Than or Equal To (<=), or Less Than (<), Not Equal To (<>)
| Value Text box | Enables users to enter values for conditions                              |
| Color       | Opens the Select Color dialog box, used to set condition color             |
| Members     | Lists members and attributes to which the current definition applies       |
| Advanced    | Aggregates or separates member combinations                                |
| Apply       | Applies new definitions to documents                                       |
c. Use the operator list and the value text area to define the condition. To show or hide members, if all members satisfy the specified condition:

d. In Where, select All Values.

e. From Members, select members.

f. Use the operator list and the value text area to define the condition.

g. To show or hide members, if any member satisfies the specified traffic-lighting color condition:

i. In Where, select Any Colors.

ii. From Members, select members.

iii. From the operator list, select Equal To (=) or Not Equal To (<>).

iv. From Color, select an option. To show or hide members, if all members satisfy the specified traffic-lighting color condition:

h. In Where, select All Colors.

i. From Members, select members.

j. From the operator list, select Equal To (=) or Not Equal To (<>).

k. From Color, select an option.

Note: Show/Hide Only Members is applied to the named member, and Show/Hide Only Values and Show/Hide Only Colors are applied to the opposite axis, using the values in the selected axis.

Color options are enabled only for data objects that feature active traffic-lighting definitions. An Advanced check box enables you to specify conditions for member combinations. The Apply button enables you to apply the current definition to the current data object, without exiting the dialog box. You may have to drag the dialog box title bar to see the data object.

4 Click OK.

The definition is added to Analysis Tools Manager.

5 Click Close.

Editing Show/Hide Only Definitions

To edit a Show/Hide Only definition:

1 Right-click a member, and select Analysis Tools, then Analysis Tools Manager.

Analysis Tools Manager is displayed.

2 Right-click a Show/Hide Only definition, and select Edit.

The Show/Hide Only dialog box is displayed.
Make selections and define parameters.
Click OK.

Traffic Lighting

The Traffic Lighting analysis tool color-codes data cells. You can base color-coding on two-member comparisons or single-member fixed limits. Colors graphically associate member values, whether or not they are sorted or ranked. Traffic Lighting definitions are created in the Traffic Lighting dialog box and maintained as the document is pivoted and changed.

The Information panel displays the Traffic Lighting definitions that color-code the current data object.

Table 105  Traffic Lighting Dialog Box

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create Criteria</td>
<td></td>
</tr>
<tr>
<td>Apply Traffic Lighting To</td>
<td>Specifies the dimension to which traffic lighting is applied</td>
</tr>
<tr>
<td>Comparing It To</td>
<td>Specifies the dimension to which the preceding dimension is compared</td>
</tr>
<tr>
<td>Assign Limits</td>
<td>Specifies the interval, set point, and color parameters that compose the traffic lighting definition</td>
</tr>
<tr>
<td>% Differences</td>
<td>Indicates that color-coding is based on the percent difference between compared members. If not enabled, color-coding is based on value difference.</td>
</tr>
<tr>
<td>Enable Financial Intelligence</td>
<td>Enables Hyperion data sources to treat expenses and liabilities as negative values. Works with % Differences to reflect variance and variance percent calculations for the Traffic Lighting dialog box.</td>
</tr>
<tr>
<td>Advanced</td>
<td>Aggregates or separates member combinations</td>
</tr>
<tr>
<td>Apply</td>
<td>Applies the definition to the document</td>
</tr>
</tbody>
</table>

Financial Intelligence Variations

% Differences and Enable Financial Intelligence cooperate to provide four calculations for the Traffic Lighting dialog box:

- Neither selected—Traffic Lighting compares members, using a subtraction calculation.
- Only % Differences selected—Traffic Lighting compares members, using a percent difference calculation.
- Enable Financial Intelligence selected—Traffic Lighting compares members, using an advanced variance calculation that recognizes specific expense and liability members as negative values.
- Both selected—Traffic Lighting compares members, using an advanced variance percent calculation that recognizes specific expense and liability members as negative values.
**Assign Limits Box**

In the Assign Limits box, you indicate the number, color, and criteria for color-coding traffic lighting ranges.

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add to End</td>
<td>Inserts set points within ranges</td>
</tr>
<tr>
<td>Remove Last</td>
<td>Removes the last traffic lighting range and set point</td>
</tr>
<tr>
<td>Set Color button</td>
<td>Opens the Select Color dialog box, used to set range colors</td>
</tr>
</tbody>
</table>

**Note:** Setting traffic lighting colors to the colors used by Spreadsheet Options may obscure member color-coding.

**Creating Traffic Lighting Definitions**

1. To create a traffic lighting definition:
   1. Right-click a member, and select **Analysis Tools**, then **Traffic Light**.
      The Traffic Lighting dialog box is displayed.
   2. From **Apply To**, select the member to which traffic lighting is to be applied.
   3. From **Comparing It To**, select the member to which the previously selected member is to be compared.
      - Compare to a fixed limit by, in Assign Limits, deselecting % Differences or, from Comparing It To, selecting Fixed Value.
      - Select Advanced twice, first to separate members into combinations and second to select from aggregated members.
      Assign Limits contains three default set points and colors. Set points divide values into ranges identified by color.
   4. For each set point, indicate a set point operand.
      The first list prompts you to specify whether the setpoint value is in the range; you choose greater than (>) or greater than and equal to (>=).
   5. In the text box, enter a setpoint value, to specify the threshold that separates ranges.
      The second list prompts you to specify the setpoint value; you enter positive or negative decimal values.
   6. **Optional:** To change the range color, click Color, and select a color square.
      The Color button displays a color-square palette. Selecting a square assigns it to the current traffic lighting range and displays the hexadecimal value of the color in the neighboring text-entry field.
   7. **Optional:** To change color opacity, enter a value in the last text-entry box for each range.
You can specify a percentage from zero (transparent) to one hundred. Transparency is sometimes used to reveal background graphics.

8 **Optional:** To add a set point, click Add to End, and repeat steps 4 through 7.

9 Click **OK**.

### Editing Traffic Lighting Definitions

To edit a Traffic Lighting definition:

1. Right-click a member, and select **Analysis Tools**, then **Analysis Tools Manager**.
   - Analysis Tools Manager is displayed.

2. Right-click a Traffic Lighting definition, and select **Edit**.
   - The Traffic Lighting dialog box is displayed.

3. Make selections, and define parameters.

4. Click **OK**.

### Sorting

The Sorting analysis tool orders dimensions of the query result set in ascending or descending alphanumeric order. Sorting definitions, which are created in the Sorting dialog box and displayed in the Information panel, are dynamic—applied as documents are drilled, pivoted, and changed.

You can use client-side and server-based sorting definitions:

- Client-side sorting—provided by Sorting and executed on local computers
- Server-based sorting—provided by Retrieve Only Top/Bottom and executed on Analytic Server; performed prior to returning the OLAP query result set to the client, thus minimizing the result set and network traffic

Multiple sorting definitions are applied in the order presented by Analysis Tools Manager. Sorting definitions applied to axes with equal values may be rearranged by sorting definitions applied to axes with diverse values. The document display is the result of the cumulative application of all active sorting, client-side and server-side, but it may seem that only the last sorting definition was applied.

<table>
<thead>
<tr>
<th>Table 107</th>
<th>Sorting Dialog Box</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Sort On</td>
<td>Specifies the member to which the sorting definition is applied</td>
</tr>
<tr>
<td>Order</td>
<td></td>
</tr>
<tr>
<td>Ascending</td>
<td>Selects ascending alphanumeric order</td>
</tr>
</tbody>
</table>
Creating Sorting Definitions

To create a sorting definition:

1. Right-click a member, and select **Analysis Tools**, then **Sort**.
   The Sorting dialog box is displayed.
2. From **Members**, select the member to which sorting is to be applied.
3. Select **Ascending** or **Descending**.
4. Click **OK**.

Editing Sorting Definitions

To edit a sorting definition:

1. Right-click a member, and select **Analysis Tools**, then **Analysis Tools Manager**.
   The Analysis Tools Manager is displayed.
2. Right-click a sorting definition, and select **Edit**.
   The Sorting dialog box is displayed.
3. Make selections and define parameters.
4. Click **OK**.

Restrict Data

The Restrict Data analysis tool narrows the return set by requiring data values to be relevant to rules and operands. Data can be restricted by two-column comparison or single-column fixed limits.

The Information panel displays Analytic Services Restrict Data definitions for the current document.

Because Restrict Data is executed by Analytic Services, the network server is protected from transmitting and the client is protected from processing large result sets.

Users can apply Restrict Data to result sets of processed queries (using the Analysis Tools right-click menu) and of unsubmitted queries. The last step of the new document wizard enables users to create Restrict Data definitions.
Table 108  Restrict Data Dialog Box

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Column</td>
<td>Displays the Select Column dialog box, used to select a column from the current document</td>
</tr>
</tbody>
</table>
| Operator menu     | Specifies an operator: Greater than (>), Greater Than or Equal To (>=), Equal to (=), Less Than or Equal To (<=), Less Than (<), Not Equal To (<>)
| Operand menu      | Specifies one of three operands:                                                               |
|                   | • A value Of—restricts data to a value or range of values                                      |
|                   | • The Data Value of Column—displays a secondary Select Column button, used to compare two columns|
|                   | • A Missing Value—restricts missing values                                                     |
| Value Text box    | Specifies values for Restrict Data conditions                                                  |

**Note:** It is advised to use one member per dimension in filters when restrict data or retrieve top/bottom is applied. If multiple members are selected per dimension, the application aggregates results. Because restrict data and retrieve top/bottom are parts of Analytic Services queries, aggregation occurs after queries are returned and may result in unexpected result sets.

### Creating Restrict Data Definitions

> To create a Restrict Data definition:

1. **Right-click a member, and select Analysis Tools, then Restrict Data.**
   
   The Restrict Data dialog box is displayed.

2. **From Select Column, select a column on which to restrict data.**

3. **From Operator, select an operator.**

4. **From Operand, select an operand: A Value Of, The Data Value of Column, or A Missing Value.**

5. **Depending on the selected operand, perform an action:**
   
   • A Value Of — For Value, enter a data value.
   
   • The Data Value of Column — From the relevant list, select a column.
   
   • A Missing Value — Do nothing.

6. **Click Add.**

   Four buttons are available: Add, Update, Remove, and Remove All.

   Restriction criteria is listed in the Restriction Definition frame. You can use the Advanced button to create compound definitions.
### Table 109  Advanced Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Submenu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add</td>
<td></td>
<td>Add the rule to Total Subset Definition</td>
</tr>
<tr>
<td>Update</td>
<td></td>
<td>Replace the selected rule with the current rule</td>
</tr>
<tr>
<td>Validate</td>
<td></td>
<td>Verify the parenthetical syntax of Total Subset Definition</td>
</tr>
<tr>
<td>Remove</td>
<td></td>
<td>Remove the rule from Total Subset Definition</td>
</tr>
<tr>
<td>Remove All</td>
<td></td>
<td>Remove all rules from Total Subset Definition</td>
</tr>
<tr>
<td>Connect</td>
<td>And</td>
<td>Insert AND at the end of the rule. AND is used by default when multiple rules are added.</td>
</tr>
<tr>
<td>Or</td>
<td></td>
<td>Insert OR at the end of the rule</td>
</tr>
<tr>
<td>Move</td>
<td>Move Up</td>
<td>Move the rule up in Total Subset Definition</td>
</tr>
<tr>
<td>Move Down</td>
<td></td>
<td>Move the rule down in Total Subset Definition</td>
</tr>
</tbody>
</table>

7 **Optional:** To compose a compound rule, select an advanced connect option, and repeat steps 2 through 7.

8 **Click OK.**

### Editing Restrict Data Definitions

To edit a Restrict Data definition:

1 **Right-click a member, and select** Analysis Tools, then Analysis Tools Manager.  
   Analysis Tools Manager is displayed.

2 **Right-click a Restrict Data definition, and select** Edit.  
   The Restrict Data dialog box is displayed.

3 **Make selections and define parameters.**

4 **Click OK.**

### Retrieve Only Top/Bottom

The Retrieve Only Top/Bottom analysis tool, central to top/bottom analysis, leverages Analytic Services server-based sorting and ranking to control the size and order of OLAP query result sets. Thus, the network server is protected from transmitting and the client is protected from processing large result sets.

You can apply Retrieve Only Top/Bottom to result sets of processed queries (using the Analysis Tools right-click menu) and to result sets of unsubmitted queries. Prior to sending queries, click the Data Layout Options button and select Retrieve Only Top/Bottom. During query creation, use the last step of the new document wizard.
The Information panel displays all Analytic Services Retrieve Only Top/Bottom definitions for the current document.

**Server-Based Sorting**

Server-based sorting is provided by Retrieve Only Top/Bottom and executed on Analytic Server. Server-based sorting is performed by the server prior to returning the OLAP query result set to the client, thus minimizing the result set and network traffic.

**Multiple, Filter-Axis Members**

Multiple, filter-member selections impact Retrieve Only Top/Bottom.

Multiple filter-axis members are aggregated before they are sent queries. Because client-based aggregation does not exist in data source servers, queries are processed using server data values. The discrepancy between client aggregations and server-based sorting and ranking results in irregular result sets.

*Note:* Users are strongly advised to use one member per dimension in filters when using Retrieve Only Top/Bottom and Restrict Data.

<table>
<thead>
<tr>
<th><strong>Table 110</strong> Retrieve Only Top/Bottom Dialog Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
</tr>
<tr>
<td>Select Column</td>
</tr>
<tr>
<td>Show</td>
</tr>
<tr>
<td>Top</td>
</tr>
<tr>
<td>Bottom</td>
</tr>
<tr>
<td>Sorting</td>
</tr>
<tr>
<td>Ascending</td>
</tr>
<tr>
<td>Descending</td>
</tr>
<tr>
<td>Clear</td>
</tr>
</tbody>
</table>

**Creating Retrieve Only Top/Bottom Definitions**

To create a Retrieve Only Top/Bottom definition:

1. Right-click a member, and select **Analysis Tools**, then **Retrieve Only Top/Bottom**.

The Retrieve Only Top/Bottom dialog box is displayed.
2 From Column, select the column to which the Retrieve Only Top/Bottom definition.
3 Limit the result set by selecting Top or Bottom and, in the relevant box, indicating the number of members.
4 Sort the result set by selecting Ascending or Descending.
5 Optional: To remove all selections from the current definition and start over, click Clear.
6 Click OK.

**Editing Retrieve Only Top/Bottom Definitions**

- To edit a Retrieve Only Top/Bottom definition:
  1 Right-click a member, and select Analysis Tools, then Analysis Tools Manager. Analysis Tools Manager is displayed.
  2 Right-click a Retrieve Only Top/Bottom definition, and select Edit. The Retrieve Only Top/Bottom dialog box is displayed.
  3 Make selections and define parameters.
  4 Click OK.
  5 Click Close.

**Editing Data Formatting Definitions**

- To edit a data formatting definition:
  1 Right-click a member, and select Analysis Tools, then Analysis Tools Manager. Analysis Tools Manager is displayed.
  2 Right-click a formatting definition, and select the Edit button. The Formatting dialog box is displayed.
  3 Make selections and define parameters.
  4 Click OK.

**Spreadsheet Options**

All spreadsheet formatting options are set using the Spreadsheet Options dialog box, accessed from the spreadsheet data object shortcut menu. You can set these options for all spreadsheets subsequently created using Spreadsheet preferences.

<table>
<thead>
<tr>
<th>Spreadsheet Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td></td>
</tr>
<tr>
<td>Spreadsheet Option</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Gridlines</td>
<td>Sets the spreadsheet to display table gridlines.</td>
</tr>
<tr>
<td>Transparent</td>
<td>Makes the cell background transparent to display a spreadsheet background image.</td>
</tr>
<tr>
<td>Row Banding</td>
<td>Sets spreadsheet rows to display alternating banding.</td>
</tr>
<tr>
<td>Column Banding</td>
<td>Sets spreadsheet columns to display alternating banding.</td>
</tr>
<tr>
<td>Background Color</td>
<td>Opens the Select Color dialog box, to set the background color.</td>
</tr>
<tr>
<td>Background Image</td>
<td>Opens the Select Background Image dialog box.</td>
</tr>
<tr>
<td>Row Band Color</td>
<td>Opens the Select Color dialog box, to set the color of row banding.</td>
</tr>
<tr>
<td>Column Band Color</td>
<td>Opens the Select Color dialog box, to set the color of column banding.</td>
</tr>
<tr>
<td>Headers</td>
<td></td>
</tr>
<tr>
<td>Custom Row Height</td>
<td>Sets a fixed height for spreadsheet rows in point size (from 20-200).</td>
</tr>
<tr>
<td>Row Titles</td>
<td>Displays column headers for nested rows.</td>
</tr>
<tr>
<td>Row Header Alignment</td>
<td>Aligns row headers left, center, or right or indents them based on generation.</td>
</tr>
<tr>
<td>Indent Amount</td>
<td>Indicates the number of pixels to indent row headers for each level from the top of the dimension hierarchy.</td>
</tr>
<tr>
<td>Row Group Alignment drop-down list</td>
<td>Aligns rows as a group center, top, or bottom in a cell.</td>
</tr>
<tr>
<td>Header Font</td>
<td>Displays the Font Properties dialog box, enabling the selection of header fonts and font formatting.</td>
</tr>
<tr>
<td>Header Background Color</td>
<td>Opens the Select Color dialog box, where you can set the header background color.</td>
</tr>
<tr>
<td>Sample Header</td>
<td>Displays the current header formatting.</td>
</tr>
<tr>
<td>Column Header Alignment</td>
<td>Justifies column headers; Center (default), Left or Right.</td>
</tr>
<tr>
<td>Data</td>
<td></td>
</tr>
<tr>
<td>Align Text</td>
<td>Sets the alignment of textual data values: left, center, and right.</td>
</tr>
<tr>
<td>Align Values</td>
<td>Sets the alignment of numeric data values: left, center, and right.</td>
</tr>
<tr>
<td>Cell Font</td>
<td>Displays the Font Properties dialog box enabling the selection of data value fonts and font formatting.</td>
</tr>
<tr>
<td>Note: Font sizes are limited to a maximum of 100 points.</td>
<td></td>
</tr>
<tr>
<td>Cell Background Color</td>
<td>Opens the Select Color dialog box where you can set the cell background color; does not override banding.</td>
</tr>
<tr>
<td>Sample Cell</td>
<td>Displays the current data values formatting.</td>
</tr>
</tbody>
</table>
**Sizing Columns**

Columns can be individually sized, uniformly sized, or reset to their default column width. The Freeze Headers formatting option must be enabled in the preferences or the Spreadsheet Options dialog box before you can size columns.

**Sizing Individual Columns**

To size a column:

- Right-click a column header and select **Column Sizing > Custom Width** from the shortcut menu. When the Column Width dialog box is displayed, enter the desired column width in pixels. The default is 75 pixels.

**Sizing All Columns to a Common Width**

To size all columns uniformly:

1. **To size one column:**
   - Position your mouse over the border between two column headers. When the cursor changes to the double-arrow cursor, drag the column border to adjust the column width.
   - Right-click a column header and select **Column Sizing, then Set Column Width** from the shortcut menu. When the Column Width dialog box is displayed, enter the desired column width in pixels.

2. **When you are satisfied the selected column size, right-click that column and select Column Sizing, then Set All Columns To This Width.**

   The remaining columns are automatically resized to the selected column’s width.

**Autosizing Column Width**

To size all column widths so that headers display without truncation, select **Column Sizing > Autosize** from the header shortcut menu.

**Note:** You must save the document before closing it to preserve the column widths.
Formatting Documents

Formatting Options

Documents display data values returned from the data source in a data object. Multiple data objects can occupy a document, and each data object’s display type can differ:

- Spreadsheet
- Chart
- Pinboard
- SQL Spreadsheet
- Freeform grid

Each display type has formatting options. This chapter describes the formatting options for spreadsheets and charts, as only these two objects can be modified through EPM Workspace.

Other Kinds of Formatting

- Display Type — Converts spreadsheet data objects to charts or pinboards.
- Data Display options — Sets document behavior through the data object shortcut menu (or preferences, for subsequently created documents).
- Formatting options — Formats dimension headers and cell ranges. You can restrict formatting by member selection or cell value. Formatting options include currency formatting and positive and negative numeric formatting. See “Formatting Dialog Box” on page 386. Formatting options include:
  - Measures formatting (Available in Oracle's Hyperion® Web Analysis Studio only)
  - Default formatting preferences
  - Ad hoc formatting
  - Data formatting analysis tool
  - Cell Formatting
    See “Formatting Data” on page 389.

The scope of formatting depends on its source. To review all formatting definitions applied to a document, you must consult preferences, the Analysis Tools Manager, the Information Panel, and various document, data object, dimension and cell property settings.

Formatting Order of Precedence

Formatting is applied an order of precedence:
1. **Measures formatting** — Applied globally to dimensions on database connections. Settings are saved with the database connection.

2. **Default formatting preferences** — Applied globally to column and row headers, and data values. Settings are saved in preference files.

3. **Formatting** — Applied ad hoc from the data object shortcut menu on dimension members. It is stored with the document definition and applied as a preliminary Analysis Tool definition. See “Formatting Dialog Box” on page 386.

4. **Data formatting analysis tool** — Applied after Data Formatting Analysis Tool definitions are created and applied. It is stored with the document and applied from the Analysis Tools Manager.

5. **Cell formatting** — Applied ad hoc to cell ranges, and is stored with the document. See “Formatting Data” on page 389.

Preferences and formatting options:

There are some identical formatting options and preferences. Preferences are global settings applied to documents. Preferences, however, can be overridden by database connection formatting and document-based formatting.

The formatting order of precedence can be changed for Database Connection Measures formatting, User Preferences, and Analysis Tools formatting. For example, Analysis Tools formatting can be set to override all Database Connection and User Preferences formatting for a specific report.

Order of formatting precedence:

1. Formatting options saved with documents
2. Formatting options saved with the database connection
3. Formatting options specified by the User Preferences dialog box

**Data Display Options**

Each display type has data display options specifying document behavior:

- **Label mode**—Essbase and Financial Management enable administrators to define multiple alias tables. Web Analysis Studio enables you to specify which alias table to use. Alias table selection is saved as a database connection property. See “Setting the Label Mode” on page 385.

- **Dimension header sort** — Order column and row headers in a query result set using Dimension Header Sort definitions. Dimension Header Sort options are determined by the data source. See “Sorting Dimension Headers” on page 386.

- **Suppression** — Suppresses rows with missing data, rows with zeroes, and in the case of Essbase, rows with shared members. Suppression can be set from the Data Layout dialog box, Data Display shortcut menu or OLAP Server preferences.
<table>
<thead>
<tr>
<th>Data Display Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected Member</td>
<td>Displays the explicit member selection made in the query. This member selection can be previewed in the Information panel, or Dimension Browser. Selected Member provides a method for displaying this information in data objects.</td>
</tr>
<tr>
<td>Selected Member First</td>
<td>When Selected Member is active, enables you to position the explicit member selection made in the query definition first (from left to right, or top to bottom).</td>
</tr>
<tr>
<td>Default Label Mode</td>
<td>Toggles between label modes:</td>
</tr>
<tr>
<td></td>
<td>1. Descriptions</td>
</tr>
<tr>
<td></td>
<td>2. IDs</td>
</tr>
<tr>
<td></td>
<td>3. Both (Financial Management option)</td>
</tr>
<tr>
<td>Dimension-Specific Label Mode</td>
<td>Toggles between label mode options:</td>
</tr>
<tr>
<td></td>
<td>1. Use Default</td>
</tr>
<tr>
<td></td>
<td>2. Descriptions</td>
</tr>
<tr>
<td></td>
<td>3. IDs</td>
</tr>
<tr>
<td></td>
<td>4. Both (Financial Management option)</td>
</tr>
<tr>
<td>Display Entity Currency</td>
<td>When using Financial Management data sources with defined Entity dimension currency information, you can enable the Display Entity Currency option to append Entity dimension members with currency value. This can be set before querying using Data Layout options, after querying using the Data Display shortcut menu, and for all subsequently created documents using OLAP Server preferences.</td>
</tr>
<tr>
<td>Dimension Header Sort</td>
<td>Orders the selected dimension per the order option:</td>
</tr>
<tr>
<td></td>
<td>1. Default</td>
</tr>
<tr>
<td></td>
<td>2. Ascending</td>
</tr>
<tr>
<td></td>
<td>3. Descending</td>
</tr>
<tr>
<td></td>
<td>4. Level (OLAP specific)</td>
</tr>
<tr>
<td></td>
<td>5. Generation (OLAP specific)</td>
</tr>
<tr>
<td></td>
<td>6. Selection Order (Relational specific)</td>
</tr>
<tr>
<td></td>
<td>The Default option is the order in which dimension members are naturally ordered by data source outlines. Using this option may offer improved performance.</td>
</tr>
<tr>
<td></td>
<td>For a complete description, See “Sorting Dimension Headers” on page 386.</td>
</tr>
<tr>
<td>Show Linked Reporting Object</td>
<td>Shows or hides small cell triangles indicating the presence of Linked Reporting Objects. Triangles persist for related content.</td>
</tr>
<tr>
<td>Indicators</td>
<td></td>
</tr>
<tr>
<td>Suppress</td>
<td>Omits data, as specified, from the query result set:</td>
</tr>
<tr>
<td></td>
<td>1. Missing Rows</td>
</tr>
<tr>
<td></td>
<td>2. Missing Columns</td>
</tr>
<tr>
<td></td>
<td>3. Shared Members</td>
</tr>
<tr>
<td></td>
<td>4. Zero Rows</td>
</tr>
</tbody>
</table>
Setting the Label Mode

Alias tables are database tables storing alternate description labels for dimension members.

Essbase and Financial Management enable administrators to define multiple alias tables. Web Analysis Studio enables you to specify which alias table to use. The alias table selection is saved as a database connection property.

You can specify to display the member ID or its description label from the alias table.

- The ID number is a column of unique values distinguishing members from all other members.
- Description displays the alias table description. Web Analysis Studio uses the Description label when no label mode is specified.

Oracle Hyperion Financial Management, Fusion Edition users have an additional label mode option. They can select the Both option to display the ID label and description.

You can set the default label mode before querying using Data Layout options or the last step in the document creation wizard, and after querying using the data object shortcut menu. You can specify which description label to use in dimensions, using Dimension Browser and the data object shortcut menu.

The Description label comes from the alias table setting, saved per database connection and per active user as a database user preference.

To set the default label mode for the current database connection:

1. Right-click dimension header.
2. Right-click and select Data Display.
3. Select Default Label Mode from the drop-down list.
4. Select IDs or Descriptions.

To set the label mode for a dimension:

1. Right-click a dimension header.
2. Right-click and select Data Display.
3. Select the dimension-specific Label Mode from the drop-down list.
4. Select Use Default, IDs or Descriptions.

Default label mode coordinates the label mode of the selected dimension with all other dimensions displaying the default label mode. Default label mode can be set for all dimensions in a query through Data Layout, and per dimension by Dimension Browser or the Data Display shortcut menu.
Sorting Dimension Headers

You can order column and row headers in a query result set using Dimension Header Sort definitions. Dimension Header Sort options are determined by the data source.

For Example, Essbase enables you to order columns and rows in default, ascending, descending, level or generation order. The default order is the natural order in which dimension members are returned, based on the data source outline.

➢ To indicate a Dimension Header Sort definition:

1. Right-click a dimension member header and select Data Display, then Dimension Header Sort.

   The Dimension Header Sort submenu is displayed.

2. Select Default, Ascending, Descending, Level or Generation.

Relational Dimension Header Sort

You can order the result set returned by relational SQL queries in Ascending, Descending, Selection Order or Default order. Default returns members based on the data source outline. Selection Order is the member selection order in Dimension Browser.

Unlike OLAP servers, relational cubes are compiled by Web Analysis Studio, and the label mode, alias tables, and selection order are manually coordinated. Sort by alias may perform comparatively slow, as the default query result set is sorted by ID. Sorting by alias requires a complete client-side re-sort.

The source of the relational dimension header sort impacts performance. Defining a relational dimension header sort using Data Layout, prompts Web Analysis Studio to sort all dimensions as part of the current query result set.

Alternatively, sorting a relational dimension using the data object shortcut menu (Data Display > Dimension Header Sort) requires you to select dimension headers.

Lastly, you can apply dimension header sort definitions to relational generations defined in the Generation Editor. These definitions only impact the Dimension Browser sort order. Using the Order By Mode drop-down list, you can also specify orders by ID or Alias.

Formatting Dialog Box

The Formatting dialog box indicates the members to which these formats are applied:

- Header font properties by member.
- Data value format and font properties by member.
- Edit the dimension members selected for formatting.
- Restore default formatting preferences.
<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selections</td>
<td>Lists dimensions and members in the query. The dimensions that appear are based on the context of where the Formatting dialog box was invoked. For example, if Formatting is invoked from the rows, all row dimension and members are displayed. If Formatting is invoked from a cell, all dimensions and members in the query are listed.</td>
</tr>
<tr>
<td>Advanced</td>
<td>Shows the Dimension panel that enables you to select or deselect dimensions and apply formatting to specific dimension combinations. This mainly applies when there are two or more dimensions in the columns or rows.</td>
</tr>
<tr>
<td>Dynamic References</td>
<td>Provides selection of row or column references instead of selecting members from a report. Formatting is applied regardless of the member selection.</td>
</tr>
<tr>
<td>Apply to entire grid</td>
<td>Applies formatting defined to the entire spreadsheet query. When selected, the Selections section is grayed and a Formatting “All Members” item is added to the Analysis Tools Manager.</td>
</tr>
<tr>
<td>Header Font tab</td>
<td>Allows formatting of member labels fonts in the row and column headers.</td>
</tr>
<tr>
<td>Data Font tab</td>
<td>Allows formatting of data cells fonts. Conditional font or number formatting can be applied to specific data values that meet the defined criteria.</td>
</tr>
<tr>
<td>Data Format tab</td>
<td>Provides formatting to specific data values such as currency/prefix/suffix, as well as other numeric formatting. Conditional font or number formatting can be applied to specific data values that meet the defined criteria.</td>
</tr>
<tr>
<td>Conditional Formatting</td>
<td>Enables conditional formatting of dimension member selections based on the criteria defined in the operand drop-down list and value text box.</td>
</tr>
<tr>
<td>Conditional Formatting — Operand drop-down list</td>
<td>Specifies the conditional formatting operand: &gt;, &gt;=, =, &lt;=, &lt;, or &lt;&gt; .</td>
</tr>
<tr>
<td>Conditional Formatting — Value Text box</td>
<td>Specifies the conditional formatting value.</td>
</tr>
<tr>
<td>Restore Defaults</td>
<td>Restores the settings specified by the Default Formatting preferences.</td>
</tr>
</tbody>
</table>

**Formatting Behavior**

The behavior for the members that are selected prior to opening the Formatting dialog:

- When you right-click a column or row header and select Formatting, the context is completed automatically for the row or column member selections. This context can be edited and different member selections can be made.
- When you right-click a cell and select Cell Formatting, the context is completed for the cell intersection of members. This context cannot be edited.
- When you right-click a column or row header and select Analysis Tools > Format, the Formatting dialog is opened without completed context.
- If the number of members in a dimension on a report exceeds 25, the dimension parent node is collapsed. You can click the node to expand it.
- If there is more than one dimension in the rows or columns, you can select from one dimension only or multiple dimensions.
Using Dynamic References

Instead of selecting members from a report, you can use Dynamic References to select a row or column reference. Formatting is applied regardless of the member selection. Also:

- If a member is drilled on, its formatting will “carry with it”.
- If a swap or pivot is performed, the formatting will “carry” where possible.

Topics that discuss formatting:

- “Creating Formatting Definitions” on page 388
- “Formatting Data” on page 389

Creating Formatting Definitions

To create formatting definitions:

1. Right-click a column or row dimension header.
2. Select Formatting.
   The Formatting dialog box is displayed.
3. Optional. To display the Dimensions panel, click Advanced.
4. To select a dimension, click its check box.
   If you select one dimension from the Dimensions panel, the corresponding dimension members are displayed in the Combinations panel.
   If you select multiple dimensions from the Dimensions panel, the Combinations panel displays dimension member aggregations.
5. To specify dimension members, click the check boxes in the Combinations panel.
6. To specify a formatting definition, perform an action:
   - To specify header cell font properties for the dimension member selection, click the Header Font tab.
   - To specify data cell font properties for the dimension member selection, click the Data Font tab.
   - To specify leading and trailing text and numeric formatting, click the Data Format tab.
     See “Formatting Data” on page 389.

   Note: The Data Font and Data Format tabs provide conditional formatting where you can refine formatting definitions. Select Conditional Formatting, then select an operand and specify a value.
7. Click OK to accept the formatting definition properties for the dimension member selection.
   The formatting definition is listed in Analysis Tools Manager for future reference, and the definition is applied to the document.
### Formatting Data

You define format definitions in the Data Format tab:

<table>
<thead>
<tr>
<th>Formatting Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditional Formatting</td>
<td>Enables conditional formatting of dimension member selections based on the criteria defined in the operand drop-down list and value text box.</td>
</tr>
<tr>
<td>Replace Missing With</td>
<td>Enables you to replace missing data with zeros or text that you specify.</td>
</tr>
<tr>
<td><strong>Leading and Trailing Formatting</strong></td>
<td></td>
</tr>
<tr>
<td>Currency Symbol</td>
<td>Inserts currency formatting symbols into the Positive Prefix and Negative Prefix text boxes.</td>
</tr>
<tr>
<td>Positive Prefix</td>
<td>Specifies the character to precede positive numeric values.</td>
</tr>
<tr>
<td>Positive Suffix</td>
<td>Specifies the character to follow positive numeric values.</td>
</tr>
<tr>
<td>Negative Prefix</td>
<td>Specifies the character to precede negative numeric values. <strong>Caution:</strong> The minus sign (-) is the default prefix. Deleting the default prefix without replacing it displays negative values as positive.</td>
</tr>
<tr>
<td>Negative Suffix</td>
<td>Specifies the character to follow negative numeric values.</td>
</tr>
<tr>
<td><strong>Numeric Formatting</strong></td>
<td></td>
</tr>
<tr>
<td>Grouped Thousands</td>
<td>Displays numeric digits as grouped by thousands.</td>
</tr>
<tr>
<td>Minimum Decimals</td>
<td>Indicates the minimum number of decimal places displayed.</td>
</tr>
<tr>
<td>Maximum Decimals</td>
<td>Indicates the maximum number of decimal places displayed.</td>
</tr>
<tr>
<td>Scale</td>
<td>Enables abbreviated values by tens, hundreds, thousands, ten-thousands, hundred-thousands, millions, and billions.</td>
</tr>
<tr>
<td>Use Negative Color</td>
<td>Indicates that negative numbers are signified by a selected color.</td>
</tr>
<tr>
<td>Select Negative Color</td>
<td>Enables you to select the color representing negative values.</td>
</tr>
<tr>
<td><strong>Date Formatting</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select a date format.</td>
</tr>
<tr>
<td><strong>Samples</strong></td>
<td></td>
</tr>
<tr>
<td>Update Samples</td>
<td>Updates the samples panel based on the most recent formatting selections.</td>
</tr>
</tbody>
</table>

### Cell Formatting

The Cell Formatting dialog box enables you to format cell ranges ad hoc.

- Format data value font properties for cell ranges.
- Set text and numeric formatting for cell ranges.
- Restore default formatting preferences.

To define cell formatting, right-click a spreadsheet cell and select Cell Formatting:
### Sizing Columns

Columns can be individually sized, uniformly sized, or reset to their default column width. The Freeze Headers formatting option must be enabled in the preferences or the Spreadsheet Options dialog box before you can size columns.

#### Sizing Individual Columns

- To size a column:
  - Right-click a column header and select **Column Sizing > Custom Width** from the shortcut menu. When the Column Width dialog box is displayed, enter the desired column width in pixels. The default is 75 pixels.

#### Sizing All Columns to a Common Width

- To size all columns uniformly:
  1. **To size one column:**
     - Position your mouse over the border between two column headers. When the cursor changes to the double-arrow cursor, drag the column border to adjust the column width.
     - Right-click a column header and select **Column Sizing, then Set Column Width** from the shortcut menu. When the Column Width dialog box is displayed, enter the desired column width in pixels.

  2. **When you are satisfied the selected column size, right-click that column and select **Column Sizing, then Set All Columns To This Width.**

     The remaining columns are automatically resized to the selected column’s width.

#### Autosizing Column Width

- To size all column widths so that headers display without truncation, select **Column Sizing > Autosize** from the header shortcut menu.

**Note:** You must save the document before closing it to preserve the column widths.
Changing and Locking Display Types

To change the current display type, select the Display menu, and select a display type or chart type from the submenu.

To prevent others from changing the current display type:

1. Right-click the current content tab and select Properties.
   The File Properties dialog box is displayed.
2. Select the Advanced tab.
3. In Document Usage, select Change Display Type.
4. Click OK.

Spreadsheet Options

All spreadsheet formatting options are set using the Spreadsheet Options dialog box, accessed from the spreadsheet data object shortcut menu. You can set these options for all spreadsheets subsequently created using Spreadsheet preferences.

<table>
<thead>
<tr>
<th>Spreadsheet Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td></td>
</tr>
<tr>
<td>Gridlines</td>
<td>Sets the spreadsheet to display table gridlines.</td>
</tr>
<tr>
<td>Transparent</td>
<td>Makes the cell background transparent to display a spreadsheet background image.</td>
</tr>
<tr>
<td>Row Banding</td>
<td>Sets spreadsheet rows to display alternating banding.</td>
</tr>
<tr>
<td>Column Banding</td>
<td>Sets spreadsheet columns to display alternating banding.</td>
</tr>
<tr>
<td>Background Color</td>
<td>Opens the Select Color dialog box, to set the background color.</td>
</tr>
<tr>
<td>Background Image</td>
<td>Opens the Select Background Image dialog box.</td>
</tr>
<tr>
<td>Row Band Color</td>
<td>Opens the Select Color dialog box, to set the color of row banding.</td>
</tr>
<tr>
<td>Column Band Color</td>
<td>Opens the Select Color dialog box, to set the color of column banding.</td>
</tr>
<tr>
<td>Headers</td>
<td></td>
</tr>
<tr>
<td>Custom Row Height</td>
<td>Sets a fixed height for spreadsheet rows in point size (from 20-200).</td>
</tr>
<tr>
<td>Freeze Headers</td>
<td>Holds column dimension headers in place as cells scroll independently. Note: Freeze Headers must be enabled for Column Sizing.</td>
</tr>
<tr>
<td>Row Titles</td>
<td>Displays column headers for nested rows.</td>
</tr>
<tr>
<td>Row Header Alignment</td>
<td>Aligns row headers left, center, or right or indents them based on generation.</td>
</tr>
<tr>
<td>Spreadsheet Option</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Indent Amount</td>
<td>Indicates the number of pixels to indent row headers for each level from the top of the dimension hierarchy.</td>
</tr>
<tr>
<td>Row Group Alignment drop-down list</td>
<td>Aligns rows as a group center, top, or bottom in a cell.</td>
</tr>
<tr>
<td>Header Font</td>
<td>Displays the Font Properties dialog box, enabling the selection of header fonts and font formatting.</td>
</tr>
<tr>
<td>Header Background Color</td>
<td>Opens the Select Color dialog box, where you can set the header background color.</td>
</tr>
<tr>
<td>Sample Header</td>
<td>Displays the current header formatting.</td>
</tr>
<tr>
<td>Column Header Alignment</td>
<td>Justifies column headers; Center (default), Left or Right.</td>
</tr>
</tbody>
</table>

### Data

<table>
<thead>
<tr>
<th>Align Text</th>
<th>Sets the alignment of textual data values: left, center, and right.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Align Values</td>
<td>Sets the alignment of numeric data values: left, center, and right.</td>
</tr>
<tr>
<td>Cell Font</td>
<td>Displays the Font Properties dialog box enabling the selection of data value fonts and font formatting.</td>
</tr>
<tr>
<td><strong>Note:</strong> Font sizes are limited to a maximum of 100 points.</td>
<td></td>
</tr>
<tr>
<td>Cell Background Color</td>
<td>Opens the Select Color dialog box where you can set the cell background color; does not override banding.</td>
</tr>
<tr>
<td>Sample Cell</td>
<td>Displays the current data values formatting.</td>
</tr>
</tbody>
</table>

## Charts and Chart Types

Charts are graphic representations of spreadsheet data. Their visual nature expedites quick analysis, color coding, and cues that aid comparisons.

Charts, depending on the chart type, can display one to four dimensions. Pie charts only display one dimension; quadrant charts offer more complex displays.

Charts can be rendered using a variety of chart types:

<table>
<thead>
<tr>
<th>Chart Type</th>
<th>Compares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bar</td>
<td>Similar elements, represented as vertical bars.</td>
</tr>
<tr>
<td>Line</td>
<td>Items over time.</td>
</tr>
<tr>
<td>Spline</td>
<td>Displays the document as a spline chart.</td>
</tr>
<tr>
<td>Pie</td>
<td>Contributions.</td>
</tr>
<tr>
<td>Area</td>
<td>Items over time.</td>
</tr>
<tr>
<td>Curve Area</td>
<td>Items over time, represented as a curved area.</td>
</tr>
<tr>
<td>Horizontal Bar</td>
<td>Similar elements.</td>
</tr>
<tr>
<td>Chart Type</td>
<td>Compares</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>Marks</td>
<td>Items over time.</td>
</tr>
<tr>
<td>Pareto</td>
<td>Trends in data.</td>
</tr>
<tr>
<td>Box</td>
<td>Displays the document as a box plot chart.</td>
</tr>
<tr>
<td>Quadrant</td>
<td>Two members from one dimension over time.</td>
</tr>
<tr>
<td>Bubble</td>
<td>Displays the document as a Bubble chart.</td>
</tr>
</tbody>
</table>

Only the first 50 dimension members can be accommodated on chart axes.

**Quadrant Charts**

In Quadrant charts, at least one dimension must be placed on the column axis and at least two dimensions must be placed on the rows axes. Other dimension-axes arrangements result in error messages.

**Bubble Charts**

Bubble charts require three dimensions. Only one dimension can be placed on the column axis. One or two dimensions can be placed on the row axis. There must be two columns in the dimension positioned on the columns axis. These columns may be the result of selecting two dimension members, or of including a calculated column with a dimension member. The values in the first two columns provide the X and Y values required to plot the chart.

A third column provides the Z value used to determine the bubble size. If no third column is available, a constant of 100 is used to determine the bubble size.

**Chart Properties**

Use the data object shortcut menu to access Chart Properties, described in these topics:

- “General Chart Properties” on page 394 — options for effects, object borders, chart backgrounds, and legends.
- “Titles Chart Properties” on page 394 — options for chart titles.
- “Axes Chart Properties” on page 395 — options for axes, number formatting, gridlines, scale, and labels.
- “Series Effects Chart Properties” on page 396 — options for chart behavior and border formatting.
- “Series Chart Properties” on page 396 — options for chart object properties.
- “Pie Chart Properties” on page 397 — options for pie charts.
- “Bubble Chart Properties” on page 398 — options for bubble charts.
## General Chart Properties

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Layout</strong></td>
<td></td>
</tr>
<tr>
<td>Chart Type</td>
<td>Enables you to set the Chart Type: Bar, Line, Spline, Pie, Area, Curve Area, Horizontal Bar, Marks, Pareto, Multi, Box, Quadrant, and Bubble.</td>
</tr>
<tr>
<td>Stacked</td>
<td>Enables you to arrange chart objects: Side-by-Side, Stacked, and Stacked 100%.</td>
</tr>
<tr>
<td>Left Plot Area Margin</td>
<td>Enables you to specify a left margin for the plot area.</td>
</tr>
<tr>
<td>Right Plot Area Margin</td>
<td>Enables you to specify a right margin for the plot area.</td>
</tr>
<tr>
<td><strong>Effects</strong></td>
<td></td>
</tr>
<tr>
<td>3D</td>
<td>Represents chart objects in three-dimensional space.</td>
</tr>
<tr>
<td>Anti-alias Fonts</td>
<td>Enables and disables the use of anti-alias fonts. Although anti-alias fonts are clearer, they sometimes differ from the original font style.</td>
</tr>
<tr>
<td>Cluster (Z-axis)</td>
<td>Arranges chart objects along the Z axis in three-dimensional space.</td>
</tr>
<tr>
<td>Show Z-axis Labels</td>
<td>Displays labels along the Z axis (front to back). This feature is only available when the chart is clustered, and for Bar, Horizontal Bar, Pareto and Multichart chart types. Long Z-axis labels may be cut off by chart margins.</td>
</tr>
<tr>
<td><strong>Background</strong></td>
<td></td>
</tr>
<tr>
<td>Background Color</td>
<td>Displays the Select Color dialog box where you can set the chart background color.</td>
</tr>
<tr>
<td>Plot Area Color</td>
<td>Displays the Select Color dialog box where you can set the plotter background color.</td>
</tr>
<tr>
<td><strong>Legend</strong></td>
<td></td>
</tr>
<tr>
<td>Show Legend</td>
<td>Displays a chart legend.</td>
</tr>
<tr>
<td>Position</td>
<td>Locates the Legend to the Top, Left, Bottom, or Right of the chart.</td>
</tr>
<tr>
<td>Color</td>
<td>Displays the Select Color dialog box to set the legend background color.</td>
</tr>
<tr>
<td>Font</td>
<td>Displays the Font Properties dialog box to select font and their formatting.</td>
</tr>
</tbody>
</table>

## Titles Chart Properties

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Header Title</td>
<td>Sets the text string for the header title.</td>
</tr>
<tr>
<td>Footer Title</td>
<td>Sets the text string for the footer title.</td>
</tr>
<tr>
<td>Left Title</td>
<td>Sets the text string for the left title.</td>
</tr>
<tr>
<td>Right Title</td>
<td>Sets the text string for the right title.</td>
</tr>
</tbody>
</table>
### Control Properties

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Font</td>
<td>Displays the Font Properties dialog box to select font and their formatting.</td>
</tr>
</tbody>
</table>

### Axes Chart Properties

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Axis</strong></td>
<td>Indicates the current axis:</td>
</tr>
<tr>
<td></td>
<td>- X-axis - Sets the Axes tab to display x-axis parameters.</td>
</tr>
<tr>
<td></td>
<td>- Y-axis - Sets the Axes tab to display y-axis parameters.</td>
</tr>
<tr>
<td></td>
<td>- Secondary Y-axis - Set the Axes tab to display secondary y-axis parameters.</td>
</tr>
<tr>
<td></td>
<td>See also Series Tab, Assign to Secondary Y-axis.</td>
</tr>
<tr>
<td>Show Axis</td>
<td>Displays the current axis.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scale</th>
<th>Enables the current axis to be calculated automatically based on data values.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start at Minimum Value</td>
<td>Indicates whether to start numeric labels with the minimum value.</td>
</tr>
<tr>
<td>Minimum</td>
<td>Sets the minimum value on the current axis.</td>
</tr>
<tr>
<td>Maximum</td>
<td>Sets the maximum value on the current axis.</td>
</tr>
<tr>
<td>Step</td>
<td>Sets the number of increments to scale on the current axis.</td>
</tr>
<tr>
<td>Scale</td>
<td>Enables you to indicate the multiple by which to scale the current axis:</td>
</tr>
<tr>
<td></td>
<td>None, Tens, Hundreds, Thousands, Ten Thousands, Hundred Thousands, Millions,</td>
</tr>
<tr>
<td></td>
<td>or Billions.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gridlines</th>
<th>Displays gridlines on the current axis.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Style</td>
<td>Represents gridlines using one style: Solid Line, Dash, Dot, and Dash Dot.</td>
</tr>
<tr>
<td>Weight</td>
<td>Sets the width of gridlines in pixels (from 1-8).</td>
</tr>
<tr>
<td>Color</td>
<td>Displays the Select Color dialog box where you can select a gridline color.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number Format</th>
<th>Enables you to sets the number of decimal places used to represent data values (0-10).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format</td>
<td>Enables you to sets the numeric format for data values: Numeric, Currency, Percent.</td>
</tr>
<tr>
<td>Currency Symbol</td>
<td>Inserts currency formatting symbols.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Labels</th>
<th>Alternates labels on two lines to accommodate larger labels.</th>
</tr>
</thead>
</table>
### Control Description

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angle</td>
<td>Enables you to indicate the angle at which labels extend from the current axis: 0-360 degrees.</td>
</tr>
<tr>
<td>Font</td>
<td>Displays the Font Properties dialog box to select fonts and their formatting.</td>
</tr>
</tbody>
</table>

### Series Effects Chart Properties

Series Effects chart properties impact all chart object series in general. Series chart properties are applied only to specific series.

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Groups Displayed</td>
<td>Specifies the number of chart object groups to display.</td>
</tr>
<tr>
<td>Chart All Dimensions</td>
<td>Delineates nested dimensions for chart type requirements and displays each combination set as a series. Chart type requirements differ for dimension member position and number. When dimension members exceed a requirement, surplus dimensions are relocated to the page axis so that the designated chart type can be displayed. Enabling Chart All Dimensions prompts Oracle’s Hyperion® Web Analysis Studio to delineate nested dimensions and display each combination set as a series.</td>
</tr>
<tr>
<td>Show Borders</td>
<td>Represents chart objects with a border or outline.</td>
</tr>
<tr>
<td>Style</td>
<td>Represents the chart object border using one style: Solid Line, Dash, Dot, and Dash Dot.</td>
</tr>
<tr>
<td>Width</td>
<td>Sets the width of chart object border in pixels (from 1-8).</td>
</tr>
<tr>
<td>Color</td>
<td>Displays the Select Color dialog box where you can set the border color.</td>
</tr>
</tbody>
</table>

### Series Chart Properties

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td>Indicates the current dimension member chart object series.</td>
</tr>
<tr>
<td>Show Series</td>
<td>Displays the current series.</td>
</tr>
<tr>
<td>Type</td>
<td>Sets the chart type for the series when multiple chart types are enabled: Bar, Line, Area, Spline and Curve Area.</td>
</tr>
<tr>
<td>Shape</td>
<td>Sets the series chart object to one shape: Bar, Cylinder, Diamond Bar, or Triangle Bar.</td>
</tr>
<tr>
<td>Color</td>
<td>Displays the Fill Properties dialog box where you can set chart object color, pattern fill, or gradient.</td>
</tr>
<tr>
<td>Assign to Secondary Y-axis</td>
<td>Displays the current series on the secondary y-axis.</td>
</tr>
</tbody>
</table>
### Markers

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Style</td>
<td>Sets the series to one marker: None, Square, Circle, Triangle-Up, Diamond, Cross, Triangle-Down, or Multiple Chart Type.</td>
</tr>
<tr>
<td>Size</td>
<td>Sets the size of the series marker in pixels (1-20).</td>
</tr>
</tbody>
</table>

### Point Values

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Show Values</td>
<td>Displays data values with the series.</td>
</tr>
<tr>
<td>Font</td>
<td>Displays the Font Properties dialog box where you can select font and their formatting.</td>
</tr>
<tr>
<td>Angle</td>
<td>Indicates the angle at which value labels extend from the current series: 0-360 degrees.</td>
</tr>
</tbody>
</table>

### Lines

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Style</td>
<td>Represents the chart object border using one style: Solid Line, Dash, Dot, and Dash Dot.</td>
</tr>
<tr>
<td>Width</td>
<td>Sets the width of chart object border in pixels (from 0-8).</td>
</tr>
<tr>
<td>Apply selections to all</td>
<td>Sets all series to the parameters of the current series.</td>
</tr>
</tbody>
</table>

### Line Widths of Zero (0)

Line charts accommodate a line width of zero, enabling a line chart to appear as a marks chart. This applies only to two-dimensional line, quadrant, multichart, spline, area, and curve area chart types.

### Pie Chart Properties

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Values</td>
<td>Indicates the current pie slice.</td>
</tr>
<tr>
<td>Color</td>
<td>Displays the Select Color dialog box to set color, pattern fill or gradient scale for the current slice.</td>
</tr>
<tr>
<td>Show Values</td>
<td>Displays data values with pie slices.</td>
</tr>
<tr>
<td>Position</td>
<td>Indicates where to display labels: Inside Slices or Outside Slices.</td>
</tr>
<tr>
<td>Font</td>
<td>Displays the Font Properties dialog box where you can select font and their formatting.</td>
</tr>
<tr>
<td>Show Multiple Pies</td>
<td>Sets Page Dimensions to be displayed as multiple pie charts in one document.</td>
</tr>
</tbody>
</table>
Bubble Chart Properties

Bubble charts require three dimensions. Only one dimension can be placed on the column axis. Up to two dimensions can be placed on the row axis. There must be two columns in the dimension positioned on the columns axis. These columns may be the result of selecting two dimension members, or the result of including a calculated column with a dimension member. The values in the first two columns provide the X and Y values required to plot the chart.

A third column provides the Z value used to determine the bubble size. If no third column is available, a constant of 100 is used to determine the bubble size.

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effects</strong></td>
<td></td>
</tr>
<tr>
<td>Marker Style:</td>
<td>Sets the bubble chart to be displayed using these options: none, square, circle, Triangle Up, Diamond, Cross, Triangle Down, or Multi.</td>
</tr>
<tr>
<td>Maximum Size:</td>
<td>Sets the maximum bubble object size in points.</td>
</tr>
<tr>
<td>Show Points</td>
<td>Displays plot points.</td>
</tr>
<tr>
<td>Point Color</td>
<td>Sets the color of the center point.</td>
</tr>
<tr>
<td><strong>Values</strong></td>
<td></td>
</tr>
<tr>
<td>X-member Values:</td>
<td>Indicates the dimension member used to plot x-axis values.</td>
</tr>
<tr>
<td>Y-member Values:</td>
<td>Indicates the dimension member used to plot y-axis values.</td>
</tr>
<tr>
<td>Z values:</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>Sets the constant used to plot the size of bubble chart objects when no third column is available, so that object sizes match.</td>
</tr>
<tr>
<td>Z-member Values:</td>
<td>Indicates the third column used to plot the size of bubble chart objects.</td>
</tr>
<tr>
<td><strong>Scaling</strong></td>
<td></td>
</tr>
<tr>
<td>Minimum Scaling:</td>
<td>Sets the minimum bubble size when the bubble object size has reached the Maximum Size limit.</td>
</tr>
<tr>
<td>Maximum Scaling:</td>
<td>Sets the maximum bubble size when the bubble object size has reached the Maximum Size limit.</td>
</tr>
<tr>
<td>Scale On:</td>
<td>Sets the bubble chart to determine scale using area or diameter.</td>
</tr>
<tr>
<td><strong>Borders</strong></td>
<td></td>
</tr>
<tr>
<td>Show Borders</td>
<td>Displays or hides the bubble borders.</td>
</tr>
<tr>
<td>Use Traffic Lights for Colors</td>
<td>Sets the bubble object border to use colors specified in the traffic lighting definition; only one dimension, with a traffic lighting definition, can be positioned on the rows axis</td>
</tr>
<tr>
<td>Color</td>
<td>Displays the Select Color dialog box.</td>
</tr>
<tr>
<td>Border Width:</td>
<td>Sets the border width in pixels.</td>
</tr>
</tbody>
</table>
## Selecting Color

The Select Color dialog box enables you to set object, font, and component colors.

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Swatches Tab</strong></td>
<td></td>
</tr>
<tr>
<td>Recent</td>
<td>Displays recently selected colors.</td>
</tr>
<tr>
<td>RGB Float Over Values</td>
<td>Displays the Red-Green-Blue color values when mouse is floated over a color.</td>
</tr>
<tr>
<td><strong>HSB Tab</strong></td>
<td></td>
</tr>
<tr>
<td>Hue</td>
<td>Sets the percentage of hue in the current color.</td>
</tr>
<tr>
<td>Saturation</td>
<td>Sets the percentage of saturation in the current color.</td>
</tr>
<tr>
<td>Brilliance</td>
<td>Sets the percentage of brilliance in the current color.</td>
</tr>
<tr>
<td>Red</td>
<td>Displays the red value of the current color.</td>
</tr>
<tr>
<td>Green</td>
<td>Displays the green value of the current color.</td>
</tr>
<tr>
<td>Blue</td>
<td>Displays the blue value of the current color.</td>
</tr>
<tr>
<td><strong>RGB Tab</strong></td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>Displays the red value of the current color.</td>
</tr>
<tr>
<td>Green</td>
<td>Displays the green value of the current color.</td>
</tr>
<tr>
<td>Blue</td>
<td>Displays the blue value of the current color.</td>
</tr>
<tr>
<td>Preview</td>
<td>Displays the application of the current color.</td>
</tr>
</tbody>
</table>

## Font Properties

The Font Properties dialog box enables font selection and formatting.

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Font</td>
<td>Sets the font family.</td>
</tr>
<tr>
<td>Size</td>
<td>Sets the font point size. Note: Fonts are limited to 100 points in size.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Font Style</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bold</td>
<td>Displays the <strong>bold</strong> font.</td>
</tr>
<tr>
<td>Italic</td>
<td>Displays the <strong>italic</strong> font.</td>
</tr>
<tr>
<td>Color</td>
<td>Displays the Select Color dialog box, to enable font color selection.</td>
</tr>
<tr>
<td>Sample Text</td>
<td>Displays the current font selection.</td>
</tr>
</tbody>
</table>
Calculations

You can create members as the products of calculations (client-side calculated members) and edit, delete, and analyze calculations.

Calculation-definition order in Analysis Tools Manager prescribes the order in which compound calculations are executed. To change the order, select definitions and click the up and down arrow.

The “Creating Calculations” on page 405 procedure describes Calculation analysis tool options in context.

Average

- **Function Performed**: Sum of arguments divided by number of arguments
- **Number of Arguments**: Two or more members or existing calculations
- **Options**: Whether missing values are set to 0 and included in the number of arguments

Example: If Actual is 100 and Budget is 200, the average of Actual and Budget is 150.

Cumulative

- **Function Performed**: A running total
- **Number of Arguments**: One member or existing calculation
- **Options**: Whether missing values are set to 0

Example: Consider a spreadsheet with Actual as a column and Colas, Root Beer, and Cream Soda as rows. If Actual values for the products are 100, 200, 300, Cumulative values are 100, 300, 600.

Difference from Average

- **Function Performed**: Difference between the average value and the occurrence of an argument
- **Number of Arguments**: One member or existing calculation
- **Options**: Whether missing values are set to 0

Example: Consider a spreadsheet with Actual as a column and Colas, Root Beer, and Cream Soda as rows. If Actual values for the products are 100, 200, 300, the average is 200, and Difference from Average values are -100, 0, 100.

Divide

- **Function Performed**: Arithmetic division
- **Number of Arguments**: Two members or existing calculation
- **Options**: Whether missing values are set to 0

**Linear Regression**
- **Function Performed**: Straight-line linear regression. Looks at all occurrences of the specified argument and uses a linear regression algorithm to calculate a straight line through the occurrences
- **Number of Arguments**: One member or existing calculation
- **Options**: Whether missing values are set to 0 in the calculation

Example: Consider a spreadsheet with Actual as a column and Jan, Feb, Mar as rows. If the Actual values for the time periods are 100, 300, 600, the linear regression values are 83, 333, 58. Notice that there is a constant difference between values (250). All points in the sequence are adjusted. A chart of the numbers produces a straight line that intersects the original data points.

**Maximum**
- **Function Performed**: Given two or more arguments, the name of the member or existing calculation with the maximum value
- **Number of Arguments**: Two or more members or existing calculations
- **Options**: Whether missing values are set to 0

Example: Consider a spreadsheet with East and West as columns and Jan, Feb, Mar as rows. If East values are 100, 300, 600 and West values are 200, 200, 300, Maximum values are West, East, East.

**Maximum Value**
- **Function Performed**: Given two or more arguments, the value of the member or existing calculation with the maximum value
- **Number of Arguments**: Two or more members or existing calculations
- **Options**: Whether missing values should be set to 0

Example: Consider a spreadsheet with East and West as columns and Jan, Feb, Mar as rows. If East values are 100, 300, 600 and West values are 200, 200, 300, Maximum Value values are 200, 300, 600.

**Minimum**
- **Function Performed**: Given two or more arguments, the name of the member or existing calculation with the minimum value
- **Number of Arguments**: Two or more members or existing calculations
Options: Whether missing values should be set to 0

Example: Consider a spreadsheet with East and West as columns and Jan, Feb, Mar as rows. If East values are 100, 300, 600 and West values are 200, 200, 300, Minimum values are East, West.

Minimum Value

Function Performed: Given two or more arguments, the value of the member or existing calculation with the minimum value.

Number of Arguments: Two or more members or existing calculations

Options: Whether missing values are set to 0

Example: Consider a spreadsheet with East and West as columns and Jan, Feb, Mar as rows. If East values are 100, 300, 600 and West values are 200, 200, 300, Minimum Value values are 100, 200, 300.

Multiply

Function Performed: Arithmetic multiplication

Number of Arguments: Two members or existing calculations or one member or existing calculation and a constant.

Options: A constant as an argument (if you want to work with one rather than two existing members or calculations) and whether missing values are set to 0

Percent

Function Performed: Percentage calculation

Number of Arguments: Two members or existing calculations or one member or existing calculation and a constant.

Options: A constant as an argument (if you want to work with one rather than two existing members or calculations) and whether missing values are set to 0

Example: Consider a spreadsheet with Actual and Budget as columns and Jan, Feb, Mar as rows. If Actual values are 100, 300, 600 and Budget values are 200, 200, 400, Percentage values (Actual % Budget) are 50, 150, 150.

Percent Difference from Average

Function Performed: The Difference from Average result displayed as a percentage of the average

Number of Arguments: One member or existing calculation

Options: Whether missing values are set to 0
Example: Consider a spreadsheet with Actual as a column and Colas, Root Beer, and Cream Soda as rows. If Actual values for the products are 100, 200, 300, the average is 200, and the Difference from Average (%) column values are -50, 0, 50.

**Percent of Difference**

- **Function Performed:** Percentage difference calculation
- **Number of Arguments:** Two members or existing calculations or one member or existing calculation and a constant.
- **Options:** A constant as an argument (if you want to work with one rather than two existing members or calculations) and whether missing values are set to 0

Example: Consider a spreadsheet with Actual and Budget as columns and Jan, Feb, Mar as rows. If Actual values are 100, 300, 600 and Budget values are 200, 200, 400, Percentage difference values (Actual % diff Budget), calculated as ((Actual - Budget) / Budget) * 100, are -50, 50, 50.

**Percent of Member**

- **Function Performed:** A member argument as a percentage of another member argument. The second argument is defined by a member intersected on an opposite axis.
- **Number of Arguments:** Two or more members or existing calculations or one member or existing calculation and a constant.
- **Options:** Whether missing values are set to 0
- **Procedure:** Select a Percent of Member calculation from the Function list, select a member argument, and select a member from the opposite axis, using the Opposite Member list.

**Percent of Total**

- **Function Performed:** Percentage of total
- **Number of Arguments:** One member or existing calculation
- **Options:** None

Example: Consider a spreadsheet with Actual as a column and Jan, Feb, Mar as rows. If Actual values are 100, 300, 600, Percentage of Total values are 10, 30, and 60.

**Rank Ascending and Rank Descending**

- **Function Performed:** Ranking
- **Number of Arguments:** One member or existing calculation
- **Options:** Ascending or descending (the default). If ascending, the smallest value is ranked as 1. If descending, the largest value is ranked as 1.
Consider a spreadsheet with Actual as a column, Jan, Feb, Mar as rows, and Actual values of 100, 300, 600. If descending is selected, Rank values are 3, 2, 1. If ascending is selected, Rank values are 1, 2, 3.

**Subtract**
- **Function Performed:** Arithmetic subtraction
- **Number of Arguments:** Two or more members or existing calculations or one member or existing calculation and a constant.
- **Options:** Whether missing values are set to 0

**Sum**
- **Function Performed:** Arithmetic addition
- **Number of Arguments:** Two or more members or existing calculations or one member or existing calculation and a constant.
- **Options:** Whether missing values are set to 0

**Trend**
- **Function Performed:** Trend based on straight-line linear regression; that is, the slope of the straight line that a linear-regression calculation plots between original, data-series points
- **Number of Arguments:** Two or more members or existing calculations
- **Options:** Whether missing values are set to 0

**Variance**
- **Function Performed:** Arithmetic subtraction that uses Financial Intelligence account metadata to interpret Financial Management expense and liability items as negative values
- **Number of Arguments:** Two or more members or existing calculations or one member or existing calculation and a constant.
- **Options:** Whether missing values are set to 0

**Variance Percent**
- **Function Performed:** Percentage difference calculation that uses Financial Intelligence account metadata to interpret Financial Management expense and liability items as negative values
- **Number of Arguments:** Two members or existing calculations or one member or existing calculation and a constant.
- **Options:** A constant as an argument (if you want to work with one rather than two existing members or calculations) and whether missing values are set to 0
Complex Calculations

Oracle recommends dividing complex calculations into components and combining the components into a compound calculation.

Example: To set up a calculation for \((A + B) / (C \times 2)\), where A, B, and C are members, you divide the formula into steps:

- Set up Sum for A + B, and name it Step 1.
- Set up Multiply for C \times 2, and name it Step 2.
- Set up Divide for Step 1 result divided by Step 2 result, and name it Step 3.
- Use Show Only Members to hide Step 1 and Step 2. If you want to switch between seeing only members, seeing only calculations, and seeing both, you can use the Hide option in your document right-click menu.

Creating Calculations

You can use a combination of members, functions and/or operators to create a formula using the Functions and Members tabs, as well as the operators buttons. You can create a formula by using members and operators, without functions, or you can combine members, functions and operators in a formula. You also can create and edit advanced expressions by manually entering and editing the formulas.

An editor field, Formula Body, allows you to manually enter and edit the formula using a syntax that resembles multidimensional expressions (MDX) for defining members. However, while the syntax definition for defining members resemble the MDX format, MDX statements are not supported in the Web Analysis calculations. A formula is created by selecting a combination of Function and Member(s). For more information, see Using the Manual Formula Syntax.

Toolbar buttons for Cut, Copy, Paste and Validate are activated when a formula is entered in the Formula Body. The Validate button checks the validity of the formula for any errors and returns an error box to confirm whether validation succeeded or an error exists. The result of the formula is shown in the Formula field and can be inserted into the report by clicking the Insert button. Existing functions can be grouped together in one expression. If you want to switch between seeing only members or only calculations, or both, you can use the Hide option in the shortcut menu on your document.

Note: You can select Dynamic row or column references instead of selecting members from the report. The formatting is applied regardless of the member selection. If a calculation refers to a specific column, and that column is deleted through member selection, the calculation is handled correctly. If a swap or pivot is performed, the calculation will “carry” where possible.

To create a calculation:

1. Right-click a dimension member header and select Analysis Tools, then Calculation.
The Calculation Definition dialog box is displayed, containing three tabs: Functions, Members and Options.

- The **Members** tab is for selecting members and adding them to a formula (for example, \([\text{Sales}] - [\text{COGS}]\), outside a formula function. You can select one or more members in the **Select Members** list, click **Insert** to insert to the formula **Definition**.

- The **Functions** tab is for inserting formula functions into the **Definition** area after selecting a function and members. You can add and remove members and constants to the formula. Once a function is selected, it appears in the **Formula** area. Members (or dynamic references) can be added to the formula by clicking on each member/reference, then clicking on **Add** to add it to the **Arguments** area. The **Formula** area is updated with arguments once they are added. When the formula is complete, it can be inserted to the **Definition** area by clicking **Insert**.

- The **Options** tab provides **Missing Values** and **Select Positions** settings.

The following areas are displayed for all three tabs:

- **Name** — the name of the formula.
- **Definition** — displays the formula. It allows for manual entry and editing of the formula. The Cut, Copy, Paste, and Validate buttons become enabled.
- **Mathematical Operators** — symbols that provide types of calculations that you can perform on the elements of a formula; addition (+), subtraction (-), multiplication (*), division (/), parenthesis (( )).

You can create a formula by using members on the **Members** tab. Perform the following:

- In the **Select Members** area, select members.
- In **Advanced** — click to list all dimension member combinations and add them to the formula **Definition** area. When deselected, only members from one dimension are shown.
- In **Dynamic References** — select to enable the selection of a row or column reference

Click **Insert** to add the formula.

To create a formula using functions, in the **Functions** tab, perform the following:

- **Select a calculation type from the Function list.**
- Replace the undefined arguments, displayed with a (?) in the **Arguments** area, with a member located in the **Select Members** area. Do this by selecting the member and clicking the right arrow button.
- To replace an undefined argument (?) with a value, enter a value in the **Constant** text box, and click the right arrow button.
- To replace an undefined argument from dimension member combinations, select **Advanced** to display dimension member combinations. Click to select a dimension member combinations label, and click the right arrow button to replace an undefined argument (?).
- Select **All Members** to quickly select all available dimension members.
- Click **Insert** to include the formula in the definition.
When the calculation is defined, click **Apply** and **OK**.

The following list describes the items on the **Functions** tab:

- **Formula** — displays the formula result
- **Functions** — provides pre-written formulas such as adding values, dividing values, calculating averages
- **Select Members** — provides members to be included during calculation
- **Advanced** — click to select a dimension member combination label. If the row or column context of the calculation has multiple dimensions, **Advanced** shows all dimension in the row or column. When deselected, only members from one dimension are shown.
- **All Members** — select to select all dimension members
- **Dynamic References** — enable to select a row or column reference.
- **Constant** — type a value to use in a function. For example, instead of \( \text{Sum}("Qtr1", "Qtr2") \), you could have \( \text{Sum}("Qtr2", 155) \).
- **Optional. Opposite Member** — select to evaluate a dimension member argument as a percentage of another dimension member argument. The second argument is defined by the dimension member intersected on an opposite axis
  - Select a **Percent of Member** calculation from the Function list.
  - Select a dimension member argument.
  - Select a dimension member from the opposite axis using the **Optional Opposite Member** list.

  **Note:** The **Opposite Member** list in the arguments frame is enabled only for the Percent of Member Calculation. This control evaluates a dimension member argument as a percentage of another dimension member argument. The second argument is defined by the dimension member intersected on an opposite axis.

6 On the **Options** tab, perform the following:

- **Ignore Calculations** — excludes calculated members from the equation when “All Members” is selected.
- **Optional. Missing Values** — provides option for how missing values are treated; include, exclude, or treat as a number that you specify.
  - **Include** — calculates missing values as they are stored.
  - **Exclude** — removes arguments populated by missing values from the calculation.
  - **Treat as Number** — populates the argument with the value indicated. Default is zero (0).
- **Select Position** — provides options for specifying the location of the calculated row or column.
  - **Front/Top**
  - **Back/Bottom**
Insert Before

Insert After

Insertion Point — If you selected Insert Before or Insert After, select an insertion point from the corresponding list. The calculated row or column is inserted before or after the specified dimension header.

Ignore Calculations — selected to exclude calculated members from the equation when “All Members” is selected.

When the calculation is defined, click Apply and OK.

Using the Manual Formula Syntax

If a member name contains unsupported characters or symbols, it should be enclosed in brackets – [ ]; If the name does not contain such symbols, it can be used as is. Some guidelines:

1. [New York] + West + East — correct
2. East + New York — incorrect; member name New York contains spaces.
3. Old style syntax (member names are separated by “;”). For advanced members, can be used if member names contain “good” symbols only. For example:
   Qtr1:West + Qtr2:East — correct
   Qtr3:New York — incorrect
4. For new MDX style syntax, a list of comma – separated member names is included between “(‘and’)”. Member names must be included within [] according to the same rules as for simple members. For example:
   ([New York], West) — correct
   (New York, West) — incorrect
5. Simple and advanced members must not be mixed in one formula body. For example:
   ([New York], West) + East — incorrect
   Qtr1:West + South — incorrect
6. All members’ specification in the script is defined by keyword @selectAllMembers. For example:
   Average(@selectAllMembers) + 1234 + [East]
7. All members’ specification can be used in the script several times. For example:
   Sum(@selectAllMembers) – Sum(@selectAllMembers) — correct, always zero
8. Dynamic references are specified by the following way; for rows they are in form @row<ROW NUMBER>, for columns they are @col<COLUMN NUMBER>. For example:
   @col + @col5 – @col16/100@row2 – @row3
9. In one expression, row and column dynamic references should not be mixed. For example:
   @col + @row1 — incorrect. An error message occurs.
10. You can mix members and dynamics references in one expression, with the following restriction: If the axis (row or column) contains several dimensions, an advanced members’ specifications must be used. For example:

@row1 + [Qtr1] — correct only if row axis contains one dimension – Year
@col2 + Qtr1:West — correct if column contains Year and Market.

11. Opposite members are used only for one function – Percent_of_Member. An @ character must precede the opposite member. For example:

2* Percent_of_Member (Qtr1, @Colas) — correct
[Qtr2] + Percent_Of_Member (Qtr, @Root Beers) — correct
Percent_Of_Member (Qtr1, @ [Root Beers]) — incorrect; space after @

**Modifying Calculations**

- To modify a calculation:
  1. Right-click a dimension member header and select Analysis Tools, then, **Analysis Tools Manager**.
     
     The Analysis Tools Manager is displayed.
  2. Click a calculation definition.
  3. Click **Edit**.
     
     The Calculation Definition dialog box displays the arguments for the selected calculation definition.
  4. **Optional**: To change the calculation definition name, enter a name in **Name**.
  5. **Optional**: To move the calculation position, select another option.
  6. **Optional**: If you selected Insert Before or Insert After, select an insertion point from the corresponding list.
     
     The calculated row or column is inserted before or after the specified dimension header.
  7. **Optional**: To change the calculation type, select a calculation type from **Function**.
     
     Changing the calculation type requires that the user redefine all arguments. For instructions, see “Managing Analysis Tools” on page 367.
  8. **Optional**: To change the arguments for the calculation, perform one:
     
     - Click an argument, click a dimension member label, and click the arrow button.
     - Click an argument, enter a value in the Constant text box, and click the arrow button.
     - Select **Advanced** to display dimension member combinations. Click an argument, click a dimension member combination label, and click the arrow button.
     
     The calculation definition is displayed in the Formula group box.
  9. When the calculation is redefined, click **Apply** and **OK**.
  10. **Click Close**.
Analytic Services Attribute Calculations

You can leverage server-based Analytic Services attribute calculations in the client. Because server-based calculations are performed before OLAP query results are sent to clients, network traffic and the result set are minimized.

To use attribute calculations, you use Data Layout to select the attribute calculations dimensions to participate in the query. Then you use Dimension Browser to select the server-based calculations to be returned by the query result set.

Note: You can reproduce many attribute calculations on the client, but you are responsible for defining the calculations, and the client is responsible for processing the result set.

Reasons to use attributes in calculations:

- To select, aggregate, and report on data that shares attributes
- To select attributes by data type: text, numeric, Boolean, and data type
- To group numeric data types into statistical ranges
- To use sum, count, min, max, and average functions on the attribute calculations dimension automatically generated by Analytic Services
- To use numerical attribute values from calculation scripts and member formulas in calculations
- To create crosstabs of attribute data for a dimension and analyze the dimension in terms of each attribute

Print as PDF from EPM Workspace

Web Analysis documents can be printed to Adobe Portable Document Format (PDF) from the EPM Workspace. There are two printing options:

- Print Screen — Prints the content area. A print view and Microsoft Print dialog is displayed.
- Print Selected Object — Prints the specified OLAP pages of the current data object (For Example, Spreadsheet, Chart or Pinboard). A Print via PDF dialog presents print options (orientation, scale, and an option to allow print settings to be saved with document).

Print Screen prints the current display quickly and easily. Because documents can contain multiple data objects, Print Screen does not specify OLAP pages. If you want to include OLAP pages or object-specific document summaries, you should select Print Selected Object.

To print a report as PDF, perform one:

1. Open a report and Select File, then Print via PDF, then Screen to print the screen, or, Select File, then Print via PDF, then Selected Object to print the selected reporting object in the report. The Print via PDF dialog is displayed. See “Print via PDF” on page 411.
2 Right click a data object and select **Print via PDF**, then **Selected Object**. The Print via PDF dialog is displayed. See “Print via PDF” on page 411.

**Note:** If Print via PDF is not available, the System Administrator has configured Web Analysis to only print to HTML in the EPM Workspace and Print via PDF has been disabled.

### Print via PDF

The Print via PDF dialog is used to specify print options when you select to print Selected Object.

- **Orientation** — Specifies how a document is positioned on the page
  - Portrait: Prints across the width of the page (letter style).
  - Landscape: Prints across the length of the page (spreadsheet style).
- **Scale** — Fit to page printing. Enables you to determine how document content is broken down into print job pages.
- **Allow print setting to be saved with document** — Automatically inserts a print summary into the printer output when checked.

### Database Connections

Database connections are portable files that define terms, conditions, and methods for connecting to data sources. You must use Web Analysis Studio, not Web Analysis, to create and modify database connections.

Documents are dependent on database connection files to query data sources. A document can use multiple database connections to connect to one or more data sources.

To access data sources, you may be prompted to provide logon credentials.

Information provided in the view pane Information tab:

- **Database**—displays the database connection name for the current data object
- **Database User Name**—displays the user name by which access to the database connection is granted

Data sources and database connections supported by Web Analysis documents:

- **OLAP data sources**
  - Analytic Services 6.5.6, 7.0.1, 7.1, and 7.1.2
  - IBM DB2 OLAP Server 7.1 Service Pack 11, 8.1 Service Pack 3, and 8.2
  - SAP BW 3.0, 3.1, and 3.5

- **Hyperion data sources**
  - Financial Management 3.4, 3.5, 3.5.1, and 4.0
- Planning 3.3, 3.5 with Analytic Services 3.5.1, and 4.0

- Relational database connections:
  - IBM DB2
  - Microsoft SQL Server
  - Oracle
  - Teradata

System RDBMS requirements vary. See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide* for descriptions of relational system requirements.

**Database Connection Files**

Database connections are stored as repository files and adhere to most file management conventions. You see only database connections that you own or to which you are granted permissions. Various kinds of permission are needed to read, write, edit, and change database connection file properties.

**Database Connection Access and Document Permissions**

Documents or presentations distributed to users may require database connections that the users cannot access. Document access is independent of database connection access.

Database connection permissions that deny access may prevent access to only one connection. Users can use other connections to the primary data source or to alternate data sources. Users can leverage document definitions independently of database connections.

**User and Group Permissions**

Users can access database connections assigned to them or to groups to which they belong.

When documents are assigned to groups, the database connections that the document uses must also be assigned to the groups. Otherwise, group members can access the document, but not its data values (unless they are granted individual user access).

To mitigate the risk of conflicting permissions, store documents and their database connections in the same folders. Whenever possible, distribute documents and database connections to groups. It is easier to set permissions for all files in a folder and all users in a group than to manage permissions for individual files and users.

**Integrating OLAP and Relational Data**

Web Analysis Studio users can construct seamless liaisons between OLAP data and relational data sources. Navigation from OLAP to relational data is called *relational drill-through*. 
After relational drill-through is configured, users can navigate from the dimension bottom (level 0) of the OLAP database and drill down to relational data.

Relational drill-through is a client-based integration solution comparable to the server-based Analytic Integration Services drill-through.

The Relational Drill-Through dialog box is a graphical user interface for creating SQL relational database queries. Users can use complex SQL syntax to specify table joins and to select and order by clauses.

**Note:** Relational drill-through supports an array of JDBC relational data sources but does not support queries by levels, generations, or previously selected members.

Relational drill-through definitions are saved as properties of database connection files.

## Analytic Services Database Connections

Analytic Services, the analytic solution that integrates data from multiple sources and meets the needs of users across an enterprise, enables the quick and easy implementation of solutions, adds value to previously inaccessible data, and transforms data into actionable information.

Analytic Services integrates with existing business intelligence infrastructure, requiring a minimum of IT overhead and enabling organizations to realize maximum return on their IT investments.

Various Analytic Services features are extended through the Web Analysis graphical user interface:

- “Restrict Data” on page 375
- “Retrieve Only Top/Bottom” on page 377
- “Edit Data” on page 414
- “Suppress Missing Rows, Zeros, and Shared Members” on page 414
- “Label Mode and Alias Tables” on page 414
- “Analytic Services Drill Settings” on page 414
- “Linked Reporting Objects (LROs)” on page 414
- “Relational Drill-through” on page 415
- “Analytic Integration Services Drill-through” on page 415
- “Analytic Services Advanced Member Selection” on page 415
- “Attribute Dimensions and Attribute Calculations” on page 415

## Restrict Data

Restrict Data narrows the return set by requiring data values to be relevant to specific rules and operands. Data can be filtered by two-column comparison or by single-column fixed limits.
Retrieve Only Top/Bottom

Retrieve Only Top/Bottom Analysis leverages Analytic Services sorting and ranking to control the size and order of OLAP query result sets, thus protecting the network server from transmitting and the client from processing large result sets.

Edit Data

If you have permission, you can edit data values and write edits back to Analytic Services databases. After edits are applied, users can recalculate the databases and measure the impact of changed values.

Suppress Missing Rows, Zeros, and Shared Members

Web Analysis documents leverage Analytic Services to suppress missing rows, zeroes, and shared members from the query result set, thus preventing return of irrelevant information, reducing network traffic, and increasing query speed.

Label Mode and Alias Tables

Label mode enables you to select whether members are listed by ID number, description, or both. Label mode options are database-specific and can be set for database connections, specific documents, and specific dimensions.

Label mode indicates whether descriptions or ID numbers are used, and Analytic Services alias table definitions provide the displayed values.

Analytic Services Drill Settings

Web Analysis documents use Analytic Services features to provide customized drilling, dependent upon three factors:

- The nature of the hierarchical navigation
- Whether current members are replaced or augmented
- Whether drilled members are replaced or augmented

Linked Reporting Objects (LROs)

Analytic Services LROs, which include the following types, enable users to annotate data values by associating external media with cells.

- Text documents
- File attachments
- URLs
Relational Drill-through

Web Analysis documents enable you to drill through to related relational data from the lowest level of the Analytic Services outline by defining links on Analytic Services database connections. Users can pass pages, filters, and row limits to focus and control the relational query result set.

Analytic Integration Services Drill-through

Analytic Integration Services enables you to organize, format, and present relational data as OLAP cubes in Analytic Services. Web Analysis documents enable you to access Analytic Integration Services data through Analytic Services linked reporting objects by drilling on cells marked for Analytic Integration Services drill-through.

Analytic Services Advanced Member Selection

In dimensions with large member sets, users can define selections with the Dimension Browser right-click menu. Right-clicking member names enables selection by familial relationship and database-specific options.

Attribute Dimensions and Attribute Calculations

In addition to member names, locations, and relationships, Analytic Services can store characteristics about members. Analytic Services does not store attribute dimensions as part of OLAP cubes, but dynamically calculates them upon request. Attribute dimensions are displayed in dimension hierarchies and used in calculations, as standard dimensions are displayed and used.

Financial Management

Financial Management is a centralized, scalable, financial management and reporting solution. With Financial Management, users can unify their financial information (actuals, budgets, forecasts, statistics) in one Web-based application. Financial Management contains packaged features to support tasks and practices:

- Compliance with global reporting standards, currency management, automation of inter-company activities, and production of auditable results
- Links between legal and management reporting and operating plans to achieve enterprise-wide consistency and visibility
- Multidimensional, line-of-business analysis
- Improved collaboration through the Web
- Key external industry metrics that provide one central point of financial intelligence
Designed for large-scale, centralized Web deployment, Financial Management acts as a shared financial resource for thousands of users across the enterprise, enabling them to collaborate and cooperate in the day-to-day business management. In one application, users can produce auditable documents and forecasts for multiple consumers, such as regulatory bodies, financial analysts, stakeholders, and business partners.

- “Financial Management Features Available in Web Analysis Documents” on page 416
- “Related Content” on page 416
- “Cell Text” on page 416
- “Line-Item Detail” on page 417
- “Related Content Changes” on page 417
- “Organization by Period” on page 417
- “Financial Management Advanced Member Selection” on page 417
- “User-Defined Fields” on page 418
- “Display Entity Currency” on page 418

Financial Management Features Available in Web Analysis Documents

Financial Management features extended to Web Analysis documents:

- Organization by period
- Advanced member selection
- Cell text, related content
- Line-item detail, related content
- User-defined fields
- Entity currency display

Related Content

The Related Content dialog box links to previously configured, related content and applications. When LRO indicates are enabled, blue triangles are displayed in spreadsheet cells that contain links to related content. Right-clicking linked cells and selecting Related Content displays the Related Content dialog box.

Cell text and line-item detail are accessed as related content.

Cell Text

You can launch cell text notes, read-only text strings stored in the Financial Management data source.
Line-Item Detail

You can launch line-item-detail spreadsheets, read-only relational spreadsheets created from Financial Management data sources.

Related Content Changes

Changes to cell text and line-item detail items are not displayed in Web Analysis documents until Financial Management is recalculated and changes registered.

Organization by Period

Financial Management Organization by Period functionality enables an organization’s latest consolidation structure to coexist with past structures in one application.

Thus, dimension hierarchies can be consolidated differently during different periods. Organizational structures can change for many reasons, including acquisitions, disposals, mergers, and reorganizations.

You can access Org by Period functionality when Org by Period is configured and set on the Financial Management server.

When querying Financial Management database connections configured with Org by Period, the Data Layout Options button displays an Org by Period item. The Org by Period dialog box offers an interface for enabling Org by Period and selecting three members.

**Note:** You can review and set this feature only in Web Analysis Studio, but settings are observed by the HTML Web client.

For information on Org by Period, See "Managing Metadata" in the *Oracle Hyperion Financial Management Administrator’s Guide*.

Financial Management Advanced Member Selection

In dimensions with large member sets, users can define selections with the Dimension Browser right-click menu. Right-clicking member names enables selection by familial relationship and database-specific options.

Financial Management offers a smaller set of advanced member selection methods than does Analytic Services.

**Table 111  Financial Management Advanced Member Selection Methods**

<table>
<thead>
<tr>
<th>Right-Click Menu Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Members</td>
<td>Selects all members—a Financial Management member selection method</td>
</tr>
<tr>
<td>Select Dim Top</td>
<td>Selects the highest ancestor</td>
</tr>
<tr>
<td>Right-Click Menu Command</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Select Dim Bottom</td>
<td>Selects the lowest descendants</td>
</tr>
<tr>
<td>Also Select Descendants</td>
<td>Selects the currently member and its descendants</td>
</tr>
<tr>
<td>Member List</td>
<td>Displays the Member List dialog box, used to select lists of members—a Financial Management member selection method</td>
</tr>
<tr>
<td>User Defined Fields 1, 2, and 3</td>
<td>Displays the User Defined Field dialog box, used to select members with specific user-defined field values</td>
</tr>
<tr>
<td>Search</td>
<td>Displays the Search dialog box, used to locate members</td>
</tr>
</tbody>
</table>

**User-Defined Fields**

User-defined fields are typically defined only for Account, Scenario, Entity, and custom dimensions and are limited to 20 characters.

Users can compose compound selection statements by using multiple values for one field (for example, `User Defined Field 1= West AND User Defined Field 1= East`).

To define a user-defined field, users cannot use an empty string as a value.

**Display Entity Currency**

Financial Management stores currency metrics in the Value dimension and as Entity dimension attributes, thus enabling users to query data sources using selected or default currency values.

When using Financial Management data sources with defined Entity dimension currency information, you can enable the Display Entity Currency option, to append Entity members with their default currency values. Before querying, you use Data Layout options; after querying, you use the Data Display right-click menu; for all subsequently created documents, you use OLAP Server user preferences.

**Note:** You can use Web Analysis Studio only to review and set this feature, but settings are observed by the HTML Web client.

**Financial Management Conventions**

Financial Management outlines have 12 dimensions, eight predefined (Period, View, Entity, Account, ICP, Scenario, Value, and Year) and four custom.

- “No Drill To Top” on page 419
- “No Edit Data” on page 419
- “Adding and Deleting Members” on page 419
- “New Databases” on page 419
- “Deleted Users” on page 419
No Drill To Top

When you query Financial Management, you cannot drill to top as you can when querying Analytic Services. Financial Management and Analytic Services track parent-child relationships differently. The Financial Management hierarchies enable multiple consolidations, thus enabling multiple parents for one child.

No Edit Data

Users cannot write back data to Financial Management data sources, as they can to Analytic Services data sources.

Adding and Deleting Members

Users must click the Reload button to display added or deleted members.

New Databases

Current sessions cannot interact with Financial Management data sources added during the session. Only data sources operating when a session is established can communicate with Web Analysis documents. To connect to new Financial Management databases, log off and then log on again.

Deleted Users

After you establish a Financial Management session, connection is valid until you log off, even if your user name is deleted server-side. Access is not revoked until the current session ends.

SAP BW

You can access SAP BW data sources in Web Analysis documents. Thus, you can extend your SAP BW investment by using advanced analytics and dashboards. Using the custom document freeform grid component, you can present OLAP, relational, and manually entered data on one data object and leverage all data sources in integrated dynamic calculations. Visually compelling SAP BW documents typically surpass the presentation, reporting, and distribution requirements of information consumers.

- “SAP BW Prerequisites” on page 419
- “SAP BW Conventions” on page 420
- “SAP BW Advanced Member Selection” on page 420

SAP BW Prerequisites

After installation, you must download the SAP BW JCo driver 2.1.4 or 2.1.5 from an SAP Web site.
Two Microsoft DLL files, MSvcr71.dll and MSvcp71.dll, are deployed to a common directory during installation. The files are used by Production Reporting, Financial Reporting, and Web Analysis.

You must locate the SAP BW JCo Driver in the DLL files directory.

**SAP BW Conventions**

SAP data sources differ from other data sources. For example, level 0 is the highest ancestor in SAP and the lowest descendant in Analytic Services. SAP member properties are analogous to Analytic Services attribute dimensions.

**SAP BW Advanced Member Selection**

In dimensions with large member sets, users can define selections with the Dimension Browser right-click menu. Right-clicking member names enables selection by familial relationship and database-specific options.

SAP BW and Analytic Services offer different sets of advanced member selection methods.

<table>
<thead>
<tr>
<th>Right-Click Menu Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Members</td>
<td>Selects all members</td>
</tr>
<tr>
<td>Select Dim Top</td>
<td>Selects the highest ancestor, or, in multiple hierarchies, all top level ancestors</td>
</tr>
<tr>
<td>Select Dim Bottom</td>
<td>Selects all lowest level descendants</td>
</tr>
<tr>
<td>Also Select Descendants</td>
<td>Selects the current member and its descendants</td>
</tr>
<tr>
<td>Select Parent</td>
<td>Selects the parent of the current member</td>
</tr>
<tr>
<td>Also Select Ancestors</td>
<td>Selects the current member and its ancestors</td>
</tr>
<tr>
<td>Also Select Children</td>
<td>Selects the current member and its children</td>
</tr>
<tr>
<td>Also Select Siblings</td>
<td>Selects the current member and members on the same level and of the same parent</td>
</tr>
<tr>
<td>Also Select Level</td>
<td>Selects the current member and all members on the same level and of the same dimension</td>
</tr>
<tr>
<td>Select At Level</td>
<td>Selects all members at a level specified by name or number</td>
</tr>
<tr>
<td>Also Select Previous</td>
<td>Selects a variable number of previous members from the level of the current member; uses MDX LAG to indicate the number of previous members to return</td>
</tr>
<tr>
<td>Also Select Next</td>
<td>Selects a variable number of next members from the level of the current member; uses MDX LEAD to indicate the number of subsequent members to return</td>
</tr>
<tr>
<td>Date Time Series</td>
<td>Selects time members based on time definition criteria. SAP BW does not return aggregated values for DTS selections and returns only members that satisfy the criteria.</td>
</tr>
<tr>
<td>Right-Click Menu Command</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Select Top/Bottom</td>
<td>Returns a variable number of members, based on their rank. You can select top or bottom values, but not both. Rank can be calculated by percentage, sum, or count. Sum uses a threshold value to select members up to and including the value that limits the threshold. Result sets may differ from Dimension Browser preview, due to custom filter selections on the query.</td>
</tr>
<tr>
<td>Filter on Member Properties</td>
<td>Displays the Member Properties dialog box, used to select member subsets by member SAP BW property values</td>
</tr>
<tr>
<td>Find in Tree</td>
<td>Locates members in large dimensions; expands the hierarchy but does not add found members to the Selection list</td>
</tr>
</tbody>
</table>

## Relational Access

Web Analysis documents, using one of five methods, can access OLAP, Hyperion, and supported relational databases.

- “Custom Document SQL Spreadsheet” on page 421
- “Custom Document Freeform Grid” on page 421
- “Relational Drill-through” on page 421
- “Relational Database Connections” on page 422
- “Analytic Integration Services Drill-through” on page 422
- “Repository” on page 422
- “Controlling Query Result Set Size” on page 422

### Custom Document SQL Spreadsheet

SQL spreadsheet objects represent relational data sources as spreadsheets, using standard SQL syntax queries.

### Custom Document Freeform Grid

Freeform grids enable users to combine data values from multiple data sources in one data object and thus leverage custom document database connections.

### Relational Drill-through

You can construct seamless liaisons between OLAP data and relational data sources. Navigation from OLAP to relational data is typically called *relational drill-through*. Users can navigate from the dimension bottom (level 0) of OLAP databases and drill down to relational data.
Web Analysis documents store relational drill-through definitions, which can be defined with Select statements and clauses, as database connection properties of Analytic Services database connections. Query result sets are presented as SQL spreadsheets.

See “Integrating OLAP and Relational Data” on page 412.

**Relational Database Connections**

Web Analysis Studio provides users with an easy-to-use graphical interface for defining relational database connections. You are prompted to specify relational database type and login credentials, select a relational table, and define database-connection properties.

Web Analysis documents relational data sources, aggregates result sets, and expresses data as OLAP cubes.

**Analytic Integration Services Drill-through**

Analytic Integration Services Drill-through is a server-based form of relational drill-through. Like conventional relational drill-through, you can construct seamless connections between OLAP and relational data. Unlike conventional relational drill-through, you can drill to relational data sources from all Web Analysis document intersections.

Analytic Services administrators must establish Analytic Integration Services drill-through reports. Relational queries are stored as intersection-specific metadata and flagged with LRO indicators. When users double-click flagged cells, OLAP documents navigate to the specified relational report.

**Repository**

Repository access is the only mandatory form of relational database access. The repository centrally stores system data, user names, user preferences, and document definitions in relational database tables. Without repository access, you cannot save information. Administrators establish repository access during installation.

**Controlling Query Result Set Size**

Query governors vary for relational access methods.

Custom document SQL spreadsheets and relational drill-through methods enable users to declare query governors as they create SQL queries or relational drill-through definitions.

When you drill from OLAP to relational data, passing only the drilled OLAP member to the relational data source may result in a large query result set. To focus and diminish query result sets, users can pass page and filter dimensions specified in the OLAP documents.

Other relational access methods rely on the Analysis.properties file to limit query result sets.
Custom Web Analysis Documents

Web Analysis Studio provides twenty-one coding-free components, each of which can be customized and added to custom documents multiple times. Combination options provide almost unlimited creative opportunities for custom-document designers.

Note: Custom documents cannot be created in Web Analysis EPM Workspace.

- “Containers” on page 423
- “Content Panels” on page 423
- “Data Objects” on page 423
- “Subscription Controls” on page 424
- “SQL Spreadsheet and SQL Subscription” on page 424

Containers

Panel and Split Panel objects enable you to control space and layers on custom documents. It is best to use container panels to design documents and to orient components inside panels. Components placed with absolute alignment in the main document panel maintain position even as other components fluctuate. Thus, components may overlap and shift.

You can size, align, and establish properties for panels. Properties control appearance and behavior.

Content Panels

Panels that provide specialized content:

- Label—Static or dynamic text for use as titles, labels, or captions
- Text Area—Dynamic text used for annotations
- Image—A graphic used to include graphic backgrounds, pictures, illustrations, and graphic controls
- HTML Browser—Static HTML

The panels function without additional coding. Label objects support the dynamic text labels used in printing headers, footers, and SQL spreadsheets.

Data Objects

Data objects representing display types (on the component toolbar):

- Chart—query result sets as charts
- Spreadsheet—query result sets as spreadsheets
- Freeform Grid—content from freeform grids
• Pinboard— query result sets as pinboards

SQL spreadsheet data objects are also available, at the end of the component toolbar.

**Subscription Controls**

You can add controls to documents to enable users to navigate dimensional hierarchies, browse the documents, or execute commands.

• Combo Box Subscription— View a list of members.
• Radio Button Group Subscription— Select a member option.
• Checkbox Group Subscription— Select multiple members.
• Tab Group Subscription— Select a member tab.
• Multi-level Combo Box Subscription— Select from interdependent lists (members changing as selections change).
• Slider Subscription— Select a member, based on its position on a slider bar.
• Selection Button Subscription— Apply member selections to data objects that use the same data source.
• Alias Controller— Toggle data objects between alias table labels.
• Services Button— Execute preset commands and create hot spots.

Subscription buttons can control data objects that share a database connection query.

**SQL Spreadsheet and SQL Subscription**

Components that present and control SQL query result sets.

• SQL Spreadsheet— a data object that displays a SQL query to a relational data source
• SQL Subscription— a subscription button designed for SQL spreadsheets

**Linking Components by Query**

Specifications required for document creation:

• Data source—provides data values
• Data object—displays data values
• Query—Retrieves data values from data sources and returns them to data objects

Properties that customize the specifications:

• Database connection properties indicate data-source type, logon credentials, database applications, dimension formatting, and drill-through properties.
• Data objects can be set to display types that feature specific options.
Queries can be explicit, requesting information on members, or dynamic, requesting information about all members that satisfy a set of criteria.

In Design Document mode, query definitions are referred to as *data sources*.

- “Common Data Sources” on page 425
- “Unlinking Components” on page 425

**Common Data Sources**

Design document components using the same data source are coordinated (follow the same navigation lines).

**Unlinking Components**

If you do not want coordinated document components, you can assign multiple data sources to a data object. Identical data sources with different names are treated as individual sources.

**Linking Dimensions**

You can use Custom settings to link dimensions within data objects on a document. Dimension linking enables data objects that share dimensions but use different data sources to remain coordinated. Links are unidirectional. Navigation on a data object triggers coordinated navigation on the data objects linked to it. Navigation on the other data objects triggers coordinated navigation only the objects have defined links.

**Edit Data Mode**

If you have permission, you can edit cell values and write edits back to Analytic Services. You can initiate Edit Data mode only from the spreadsheet display type.

- To initiate Edit Data mode in a Web Analysis document, right-click the data object, and select *Edit Data*.

Edit Data buttons are added to the content area. Editable cells in Analytic Services are converted to data-entry cells.

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculation list</td>
<td>Specifies the calculation script to use when the database is recalculated from the HTML Web client</td>
</tr>
<tr>
<td>Run</td>
<td>Prompts the database server to recalculate the database</td>
</tr>
<tr>
<td>Control</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Exit</td>
<td>Closes Edit Data mode</td>
</tr>
<tr>
<td>Send Data</td>
<td>Applies edits to the database</td>
</tr>
</tbody>
</table>

## Editing Data Values

- To edit data values:
  1. Right-click the data object, and select **Edit Data**.
  2. To recalculate the database, from **Calculation**, select a calculation script, and click **Run**.
  3. Click a cell to edit its data value.
  4. Enter a data value, and click the column or row heading.
  5. Click **Send Data**.

    Only authorized users can successfully write changes to the database. The Confirmation dialog box is displayed if write-back is successful.

  6. **Optional**: Perform step 2 to recalculate the data.
  7. Click **Exit**.

    **Note:** On long spreadsheets, you may need to scroll down and to the right to locate the Send Data and Exit buttons, on long spreadsheets.

## Copying, Cutting, and Pasting To and From Excel

While in Edit Data mode, you can cut, copy, and paste ranges of cells from Excel spreadsheets into Web Analysis spreadsheets. The edits can then be posted to Analytic Services. You can also cut, copy, and paste between values.

Keyboard shortcuts:

- To copy, select a range of cells, and press Ctrl + C.
- To cut, select a range of cells, and press Ctrl + X.
- To paste, select a range of cells, and press Ctrl + V.

## Tips for Edit Data Mode

- You cannot edit calculated members or attribute dimensions, because their values do not reside in the database.
Dimensions composed of implied shares (or user-defined hierarchies) do not aggregate as conventional dimension hierarchies do. Therefore, implied shares may overwrite data edits made to parents of implied shares as the model is pivoted.

Example: Actual and Budget are implied shares of the parent Scenario. Scenario, however, is a categorical label, not an aggregation of Actual and Budget measures.
Overview

From the Applications module of the Navigate menu, you can select the following Oracle Business Intelligence products:

- Oracle BI Answers
- Oracle BI Interactive Dashboards
- Oracle BI Delivers

See Chapter 7, “Launching Applications” for additional information on availability of these products based on user rights, roles, and availability of these products from EPM Workspace. For additional information on setting preferences for these products, see “Setting Preferences for Oracle BI Publisher” on page 76 and “Setting Preferences for Oracle Business Intelligence Products” on page 77. For details on Oracle BI EE functionality available in EPM Workspace, see the Oracle Business Intelligence Enterprise Edition New Features Guide.

Oracle BI Answers

Oracle BI Answers provides true end user ad hoc capabilities in a pure Web architecture. Users interact with a logical view of the information—completely hidden from data structure complexity while simultaneously preventing runaway queries—and can easily create charts, pivot tables, reports, and visually appealing dashboards, all of which are fully interactive and drillable and can be saved, shared, modified, formatted, or embedded in the user’s personalized Oracle BI Interactive Dashboards. The results are new levels of business user self-sufficiency in an environment that is fully secure and controlled by IT. See “Overview” on page 429 for availability and preferences for these products.

Oracle BI Interactive Dashboards

Oracle BI Interactive Dashboards provides any knowledge worker with intuitive, interactive access to information that is actionable and dynamically personalized based on the individual’s role and identity. In the Oracle BI Interactive Dashboards environment, the end user is working
with live reports, prompts, charts, tables, pivot tables, graphics, and tickers in a pure Web architecture. The user has full capability for drilling, navigating, modifying, and interacting with these results. Oracle BI Interactive Dashboards can also aggregate content from a wide variety of other sources, including the Internet, shared file servers, and document repositories. See “Overview” on page 429 for availability and preferences for these products.

**Oracle BI Delivers**

Oracle BI Delivers is a proactive intelligence solution that provides business activity monitoring and alerting that can reach users through multiple channels such as email, dashboards, and mobile devices. Oracle BI Delivers includes a full Web-based self-service alert creation and subscription portal. This next-generation product can initiate and pass contextual information to other alerts to execute a multistep, multi-person, and multi-application analytical workflow. Furthermore, it can dynamically determine recipients and personalized content to reach the right users at the right time with the right information. See “Overview” on page 429 for availability and preferences for these products.
Overview

In EPM Workspace, you use the Schedule module to perform the following tasks:

- Run and schedule job types:
  - Interactive Reporting job – An Interactive Reporting document imported in EPM Workspace as a job and its associated files.
  - Production Reporting job – A Production Reporting report or program and its associated files. A Production Reporting job can be secure or nonsecure.
  - Generic job – A report or program from another software provider (for example, an Oracle report or a Crystal report), and any associated files.

- Run and schedule batches, which are collections of reports.

Scheduling and Running Jobs

You can manually run jobs from Explore. Select the jobs you want to run, enter the job parameters, then view the job output. You can also run jobs automatically by scheduling your jobs to run using events and job parameters.

The schedule module contains the following panels for scheduling jobs:
Job queueing occurs when no Job Service is available to process a job. Administrators can control Job Service availability using the Job Limit and Hold properties. For more information on these properties, see *Oracle Enterprise Performance Management Workspace Administrator’s Guide*.

Use this to see the status of jobs and notifications for jobs that are finished.

Show Parameters – Displays a list of information about job parameters. You can modify or delete parameters from the Show Parameters page. See “Modifying Job Parameters” on page 447.

Jobs Running – Use this to list jobs which are currently running. You can cancel a job by selecting a job, right-click and select Cancel.

Managing Events - Use this to create and manage events.

Using the Consolidated Job Status List - Use this to view a list of jobs with the option to filter the list and modify the jobs, schedules or events. You can also use the Run Now option on a job from the Consolidated Job List.

If your administrator enabled the pass-through feature, you can configure foreground jobs to run without additional requests for data source login credentials. You can run jobs in the foreground or in the background depending upon how the job was configured by the importer.

Note: You can also run any job in the background or foreground using Run Job option from File menu.

Scheduling and Running Jobs includes the following topics:

- “About Job Execution” on page 433
- “Events” on page 433
- “Event Status and Schedule Status” on page 434
- “Job Parameters” on page 434
- “Running Jobs” on page 435
- “Scheduling Jobs” on page 436
- “Using Job Output” on page 438
- “Managing Events” on page 439
- “Managing Job Queue” on page 442
- “Viewing Job Notifications” on page 442
- “Using the Consolidated Job Status List” on page 442
- “Retrieving Jobs” on page 448
About Job Execution

When a job executes in the foreground, you must wait until the job completes before continuing with other tasks. When a foreground job finishes executing, EPM Workspace displays:

- For Interactive Reporting jobs, a link to the output in the folder where the job resides
- For Production Reporting jobs, the HTML frame file
- For generic jobs:
  - The primary output file, if there is only one
  - A list of primary output files, if there are multiple files
  - A list of all output files, if there is no primary one

When a job is executing in the background, you can perform other tasks in the foreground. When the background job finishes executing, the output files are written to the repository, and a notification message is displayed in the View Job Status panel of the Schedule module.

The Output link is displayed next to the job title. Click the Output link to view the job output.

- “Job Priority” on page 433
- “Scheduling Jobs” on page 433

Job Priority

When jobs are scheduled to process at the same time, jobs with High priority run first. You can set the priority to High or Normal when you schedule the job.

Scheduling Jobs

Scheduling a job enables you to automatically run jobs at a date or time and/or on a recurring basis. To schedule a job, you must associate a time event and a job parameter list with the job. All types of jobs can be scheduled through EPM Workspace.

- Events define the timetable for running a job
- Job Parameters define the run time values necessary to execute a job

Note: For Production Reporting jobs, compile time parameters may also be specified with job parameters.

- Schedules specify the job you want to execute, as well as the event schedule and job parameter list for running the job

Events

Events define when the job runs and whether the job runs only once or many times. You can determine whether the job runs every Wednesday, or every fourth Friday, or after an event occurred.
Because events are not associated with a particular job, you can use them to schedule multiple jobs. You can create personal recurring time events that only you can use. You may have access to public recurring time events and externally triggered events your administrator created.

You can create events as you schedule a job or from the Schedule module using the Manage Events panel. You can also view, modify, access, or delete time events.

The types of events that can be used for scheduling jobs are:

- Public recurring time events – Reusable time events created by an administrator and accessible to you with the required access privileges.
- Personal recurring time events – Reusable time events created by you and accessible only to you.
- Externally triggered events – Date based events created by an administrator and accessible to you with the required access privileges. Jobs are scheduled to run when the event is triggered.
- Custom time events – Time events created by you for one time use within a job schedule. Custom events cannot be used by other job schedules.

**Event Status and Schedule Status**

Events and Schedule each maintain their own status, which is displayed by a traffic light indicator. The following table shows how the status enables a job to run. You can set the status when you modify the event or schedule.

<table>
<thead>
<tr>
<th>Event Status</th>
<th>Schedule Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>active</td>
<td>active</td>
<td>The scheduled job runs</td>
</tr>
<tr>
<td>active</td>
<td>inactive</td>
<td>The scheduled job will not run</td>
</tr>
<tr>
<td>inactive</td>
<td>active</td>
<td>The scheduled job will not run</td>
</tr>
<tr>
<td>inactive</td>
<td>inactive</td>
<td>The scheduled job will not run</td>
</tr>
</tbody>
</table>

**Job Parameters**

Job parameters are run-time values that are necessary to run a job. The run-time values are the job variables or limits you are prompted for by the job. For some Interactive Reporting jobs, job parameters also include processing and job output options. You can save job parameters to:

- Run or schedule jobs without being prompted for the run-time values
- Share Public job parameters with other users
- Run jobs using different parameters on a schedule

EPM Workspace supports the following types of job parameters:
Public job parameters – Reusable named job parameters created by your administrator and accessible to you with the required access privileges.

Personal job parameters – Reusable named job parameters created by you and accessible only by you.

Custom job parameters – Unnamed job parameters created by you and associated with a schedule. Default job parameters are not listed or named and cannot be used with other schedules. They are deleted when the schedule is deleted.

Note: Job parameters can only be created when creating or modifying a job schedule or when running a job. See “Running Jobs” on page 435 or “Scheduling Jobs” on page 436 to see how to get to the job parameters section.

Job Parameter Tasks

You can modify and delete parameters from the Show Parameters page. You can also modify job cycles.

- To modify a job parameter, select a job name, right-click and select Modify. See “Setting Interactive Reporting Job Properties” on page 460 to complete the Properties dialog.

- To delete a job parameter, select a job name, right-click and select Delete.

Running Jobs

This section provides general instructions for running a job and setting your default job parameters.

- To run jobs:

  1. From Explore, navigate to the job you want to run, then do one of the following:
     - From the menu bar, select File, then Run Job.
     - Double click the job.
     - Right-click the job, from the shortcut menu, select Run Job.
     - Right-click the job, from the shortcut menu, select Run Job in, then Foreground. When you run jobs in the foreground, a progress bar displays status and you cannot perform other tasks until it is complete.
     - Right-click the job, from the shortcut menu, select Run Job in, then Background. When you run jobs in the background, you can continue working in EPM Workspace.

  2. If database authentication is required, enter the user name and password for each connection in the Database Connectivity section. The Database Connectivity section is displayed only if database authentication is required.

  3. For Production Reporting and Generic jobs, browse to specify a folder destination for the job output.
The default folder is the folder where the job is located.

4 In the Job Parameters section, define parameters using an existing job parameters list or create one.
   If the job has no run-time variables, the job parameters section is not displayed.
   To set personal default job parameters, see “Setting Job Parameters” on page 436.

5 If you are using default parameters, click Run Job, if not continue with the following steps.

6 Set values, limits, or define or modify cycles depending upon the type of job you are running.
   See “Setting Job Parameters” on page 466 and “Setting Production Reporting and Generic Job Parameters” on page 488.

7 Click Run Job.
   Job parameters selected when jobs are imported are called Publisher defaults. You can override these Publisher defaults at run time and set your own job parameters. Your jobs run with your Publisher defaults until you change them.

**Setting Job Parameters**

➢ To set your default job parameters:

1 From Explore, navigate to the job you want to run, right-click, then select Run Job.

2 Select an existing job parameter list or New Values.

3 Set values, set limits, or define or modify cycles depending upon the type of job you are running.
   See “Setting Job Parameters” on page 466 and “Setting Production Reporting and Generic Job Parameters” on page 488.

4 Do one or more of the following steps:
   ● Check Save as my default.
   ● Check Save, then select Public or Private.

5 Click Run Job.
   Your job parameters are not saved until you run the job.

**Scheduling Jobs**

This section provides general instructions for scheduling a job.

**Note:** When scheduling the Day of the Week option, it is calculated based on the server time.

➢ To schedule a job:

1 Do one of the following:
   ● From Explore, navigate to the job you want to run.
   ● From Consolidated Job Status page, select a job.
2 Right-click the job and select **Add a Schedule**.

3 Fill in the properties.

- **Name**—(Required) The Name can contain letters, numbers, the space character, and the underscore character “_”.
- **Description**—A meaningful description of the schedule. For example, *Quarter end for all regions*. The length is limited to 250 characters.
- **Priority**—When jobs are scheduled to process at the same time, jobs with High priority are run first. Select High or Normal priority.
- **Active**—This is displayed when you modify a schedule only. A traffic light that indicates if the job is scheduled to run.
  - A green traffic light indicates that the job is scheduled to run.
  - A red traffic light indicates that the job is not scheduled to run.
- **Run this job**—Infinitely or a specified number of times. The job automatically becomes inactive after it runs the indicated number of times.
- **Job outputs inherit time to live from the job properties**—Enable to automatically delete job output.
- **Auto-delete job outputs after:** Indicate when to delete by entering a number and selecting a time interval (minutes, hours, days, weeks, years) after the job is run. Default is minutes.
- **User name and Password**—You are prompted for database authentication if it is required.

4 Click **Next**.

5 For **Job Parameters**, select one of the following options:

- To create job parameters from scratch, select **Define job parameters starting with** and select **New Values**.
- To create job parameters from existing job parameters, select **Define job parameters starting with** and select a job parameter. This enables you to quickly create a job which is similar to an existing job. Make changes to the parameters and save the completed job parameters using a different name.
- To use or view job parameters, select **Schedule this job with existing job parameters** and select the parameters you want to use from the drop-down list. Click **View** if you want to see the parameters before you move on to the next screen.
  
  If the job has no parameters (no run time variables or limits), the job parameters section is not displayed.
  
  If there are no job parameters, you must create them.

6 Click **Next**.

7 For **Set Values**, select the cycles and actions for this Interactive Reporting job.

8 Select **Save** if you want to save the parameters for another job as your own, Personal, or available to others as **Public**.
From the Time Events page, indicate if you want to create an event or use an existing event using one of the following options:

- To create a new event, select **A New Recurring Time Event** from the drop-down list. See “Creating Personal Recurring Time Events” on page 439.
- A new **Custom Time Event**. You use custom time event in order to create a one time schedule. The time cannot be changed by modifying event since you do not have access to the event properties.

Click **Next**.

If desired, configure notification options.

- If you want to view your notifications in the Schedule module using the Job Notifications panel, select **Display notification in Schedule Module**.
- If you want to E-mail the notification, enter E-mail addresses. Separate E-mail addresses by semicolons, colons, space characters, commas, or new lines.
- If you want to attach the latest job output to the E-mail, select **Attach PDF outputs to email messages**.

For Production Reporting jobs, see additional notification options in “Output Options for Scheduling Jobs” on page 488.

Complete Permissions step, see “Setting Permissions” on page 129.

Click **Finish** to schedule the job.

## Using Job Output

When jobs run, the results are placed in job output items. This section describes modifying job output properties and viewing job output. Job output deletion is streamlined. When you delete jobs, you can also delete all associated outputs.

### Modifying Job Output Properties

Job output properties determine which users can view the job output. Job output is listed in the same folder as the job. Each run of the job produces job output. You can modify or view the job output properties depending on your access privileges on the job.

To modify or view job output properties:

1. From **Explore**, navigate to the job output, and select it.
2. Select **File**, then **Properties**.

   **Note:** You can also right-click on an artifact and select **Edit Permissions**.

3. Change the properties or click **Permissions** to change the access control.

   When assigning access to additional users, groups, or roles, the adaptive state is limited to **View Only**. Also, the adaptive state cannot be modified for the existing roles, groups, and
users. You can modify the adaptive state for future job output when modifying the access control for the job.

To modify access control, see “Setting Permissions” on page 129.

4 Click OK.

**Viewing Job Output**

You can open job output and a table of contents is displayed to navigate through the job output.

To view job output:

1. From Explore, right-click the job output file, then select Open.

   The table of contents is displayed for items in the job output.

2. Click an item, then click Open.

3. To return to the table of contents and view other items, select the TOC tab in the content tab area.

**Managing Events**

From the Schedule module, use the Manage Events panel to:

- View events which you can access
- Make events accessible to other users using access control
- Modify, delete, or create events

To manage events:

1. Select Navigate, then Schedule, then Manage Events.

2. To filter the events displayed, select Filter from the toolbar. Complete the Filter dialog fields and select Apply.

   All the events you can access are listed with their properties.

3. To modify or delete an event, select the event, right-click and select Edit or Delete.

4. To create a personal time event, see “Creating Personal Recurring Time Events” on page 439 and to create a public recurring time event, see “Creating Public Recurring Time Events” on page 440.

**Creating Personal Recurring Time Events**

To create a personal recurring time event:

1. Select Navigate, then Schedule, then Manage Events.

2. To filter the events displayed, select Filter from the toolbar. Complete the Filter dialog fields and select Apply.

   All the events you can access are listed with their properties.
3 Right-click an event and select Add, then Personal Recurring Event.

**Note:** You must be an Administrator to add a Public Recurring Event or Externally Triggered Event.

4 The Create Personal Recurring Time Event dialog wizard is displayed. Enter the time event name and description.

5 Click Active to make the Event available for scheduling.

**Note:** If a schedule is associated with an inactive event, the job will not run. You can check the event's active status by using the Manage Events panel in the Scheduler.

6 Select the calendar you want to use for this time event.

Company calendars are created by your administrator.

7 From the Days to Run list, select the option you want to use and click Go (By Day is the default).

By Day, By Week, By Period, By Quarter, and By Year let you specify a recurring time pattern. Advanced Days of Week and Advanced Days of Period give you the option to select days with no pattern.

8 From the Time to Run list, select the option you want to use and click Next (Once per hour is the default).

The options include Once Per Day, More Than Once Per Day, or After External Event.

9 Update the Starting At and Ending At time to specify a range for the event.

10 Enter a Start Date and select the option to enter an End Date or to accept the default, No End Date.

11 Click Finish.

**Creating Public Recurring Time Events**

To create a public recurring time event:

1 Repeat step 1 through step 10 above. The only exception is to select Public Recurring Event in place of Personal Recurring Event.

2 Select Next.

3 Complete the permissions for this event and select Finish. For more information on setting permissions, see “Setting Permissions” on page 129.

**Creating Externally Triggered Events**

To create an externally triggered event:

1 Repeat step 1 through step 10 above. The only exception is to select Externally Triggered Event in place of Personal Recurring Event.

2 Select Next.
3 Complete the permissions for this event and select **Finish**. For more information on setting permissions, see “Setting Permissions” on page 129.

**Viewing Events**

You can view all your events from the Manage Events panel in the Schedule module.

- To view events:
  1. Select **Navigate**, then **Schedule**, then **Manage Events**.
     A recurring and externally triggered event list is displayed.
  2. To filter the events list, select **Filter** from the toolbar area. Complete the Filter dialog and select **Apply**.

**Modifying Events**

You can modify events from the Manage Events panel in the Schedule module.

- To modify events:
  1. Select **Navigate**, then **Schedule**, then **Manage Events**.
     A recurring and externally triggered event list is displayed.
  2. To filter the events list, select **Filter** from the toolbar area. Complete the Filter dialog and select **Apply**.
  3. Select an event, right-click and select **Modify**.
  4. Change properties.
  5. Click **OK**.
     The modified event is displayed in the events list.

**Deleting Events**

You can delete events unused by schedules or other events. For example, if an external event is used to trigger a recurring event, the recurring event needs to be deleted or disassociated from the external event before the external event can be deleted.

- To delete events from the Manage Events panel in the Schedule module.
  1. Select **Navigate**, then **Schedule**, then **Manage Events**.
     An event list is displayed.
  2. To filter the events list, select **Filter** from the toolbar area. Complete the Filter dialog and select **Apply**.
  3. Select an event, right-click, select **Delete** and confirm deletion by clicking **Yes**.
     If schedules are associated with the time event you are deleting, modify those schedules to use another time event.
     Before you delete a time event associated with an external event, disassociate the time event from the external event or delete the external event.
Managing Job Queue

Job Queueing enables users to limit the number of jobs processed in parallel and manage the Job Queue.

To manage job queue:

1. Select Navigate, then Schedule, then Job Queue.
2. Go to Job Queue page. Verify that jobs with High priority are at the top of the queue.
3. Perform the following tasks to manage and validate changes are reflected in the queue:

   From the right-click menu:
   - Place a job to the top of the queue – This job should be first removed from queue.
   - Place job in the bottom of the queue – The job should be removed from the queue last.
   - Select Hold item for the Job. Repeat for several job types – Job should not be processed, but not removed from the queue. Check mark next to the job is displayed when Held.
   - Delete job from the queue. Repeat for all job types – Job should be removed from the queue.

   Note: When some scheduled jobs are in the queue, run several different jobs in Background and Foreground. A dialog is displayed asking whether user wants to queue the Job. Job is added to the Queue if user clicks Yes.

Viewing Job Notifications

From the Schedule module, use the Job Notifications panel to:

- Display completion status of jobs running in the background.
- Display notifications for jobs that have completed.

To view job notifications:

1. Select Navigate, then Schedule, then Job Notifications.
2. To delete job completion notifications:
   - To delete one notification, select the job, right-click, then select Delete.
   - To delete all notifications, select the jobs, right-click, then select Delete.

Using the Consolidated Job Status List

From the Schedule module, use the Consolidated Job Status panel to:

- Filter the job list shown in the Consolidated Job Status List, see "Filtering Consolidated Job Status List" on page 443.
Run Now. Run the scheduled job again with parameters used previously when the job failed. See “Run a Scheduled Job Now” on page 444.

- Modify job properties. See “Modifying Job Parameters” on page 447
- Modify schedule properties. See “Modifying Schedules” on page 446
- Modify event properties. See “Modifying Events” on page 441
- Add schedules. See “Adding Schedules” on page 447
- Delete schedules. See “Deleting Schedules” on page 446

To update a scheduled job list:

1. Select the Navigate, then Schedule, then Consolidated Job Status.

   Select Filter from the toolbar. To filter the Consolidated Job Status List, see “Filtering Consolidated Job Status List” on page 443.

   The following table lists the column descriptions on the Consolidated Job Status List page.

<table>
<thead>
<tr>
<th>Table 115 Consolidated Job Status List Columns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Name</td>
</tr>
<tr>
<td>Job Owner</td>
</tr>
<tr>
<td>Schedule Name</td>
</tr>
<tr>
<td>Schedule Owner</td>
</tr>
<tr>
<td>Event Name</td>
</tr>
<tr>
<td>Last Run Date</td>
</tr>
<tr>
<td>Last Status</td>
</tr>
<tr>
<td>Next Run Date</td>
</tr>
</tbody>
</table>

2. Optional: To delete schedules, select the schedule, then right-click and select Delete.

   To select all schedules, click the check box at the top of the column.

Filtering Consolidated Job Status List

You can filter your job list using the filter criteria listed in Table 116. A particular filter is not set when it is blank. The Consolidated Job Status List is sorted by the filter you selected in the Default Sort Order field from the filter page.

To set filters and sort criteria for the Consolidated Job Status List:

1. Select Navigate, then Schedule, then Consolidated Job Status.

2. If default filter settings do not exist, select filter settings by selecting Filter from the toolbar. Filter dialog is displayed.
See Table 116 for more details on the filter criteria.

3 Determine the sort order by selecting the Default Sort Order from the drop-down list and the options indicating ascending or descending order.

The default sort filter is the job name. For descriptions of sorting filters, see Table 116.

4 Click a button:
   - **Apply** - Saves your values for one session.
   - **Save As Default** - Saves your values as your default values.
   - **Restore Defaults** - Retrieves the values you last saved as your default values.
   - **Cancel** - Saves no values.

<table>
<thead>
<tr>
<th>Job Filter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Name</td>
<td>Select <strong>Equals</strong>, <strong>Contains</strong>, <strong>Ends with</strong>, or <strong>Begins with</strong> and enter text.</td>
</tr>
<tr>
<td>Job Owner</td>
<td>Select <strong>Equals</strong>, <strong>Contains</strong>, <strong>Ends with</strong>, or <strong>Begins with</strong> and enter text.</td>
</tr>
<tr>
<td>Schedule Name</td>
<td>Select <strong>Equals</strong>, <strong>Contains</strong>, <strong>Ends with</strong>, or <strong>Begins with</strong> and enter text.</td>
</tr>
<tr>
<td>Schedule Owner</td>
<td>Select <strong>Equals</strong>, <strong>Contains</strong>, <strong>Ends with</strong>, or <strong>Begins with</strong> and enter text.</td>
</tr>
<tr>
<td>Event Name</td>
<td>Select <strong>Equals</strong>, <strong>Contains</strong>, <strong>Ends with</strong>, or <strong>Begins with</strong> and enter text.</td>
</tr>
<tr>
<td>Last Status</td>
<td>Select <strong>All</strong>, <strong>Is</strong>, or <strong>Is not</strong> from the first drop-down list and <strong>Successful</strong> or <strong>Cancelled</strong> from the second drop-down.</td>
</tr>
<tr>
<td>Last Run Date</td>
<td>Select the time period from the drop-down list.</td>
</tr>
<tr>
<td>Next Run Date</td>
<td>Select <strong>After</strong>, <strong>Between</strong>, or <strong>Before</strong> from the drop-down list and the year, month, and day for your selection.</td>
</tr>
<tr>
<td>Default Sort Order</td>
<td>Select a filter criteria from the drop-down list to sort the list. Select a radio button for ascending or descending sort order.</td>
</tr>
<tr>
<td>Schedule State</td>
<td>Select the desired filter(s) for the schedule state. Active is the default.</td>
</tr>
</tbody>
</table>

**Run a Scheduled Job Now**

This functionality allows a user to run any job from Consolidated Job Status list. You can also select multiple jobs to run at once. For applicable user rights required, see Table 117.

<table>
<thead>
<tr>
<th>Artifact</th>
<th>Job Type</th>
<th>User Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generic Job</td>
<td>Simple</td>
<td>Administrator</td>
</tr>
<tr>
<td>Generic Job</td>
<td>Simple</td>
<td>Any user with lower than Modify and Run access</td>
</tr>
<tr>
<td>Generic Job</td>
<td>With Parameters</td>
<td>Schedule Manager with Modify and Run access</td>
</tr>
<tr>
<td>Artifact</td>
<td>Job Type</td>
<td>User Rights</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Interactive Reporting job</td>
<td>Simple</td>
<td>Schedule Manager with Modify and Run access</td>
</tr>
<tr>
<td>Interactive Reporting job</td>
<td>With parameters</td>
<td>Administrator</td>
</tr>
<tr>
<td>Interactive Reporting job</td>
<td>Simple</td>
<td>Any user with lower than Modify and Run access</td>
</tr>
<tr>
<td>Production Reporting job</td>
<td>Simple</td>
<td>Any user with lower than Modify and Run access</td>
</tr>
<tr>
<td>Production Reporting job</td>
<td>With parameters</td>
<td>Administrator</td>
</tr>
<tr>
<td>Production Reporting job</td>
<td>With DB connection</td>
<td>Schedule Manager with Modify and Run access</td>
</tr>
<tr>
<td>Production Reporting job</td>
<td>With DB connection</td>
<td>Administrator</td>
</tr>
</tbody>
</table>

To run a scheduled job now:

1. Select **Navigate**, then **Schedule**, then **Consolidated Job Status**.
2. Select a job which had been run successfully by the schedule with notifications enabled.
3. Right-click and select **Run Now**.
4. Do any of the following:
   - Go to Jobs Running page, verify that the job is running.
   - Go to Job Notifications page, check job's notification.
   - Open the output from Job Notifications page.
   - If you run a job when job service is busy, you can check the Job Queue module to see if the job has been added to the top of the queue.

### Managing Individual Job Schedules

To manage schedules:

1. From **Explore**, right-click a job and select **Manage Job Schedules**.
2. Review **Schedules** information:

<table>
<thead>
<tr>
<th>Table 118</th>
<th>Schedules</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Schedule Columns</strong></td>
<td><strong>Descriptions</strong></td>
</tr>
<tr>
<td>Job Name</td>
<td>Name of job</td>
</tr>
<tr>
<td>Job Owner</td>
<td>Owner of job</td>
</tr>
<tr>
<td>Schedule Owner</td>
<td>Creator of schedule</td>
</tr>
<tr>
<td>Schedule Name</td>
<td>The name of the schedule</td>
</tr>
<tr>
<td>Description</td>
<td>A schedule description</td>
</tr>
</tbody>
</table>
### Schedule Columns

<table>
<thead>
<tr>
<th>Schedule Columns</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Name</td>
<td>Type of action</td>
</tr>
<tr>
<td>Next Run Date</td>
<td>Next scheduled run</td>
</tr>
</tbody>
</table>

3 Review **Job Parameters** information, select a job, right-click and select **Show Parameters**.

#### Table 119  Job Parameters

<table>
<thead>
<tr>
<th>Job Parameters</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Name</td>
<td>The name of the job</td>
</tr>
<tr>
<td>Job Type</td>
<td>Type of Interactive Reporting or Production Reporting job</td>
</tr>
<tr>
<td>Parameter Name</td>
<td>Name of parameter created for this job</td>
</tr>
<tr>
<td>Description</td>
<td>A parameter description</td>
</tr>
<tr>
<td>Ownership</td>
<td>Owner of parameter</td>
</tr>
</tbody>
</table>

### Modifying Schedules

When your schedule needs changes, you can modify it.

▸ To modify a schedule:

1 Select **Navigate**, then **Schedule**, then **Consolidated Job Status**.
   A list of all jobs that you can access is displayed.

2 Under **Job Name**, locate the job.
3 Select the job, right-click and select **Modify Schedule**.
4 Change properties.
   See “Scheduling Jobs” on page 436.
5 To deactivate or activate the schedule on the General Properties page toggle **Active**.
6 To modify more properties click **Apply**, otherwise click **OK**.

### Deleting Schedules

▸ To delete a schedule:

1 Select **Navigate**, then **Schedule**, then **Consolidated Job Status**.
   A list of all jobs in the system is displayed.
2 Under **Job Name**, locate the schedule, right-click and select **Delete**.
Adding Schedules

➢ To add a schedule:

1. **Do one of the following:**
   - Select **Navigate**, then **Schedule**, and then **Consolidated Job Status**
     
     A list of all jobs in the system is displayed.
   
   - From **Explorer**, select a job.

2. **Right-click and select Add Schedule.**

3. **Follow the instructions in “Scheduling Jobs” on page 436 starting on step 3 on page 437.**

Viewing Job Parameters

➢ To view job parameters, select **Navigate**, then **Schedule**, then **Show Parameters**. A list of all jobs with schedules and parameters is displayed. See also, “Modifying Job Parameters” on page 447 and “Deleting Job Parameters” on page 447.

Modifying Job Parameters

➢ To modify job parameters:

1. **Select **Navigate**, then **Schedule**, then **Show Parameters**.**
   
   A list of all jobs with schedules and parameters is displayed.

2. **Select a job, right-click and select **Modify**.**

3. **Change properties and click **OK**.**

Deleting Job Parameters

You can delete job parameters that are not being used by a schedule.

➢ To delete job parameters:

1. **Select **Navigate**, then **Schedule**, then **Show Parameters**.**
   
   A list of all jobs with schedules and parameters is listed.

2. **Click the scheduled job.**

3. **Right-click and select **Delete**.**
   
   If no schedules are associated with it, the job parameter is deleted.

   If schedules are associated with it, you must associate the schedule with other job parameters by modifying the schedule.
Retrieving Jobs

You can retrieve a Production Reporting job and its associated files.

➢ To retrieve a Production Reporting job:
From Explore, right-click the job, and select Retrieve.

Scheduling Batches

Batch processing for Financial Reporting topics:

- “Scheduling Batches to Run” on page 448
- “Batch Deletion” on page 455
- “Retrieving the Exported Output” on page 456
- “Viewing the Status of Scheduled Batches” on page 456
- “Preparing Batch Files for the Command Line Scheduler” on page 457

Batches are created, edited, and saved in EPM Workspace using the Batch Editor. You must have a Global Administrator, Report Designer, Scheduler, or Content Publisher role in order to perform these tasks. For role information, see the appendix in the Oracle Hyperion Enterprise Performance Management System Security Administration Guide. Batches are used to group and process sets of documents such as reports or books. You can send the output of a generated batch to a printer. You can export batches as HTML or PDF files to an external directory. You can e-mail users the exported output in PDF format.

Note: Oracle recommends that you print long reports or books in a batch. This keeps your computer free while processing.

Scheduling Batches to Run

You schedule batches to run immediately or at a later date. During batch scheduling, you can define the batch POV, set up e-mail notifications, and select the destinations of the generated output when the batch is run. Destination types can include Print to a designated printer, Snapshot to a designated repository folder, PDF to an external directory or attached to an e-mail, and HTML to a designated external directory (Batch Bursting does not support HTML). After selecting scheduled batch options, the batch is added to the batch queue from the Batch Scheduler after a successful run.

The scheduler’s batch bursting feature can run a batch for more than one member of a single dimension on the batch POV for one data source, e-mail the PDFs generated to a recipient list, and save the output to the file system or to the repository. For example, a batch scheduled to run for New York and Houston can have the output for New York going to jones@cd.com and the output for Houston going to smith@cd.com. With batch bursting, you can use predefined
text functions for report labels and folder labels. You can create a Bursting Destination File (see About the Bursting Destination File) to override default settings assigned to the batch.

**About the Bursting Destination File**

The Bursting Destination File contains the default settings for the scheduled batch. You can periodically view the default settings as you navigate through the batch wizard. You can export the Bursting File as a CSV file to specify output and permissions exceptions for a scheduled batch, thus overriding the default settings defined in the Batch Wizard. The member settings in the CSV Bursting Destination file can be appended to the member selections in the Batch Wizard. For example, you may want to specify a different sub-folder for some reports, based on selected members, or make some reports read-only. Only members that are valid for the selected dimension are appended to the bursted file.

To edit the Bursting Destination File for a current batch, the administrator or designer exports the file to a text editor or Excel, enter the members, if not already displayed, and edits any values in the table. The values for each member in the dimension are: Subfolder Name, Financial Reporting Object Name, E-mail Address, Group Name, Role Names, User Names, External Root Folder for PDF.

Upon completion, the file must be imported into the repository (File, then Import, then File) where it can be applied to a batch in the batch wizard. A sample Bursting Destination File is stored in the Sample folder of your Reporting and Analysis installation.

Batch scheduling tasks:

- “Selecting a Member for the Batch Point of View” on page 450
- “Scheduling Job Bursting” on page 450
- “Specifying the Batch Destination and Bursted Output Labels” on page 451
- “Creating an E-mail List for Batch Bursting Recipients” on page 454

To schedule a batch to run:

1. Click **Navigate**, then **Schedule**, then **Batch Scheduler**.
2. In **Batch Scheduler**, select **File**, then **New Scheduled Batch**.
3. Enter a name and description for the scheduled batch.
4. Optional: To delete the batch from the scheduler after a successful run, select **Delete Scheduled Batch Entry from Scheduler if Completed Successfully**.
5. Click **Next** to select a batch.
6. Select a batch and click **Next**. If required, **Logon Credentials** is displayed. Enter a User name and Password and click **OK** (see “Providing Logon Credentials” on page 458)
7. For **Start Time**:
   - To start the scheduled batch immediately, click **Now**. Go to step 9.
   - To start the scheduled batch in the future, select **Later, Start At** Go to step 8.
8. To select the start time and date in the **Start Time area**: 
a. In the upper left list boxes, enter the start time and the periodic time interval to run the batch (for example, daily, weekly).

b. In the upper right drop-down lists, select a start date and end date.

9 Optional: If any of the reports and books in the batch have dimensions on the user POV, you can set the member for those dimensions in the Scheduled Batch Point of View. For information, see “Selecting a Member for the Batch Point of View” on page 450.

10 Optional: If you wish to use job bursting to run a batch for more than one member in a dimension on the Batch POV, see “Scheduling Job Bursting” on page 450.

11 Click Next.

12 Change the default settings for the Destination of the batch file that you are running, and click Next.

13 To save the batch job in the Batch Scheduler with the settings you selected for the destination, click Finish.

Selecting a Member for the Batch Point of View

Each scheduled batch has a POV based on all relevant dimensions for the reports in the batch. If no reports or books have a member on the user POV, then there is no batch POV. When the batch is added to the schedule, the user POV is specified as the default batch POV. You can override the user POV settings by specifying a member for each dimension on the batch POV. You must verify that the members selected in the batch POV are appropriate.

To select a member for the batch POV:

1 To arrive at Batch Scheduler, see “Scheduling Batches to Run” on page 448.

2 From the Scheduled Batch Point of View area, click the dimension for which you want to select a member. Member Selection is displayed.

3 Select the member that you want to use for the POV and click OK. For more information on Member Selection, see Chapter 8, “Using Financial Reporting.”

4 Repeat step 2 and step 3 for each POV dimension.

5 Click Next to complete the batch destination of the batch. See “Specifying the Batch Destination and Bursted Output Labels” on page 451.

Scheduling Job Bursting

With each scheduled batch, you can use job bursting to run a report on more than one member in a dimension. When you select only a dimension for job bursting, the setting for that dimension on the batch POV is disabled. The unselected batch POV members remain active and are included with the batch. (If no reports or books have a member on the user POV, then there is no batch POV or job bursting).
To schedule batch bursting:

1. Use the batch scheduler wizard to navigate to the Start Time screen (see “Scheduling Batches to Run” on page 448).

2. In the Bursting Options area, select Run Batch for multiple members in the dimension, then select the dimension for job bursting.

3. Click , then select the members for job bursting. For information on Member Selection, see Chapter 8, “Using Financial Reporting.”

4. In Bursting File, if you have created a CSV Bursting Recipients list for this batch and imported it into the repository, click to select the file.

5. Click Copy Members to add the members defined in the CSV Bursting Recipients list to the Select Members list.

   Note: Only members that are valid for the selected dimension are added.

6. Click Next, To continue to batch destination, see “Specifying the Batch Destination and Bursted Output Labels” on page 451.

**Specifying the Batch Destination and Bursted Output Labels**

The Destinations area specifies the type and location of the output for the scheduled batch. Select any combination of the following output options for your batch destination:

**Note:** Batch Bursting only supports output to Snapshot Reports, Books and PDF files; output to a printer and HTML are not supported for Batch Bursting.

- Snapshot reports or snapshot books—You can save snapshot reports and books within the originating folder (default location) or another folder in the repository. You can assign file permissions for viewing snapshot reports or books to users, groups, and roles.

- Print—You can select a printer and specify printer properties. The Batch Scheduler shows all printers available to the Print Server. Print Server configuration is specified in the fr_repserver.properties file on the Financial Reporting Server computer.

- Export as PDF—PDF files can be saved within a folder on the Scheduler Server or exported to an external directory. PDF files can be attached to an e-mail. Separate e-mail files can be sent for each report or sent once in a zip file.
To specify a maximum attachment size for e-mail output, use the property, `MaxEmailAttachmentSize` within `fr_scheduler.properties` file located in `BIPlus/Lib` on the scheduler machine. This value, entered in kilobytes, is used to split reports into multiple e-mails to conform to the maximum size attachments allowed per e-mail. The default is set to unlimited (0 (zero) or –ve). When sending an oversized attachment containing a single PDF file or numerous files, the e-mail fails to deliver and the sender is notified. For a single oversized file attachment, the sender can manually deliver the attachment by copying it from the scheduler server or external directories. For numerous files attachments, the sender can rerun the batch from the Batch Scheduler and select the option of sending individual e-mails for each file. This property applies to bursting and non-bursting output.

- Export as HTML—HTML files can be saved within a folder on the Scheduler Server or exported to an external directory. Job bursting is not supported for HTML files.

To select batch destinations:

1. From the Destinations area, select any actions:
   - **Save As Snapshot in Repository:** If you select this option, you enable the **In Same Folder as Original Object** and **In Another Folder** options. Perform an action:
     - Select **In Same Folder as Original Object** to save snapshots and snapshot books within the same folder as the original report or book in the repository.
     - Select **In Another Folder** to save the output to another location in the repository. Click **Folder** to select a destination folder in the repository, then click OK.

   **Note:** Selecting **Save As Snapshot in Repository** enables File Permissions. File Permissions allows you to assign access to users and groups for snapshot output. For information on assigning access permissions, see Chapter 9, “Designing Documents for Financial Reporting Batches and Books.”

- **Print to**—The default printer is displayed. Select a different printer and printer settings.

- **Export as PDF**—Export the batch as a PDF file on the scheduler server. To export to an external directory, select **Export to an external directory**. To attach the reports as e-mail attachments, select **E-mail as PDF Attachment(s)**. To zip the e-mail attachments, select **Zip PDF(s)**. To print annotations with the report, select **Print Annotations**, then select **Details** to specify how annotations should be printed. See “Setting Annotation Printing Preferences” on page 74.

   **Note:** Annotation printing preferences are one-time setups for a specific batch; they are not saved as global preferences.

- **Export as HTML**—Export the batch as an HTML file on the scheduler server. To export to an external directory, select **Export to an external directory**. This option does not support batch bursting.
When Export to an external directory is selected, the enabled drop-down menu is populated by folder locations specified in the fr_scheduler.properties file in the <FinancialReporting>\lib directory on the Hyperion Financial Reporting Scheduler Server computer. Here is a sample from that file:

```
ExportFolderLabel1=ExportFolder1 # ExportFolderPath1=\\\{machine name}\\{export folder name}
```

A system administrator must determine all the folders where exports are permitted. Contact your system administrator to specify a different folder location.

- **Bursted Output Labels** — The Object Label and SubFolder Label fields display two default text functions that can optionally be used to identify the report and the report’s subfolder names, respectively. Click to select additional text functions. Click to test the functions. The available functions for bursted reports are:
  - `<MemberName()>` — Returns the name of the member being bursted. This function takes no parameters.
  - `<MemberAlias()>` — Returns the alias of the member being bursted. This function takes no parameters.
  - `<MemberDescription()>` — Returns the description of the member being bursted. This function takes no parameters.
  - `<BatchPovMember(DataSrcName, DimName)>` — Returns the name of the POV member being bursted where `DataSrcName` is the name of a data source of the desired POV (a batch can point to two or more POVs) and `DimName` is the name of the dimension under the given POV whose member name is to be extracted.
  - `<BatchPovAlias(DataSrcName, DimName)>` — Returns the alias of the POV member of the report being bursted where `DataSrcName` is the name of a data source of the desired POV (a batch can point to two or more POVs), and `DimName` is the name of the dimension under the given POV whose member description is to be extracted.
  - `<BatchPovDescription(DataSrcName, DimName)>` — Returns the description of the POV member of the report being bursted, where `DataSrcName` is the name of a data source of the desired POV (a batch can point to two or more POVs), and `DimName` is the name of the dimension under the given POV whose member description is to be extracted.
  - `<FinancialReportingObjectName()>` — Returns the name of the Financial Reporting object being bursted. This is typically the report name. This function takes no parameters.
  - `<Financial ReportingObjectDescription()>` — Returns the description of the Financial Reporting object being bursted. This is typically the report description. This function takes no parameters.
  - `<Date("format")>` — Returns the date and time that an online report is populated with data, or the date and time a snapshot report is saved, where `format` is a list of characters enclosed in quotes that define the format of the date and time. See the Oracle Hyperion Financial Reporting Studio User’s Guide, Using Functions chapter for a list of all the `format` date and time characters.
Preview Bursting List — Select to preview the CSV bursting list. The list shows the default settings selected for members in the job bursting batch. For information, see About the Bursting Destination File.

2 Click Next.

- If your scheduled batch includes e-mail PDF attachments with job bursting, the PDF Attachment Email dialog box is displayed. For instructions, see “Creating an E-mail List for Batch Bursting Recipients” on page 454.

- If your scheduled batch includes e-mail PDF attachments without job bursting, the Scheduled Batch Details dialog box is displayed. For instructions, see “Setting Up E-mail Notifications” on page 454.

Creating an E-mail List for Batch Bursting Recipients

You can create a recipient list, a subject, and a message for recipients who will receive e-mails with PDF attachments through batch bursting.

➢ To create an e-mail recipient list:

1 Click Select to select and/or add e-mails addresses to the recipient list. For information, see “Selecting E-mail Addresses for Batch Scheduling” on page 455.

2 You can accept the default text, or customize Message Subject and Message Body. Click to add a text function, and to test the function.

3 Click Preview Bursting List to view the default settings for the POV members.

4 Click Next to notify recipients on batch job status by e-mail. For information, see “Setting Up E-mail Notifications” on page 454.

Setting Up E-mail Notifications

You can send a status of Successful and/or Unsuccessful by e-mail when batches scheduled for PDF output are completed. For unbursted batches, the e-mail contains the notification and PDF attachments; for bursted batches, the e-mail contains only the notification.

➢ To set up e-mail notifications:

1 To arrive at Scheduled Batch Details, start the batch wizard. See “Scheduling Batches to Run” on page 448.

2 To notify recipients of a successful batch run, select If Successful, E-mail Details to and click Select to add e-mail recipients (for information, see “Selecting E-mail Addresses for Batch Scheduling” on page 455). Enter a short remark in Message Subject.

To notify recipients of an unsuccessful batch run, select If Unsuccessful, E-mail Details to and click Select to add e-mail recipients (for information see “Selecting E-mail Addresses for Batch Scheduling” on page 455). Enter a short remark in Message Subject.
Optional. For job bursting batches, click Preview Bursting List to view and export the Bursting Destination file. This file contains default settings selected for the members in the bursted batch. For information on this file, see About the Bursting Destination File.

Selecting E-mail Addresses for Batch Scheduling

You can set up the scheduler to send an e-mail when a scheduled batch is completed successfully or unsuccessfully. The e-mail includes status details of the batch and optionally the PDF output of the batch. You can select, add, or delete e-mail addresses.

To select recipient e-mails:

1. To arrive at Select E-mail Recipients for Scheduling, start the batch wizard. See “Scheduling Batches to Run” on page 448.
2. In Available Recipients, select an e-mail address and click →.

   - To add new recipient e-mails, click Add. In Add Address to List of Recipients, add e-mail addresses, separated with a comma and click OK.
   - To Remove recipients’ e-mail, select an e-mail address and click Remove

Batch Deletion

You can delete batches in these ways:

- If you have a Global Administrator, Report Designer, Scheduler, or Content Publisher role and proper file permissions, you can delete batches from the repository.
- You can delete scheduled batches from the Batch Scheduler.

Deleting Batches from the Repository

You can delete numerous batches from the repository at once. To delete batches, see Chapter 3, “Exploring and Managing Items”.

Deleting Batches from the Batch Scheduler

During batch scheduling, you have the option of deleting the scheduled batch from the scheduler if completed successfully. If this option is not selected, the successful batches are saved in the Batch Scheduler. Batches with an “error” status are always saved in the Batch Scheduler. All batches can also be deleted from the Batch Scheduler.

To delete scheduled batches from the Batch Scheduler:

1. Click Navigate, then Schedule, then Batch Scheduler.
2. In Batch Scheduler, select the batches for deletion.
Tip: To select multiple batches hold down the CTRL key and click each batch in the list.

3 Select Edit, then Delete.

4 When prompted, click Yes.

### Automatic Removal of Batch Scheduler Results

You can configure the Batch Scheduler to automatically remove batch results that exceed a specified future age. For example, you can remove batch results that are more than a week old and any associated result files that are stored on the scheduler server.

The automatic removal option is turned off by default. You can enable it by editing the `fr_scheduler.properties` file to specify how old the results should be before they are deleted and how often the system checks for them. The `fr_scheduler.properties` file is in the `<Financial Reporting>\lib` directory on the Hyperion Financial Reporting Scheduler Server computer.

### Retrieving the Exported Output

After a scheduled batch is run, you can retrieve a zipped HTML or PDF output file using the Retrieve Output option to rename and relocate the zipped file to your local drive from the scheduler server’s `\data\SchedulerOutput\Output` directory. You must have access to the batch to retrieve the exported output.

**Note:** If you delete a batch after scheduling one, you cannot retrieve the output. Retrieval is only valid for non-bursted batch files.

To retrieve output:

1. Click Navigate, then Schedule, then Batch Scheduler.
2. In Batch Scheduler, select a completed scheduled batch that produced exported output.
3. Select Action, then Retrieve Output. The file is presented as a zip file.
4. Select the files to export and click Extract to export the files to a directory on your machine.

### Viewing the Status of Scheduled Batches

Scheduled batches can be viewed in a list format. Items such as the start time, destination, status, and so on that occurred while running the batch are displayed in a row and column format.

To view the status of a scheduled batch that has run:

Click Navigate, then Schedule, then Batch Scheduler. The Batch Scheduler displays the list of batches that have run or are scheduled to run. You can click any heading text to sort the batches.
in the list. Headings include: Name, Description, Start Time, Destination, Status, user ID, and Path.

Tip: Click any column heading to perform a sort.

**Viewing Details of a Scheduled Batch**

You can review the details of a particular batch, which includes a summary and server activity in Show Details.

To view the details of a scheduled batch:

1. Click **Navigate**, then **Schedule**, then **Batch Scheduler**.
2. In **Batch Scheduler**, select a batch.
3. Select **Action**, then **Show Details**. **Show Details** provides the following information:
   - Summary information:
     - Destination of the batch
   - Server activity:
     - Start time of the batch
     - Exception messages
     - End time and date
     - Whether the batch was ran successfully and if e-mail was sent

4. To copy the details to the Clipboard:
   a. Right-click in **Show Details** and select **Select All**.
   b. Right-click and select **Copy**.

5. **Click Close**.

**Preparing Batch Files for the Command Line Scheduler**

You can use an external scheduler to schedule batch jobs in EPM Workspace. You automate the process of launching batches using an external scheduler or launching batches after an external event occurs, such as the completion of a consolidation. For more information, see the *Oracle Enterprise Performance Management Workspace Administrator’s Guide*.

Note: For Financial Reporting the external batch command line scheduler only supports a single batch request. If you attempt to process multiple batches, only the batch in the first line is executed by the external batch command line scheduler.
To export an existing batch file for command line scheduling:

1. Click **Navigate**, then **Schedule**, then **Batch Scheduler**.
2. In **Batch Scheduler**, select a completed scheduled batch that was successful and produced exported output.
3. Select **Action**, then **Export for Command Line Scheduling**.
4. In **File Download**, save the XML file in the `<FR>`\bin directory as `mybatch.xml` where `mybatch` is the name of your batch input file. For more information, see the Oracle Enterprise Performance Management Workspace Administrator’s Guide.

To create a batch file for command line scheduling:

1. Click **Navigate**, then **Schedule**, then **Batch Scheduler**.
2. In **Batch Scheduler**, select **Action**, then **Create File for Command Line Scheduling**.
3. In **Schedule Batch**, select a batch file and click **Next**. To complete the remaining steps of this dialog, see “Scheduling Batches to Run” on page 448.
4. At the end of batch creation, **File Download** is displayed.
5. Save the XML file in the `<FR>`\bin directory as `mybatch.xml` where `mybatch` is the name of your batch input file. For more information, see the Oracle Hyperion Financial Reporting Studio User’s Guide.

**Providing Logon Credentials**

Logon credentials must be provided in order to run a scheduled batch at a future date.

To enter logon credentials:

1. Enter a user name and Password for the Financial Reporting server.
2. Enter a user name and Password for the Database Connection Name you are using.
3. Select OK.
Interactive Reporting Jobs

Interactive Reporting jobs are created with Interactive Reporting Studio and defined by properties and parameters. You can import, run, and schedule Interactive Reporting jobs.

Import Requirements

To import an Interactive Reporting, you need this information:

- Interactive Reporting database connection file names, to connect to the database for processing queries
- Custom calendar name, if not using the default calendar, to resolve dynamic date parameters
- Filter names and values, if running a job with parameters that must be specified. (See “Parameters” on page 460.)
- E-mail addresses if sending results directly to users
- Output directory name if sending results to a directory
- Database create-and-insert privileges if processing results to a database table
- Database grant access if giving additional users access to a database table.

See “Example: Importing and Scheduling a Job” on page 473.

Pass-Through Feature

Pass-through enables users to log on once and access data sources without additional authentication. Pass-through is enabled per authentication system and per Interactive Reporting...
database connection file. Pass-through can be used for foreground jobs and all Interactive Reporting documents.

After your administrator enables pass-through for authentication systems, you can enable or disable it for Interactive Reporting database connection files.

**Parameters**

Interactive Reporting job parameters include runtime values, processing options, and job-output options. Processing and job-output options are defined using cycles and actions. A cycle contains job actions and job filters. Actions define how documents are processed and results are distributed. Filters are the values for the run-time variables. Job cycles are named and associated with jobs.

When importing a job, you specify whether users can create cycles (multiple-cycle jobs) or use only the default cycle (single-cycle jobs).

- **Single-cycle jobs**—Limited to one cycle. The default processing and printing actions are used. All single-cycle job results are processed to file as job output. The job output is listed with the job in the Browse item list.

- **Multiple-cycle jobs**—Processed according to how many cycles are defined. Cycles can be created using processing, printing, and exporting actions. You can design jobs to process as many times as necessary at each scheduled run, each process having different parameters (or filters) and job output options.

**Example**

Your document queries sales transactions within a region. The region is specified through a variable filter on the query to make the data available to each sales manager on Monday mornings.

When scheduling the job, you can add a job cycle for each region. You can resolve the variable and filter for each run to retrieve numbers for only one region, and e-mail the numbers from each run directly to the regional manager. All job-run cycles are part of one job, which is easier to track and update.

**Supporting Exceptions in Interactive Reporting Programs**

This section is for Interactive Reporting programmers who support exception notifications to users. (Users can receive e-mail notifications or see a graphic indicator on the Exceptions Dashboard on Personal Pages.)

**Setting Interactive Reporting Job Properties**

These topics describe the properties for Interactive Reporting importing and modifying Interactive Reporting jobs:

- Setting Advanced Options
Setting Data Source and Query Properties

Setting Interactive Reporting General Properties and Options

Setting Job Defaults

For details on general properties and advanced options, see “Working with Properties” on page 134.

To access properties:
1. From Explore, select an item.
2. Select File, then Properties.

Setting Advanced Options

In addition to the advanced option detailed in “Working with Properties” on page 134, two options specific to Interactive Reporting jobs are available.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIME Type</td>
<td>Displays the file type.</td>
</tr>
<tr>
<td>Priority</td>
<td>Job priority when run:</td>
</tr>
<tr>
<td></td>
<td>• High</td>
</tr>
<tr>
<td></td>
<td>• Normal — default</td>
</tr>
<tr>
<td>Run this job in the background</td>
<td>Enable running of your job in the background.</td>
</tr>
<tr>
<td>Hidden File</td>
<td>Set file to hidden.</td>
</tr>
<tr>
<td>Auto-delete file on this date</td>
<td>Select a time period and enter a number to specify when output is automatically deleted.</td>
</tr>
<tr>
<td>Auto-delete job outputs after</td>
<td>Deleted job output after a specified time. Enter a number, and select a time element:</td>
</tr>
<tr>
<td></td>
<td>• Minutes</td>
</tr>
<tr>
<td></td>
<td>• Hours</td>
</tr>
<tr>
<td></td>
<td>• Days</td>
</tr>
<tr>
<td></td>
<td>• Weeks</td>
</tr>
<tr>
<td>If exceptions are generated, allow users</td>
<td>Enables users to report exceptions to Exceptions Dashboards.</td>
</tr>
<tr>
<td>to add to their Exceptions Dashboard</td>
<td></td>
</tr>
<tr>
<td>Automatically generate keywords</td>
<td>Automatically generates keywords in &lt;Assigned Keywords&gt;.</td>
</tr>
<tr>
<td></td>
<td>• To add, enter keywords and click</td>
</tr>
<tr>
<td></td>
<td>• To remove, select from &lt;Assigned Keyword&gt; and click</td>
</tr>
</tbody>
</table>
## Setting Data Source and Query Properties

Interactive Reporting database connection files are used by Interactive Reporting jobs and files to connect to databases. Queries in a document can use different databases. In addition, an Interactive Reporting database connection file can be specified for each query of an file or job.

Before you can import files and jobs, you need access to all Interactive Reporting database connections that your document uses. Otherwise, the required database connection files are not displayed in the connection list. Ask your administrator for access to the required Interactive Reporting database connections.

If you use pass-through, see “Pass-Through Using Multiple, Interactive Reporting, Database-Connection Files” on page 464.

**Note:** If no Interactive Reporting database connection file is specified for a query, users accessing the document cannot process the query unless it uses only local results.

To access data source and query properties, from Properties, click Interactive Reporting on the left.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Apply Option to All Queries</strong></td>
<td>Select a method for obtaining user names and password for queries:</td>
</tr>
<tr>
<td></td>
<td>• Use Default User Name &amp; Password—Uses the defaults for database access.</td>
</tr>
<tr>
<td></td>
<td>• Prompt for User Name &amp; Password—Prompts the user for a user name and password per data connection. The word prompt is displayed in the user name and password fields.</td>
</tr>
<tr>
<td></td>
<td>• Specify Now—Prompts the importer for a user name and password for all queries. The user name is displayed in all user name fields. The password is not retractable.</td>
</tr>
</tbody>
</table>

You can override individual username or password combinations by selecting a method for each query connection.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection</td>
<td>Select an Interactive Reporting database connection file to use the query. For queries using only local results, select &lt;No Connection&gt;.</td>
</tr>
</tbody>
</table>

If you are using pass-through, see “Pass-Through Using Multiple, Interactive Reporting, Database-Connection Files” on page 464.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User name</td>
<td>Enter a user name, set one globally with the Connecting to Data Sources list; or set a one individually with the options list.</td>
</tr>
</tbody>
</table>

| Password | Enter the password to use for this query; or set globally with the Connecting to Data Sources list; or set individually with the options list.     |

| Options  | Set the username and password using the selected method (default or prompted)                                                               |

| Query Connections and Processing | Validate all queries that you process at runtime.                                                                                          |
Setting Interactive Reporting General Properties and Options

The properties page for an Interactive Reporting job contains general properties and the Interactive Reporting options.

To access general properties, from Properties, click the Properties tab at the top.

Table 120  General Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calendar</td>
<td>Calendar selected for resolving dynamic date parameters.</td>
</tr>
<tr>
<td>Users running this job can define their own cycles and actions</td>
<td>Allow users to define cycles and parameters for the job, thus creating a multiple-cycle job. The default is not selected (single-cycle jobs). Only single-cycle jobs can be viewed in View Manager. Note: If you select the option now, you can deselect it later. If you do not select it now, you can never select it.</td>
</tr>
</tbody>
</table>

Table 121  Interactive Reporting Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable ADR</td>
<td>Browser refreshes the document automatically.</td>
</tr>
</tbody>
</table>

Setting Job Defaults

Job Defaults are detailed in Table 122 gives you the option to include HTML as a default, job-output format and to set default, job-parameter values. See “Setting Job Parameters” on page 466.

To access Job Defaults:

From Properties, click the Job Defaults tab at the top.

Table 122  Job Defaults

<table>
<thead>
<tr>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Include static HTML as a default output format</td>
<td>Select to make HTML and the default output format (the standard Interactive Reporting document) your default output format.</td>
</tr>
<tr>
<td>Set Values</td>
<td>Set default job-parameter values. See For field definitions to set values, see “Setting Job Parameters” on page 466 “Modifying Job Parameters” on page 466.</td>
</tr>
<tr>
<td>Modify Filter</td>
<td>Set default filter options. See “Filter Options” on page 468.</td>
</tr>
<tr>
<td>Set Locale (Interactive Reporting)</td>
<td>Set locale properties:</td>
</tr>
<tr>
<td></td>
<td>Language — Determines the sort order and the job log language.</td>
</tr>
<tr>
<td></td>
<td>Country — Determines the data format (for example, the date/time format).</td>
</tr>
</tbody>
</table>
Click OK to close Properties. You can schedule the job later from the Browse web module. See “Scheduling Jobs and Batches” on page 431.

To complete the Import dialog wizard for Interactive Reporting (.bqy) files, see “Importing Files as Jobs” on page 126.

Selecting Database-Connection File Options

Interactive Reporting jobs and files use database-connection files to connect to databases. An Interactive Reporting, database-connection file must be specified for each query of an Interactive Reporting file or job, except for queries that use only local results, so users can process the query.

Pass-Through Using Multiple, Interactive Reporting, Database-Connection Files

If enabled by your administrator, pass-through enables you to access data sources without entering a username and password for each data source. For pass-through to work for Interactive Reporting jobs or files associated with multiple, Interactive Reporting database connections, these conditions are necessary:

- Interactive Reporting database connections is configured for pass-through.
- Credentials required to access each data source are identical.

Note: Oracle recommends selecting similarly configured Interactive Reporting, database-connection files when importing Interactive Reporting documents. To enable users doing imports to make this selection, Interactive Reporting database connection names should indicate whether the database connection is configured for pass-through.

When Interactive Reporting jobs and files with some but not all Interactive Reporting database connections configured for pass-through are processed:

- Interactive Reporting database connections configured for pass-through—Users are not prompted for logon credentials.
- Interactive Reporting database connections not configured for pass-through—The credential option selected when the job or file was imported (prompt user, specify now, or use the default) is used.

Caution! For pass-through processing of all queries, Interactive Reporting database connections must have identical database credentials.

Setting Processing and Metadata Options

Three options types specific to Interactive Reporting, database-connection file are offered: processing and metadata.
Processing Open Catalog Extension (OCE) options store database connection information.

### Table 123 Processing Database-Connection Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data source access</strong></td>
<td>Select a method for the Interactive Reporting database-connection file to use a username and password when a job is run or a file is processed.</td>
</tr>
<tr>
<td></td>
<td>- Use the username/password specified below—You enter the database username and password.</td>
</tr>
<tr>
<td></td>
<td>- Prompt for user name/password—You are prompted for the database username and password when the job is run or scheduled or the file is processed. This is the default when pass-through is disabled.</td>
</tr>
<tr>
<td><strong>User name</strong></td>
<td>If Data source access is set to use this field, enter the database user name.</td>
</tr>
<tr>
<td><strong>Password</strong></td>
<td>If Data source access is set to use this field, enter in the database password.</td>
</tr>
<tr>
<td><strong>Allow pass-through where end user’s authentication system is enabled for it</strong></td>
<td>Select to allow pass-through credentials for data source access.</td>
</tr>
</tbody>
</table>

Metadata options store a file that contains extra information about the Interactive Reporting database connection.

### Table 124 Metadata Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>This Interactive Reporting database connection (.oce) uses metadata defined in another connection</strong></td>
<td>Metadata is used and the metadata connection is not specified in the Interactive Reporting, database-connection file. All fields in this group are disabled if this field is not selected.</td>
</tr>
<tr>
<td><strong>Select metadata connection</strong></td>
<td>If metadata is used and the metadata connection is not specified in the Interactive Reporting, database connection file, select the Interactive Reporting database-connection file for the metadata.</td>
</tr>
<tr>
<td><strong>Metadata access</strong></td>
<td>Select one of the following:</td>
</tr>
<tr>
<td></td>
<td>- Use processing OCE’s credential for metadata connection – Use that username and password associated with the Interactive Reporting database connection to access the metadata.</td>
</tr>
<tr>
<td></td>
<td>- Use specified user name/password – Use the specified user name and password to access the metadata.</td>
</tr>
<tr>
<td><strong>User name</strong></td>
<td>If Data source access is set to use this field, enter the database user name.</td>
</tr>
<tr>
<td><strong>Password</strong></td>
<td>If Data source access is set to use this field, enter in the database password.</td>
</tr>
</tbody>
</table>

### Table 125 Interactive Reporting Database Connection

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Connection Software</strong></td>
<td>Connection software name used by this Interactive Reporting database connection file (.oce) to connect to the database server, for example, ODBC or EssbaseOracle Essbase.</td>
</tr>
<tr>
<td><strong>Option</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Database</td>
<td>Type of the database or database connectivity to which this Interactive Reporting Connection file (.oce) is used to connect, for example ORA8, Essbase, ODBC, OLEDB and so on.</td>
</tr>
<tr>
<td>Host</td>
<td>Identifier or alias for the specific information needed to connect to the client, for example, host name or DSN.</td>
</tr>
</tbody>
</table>

To complete the Import dialog wizard for Interactive Reporting Database Connection (.oce) files, see “Importing Files” on page 125.

## Setting Job Parameters

With single-cycle jobs, job parameters contain job variables filters. With multiple-cycle jobs, job parameters contain job variables or filters and job cycles, which contain processing options and job actions.

**Note:** You can create job parameters only when creating or modifying a job schedule or running a job.

### Setting Single-Cycle Job Parameters

Only single-cycle jobs with variables filters have job parameters.

1. To set job parameters for a single-cycle, Interactive Reporting job:
   1. **From Explore, right-click the Interactive Reporting job, and select Run Job.**
      
      This job is stored in a folder to which you have Run Job access rights. The Job Parameters window displays the parameter values that are set.
   2. **Select a job parameter definition.**
   3. **Click Go to use the definition as is or click Edit to modify it.**
   4. **If you clicked Edit, proceed to the following topic.**

### Modifying Job Parameters

The following procedure assumes that you clicked edit in the preceding procedure.

1. To edit a job parameter definition:
   1. **Under Job Parameters next to Define Job Parameters starting with and just to the right of Go, click Edit.**
   2. **From Show Parameters, select a Job Name.**
      
      Right-click and select Modify .
   3. **From the Properties dialog, in Name, enter a name.**
4 In **Description**, enter a description.

5 To change owner for this job, select **Change Owner**.

6 Select the new owner and click **OK**. For additional information, see “Changing Ownership of Artifacts” on page 135.

7 **Under Set Local**, change the language:
   - In **Language**, select the language.
   - In **Country**, select a country.

8 **Optional**: Modify filters (available only if filters exist in the file). See “Filter Options” on page 468.

9 **Take one action**:
   - Select **Save as my default**
   - To save your job parameters, select **Save**, select parameter type, and enter a name.

10 **Optional**: Click **Permissions** in the left pane of the properties dialog to change access permissions. For more information, see “Setting Permissions” on page 129.

---

**Setting Multiple-Cycle Job Parameters**

When creating job parameters for multiple-cycle jobs, you can save the cycles and the job parameters associated with the job that you are running or scheduling.

**Note:** You can create job parameters only when creating or modifying job schedules or running jobs.

To set job parameters for multiple-cycle, Interactive Reporting job:

1 **From Explore**, right-click the Interactive Reporting job, and select **Run Job**.

   This Interactive Reporting job is stored in a folder to which you have Run Job access rights. The **Job Parameters** window shows the parameter values that are set.

2 **Under Cycles**, you can perform the following:
   - To add a cycle click **Go**.
   - To modify cycle, click **Modify**, or to add new cycles, click **Go**.
     - Under Define Cycle, enter cycle information:
       - In **Cycle Name**, enter a name.
       - Select **Save Job Output with the job** or **Save job output in another folder** and enter a file path.
       - Click **Edit Cycle Permissions** for permissions access.
   - To copy, click **Copy**.
   - If filters exist, see “Filter Options” on page 468.

3 **Select Process Options.** See “Process Options” on page 470.
The connection file and database to which you are connected determine whether you can process the results to a database table.

4 Select Action.

For details on action options, see Table 128.

5 Click OK.

6 Select Save Job Parameters, and enter a name.

Job Parameter Options

This following topics provide details on Interactive Reporting, job-parameter options:

- Filter options—For single-cycle and multiple-cycle jobs
- Processing options—For multiple-cycle jobs only
- Actions options—For multiple-cycle jobs only

Filter Options

In Interactive Reporting Studio, filters enable you to control how much data is processed and displayed during relational or OLAP database queries.

Query filters which are created initially in Interactive Reporting Studio, can be static or variable. Static filter values cannot be changed. You can change variable filter values at runtime from Set Values. The Set Values area displays information for relational and OLAP databases.

These topics detail the information displayed in the Set Values area during relational or OLAP database queries:

- Setting Filter Values for Relational Databases
- Setting Filter and Slicer Values for OLAP Queries

Setting Filter Values for Relational Databases

The Set Values area displays the values for the filters.

To access properties:

1 From Explore, select an item.

2 Right-click a job and select Run Job.

Properties is displayed.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Query Name</td>
<td>(Read-only) Query name</td>
</tr>
<tr>
<td>Filter Name</td>
<td>(Read-only) Name of the field that the filter is on from the Interactive Reporting job</td>
</tr>
<tr>
<td>Option</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Operator</strong></td>
<td>(Read-only) The operator that the filter uses, such as =, &lt;, or &gt;</td>
</tr>
<tr>
<td><strong>Values</strong></td>
<td>(Read-only) The values that the filter uses (Variable system values such as $USER, are acceptable. The values are from the database that the query is using.)</td>
</tr>
<tr>
<td><strong>Ignore</strong></td>
<td>Disables the filter when the query is processed</td>
</tr>
<tr>
<td><strong>Don’t Prompt</strong></td>
<td>Disables prompting for runtime values. (A dynamic value, such as a system variable can be used for a value(s). This option essentially changes the variable filter to a static filter with fixed values.)</td>
</tr>
<tr>
<td><strong>Modify Filter</strong></td>
<td>Enables modification of a selected filter.</td>
</tr>
<tr>
<td><strong>Include nulls</strong></td>
<td>Enables inclusion of an “is null” condition in the SQL sent to the database when the query is processed.</td>
</tr>
<tr>
<td><strong>Operator</strong></td>
<td>(Read-only) The operator that the filter uses, such as =, &lt;, and &gt;</td>
</tr>
<tr>
<td><strong>Show values</strong></td>
<td>Retrieves from the database all available values associated with the item you can consider and select from the range of values when applying a filter.</td>
</tr>
<tr>
<td><strong>Custom values</strong></td>
<td>Lists available values saved with the filter or read from a file, you can select values from a pre-defined pool. You can create and save a custom list with each filter.</td>
</tr>
</tbody>
</table>

**Setting Filter and Slicer Values for OLAP Queries**

You can set OLAP variable filters and slicers when importing or scheduling a job with an OLAP query. In the query, you can filter data on cube dimension levels to be displayed in the top or side labels of the query.

Slicers are filters on a dimension that are not in top or side labels but are visible in the data displayed. The filters list on Set Values displays the slicers last.

**Note:** When modifying filters, you cannot remove the last filter. You need at least one filter value per filter.

- To access filter and slicer values:
  1. From Explore, select an Interactive Reporting job.
  2. Select Run Job.
  3. Click Go to add a schedule.
  4. Enter the schedule properties and click Next until you can define the value and filter options.
Table 126

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Set Values (MDD)</strong></td>
<td><strong>OLAP Query Name</strong> — (Read-only) Query name</td>
</tr>
<tr>
<td></td>
<td>Filter On — (Read-only) The dimension level on which the filter is applied</td>
</tr>
<tr>
<td></td>
<td>Operator Type — (Read-only) The type that is set</td>
</tr>
<tr>
<td></td>
<td>Data Operator — (Read-only) The operator that the filter uses, such as =, &lt;, and &gt;. (Slicers have no data operators.)</td>
</tr>
<tr>
<td></td>
<td>Value(s) — (Read-only) The values that the filter uses (Variable system values such as $USER are acceptable. The values are from the database that the query is using.)</td>
</tr>
<tr>
<td></td>
<td>Ignore — Disables the filter when the query is processed</td>
</tr>
<tr>
<td></td>
<td>Don’t Prompt — Disables prompting for runtime values. (A dynamic value such as a system variable can be used for a value. This option essentially changes the variable filter to a static filter with fixed values.)</td>
</tr>
<tr>
<td><strong>Modify Filter</strong></td>
<td>Lists OLAP Query Name/Filter On values. Toggles filter list to filters applied for selected OLAP Query section and filter.</td>
</tr>
</tbody>
</table>

**Operator Type**

- Availability determined by the database:
  - Select Members From Database
  - Select By Measure
  - Top N
  - Bottom N
  - Top Sum
  - Bottom Sum
  - Top N%
  - Bottom N%
  - Select Members
  - User Defined Attributes
  - Substitution Variables

Available operator types are displayed in the filter list. Slicers have no operator types.

**Process Options**

Process options, are displayed in the section below the Modify Filters options. The connection file and database to which you connect determine whether you can process the results to a database table. You need Create and Insert privileges on the database to process to a database table.

- To set process options for a multiple-cycle, Interactive Reporting job:
  1. From Explore, right-click the job and select **Run Job**.
  2. Click **Go** to add another cycle to this job.
  3. Click Process Options (+) to display all process options.
Table 127

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Save job output with the job</td>
<td>For storing the job output in the folder containing the job</td>
</tr>
<tr>
<td>Save job output in another folder</td>
<td>For specifying an output folder</td>
</tr>
<tr>
<td>Process results to Interactive Reporting file</td>
<td>For processing queries to the Interactive Reporting file Results section</td>
</tr>
<tr>
<td>Process results to database table</td>
<td>For creating a database table to store the data set. (Items on the Request line become the column headings. You can append columns to the table and query it. You need Create and Insert privileges on the database to process to a database table.)</td>
</tr>
<tr>
<td>Query</td>
<td>For selecting the query to process to a database table.</td>
</tr>
<tr>
<td>Table Name</td>
<td>For entering the name of the table that you are creating or to which you are appending columns (See your database administrator if you want to use a new table.)</td>
</tr>
<tr>
<td>Create a table for each run, appending date to table name</td>
<td>For creating a table for each job run and appending the date to its name</td>
</tr>
<tr>
<td>Delete and recreate table for each job run</td>
<td>For deleting the old table and creates a table for each job run. Runs use the same table name.</td>
</tr>
<tr>
<td>Create table on initial run, and then append data to existing table</td>
<td>For creating a table on the initial run and adding data to the table</td>
</tr>
<tr>
<td>Grant access to:</td>
<td>For entering additional usernames (separated by commas) (You need Grant privileges to use this field. If Grant Access to is not selected, the table is granted only to your user name.)</td>
</tr>
</tbody>
</table>

**Action Options for Multiple-Cycle Jobs**

The action is the output method. The options on the actions page vary depending on the action.

Actions and items to which they apply:

- **Export**—Dashboard, Report, Results, Chart, Pivot, OLAPQuery, and an entire document as a web page
- **Save Document**—Entire Interactive Reporting file
- **Print**—Dashboard, Report, Results, Chart, Pivot, and OLAPQuery (Available if the administrator defined a printer for Oracle’s Hyperion® Interactive Reporting Studio)
- **Import Document**—Dashboard, Report, Results, Chart, Pivot, OLAPQuery, and an entire document as a web page.
- **E-mail Section**—Dashboard, Report, Results, Chart, Pivot, and OLAPQuery
- **E-mail Document**—Entire Interactive Reporting file

**Note:** A cycle can have only one Save As Job Output action. It can have multiple save actions but can be saved as a file on only some output folders.
To set action options for a multiple-cycle, Interactive Reporting job:

1. From Explore, right-click the job, and select **Run Job**.
2. Click **Go** to add another cycle to this job.
3. From the actions list, select a value and click **Go**.

### Table 128 Export Action Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section</strong></td>
<td>Section to be saved, printed, mailed, or exported.</td>
</tr>
<tr>
<td><strong>Filename</strong></td>
<td>Export file name (no extension)</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>Export file format:</td>
</tr>
<tr>
<td></td>
<td>- Microsoft Office Web Archive (*.mhtml)</td>
</tr>
<tr>
<td></td>
<td>- Excel (*.xls)</td>
</tr>
<tr>
<td></td>
<td>- HTML (*.htm)</td>
</tr>
<tr>
<td></td>
<td>- Lotus 1-2-3 (*.wks)</td>
</tr>
<tr>
<td></td>
<td>- Text (Tab Delimited) (*.txt)</td>
</tr>
<tr>
<td></td>
<td>- Text (Comma Delimited) (*.csv)</td>
</tr>
<tr>
<td></td>
<td>- Adobe Acrobat (*.pdf)</td>
</tr>
<tr>
<td></td>
<td>- Graphics file (*.jpg)</td>
</tr>
<tr>
<td><strong>Note:</strong></td>
<td>The choices depend on the export section type and text port action type.</td>
</tr>
<tr>
<td><strong>Export as job output</strong></td>
<td>For exporting the section to the current job folder in the repository. (The filename is not used with this option.)</td>
</tr>
<tr>
<td><strong>Save as job output</strong></td>
<td>For saving the section to the current job folder in the repository. (The file name is not used with this option.)</td>
</tr>
<tr>
<td><strong>Output Directory</strong></td>
<td>The directory for saving the export file or Interactive Reporting document</td>
</tr>
<tr>
<td><strong>Append Unique Identifier to Filename</strong></td>
<td>For appending the job ID# and report cycle name to the saved document or export file; ensures that the file is recognizable if similar files are saved to one directory.</td>
</tr>
<tr>
<td><strong>Append Date to Filename</strong></td>
<td>For appending the date (year, month, and day) to the saved document or exported file</td>
</tr>
<tr>
<td><strong>Save Results with Document</strong></td>
<td>For saving Results section contents with the document</td>
</tr>
<tr>
<td><strong>Save Computed Values with Document</strong></td>
<td>For saving the computed values with the document.</td>
</tr>
<tr>
<td><strong>Save in Compressed Format</strong></td>
<td>For saving the job file in Interactive Reporting, compressed-file format.</td>
</tr>
<tr>
<td><strong>Send Files</strong></td>
<td>For including the scheduled file in an e-mail message</td>
</tr>
<tr>
<td><strong>Send Results</strong></td>
<td>For including Results section contents with the e-mailed document</td>
</tr>
<tr>
<td><strong>Send Computed Values</strong></td>
<td>For including computed values with the e-mailed document.</td>
</tr>
<tr>
<td>Option</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Send Compressed</td>
<td>For sending the saved job file in Interactive Reporting compressed-file format.</td>
</tr>
<tr>
<td>Additional Message</td>
<td>Enter e-mail message text.</td>
</tr>
</tbody>
</table>

**Example: Importing and Scheduling a Job**

This example illustrates importing and scheduling of an Interactive Reporting job. In this example, you import and schedule sample1.bqy to run once per quarter.

▸ To import sample1.bqy:

1. Navigate to the folder to which to import the job.
2. Select File, then Import, then File as Job.
3. In File, click Browse to search for the file sample1.bqy. Click Next.
4. For Query, on Connecting to Data Sources, under Connection, select Sample for the Query/DataModel name called SalesQuery, and click Next.
5. For Interactive Reporting Job Properties, select Users running this job can define their own cycles and actions, and click Next.
6. For Job Defaults, set General Properties and Locale and click Next.
7. On Permissions, give the World group access to sample1.bqy.
   a. Under Users, Groups, and Roles, click Update List.
   b. Select a user and click Edit.
   c. Under Selected Users, Groups, and Roles, select the user and click Edit.
   d. On Permissions, select the access permissions level for the job and the job output, and set the adaptive state.
      - Access to Job—Full Control
      - Adaptive state—View
   e. Click Finish.

   Permissions is displayed.
8. Click Finish and Schedule.
9. On General Properties, in Name, enter Quarterly, and click Next.
10. On Job Parameters, click Next.
11. On Cycles, by Add another cycle to this job, click Go.
12. Define a cycle:
    - Under Define Cycle, in Cycle Name, enter Weekly.
• Under Add a(n) (blank) Action to this Cycle, select Email Document, and click Go.

13 On Add/Modify Action: Email Document, in To, enter your email address.

14 Select Send File and/or Send Results, and click OK.

15 On Define Cycle, click OK.

16 On Cycles, select Save Job Parameter Name, select Personal from the drop-down list, enter a name in the box, and click Next.

17 On Time Events, select Define when to run this job starting with, and select A New Recurring Time Event, and click Next.

18 On Define Event:
   • In Name, enter a name.
   • In Days to Run, select By Quarter.
   • Click Next.

19 Under Notification, select Display notification in Schedule Module, and click Finish.

   The job is now scheduled to run.
Overview

Production Reporting jobs are created with Oracle's Hyperion® SQR® Production Reporting Studio. Generic jobs are created using applications with a command-line Production Reporting interface. You can use the Explore and Schedule modules to import, run, and schedule Production Reporting and generic jobs. You also use properties and parameters to further define Production Reporting and generic job options.

This chapter explains the properties specific to Production Reporting jobs, generic jobs, and Production Reporting documents (Production Reporting job output).

For basic importing procedures, see Chapter 5, “Importing Artifacts.” For basic job execution and scheduling procedures, see Chapter 14, “Scheduling Jobs and Batches.”

Prerequisites for Importing Jobs

Information needed for importing a Production Reporting job:

- Database connectivity, database type, and Production Reporting version needed to run the Production Reporting program that you are adding (select from the list); for example, Marketing Production Reporting v. 9
- Files that the Production Reporting program references:
  - Include files (#INCLUDE commands)
Input data files (open for-reading commands)
- Image files (print-image and declare-image commands)
- Compile-time parameters (ASK commands) and runtime parameters (INPUT commands).
- For secure Production Reporting jobs, the security organization of the program: which users have access to which data and how the output is (divided) (bursted).

Job Properties
The properties explained in the following topics pertain only to Production Reporting and generic jobs. Properties that do not apply to generic jobs are noted. See “Generic Job Properties” on page 485 for properties unique to generic jobs.

Production Reporting jobs have these properties:
- General properties
- Advanced options
- Connectivity and run options
- Parameters
- Output

Production Reporting and generic jobs and other items, such as BQY jobs share many general properties and advanced options. See “Working with Properties” on page 134.

To access properties:
1. From Explore, select a Production Reporting job.
2. Select File, then Properties.

Review properties:
- Click General. See “General Properties” on page 135.
- Click Advanced. See “Advanced Properties” on page 136.
- Click Production Report to review Production Reporting properties:
  - Click Required Files. See “Required Files” on page 478.
  - Click Connect. See “Connection and Run Options” on page 478.
  - Click Parameters. See “Parameters” on page 480.
  - Click Output Options. See “Job Output” on page 483.
  - Click Advanced. See “Advanced Production Reporting Options” on page 480.

Dependency Analysis Commands
When importing Production Reporting job, the system can analyze your Production Reporting program for dependencies. The analysis occurs if you request the system to scan for required
files and INPUT and ASK parameters. Analysis can be time-consuming if your Production Reporting program is large.

The system examines these commands in your Production Reporting program:

- **INCLUDE**—Includes an external source file in the Production Reporting report specification; for example, a Production Reporting code file, charts.sqi, required by stocks.sqr when it compiles.

- **OPEN**—Opens an operating system file for reading or writing; for example, an OPEN statement that opens a file for sequential reading the data in the file, which is identified to the program as 1:

  ```
  open 'stocks.dat' as 1 for-reading record=100
  ```

- **DECLARE-IMAGE**—Declares the type, size, and source of an image to be printed; for example:

  ```
  declare-image control flow
  type = eps-file
  source = 'controlf.eps'
  image-size = (321, 309)
  end-declare
  ```

- **PRINT-IMAGE**—Prints an image in any report section (As with the declare-image command, the print-image command accepts type, size, and source arguments.)

- **ASK**—Retrieves a compile-time substitution variable (Retrieval can be by user input, command-line arguments, or entries in the @file on the command line.)

- **INPUT**—Retrieves a runtime variable (Retrieval can receive by user input, command-line arguments, or entries in the @file on the command line.)

- **PRINT URL=”...”**—Prints the file found at the URL location, usually an image file (The file is listed with the required files for the job.)

- **SECURE**—Retrieves the secure tag

**Advanced Options**

The Security Tags Included property, which is read-only, indicates whether the job is secure. Secure jobs can have only HTML output. All other advanced options are explained in “Working with Properties” on page 134.

**Connectivity and Run Options**

These topics describe all data source connection properties and run properties for Production Reporting jobs:

- **Connection and Run Options**
- **Required Files**
- **Required-File Addition**
- **Advanced Production Reporting Options**
Connection and Run Options

Use these options, which apply only to Production Reporting jobs, to configure or change the database connections and the Production Reporting engine for the job.

<table>
<thead>
<tr>
<th>Connection and Run Options</th>
<th>Descriptions</th>
</tr>
</thead>
</table>
| **Data Source and Production Reporting Engine** | For selecting a data source and a Production Reporting engine  
If the data source or engine that you need is not available, see your administrator. |
| **Database Connectivity** | Use Job Service connectivity for this data source—For using the default username and password  
Prompt for username/password—For prompting users to enter IDs and passwords at runtime  
Use the username/password specified below—For setting the username and password now on import |
| **Allow pass-through where end user’s authentication system is enabled for it** | For enabling users to access data sources without additional credentials. |

Required Files

When importing a file or job, you can identify and locate required files by scanning the Production Reporting program, or you can manually enter the required files.

**Note:** Scanning the Production Reporting program to locate required files is possible only during the import process.

As you identify and locate required files, they are added to the required files screen. For generic jobs, you must manually enter required files.

Files that can be associated with a job or Production Reporting document and required for successful execution:
- For Production Reporting jobs, Include, Data, Image files, and INI file
- For generic jobs, associated files used for running the job
- Production Reporting documents and associated files used in viewing the document

This chapter concentrates on required files managed through a listing interface, namely files for Production Reporting and generic jobs and Production Reporting documents. The INI file and the custom-form required files are managed through another interface.

**Note:** Scan for required files before manually entering required files, because the scanned results replace the required files list. If duplicate required files are listed, you must delete the extra files.
### Table 129

<table>
<thead>
<tr>
<th>Job Properties</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td>Required-file name</td>
</tr>
<tr>
<td></td>
<td>The local file icon next to the name indicates that the file is on your local system.</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>Required-file path</td>
</tr>
<tr>
<td></td>
<td>If the location is not listed, you must find the file by selecting Modify or delete the file.</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>The type (INCLUDE, IMAGE, DATA), as determined by the system.</td>
</tr>
<tr>
<td></td>
<td>Manually entered JPEG, GIF, and HTML files are given the IMAGE type. You must select a type for other manually entered files. All files must have a type before you can continue the importing process.</td>
</tr>
<tr>
<td><strong>Action</strong></td>
<td><strong>Retrieve</strong>—For opening any type of required file</td>
</tr>
<tr>
<td></td>
<td><strong>Replace</strong>—For replacing the file with one selected from your local computer or EPM Workspace repository</td>
</tr>
<tr>
<td></td>
<td><strong>Delete</strong>—For deleting the file</td>
</tr>
<tr>
<td></td>
<td><strong>Modify</strong>—For browsing your local system for files that the system could not locate</td>
</tr>
<tr>
<td><strong>Add Files Manually</strong></td>
<td>Default method to locate required files for a job</td>
</tr>
<tr>
<td><strong>Note:</strong> Scanning is available only during the import process.</td>
<td>You can enter each required file separately or zip the required files and enter the zip file manually. EPM Workspace extracts the zipped files and adds them to the required files summary list.</td>
</tr>
<tr>
<td><strong>Scan Folders Specified in Preferences</strong></td>
<td>The Production Reporting program scans listed folders for required files. Files not located are listed on the summary screen with the File not found message under location. Locate missing files by selecting Modify.</td>
</tr>
<tr>
<td><strong>Scan All of Oracle’s Hyperion Reporting and Analysis</strong></td>
<td>The Production Reporting program is scanned for required files, and files in the EPM Workspace repository are listed on the required files summary list.</td>
</tr>
<tr>
<td></td>
<td>If your program uses variables for file names in the OPEN, DECLARE-IMAGE, or PRINT-IMAGE commands, you receive a warning message that the system cannot find the files unless you provide their names. Ignore the message, if you enter the required files manually or if the variables point to files that reside on the Job Service numbers. Otherwise, exit the import process and modify your Production Reporting program.</td>
</tr>
</tbody>
</table>

### Required-File Addition

Browse your local system or the repository for required files to add manually.

### Table 130  Add Required File Parameters

<table>
<thead>
<tr>
<th>File Parameters</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Add File from my PC</strong></td>
<td>Add a file from your local hard drive.</td>
</tr>
<tr>
<td><strong>Add File from the Repository</strong></td>
<td>Add a file from the database.</td>
</tr>
<tr>
<td><strong>Browse</strong></td>
<td>Click to search files.</td>
</tr>
</tbody>
</table>
Advanced Production Reporting Options

Advanced Production Reporting options apply only to Production Reporting jobs. For more information on command-line flags and the SQR.ini file, see Hyperion SQR Production Reporting Developer’s Guide Volume 2: Language Reference.

<table>
<thead>
<tr>
<th>Advanced Options</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Compile</strong></td>
<td>For compiling the program</td>
</tr>
<tr>
<td>Benefits:</td>
<td></td>
</tr>
<tr>
<td>● Save time later when running the job</td>
<td></td>
</tr>
<tr>
<td>● Validate SQL ASK parameters</td>
<td></td>
</tr>
<tr>
<td>● Check program validity</td>
<td></td>
</tr>
<tr>
<td><strong>Command-line flags for Job Execution</strong></td>
<td>Optional command-line flags</td>
</tr>
<tr>
<td></td>
<td>Some flags can be over-ridden by job-output option formats and demand-paging options, for example, –burst and –printer.XX where XX is a format type.</td>
</tr>
<tr>
<td></td>
<td>This command-line flag option is unavailable: –EH_CSVONLY.</td>
</tr>
<tr>
<td></td>
<td>The system accepts 250 characters on the command line.</td>
</tr>
<tr>
<td><strong>Use SQR.ini from File System on Job Factory Host</strong></td>
<td>For using the SQR.ini file location</td>
</tr>
<tr>
<td><strong>Custom SQR.ini</strong></td>
<td>Path to a custom SQR.ini file</td>
</tr>
<tr>
<td></td>
<td>Browse for the file locally or in the repository.</td>
</tr>
<tr>
<td></td>
<td>● Add File from my PC—Select a local file.</td>
</tr>
<tr>
<td></td>
<td>● Add File from the Repository—Select a file from the database.</td>
</tr>
<tr>
<td><strong>Enable search indexing</strong></td>
<td>Allows keywords generation during job execution. This is in support of searching for Production Reporting jobs.</td>
</tr>
<tr>
<td><strong>Persist foreground job output in repository when running this job</strong></td>
<td>Stores output in the repository.</td>
</tr>
<tr>
<td><strong>Allow Job Runners the option to change the persistence option</strong></td>
<td>When this is selected, Persist foreground job output when running this job is available to users when running the job in real time.</td>
</tr>
</tbody>
</table>

Parameters

Production Reporting jobs have two parameter types, ASK and INPUT. ASK parameters (variables) are used at compile time. INPUT parameters (variables) are used when the job is executed and are displayed as prompts when users run the job. You can add ASK and INPUT parameters to the parameter list. Only Production Reporting jobs have ASK parameters. Production Reporting and generic jobs can have INPUT parameters. Further define a parameter by selecting Modify for the parameter. Also select custom forms for user input of parameters.
Parameter Settings

You use **Parameters** to view scanned parameter or manually enter new ones. **Table 131** details the define parameter properties.

**Table 131  Parameter Properties**

<table>
<thead>
<tr>
<th>Parameter Properties</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manually entering parameters</td>
<td>Default method for entering ASK and INPUT parameters. See &quot;Dependency Analysis Commands&quot; on page 476 (Parameters are listed as you add them.)</td>
</tr>
<tr>
<td>Scanning job and reading parameters from the Production Reporting code</td>
<td>Option to enable automatic scenery of the Production Reporting job and the INPUT and ASK parameters list</td>
</tr>
<tr>
<td>Available during the import process.</td>
<td></td>
</tr>
<tr>
<td>Add another parameter to this job</td>
<td>Select <strong>INPUT</strong> or <strong>ASK</strong> and click <strong>GO</strong>. See &quot;INPUT Parameters&quot; on page 482.</td>
</tr>
<tr>
<td>Prompt</td>
<td>The prompt for values for the parameter</td>
</tr>
<tr>
<td>Display</td>
<td>The display format (Text, SQL Choice, Choice Box) for the parameters (Default is Text.)</td>
</tr>
<tr>
<td>Default Value</td>
<td>Default value for the parameter</td>
</tr>
<tr>
<td>Modify</td>
<td>Select to modify these properties for each parameter: prompt, display format, and default value</td>
</tr>
<tr>
<td>Arrow icons</td>
<td>Arrows to reorder the parameter. (The parameters are processed in the order that they are displayed on this list.)</td>
</tr>
<tr>
<td>Garbage can icon</td>
<td>Select to delete the parameter.</td>
</tr>
</tbody>
</table>

**ASK Parameters**

ASK parameters can be entered as text or as an SQL query.

**Table 132  ASK Parameter Properties**

<table>
<thead>
<tr>
<th>Parameter Properties</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display parameter on form as:</td>
<td>Select a parameter display type:</td>
</tr>
<tr>
<td></td>
<td>● Text Entry</td>
</tr>
<tr>
<td></td>
<td>● Choice of Values obtained from SQL Query</td>
</tr>
<tr>
<td>Prompt</td>
<td>The prompt for the parameter</td>
</tr>
<tr>
<td>Default value</td>
<td>For entering a default value or allowing users to change the value (text entry only) The system requires a default value or section of <em>End-user can change value.</em></td>
</tr>
<tr>
<td>End-user can change value</td>
<td>For allowing users to enter default values during runtime</td>
</tr>
<tr>
<td>SELECT/FROM/WHERE</td>
<td>SQL commands for retrieving the parameter list (SQL query only).</td>
</tr>
</tbody>
</table>
**INPUT Parameters**

INPUT parameters can be entered as text, predetermined values, or an SQL query.

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Display parameter on form as:</strong></td>
<td>Select a parameter display type:</td>
</tr>
<tr>
<td></td>
<td>- Text Entry</td>
</tr>
<tr>
<td></td>
<td>- Choice of Pre-Determined Values</td>
</tr>
<tr>
<td></td>
<td>- Choice of Values Obtained from SQL Query</td>
</tr>
<tr>
<td><strong>Prompt</strong></td>
<td>The prompt for the parameter</td>
</tr>
<tr>
<td><strong>Data Type</strong></td>
<td>The data type (text, numeric, or date; default is text)</td>
</tr>
<tr>
<td><strong>Presentation</strong></td>
<td>The presentation format: drop-down list, option buttons, or list box (Pre-determined and SQL query only)</td>
</tr>
<tr>
<td><strong>Default value</strong></td>
<td>For entering a default value or allowing users to change the value (predetermined and text entry)</td>
</tr>
<tr>
<td></td>
<td>If Value optional is unavailable, the system requires a default value or requires that End-user can change value is selected.</td>
</tr>
<tr>
<td></td>
<td>When $FIXED_USERNAME$ is selected, Value optional and End-user can change value are disabled.</td>
</tr>
<tr>
<td><strong>Value optional</strong></td>
<td>For allowing the parameter to have no default value and enabling users to execute jobs with no value for the parameter</td>
</tr>
<tr>
<td><strong>End-user can change value</strong></td>
<td>For allowing users to enter default values during runtime</td>
</tr>
<tr>
<td></td>
<td>If no default is specified and this option is selected, users must specify default values.</td>
</tr>
<tr>
<td></td>
<td>When this option is selected, the allow multiple values field is selectable (predetermined and SQL query only).</td>
</tr>
<tr>
<td><strong>Allow multiple values</strong></td>
<td>For allowing multiple values (list box presentation only)</td>
</tr>
<tr>
<td></td>
<td>If multiple values selected are used to create dynamic selection criteria within the Production Reporting program, the program must be designed to construct a WHERE clause.</td>
</tr>
<tr>
<td><strong>Validation Type</strong></td>
<td>Validation type (text only).</td>
</tr>
<tr>
<td><strong>Validation Mask</strong></td>
<td>A standard or custom validation mask (text only)</td>
</tr>
<tr>
<td><strong>List Values</strong></td>
<td>For entering values that are moved to the list with the right-facing arrows (predetermined only)</td>
</tr>
<tr>
<td></td>
<td>Delete values by selecting them in the list and selecting the left-facing arrows.</td>
</tr>
<tr>
<td><strong>SELECT/FROM/WHERE</strong></td>
<td>SQL commands for retrieving the parameter list (SQL query only).</td>
</tr>
</tbody>
</table>

**Custom Forms**

You can select a custom JSP parameter form or use the standard form for INPUT parameter intake when the job is run. Parameter forms JSPs with input fields. They can also be more complex, invoking JavaScript or applets. You can select a customized parameter collection form developed by your company.
The assigned form is stored in the repository. You can assign a custom form from your local system or from the repository.

<table>
<thead>
<tr>
<th>Custom Form Options</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard Form</strong></td>
<td>Default HTML parameter form, which is displayed only when properties are being modified</td>
</tr>
<tr>
<td><strong>Custom Form</strong></td>
<td>For uploading the custom-form file by clicking ADD (next to Custom Form) and browsing to it</td>
</tr>
<tr>
<td><strong>Required Files</strong></td>
<td>For adding supporting files, such as images, used by the selected form</td>
</tr>
<tr>
<td>Name</td>
<td>Required-file name</td>
</tr>
<tr>
<td>Location</td>
<td>Required-file path (The icon next to the name indicates that the file is on your local system.)</td>
</tr>
<tr>
<td><strong>Action</strong></td>
<td>Replace—For replacing the file with one selected from your local system or the repository Delete—For deleting the file</td>
</tr>
<tr>
<td><strong>Add Files Manually</strong></td>
<td>For add required files by clicking Go.</td>
</tr>
</tbody>
</table>

**Parameter List Options**

Table 133 details the INPUT parameter list options.

<table>
<thead>
<tr>
<th>Parameter List options</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Smartform allows user to choose a Parameter list</strong></td>
<td>For allowing users to choose parameter lists at runtime</td>
</tr>
<tr>
<td><strong>Smartform allows user to save as Job Parameter</strong></td>
<td>For allowing users to save a parameter for values entered in the input fields</td>
</tr>
</tbody>
</table>

**Job Output**

HTML format is always selected for an output format. You can add additional output formats by selecting them or listing them in the text box.

**Output Options**

Table 134 details the output options.
## Table 134  Output Options

<table>
<thead>
<tr>
<th>Output Options</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Options</td>
<td>Output formats to be generated from your Production Reporting program:</td>
</tr>
<tr>
<td></td>
<td>● HTML</td>
</tr>
<tr>
<td></td>
<td>● Interactive Reporting Data (bqd)</td>
</tr>
<tr>
<td></td>
<td>● Smart View</td>
</tr>
<tr>
<td></td>
<td>● Adobe Acrobat</td>
</tr>
<tr>
<td></td>
<td>● PowerPoint</td>
</tr>
<tr>
<td></td>
<td>● PostScript</td>
</tr>
<tr>
<td></td>
<td>● HP Printer</td>
</tr>
<tr>
<td></td>
<td>● Excel</td>
</tr>
<tr>
<td></td>
<td>● XML</td>
</tr>
<tr>
<td></td>
<td>● Comma Delimited</td>
</tr>
<tr>
<td></td>
<td>● Line Printer</td>
</tr>
<tr>
<td></td>
<td>● Word</td>
</tr>
<tr>
<td></td>
<td>● Excel</td>
</tr>
<tr>
<td></td>
<td>HTML is the default.</td>
</tr>
<tr>
<td></td>
<td>Values entered in other are stored as a custom property.</td>
</tr>
<tr>
<td></td>
<td>Formats selected here override output formats specified in other Production Reporting Command-Line Option interfaces.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> “SPF output” is used to show or hide SPF output, which is always generated, in the output listing.</td>
</tr>
</tbody>
</table>

## Demand Paging

Demand paging offers options for splitting, or bursting, the report into separate files for better performance. By bursting a report, you avoid downloading the report in its entirety into the browser.

For secure Production Reporting jobs, you should choose an HTML Demand Paging option according to how the report divides the output among users or groups.

Demand paging is for Web output types which include HTML, BQD, XLC, and CSV. Printed output types include PDF, SPF, PS,LP, and HP.

### Table 135  Demand Paging Options

<table>
<thead>
<tr>
<th>Demand Paging Options</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write the entire report as one file</td>
<td>For writing report output to one HTML file (Not available for a secure Production Reporting job)</td>
</tr>
<tr>
<td>Write a separate file every ___ pages</td>
<td>For creating an HTML file for every N pages</td>
</tr>
<tr>
<td></td>
<td>For example: if you enter 1, an HTML file is created for every report page; if you enter 20, an HTML file is created for every 20 pages.</td>
</tr>
<tr>
<td></td>
<td>Default: An HTML file for every page in the report</td>
</tr>
</tbody>
</table>
### Demand Paging Options

<table>
<thead>
<tr>
<th>Demand Paging Options</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write a separate file based on table of contents level</td>
<td>For creating HTML files for the table of contents. If you enter 1, a separate HTML file is created for each level 1 entry in the table of contents. If you enter 2, an HTML file is created for each level 1 and level 2 entry. Default: An HTML file for each level 1 entry. <strong>Note:</strong> If no table of contents exists, the report is saved as one HTML file.</td>
</tr>
</tbody>
</table>

### Advanced Output Options

Table 136 details the advanced output properties.

**Table 136  Advanced Output Options**

<table>
<thead>
<tr>
<th>Advanced Output Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow users to add job output to a Personal Page</td>
<td>For allowing users to embed job output contents (HTML only) in personal pages</td>
</tr>
<tr>
<td>Command-line flags for Job Output</td>
<td>Command-line flags to be used in output bursting.</td>
</tr>
<tr>
<td>Auto delete job outputs after</td>
<td>For specifying when to delete job output automatically</td>
</tr>
</tbody>
</table>

### Compile Properties

You can compile Production Reporting programs before you run them. All precompile programs recompile if INCLUDE file is modified.

<table>
<thead>
<tr>
<th>Compile Properties</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compile-Time flags</td>
<td>Command-line flags for use at compile time</td>
</tr>
<tr>
<td>Database user name</td>
<td>Username to access the database</td>
</tr>
<tr>
<td>Database password</td>
<td>Password for the username</td>
</tr>
<tr>
<td>ASK parameters</td>
<td>For modifying default values for ASK parameters required by the Production Reporting job</td>
</tr>
</tbody>
</table>

A Production Reporting document is a printer-independent file format that accommodates all Production Reporting graphical features, including fonts, lines, boxes, shaded areas, charts, bar codes, and images. Production Reporting portable files have a default extension of SPF or SNN (for multiple reports). This file format is very useful for saving report output. Production Reporting documents can be distributed electronically and read with the Production Reporting viewer. You can decide later where to print a document.

### Generic Job Properties

Most generic job properties and Production Reporting job properties are the same. General properties, advanced options, and parameter properties are the same except where noted in the Production Reporting Job Properties section.
Job input and output properties are unique to generic jobs and are explained in the following topics.

**Generic Job Output Options**

If the application that you need to run your program is not available, see your administrator to configure a job service with the application that you need.

<table>
<thead>
<tr>
<th>Generic Job Output Options</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Factory Application</td>
<td>The application to run your program</td>
</tr>
<tr>
<td></td>
<td>If the required application is not on the list, a job service must be configured for the application before you proceeding with the job setup. Contact your system administrator to configure the application.</td>
</tr>
<tr>
<td>Command-line flags for Job Execution</td>
<td>Command-line flags to be passed to the application</td>
</tr>
</tbody>
</table>

**Required Files for Generic Jobs**

Identify and locate required files by manually entering the required files. As you identify and locate required files, they are added to the required files page.

<table>
<thead>
<tr>
<th>Properties of Required Files</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Required-file name</td>
</tr>
<tr>
<td></td>
<td>The icon next to the name indicates that the file is on your local system.</td>
</tr>
<tr>
<td>Location</td>
<td>Required-file path</td>
</tr>
<tr>
<td></td>
<td>If the location is not listed, you must find the file by clicking the modify icon or delete the file.</td>
</tr>
<tr>
<td>Action</td>
<td><strong>Retrieve</strong>—For downloading the file</td>
</tr>
<tr>
<td></td>
<td><strong>Replace</strong>—For replacing the file with one from your local computer or the EPM Workspace repository with the same name</td>
</tr>
<tr>
<td></td>
<td><strong>Delete</strong>—For deleting the file</td>
</tr>
<tr>
<td>Add Files Manually</td>
<td>Method for locating required files for a job</td>
</tr>
<tr>
<td></td>
<td>Enter files separately or zip them and enter the zip file name. EPM Workspace extracts the zipped files and adds them to the required file summary list.</td>
</tr>
</tbody>
</table>

**Database Connectivity for Generic Jobs**

Enter a database username, password, and connect string.

<table>
<thead>
<tr>
<th>DB Connectivity for Generic Jobs Properties</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>User name</td>
<td>User name for the data source</td>
</tr>
</tbody>
</table>
## DB Connectivity for Generic Jobs Properties

<table>
<thead>
<tr>
<th>Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Password</strong></td>
<td>Password for the data source</td>
</tr>
<tr>
<td><strong>Database Connect String</strong></td>
<td>Database connect string for the data source</td>
</tr>
<tr>
<td><strong>Allow pass-through where end user’s authentication system is enabled for</strong></td>
<td>For allowing users to access data sources without entering credentials</td>
</tr>
</tbody>
</table>

## Output Options for Generic Jobs

Define the job and output options.

<table>
<thead>
<tr>
<th>Output Options for Generic Jobs</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Display this primary output file after running the job:</strong></td>
<td>Primary output format</td>
</tr>
<tr>
<td></td>
<td>Separate formats with semicolons; for example, *.html; *.pdf. When a format matches, remaining formats are ignored.</td>
</tr>
<tr>
<td></td>
<td>Default: All formats are shown</td>
</tr>
<tr>
<td><strong>Output types generated by this job</strong></td>
<td>Value to be stored as the property SYS_OUTPUTFILETYPE.</td>
</tr>
<tr>
<td></td>
<td>Use API in your application to access this property.</td>
</tr>
<tr>
<td><strong>Auto-delete output after the job is run</strong></td>
<td>For specifying when job output is deleted automatically</td>
</tr>
</tbody>
</table>

## Modifying Production Reporting and Generic Job Properties

The properties of Production Reporting and generic jobs can be modified. See “Working with Properties” on page 134.

The Output Summary section, from which you can delete output, is available when you modify properties.

<table>
<thead>
<tr>
<th>SQR and Generic Job Properties</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Last Run Date</strong></td>
<td>Lists the date the job was last run.</td>
</tr>
<tr>
<td><strong>Output Formats</strong></td>
<td>Lists the output formats generated.</td>
</tr>
<tr>
<td><strong>Delete Selected</strong></td>
<td>In the first column, select dates, then click <strong>Delete Selected</strong> to delete.</td>
</tr>
<tr>
<td><strong>Page</strong></td>
<td>Navigate through multiple pages of output by entering a page in this text box, or by clicking the arrows.</td>
</tr>
</tbody>
</table>
Setting Production Reporting and Generic Job Parameters

You must to set the necessary runtime values for a job before the job is run or scheduled. You can save the values as personal job parameters, so they can be used again.

To set job parameters for Production Reporting and generic jobs:

1. Run or schedule a job.
   See “Running Jobs” on page 435 or “Scheduling Jobs” on page 436.

2. Enter the necessary runtime values in the Set Values section if you are running the job or on Parameters if you are scheduling the job.
   You must specify values for all ASK parameters unless you specified default values when importing the job or unless you have a saved job parameter in the Job Parameter list.

3. Optional: To save the values as personal job parameters, click Save and enter a name for the parameters.

Output Options for Scheduling Jobs

The standard job output options are explained in “Scheduling Jobs” on page 436. Production Reporting jobs offer additional e-mail notification options and output directory options.

E-mail Notification Options

Production Reporting jobs offers e-mail notification options.

<table>
<thead>
<tr>
<th>Email Notification Options</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email Address(es)</td>
<td>E-mail addresses for sending status reports; separate with semicolons, colons, space characters, commas, or lines.</td>
</tr>
</tbody>
</table>
Email Notification Options

<table>
<thead>
<tr>
<th>Attach job outputs to email messages in these formats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select formats for e-mail attachments:</td>
</tr>
<tr>
<td>Default: HTML</td>
</tr>
<tr>
<td>● HTML—Default</td>
</tr>
<tr>
<td>● Comma Delimited</td>
</tr>
<tr>
<td>● Line Printer</td>
</tr>
<tr>
<td>● Include Dependent Files</td>
</tr>
<tr>
<td>—For including all e-mail attachment files dependent on this job.</td>
</tr>
<tr>
<td>● SPF</td>
</tr>
<tr>
<td>● Interactive Reporting Data</td>
</tr>
<tr>
<td>● Smart View</td>
</tr>
<tr>
<td>● Adobe Acrobat</td>
</tr>
<tr>
<td>● Postscript</td>
</tr>
<tr>
<td>● HP Printer</td>
</tr>
<tr>
<td>● Other—Enter a file type.</td>
</tr>
</tbody>
</table>

Zip Options

<table>
<thead>
<tr>
<th>Zip file options:</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Do not compress attachment files—Zip file not created</td>
</tr>
<tr>
<td>● Combine all attachments into one Zip file—Zip file contains HTML and selected file formats</td>
</tr>
<tr>
<td>● Combine only HTML and Graphics into Zip file—Zip file contains HTML and selected graphic file formats</td>
</tr>
</tbody>
</table>

Output Directory Options

Production Reporting jobs offer output directory options.

Note: The Save to Output Directory section is displayed only if the administrator has configured an output directory.

Table 137  Output Directory Options

<table>
<thead>
<tr>
<th>Output Directory Options</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Directory</td>
<td>For saving job output is automatically in the directory containing the job When you select an output directory, job output is saved to the selected directory. (Your administrator configures the directory list.)</td>
</tr>
<tr>
<td>Save output in these formats</td>
<td>For saving job output in additional formats HTML is automatically generated. These options work only if you select a directory from the list.</td>
</tr>
<tr>
<td>Include dependent files</td>
<td>For including all files dependent on your job.</td>
</tr>
<tr>
<td>Status Report</td>
<td>For receiving all status reports Default: Receive status reports only when errors occur</td>
</tr>
</tbody>
</table>
### Working with Secure Production Reporting Jobs

Secure and insecure Production Reporting jobs are handled differently. For secure jobs, security tags are applied to report sections. The following topics explain what secure jobs are and how their security is accomplished and protected.

If the Production Reporting programmer applies security tags to report sections, thereby restricting access to the sections to specified users, the report is secure. Production Reporting produces only HTML output (with images) for a secure report. For details on programming a secure Production Reporting report, see your Production Reporting documentation.

When a secure Production Reporting job is run, the security tags are written to the Production Reporting. When the document is executed, each resulting HTML file is given a security tag assuring that only users authorized to see all data in the file can see the file.

It is important to set the bursting (or demand paging) options appropriately for a secure report, so the resulting files correspond to the way that the Production Reporting program divided data among users. If you do not burst the Production Reporting document correctly, security is preserved, but some users may not have access to data that they should be able to see.

The Production Reporting document written by running a Production Reporting program can be imported into the repository. Executing a secure document yields the same output with the same access privileges as executing the secure job.

### Access Privileges on Secure Production Reporting Jobs

Access privileges on output files are derived, first, from the user’s access when the job is executed or from the job output access privileges, if the privileges are set. Each output file may also have an associated set of security tags. Job owners can change the access privileges on SPF or output files. In a Production Reporting document, which contains all data, broadening access means relaxing security on the report.

Users need all these privileges to see output files:

- View access on the report folder
- View access on the files
- Access granted by the Production Reporting security tags of the output files (The access is derived from the security tags in the code.)

**Note:** A user can list all output formats using a delimiter (;) in the Other Formats text field for Schedule Output Properties.
Security tags are not checked when job output is deleted. Only normal access privilege checking is performed. Thus, a job output file owner can delete the file, regardless of whether the security tags enable the owner to view the file contents. If a secure report creates data file through a Production Reporting OPEN statement, only the job owner has view access to the file. The owner can relax security for the file.

**Security Mode**

Every item in Production Reporting has a security mode that is on or off.

The security mode for all items derived from a secure Production Reporting file is on. These items include the Production Reporting document, all output files, the Production Reporting ProgramOutput item, and the SPFFileOutputCollection item. If a file is secure, this information is displayed in Properties (on the Advanced tab).

It is possible to create a secure Production Reporting program that produces secure and nonsecure output. The Production Reporting program can be coded so that some pages are output without security, while the rest are secure. In this case, users with access to the output files through normal EPM Workspace access control see the nonsecure output pages and the secure pages that they are authorized to see. The ability to create secure and nonsecure pages within a secure Production Reporting program is governed with the security command in Production Reporting.

You can create on replace a version of a secure report, but the security mode for the new version and the original must match.

**Recommendations for Security**

Recommendations for ensuring the security of secure Production Reporting jobs and documents in EPM Workspace:

- Establish dedicated user accounts for secure Production Reporting or SPF jobs.
- Use a dedicated account for one secure report or a group of related secure reports.
- Ensure that secure jobs are run only from dedicated accounts.
- Limit access to the dedicated account to as few people as possible, because everyone with access to it can import secure jobs and access the Production Reporting document, which contains all data.

**Programmer Conventions**

Production Reporting has built-in conventions for designating security tags to EPM Workspace users or groups. A security tag that begins with *u#* represents a user. A security tag that begins with *g#* represents a group.
**Viewing Security Information**

Secure Production Reporting programs tailor their output for multiple users and restrict access accordingly. You can determine whether a file related to the Production Reporting program is secure by viewing its security mode.

For secure Production Reporting file and its related files, the Secure mode property is set to *on*. The related files include Production Reporting output files, document collections, and Production Reporting documents output collections.

➤ To view the security mode of a file:

1. **Select the file, and Modify.**
2. **Open the Advanced Options section.**
   
   If the file is secure, the *Security Tags Included* box is checked.

**Supporting Exceptions in Production Reporting or Generic Programs**

The following topics are for Production Reporting and generic report programmers, who support exception notifications to users. (Users can receive e-mail notifications or see a graphic indicator on the Exceptions Dashboard on personal pages.)

**Production Reporting Programming**

For Production Reporting programs to support exceptions, they must include these lines:

```
open 'output.properties' as 0 for-append record=32767:vary
write 0 from 'exception.default=on'
write 0 from 'exception.default.text=<exception text>
close 0
```

**Generic Report Programming**

For generic jobs or files to support exceptions. Programmers must use the EPM Workspace API to configure exception reporting through the job output properties, exception present and exception text.

**Setting Priority on Output Programmatically**

In Production Reporting programs, you can set the output as high priority. In Explore module listings, users see the high-priority icon next to any high-priority job output or version. Users can also sort by priority (normal or high).
To set priority to high on the output, a program writes the string `rating=high-priority` to the `output.properties` file used by the job service. This code excerpt accomplishes this objective:

```c
open 'output.properties' as 0 for-append record=32767:vary
write 0 from 'rating=high-priority'
close 0
```
Using Custom Parameter Forms for Production Reporting Jobs

In This Chapter

- Customizing Parameter Forms ................................................................. 495
- Parameter Form Elements ...................................................................... 497
- Standard Parameter Form ........................................................................ 501
- Standard Parameter Form Example .......................................................... 501
- Parameter Forms: Example and Tip .......................................................... 504

Customizing Parameter Forms

An Production Reporting job uses a parameter form to obtain INPUT parameter values at runtime. This section explains how to customize parameter forms.

Note: The parameter forms are in JSP. Customizing the standard form provided with Production Reporting requires a working knowledge of JSP and Java.

By default, when you run an Production Reporting job or create or modify a parameter list, EPM Workspace generates a standard form to collect parameter information. You can customize the form. For example, some jobs may require a more sophisticated field layout, or your organization may require certain conventions.

You can associate custom parameter forms with jobs at runtime. You run or schedule a job that is associated with a custom form, which is displayed instead of the standard form.

A parameter form is a JSP containing input fields. Forms can also be more complex, invoking JavaScript or an applet.

Parameter Form Process

The parameter form associated with a job or the standard form is displayed when you perform any of these actions:

- Select Run Job from the job shortcut menu
- From an item list, select the job name
- Create or modify parameter list while scheduling the job
After you submit a completed form for execution, EPM Workspace performs these actions:

1. Validates parameters for which validation is defined
2. Processes the form
   The form can collect parameter values and database logon information, as required by the job. For scheduling, the form can also collect the parameter list name and description.
3. Creates or modifies the parameter list or runs the job, as applicable
4. If the job was run, retrieves and displays job output

**Assigning Parameter Forms Jobs**

This procedure applies only to custom parameter forms created for use in Production Reporting.

**Note:** Custom parameter forms created prior to Production Reporting are in HTML and must be recreated as JSP forms for use with Production Reporting.

➤ To assign a custom parameter form to a Production Reporting job:

1. In the browser, navigate to the job, and right-click the job name.
2. Select **Properties** from the top menu.
3. Select **Custom Form,** and browse to the file to use.
4. If your form uses additional files, such as GIFs, select **Show Required Files.**
5. When you finish changing form properties, click **OK.**

**Assigning the Standard Form**

After assigning a custom form to a job, you can reassign the standard form.

➤ To assign the standard form to a job:

1. In the browser, navigate to the desired Production Reporting job, right-click the job name and select Properties.
2. Select **Production Report** and **Parameters** from the top menu.
3. Select **Standard Form.**
4. Select **OK.**

**Editing Parameter Forms**

Edit a custom form before you assign it to a job. To edit a form after it is assigned to a job, download it, change it, and upload it to the repository. An edited standard form is uploaded as a custom form.
Production Reporting parameter forms contain JSP tags or scriptlets that graphical HTML editors cannot display correctly. However, the tags are designed so that you can use some graphical HTML editors to modify layouts. Before using an editor, ensure that it does not alter code.

Using an editor to modify a parameter form requires knowledge of Production Reporting parameter-form API and JSP tags. When editing a parameter form, keep the scriplet code blocks together. Otherwise, it may not work correctly.

To edit a parameter form, use a nongraphical HTML editor, such as Macromedia Homesite. Be careful not to alter the JSP tags.

To edit a parameter form:

1. In the browser, navigate to the Production Reporting job, right-click the job name and select Properties.
2. From the top menu, select Parameters.
3. Select Custom Form.
4. Select Modify, select Add next to Custom Form.
5. Download the standard form, or browse your PC or the repository for a custom form.
6. If editing the standard form, specify a location for saving an editable copy, and enter a name for the new custom form.
7. Edit the form locally.
   - See “Parameter Form Elements” on page 497.
8. Click OK to save changes.

Parameter Form Elements

You create a parameter form as an HTML file that contains special elements. Before displaying a parameter form, EPM Workspace interprets and processes elements that it encounters in the form. Typically, EPM Workspace processes an element by replacing it with the value indicated by the element. For example, it replaces `<%=targetFormParameter.getJobName()%>` with the job name.

**Note:** Parameter form elements are case sensitive.

Element Types

The main element types of parameter forms:

- Basic
- Conditional
- Looping
Basic Elements

Basic elements have the form `<%= (bean).getxxx()%>>.`

Example: `<%= targetFormParameter.getJobName()%>`

Conditional Elements

A conditional element has the standard JSP or Java conditional code:

```java
if () {} 
else {} 
```

You can insert HTML or applicable parameter form elements between the start and end tag. Production Reporting evaluates whether the condition indicated by the `has Value` argument is true or false. If true, the enclosed HTML is included in the displayed form, if false, the HTML between the start and end tags is ignored.

Looping Elements

Looping elements have this form:

```html
<getxxxLoop>

...
</getxxxLoop>.
```

An example is `getParameterPickListLoop`. You can insert HTML elements between the start and end tags. When EPM Workspace processes the elements, it processes the loop contents until the loop finishes. The loop termination condition depends on the element.

Required Elements

A parameter form provides required elements and elements to use if, for example, you are setting up a parameter pick list or must access information from a database.

Required elements include elements that identify a file as a parameter form file, return parameter information, and return the URL to use when you submit the form for processing. See Table 138.

<table>
<thead>
<tr>
<th>Elements</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>setParameterAskCond(String n)</code></td>
<td>Selects the Nth ASK parameter, where n is from 1 to the total number of ASK parameters.</td>
</tr>
<tr>
<td><code>getParameterFieldName()</code></td>
<td>Returns the name of the HTML form field for setting the value of the parameter selected in <code>ParameterInputCond</code> or <code>ParameterAskCond</code></td>
</tr>
<tr>
<td><code>setParameterInputCond(String n)</code></td>
<td>Selects the Nth INPUT parameter, where n is from 1 to the number of INPUT parameters</td>
</tr>
<tr>
<td><code>getParameterName()</code></td>
<td>Returns the current parameter name</td>
</tr>
</tbody>
</table>
Elements | Function
-------|------------------------
getParameterValue() | Returns the value of the current parameter or, for a parameter list, the current value of the parameter

The following topics show code snippets using the required elements.

**Name Specification Elements**

The element that follows specifies the import file name for the parameter form.

```jsp
<jsp:include page="jsp/shared/formparameterFormJavaScript.jsp'flush=true>>
```

**Parameter List Elements**

Scheduling a job requires the creation of a parameter list, which has a name and description and contains a value for each parameter associated with the job. When scheduling a job, you select a parameter list, which provides the set of parameters that EPM Workspace uses when it runs the job.

**Parameter Display Elements**

The following code snippet shows the use of elements for handling parameter values. If your form uses a parameter pick list, see the sample code at the end of this topic.

```jsp
<getParameterInputCond hasValue="1">
  <!-- 1st parameter -->
  <!-- Name of parameter -->
  <TD VALIGN="MIDDLE">
    <FONT face="Arial, Helvetica, sans-serif" size="-1">
      <B>
        <getParameterName/>
      </B>
    </FONT>
  </TD>
  <TD VALIGN="MIDDLE" COLSPAN="2">
    <INPUT TYPE="text" NAME="<getParameterFieldName/>" VALUE="<getParameterValue/>" SIZE="30">
  </TD>
</getParameterInputCond>
```

The `<getParameterInputCond>` and `<getParameterAskCond>` tags select the INPUT or ASK parameter that is used to resolve the `<getParameterName/>`, `<getParameterFieldName/>` and `<getParameterValue>` tags. You must set the `hasValue` argument from 1 to the number of INPUT or ASK parameters.

**Nonrequired Elements**

For parameter forms, you can use nonrequired and required elements.
<table>
<thead>
<tr>
<th>Elements</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>getEmbedParameterValidationRoutines()</td>
<td>Adds the JavaScript parameter validation routines to the form</td>
</tr>
<tr>
<td>isFormUsesParameterValidationCond()</td>
<td>Returns true if the current job requires JavaScript validation routines</td>
</tr>
<tr>
<td>isParameterValidationCond()</td>
<td>Tests the current parameter for a validation function</td>
</tr>
<tr>
<td>isParameterValidationMaskCond()</td>
<td>Returns true if a mask is associated with the validation function of the current parameter</td>
</tr>
<tr>
<td>resetParameterPickList()</td>
<td>Initializes the static or dynamic choice options of the current parameter and prints an error message if initialization fails</td>
</tr>
<tr>
<td>isParameterMultiValuesCond()</td>
<td>Returns true if the parameter accepts multiple values</td>
</tr>
<tr>
<td>see getParameterType()</td>
<td>Returns the current parameter type number:</td>
</tr>
<tr>
<td></td>
<td>Text edit = 0</td>
</tr>
<tr>
<td></td>
<td>Drop-down list = 1</td>
</tr>
<tr>
<td></td>
<td>Radio button = 2</td>
</tr>
<tr>
<td></td>
<td>List box = 3</td>
</tr>
<tr>
<td>getParameterType()</td>
<td>Returns the current parameter type number:</td>
</tr>
<tr>
<td></td>
<td>Text edit = 0</td>
</tr>
<tr>
<td></td>
<td>Drop-down list = 1</td>
</tr>
<tr>
<td></td>
<td>Radio button = 2</td>
</tr>
<tr>
<td></td>
<td>List box = 3</td>
</tr>
<tr>
<td>getParameterListPublisherDefaultsFieldName()</td>
<td>Returns the name of the HTML form field used for the Publisher Defaults parameter list</td>
</tr>
<tr>
<td>processParameterPickListLoop()</td>
<td>Iterates through a parameter pick list values.</td>
</tr>
<tr>
<td>getPickListParameterValue()</td>
<td>Used within a loop construct for processParameterPickListLoop()</td>
</tr>
<tr>
<td></td>
<td>Returns the next value in a parameter pick list;</td>
</tr>
<tr>
<td>getParameterPickListValueSelected(String presentationType)</td>
<td>Must be used within a Java loop construct. Returns &quot;selected&quot; if the next value in the pick list is the current value for the parameter;</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> You can set <code>presentationType</code> to &quot;select&quot; or &quot;check.&quot; For a pick list for a parameter with only a few values, you can use buttons to display the options. In this case, setting the <code>presentationType</code> to &quot;check&quot; returns &quot;checked.&quot; You can use this option to indicate which option is the current value for the parameter</td>
</tr>
<tr>
<td>getParameterValidationMask()</td>
<td>Returns the mask associated with the current parameter of the validation function</td>
</tr>
<tr>
<td>Elements</td>
<td>Function</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>getParameterValidationName()</td>
<td>Returns the name of the current parameter of the validation function</td>
</tr>
<tr>
<td>getPublisherDefaultsParameterValue()</td>
<td>Returns the value of the current parameter in the Publisher Defaults parameter list</td>
</tr>
<tr>
<td>isRequiredParameterCond()</td>
<td>Returns true if the current parameter is required</td>
</tr>
<tr>
<td>getSaveDefaultsCheckboxFieldName()</td>
<td>Returns the name of the HTML form field that represents the &quot;save default&quot; box</td>
</tr>
<tr>
<td>isShowFormsParameterListCond()</td>
<td>Determines whether to display parameter lists</td>
</tr>
<tr>
<td>isShowFormsSaveMyDefaultsCond()</td>
<td>Determines whether the publisher selected &quot;save as my defaults&quot;</td>
</tr>
<tr>
<td>isShowParameterListPublisherDefaultsCond()</td>
<td>Returns true if the job is configured to display Publisher Defaults</td>
</tr>
</tbody>
</table>

**Standard Parameter Form**

The standard parameter form for Oracle's Hyperion® SQR® Production Reporting is in JSP. Notice the required import tags in the standard form example. A `JavaBeanIFormParameter View` statement is used to access all form APIs to obtain information regarding the form parameter list.

**Note:** You can create a custom parameter form by modifying the standard form. Java and JSP can be leveraged to enhance the form.

**Standard Parameter Form Example**

```jsp
<%@ include file="/jsp/shared/common.inc"%>
<%@ page import="com.brio.one.web.ui.JSPUtility, com.brio.one.web.browser.ui.*, com.brio.one.web.ui.config.*, java.util.*"%>
<jsp:useBean id="targetFormParameter" scope="request" type="com.brio.one.web.ui.IFormParameterView"/>
<!--
This template is used for these purposes:
1) Run a job that requires parameters or database user information
2) Create a parameter list for a job
3) Edit a parameter list for a job
This template is used when there is no custom ONE/SmartForm associated with the job. -->
<jsp:include page="/jsp/shared/form/parameterFormJavaScript.jsp" flush="true"/>
<TABLE border="0" width="98%" cellpadding="0" cellspacing="0">
    <TR>
        <TD WIDTH="45"><IMG <%=imgLocator.getSrcAltAttribute(request, "space.gif")%> WIDTH="45" HEIGHT="1" ALT=""></TD>
    </TR>
    <TD WIDTH="15"></TD>
</TABLE>
```
<!-- Start Display of Parameters -->
<% if (targetFormParameter.isParameterCond()) {
  // initialize the parameter loop
  targetFormParameter.resetParameterLoop();
  while (targetFormParameter.processParameterLoop()) {
    if (!targetFormParameter.isParameterHiddenCond()) {
      <TR>
        <TD><IMG WIDTH="45" HEIGHT="5" BORDER="0" ALT=""></TD>
        <TD VALIGN="middle" COLSPAN="3"><IMG WIDTH="20" height="5" ALT=""></TD>
      </TR>
      <TR>
        <TD COLSPAN="2"><IMG WIDTH="45" HEIGHT="12" BORDER="0" ALT=""></TD>
        <!-- Name of parameter -->
        <TD VALIGN="MIDDLE" class="SystemDataText"><%=targetFormParameter.getParameterName()%>:</TD>
        <TD VALIGN="MIDDLE" COLSPAN="2">
          <%
            int type = targetFormParameter.getParameterType();
            if (type == targetFormParameter.TEXT_EDIT) {
              %><INPUT TYPE="text" CLASS="Inputfield" onchange="onParamChange()"
              NAME="<%=targetFormParameter.getParameterFieldName()%>" VALUE="<%=targetFormParameter.getParameterValue()%>" SIZE="30"><%
            }
            if (type == targetFormParameter.DROPDOWN_LIST) {
              %><SELECT class="DataFrameDrop" NAME="<%=targetFormParameter.getParameterFieldName()%>" onchange="onParamChange()"
              <% if (!targetFormParameter.isRequiredParameterCond()) {%
                <OPTION VALUE=""></OPTION><%
              }%>
              while (targetFormParameter.processParameterPickListLoop()) {
                <OPTION VALUE="<%=targetFormParameter.getPickListParameterValue()%>" <%
                if (!targetFormParameter.getParameterPickListValueSelected("select")) {
                  %><OPTION VALUE=""></OPTION><%
                }%>
              </SELECT><%
            }
          %>
        </TD>
      </TR>
    }%>
  </%>
%>
if (type == targetFormParameter.LIST_BOX) {
    targetFormParameter.resetParameterPickList();

    if (targetFormParameter.isParameterMultiValuesCond()) {%
        SELECT class="DataFrameDrop" NAME="<
        %=targetFormParameter.getParameterFieldName()%>" onchange="onParamChange()" multiple
        size="5"><%
    } else {%

        SELECT class="DataFrameDrop" NAME="<
        %=targetFormParameter.getParameterFieldName()%>" onchange="onParamChange()" size = "5"><
    %

    if (!targetFormParameter.isRequiredParameterCond()) {%>
        <OPTION VALUE=""></OPTION><%
    }

    while (targetFormParameter.processParameterPickListLoop()) {%>
        <OPTION VALUE="<%=targetFormParameter.getPickListParameterValue()%>" <
        %=targetFormParameter.getParameterPickListValueSelected("select")%>> <
        %=targetFormParameter.getHTMLEscapedCurrentPickListParameterValue()%> </OPTION><%
    %>

    </SELECT><%
}

if (type == targetFormParameter.RADIO_BUTTONS) {
    targetFormParameter.resetParameterPickList();
    if (!targetFormParameter.isRequiredParameterCond()) { %>
        <input type="Radio" class="RadioButton"
        onchange="onParamChange()" name="<%=targetFormParameter.getParameterFieldName()%>"
        value="" checked><span class="RadioButtonText">No Selection Made</span><br><%
    }

    while (targetFormParameter.processParameterPickListLoop()) {%>
        <input type="Radio" class="RadioButton" onchange="onParamChange()" name="<
        %=targetFormParameter.getParameterFieldName()%>" value="<
        %=targetFormParameter.getPickListParameterValue()%>" <
        %=targetFormParameter.getParameterPickListValueSelected("check")%>><span
        class="RadioButtonText"><%=targetFormParameter.getPickListParameterValue()%></span><br><%
    %>
}
%

<TD VALIGN="TOP" COLSPAN="2"></TR><%}

if (targetFormParameter.isParameterHiddenCond()) {%
    <INPUT TYPE="hidden" NAME="<%=targetFormParameter.getParameterFieldName()%>"
    VALUE="<%=targetFormParameter.getParameterValue()%>"/></}%

Standard Parameter Form Example  503
All form parameter APIs are directly accessed through the Java bean; for example:

```java
targetFormParameter.getParameterName()
```

Use Java scriptlet tags to run Java code blocks within the tags; for example:

```java
<% String start="abc";%>
```

Use a JSP expression embedded in HTML to resolve variables to values at runtime; for example:

```html
<HTML>
<BODY>
The start of the alphabet is <%=start%>
</BODY>
</HTML>
```

Parameter form information can also be accessed through the parameter form APIs. This example resolves the current value of the parameter name and display the name in the form:

```java
<%=targetFormParameter.getParameterValue()%>
```

### Parameter Forms: Example and Tip

The following code snippet shows tag use for parameter pick lists.

```html
<!-- Parameter Pick List example -->
<% if (targetForm.setParameterInputCond("1")) {%>
  <SELECT NAME="<%=targetFormParameter.getParameterFieldName()%>">
    <%=targetFormParameter.restParameterPickList();
    while(targetFormParameter.processParameterPickListLoop() {%>
      <OPTION VALUE="<%=targetFormParameter.getParameterPickListValue()%>"
        <%=targetFormParameter.getParameterPickListValueSelected("select")%>
        <%=targetFormParameter.getParameterPickListValue()%>
    </OPTION>
  <%}%>
</SELECT>
<%}%>
```

Custom form can import JSPs and thus become more modular. For example, the standard form example, includes a `jsp:include` tag. The `<jsp:include>` tag is a standard JSP tag:

```jsp
<jsp:includepage="/jsp/shared/form/parameterFormJavaScript.jsp" flush="true"/>
```
The preceding example causes the parameterFormJavaScript.jsp file to be imported and executed with the standard form. Custom forms that include context, such as images, must be defined in the required files section.
Annotation Service, used with Financial Reporting reports, provides a collaborative tool that captures collective information that can be shared on particular documents and data. It provides a range of flexibility from simple notations to full-fledged threaded discussions, laying the foundation for collaboration, compliance reporting, and business process analysis. Authorized users have the ability to create, remove, and respond to annotations. Annotations can be attached to a report object (grid object, text object, chart object, and image object), and can reference a full or partial POV. Annotations included in reports can be viewed when selected for books and snapshot books.

**Note:** Annotations cannot be applied to objects in the report's header or footer.

**Note:** Annotations in Snapshot reports, represented with an eye icon, and snapshot books and batches are limited to read-only permissions.

Multiple attachments per annotation is supported as well as the referencing of URLs. On hover, the icon displays the underlying attachment title. If multiple attachments exist, the hover displays the list of attachments.

Annotations elements are:

- Annotation header—A high level description of the commentary; includes Subject, Creation Date, Author, and Category. There is one summary heading for each annotation.
The annotation creator can apply access control and permission options to groups or users.
Annotations can be added to a single value, a row or column, or a range of rows and columns.
A warning icon is displayed when a report containing an annotation is deleted.
A designer can add text cells or text objects to a report and apply an Annotation function that will reference specific annotations or annotation elements in a grid. This is done through Financial Reporting Studio. See the Oracle Hyperion Financial Reporting Studio User’s Guide.

In Annotation Manage, administrators can search and access annotations across the environment, modify context associated with a context, modify properties, including metadata, and remove annotations from the system. See the Oracle Enterprise Performance Management Workspace Administrator’s Guide.

**Showing Annotations**

Use the View menu to enable or showing or hiding annotations. To view annotations select View > Show Annotation. To hide annotations, select View > Hide Annotations.

**Creating Annotations**

Annotations can be attached to a report object, grid object, text object, chart object, and image object, and can reference a full or partial POV. You create a new annotation in the New Annotation dialog box. Three tabs in the New Annotation dialog box allow you to define the annotation:

- **Annotation tab** — capture the title, description and a predefined category.
- **Context tab** — capture Object and Dimension information. Object information can be a datasource or any object on the report. For example:
  - a data source — the annotation is attached to any Financial Reporting report using the specified data source.
  - Grid:data source — the annotation is attached to the specified grid and data source.
  - Text, Chart, or Grid — the annotation is attached the specified object with no dimensions on the object.
- **Attachments tab** — Link attachments to an annotation. Attachments can be a file on your local drive, any object in the repository, or a URL.

➢ To create an annotation

1. Right–click on any report object and select New Annotation. The **New Annotation** dialog box is displayed.
2. On the **Annotation** tab, enter a title, description and select a Category.

3. On the **Context** tab, select an object and, if applicable, deselect any dimensions that you want excluded.

**Note:** To select members for a dimension, click the dimension name.

4. On the Attachments tab, click **File** to attach a document that is located on your computer, click **Report** to attach a document from the repository, or click **URL** to select a link to a Web site.

5. Click OK. An Annotation icon is displayed in the report.

**Viewing an Annotation Summary**

Initial summary annotation text can be viewed in a “bubble” by right-clicking the annotation icon. Within the bubble, you can click icons to view attachments, reply to annotations, or view annotation details, if applicable.

**Viewing Annotation Details**

The detail annotations, which may include responses and attachments, can be viewed in the Annotation List Panel. The following information is presented for each annotation:

- **Status** — Displays an Eye icon to indicate viewing rights only, an exclamation icon to indicate that this annotation is no longer associated with an object in repository, or is blank to indicate that this annotation can be viewed and responded to.
- **Title** — The annotations title
- **Author** — The creator of the annotation
- **Description** — The annotation description
- **Posted** — The date the annotation was created
- **Source** — The database used in the report
- **Context** — The object associated with the annotation. If the object is a Grid, the dimension and members are displayed. If the object is an image, text or chart, the path of the report and object ID is displayed.
- **Category** — Predefined categories describing the nature of the annotation. Categories are Comment, Assessment, FYI, Misc (Miscellaneous), Other, Performance, or Target.

To view annotation details, in a report that contains annotations, do one of the following:

- Click an annotation icon, then click the Show Details icon to view the annotation in the Annotation List Panel.
- Locate the Annotation List Panel at the bottom of the screen, hover over the Show panel and click it.
Searching for Annotations

The Search option returns a list of annotations based on specified criteria.

To search for annotations:
1. From EPM Workspace, expand the annotation panel located at the bottom of the screen.
2. From the Search drop-down, select a search method.
   - All — A search based on text located in Title, Author, Category, Description, or Context. Case-insensitive text, trailing asterisks and wildcard strings are acceptable.
   - Title — A search based on text located in Title. Case-insensitive text, trailing asterisks and wildcard strings are acceptable.
   - Author — A search based on text located in Author.
   - Category — Search on category. Click the drop-down list to select a category.
   - Description — A search based on text located in Description. Case-insensitive text, trailing asterisks and wildcard strings are acceptable.
   - Context — Search on context. The Search lookup displays the Context Lookup dialog box where you can define your search based on a data source, element name, and, optionally, an element value. See “Context Lookup” on page 510
   - Advanced Search — The Search lookup displays the Advanced Search dialog box where you can define your search based on a combination of Title, Author, Description, Posted Date Range, Category or Context. See “Advanced Search” on page 511
3. To view annotation content, click the annotation.

Context Lookup

You can refine your search based on a data source, element name, and element values.

To define your search in Context Lookup:
1. In the Data Source drop-down, select a data source.

   Note: Data sources are displayed for existing annotations. The $\text{fr}$ data source is displayed when annotations are set on a report object; $\text{fr}$ followed by a data source indicates annotations set on that data source for a particular report.

2. In the Element Name drop-down, select an element.

   Note: The selected element is removed from the list and cannot be re-selected.

3. In Element Values, specify the value. To specify multiple values, separate each value with a comma (,).

   Note: Only one of the multiple values need to be met.
4. To add additional search criteria, repeat steps 2 and 3.

**Note:** When you specify multiple element names, a value for each element name must be met.

**Advanced Search**

You can refine your search for annotations based on a combination of criteria:

- To use the Advanced search:
  1. From the search drop-down, select *Advanced Search*.
  2. In the **Advanced Search** dialog box, enter search criteria:
     - Title — Annotation title.
     - Author — Annotation author.
     - Description — Annotation description.
     - Posted Date Range From/To — The inclusive beginning and end past dates of annotations. Calendar lookup selections are provided in the From and To drop-downs.
     - Category — The topic, or subject, associated with the annotations. Select a category from the Category drop-down.
     - Context — Select a data source, element name and element values using the Context Lookup. Click the Lookup icon to display the Context Lookup dialog box. See “Context Lookup” on page 510.

**Setting Annotation Permissions**

The annotation creator can apply access control and permission options to selected users, groups, or roles. Access control applies to the top level annotation (the root) and all subsequent replies. Permission options define what kind of access a user has to the annotation. You can organize and control the view of annotations to which you have access.

Permissions options are:

- No Access—Users cannot view annotations.
- View—Users can view all annotations but cannot create or respond to annotations.
- Modify—Users can create and respond to annotations, but not delete.
- Full Control—Users can create, respond to, and perform administrative functions associated with the repository object.

- To set annotation permissions:
  1. Click the annotation, then click the Show Details icon to view the annotation in the Annotation List Panel.
2. In the Annotation List Panel, highlight the annotation to which you want to set permissions and click the Permissions icon.

3. In the Permissions dialog box highlight the users, groups, or roles to which you want to apply permissions, then click on the right-facing arrow to move them to the Selected Users, Groups and Roles panel.

4. From the Access drop-down, select the permissions, and click OK.

### Responding to Annotations

Users with the Modify or Full Control permissions can respond to annotations through the annotations bubble or the Annotation List Panel in a Financial Reporting report. While replying, one can change the category and also add attachments like EPM Workspace documents, local documents on your computer, or URLs.

**Note:** When responding to annotations, the Annotation tab and Attachments tabs are enabled.

> To respond to annotations:

1. In a report that contains annotations, do one of the following:
   - Click an annotation icon, then click the Reply icon and respond to the annotation.
   - Locate the Annotation List Panel at the bottom of the screen, hover over the Show panel and click it. Then click the Reply icon and respond to the annotation.

2. Click OK.

### Deleting Annotations

If you are the annotation author, or have Full Control permissions, you can delete annotations.

> To delete annotations:

1. In a report that contains annotations, do one of the following:
   - Click an annotation icon, then click the Show Details icon to view the annotation in the Annotation List Panel.
   - Locate the Annotation List Panel at the bottom of the screen, hover over the Show panel and click it.

2. Highlight the annotation you want to delete, and click the Delete icon.
Setting Preferences for Printing Annotations

Annotations or their elements can be printed with the report. Use the Preferences option to specify how annotations should be printed. See “Setting Annotation Printing Preferences” on page 74.
Enabling Screen Reader Support for EPM Workspace

The Screen Reader Support preference for EPM Workspace enables screen readers and magnifiers to access and work with EPM Workspace. If you change this setting during a session, you must restart your browser to enable the changes.

For Interactive Reporting, you must install additional scripts in order to work with JAWS. Install JAWS Scripts by selecting Tools, then Install, then JAWS Scripts. The JAWS Scripts option is only available when a BQY file is open in EPM Workspace.

**Note:** The Enable Screen Reader Support option is displayed in EPM Workspace user preferences General tab when using Internet Explorer 6 and 7.

- To enable accessibility:
  1. Select File, then Preferences.
From Accessibility Mode, select **Enable Screen Reader Support**.

Click **OK**.

### Setting High-Contrast Mode

A high-contrast color mode is available for accessibility. This option is supported only on the same platforms on which Screen Readers are supported.

To set high-contrast mode:

1. **Perform an action:**
   - Select `File`, then `Preferences`. From Accessibility Mode, from the Select Theme menu select **High Contrast**.
   - A shortcut key is also available to toggle between high-contrast and regular mode. Ctrl + Shift + H toggles the theme and prompts you to either restart EPM Workspace or continue working. You must restart EPM Workspace to see the theme changes. If you continue working, theme changes take effect at your next logon.

2. Click **OK**.

### Using the Tab Key in the EPM Workspace UI

Default tab order in the EPM Workspace UI flows from left to right, top to bottom. The component order: toolbar, search control, view pane, content area, content area (bottom) tab bar. The tab order loops in both directions so that tabbing from the last item focuses the first item, and reverse-tabbing from the first item focuses the last item. The following elements are not included in the tab order:

- Navigate menu
- Main menu bar (use shortcut keys to access menu items)
- The “Welcome <username>” message and the accompanying logoff text link (use logoff or exit icon in toolbar or items from File menu instead)

### Using Global Navigation Shortcuts

EPM Workspace provides keyboard shortcuts for general navigation:

<table>
<thead>
<tr>
<th>Key</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>F10</td>
<td>Move the focus to the first menu in the menu bar.</td>
</tr>
<tr>
<td>Ctrl+0</td>
<td>Focus current view pane (because a view pane cannot have focus itself, this focuses the first valid child in the tab order). If there is no view pane, nothing happens.</td>
</tr>
<tr>
<td>Key</td>
<td>Action</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ctrl+1,2...9</td>
<td>As with Ctrl+0, but select the first, second, through ninth view pane and move focus to its first focusable child.</td>
</tr>
<tr>
<td>Ctrl+B</td>
<td>Focus Annotations Area control. (for Financial Reporting only, see “Accessibility for File Accumulator” on page 523.</td>
</tr>
<tr>
<td>Ctrl+G</td>
<td>Focus bottom Content tab bar of EPM Workspace (which lists open modules). Focus goes to current module tab. If multiple documents are open, the current module tab is highlighted. If no tabs are open, nothing happens.</td>
</tr>
<tr>
<td>Ctrl+F</td>
<td>Focus the Search field.</td>
</tr>
<tr>
<td>Ctrl+T</td>
<td>Focus the Standard toolbar. Use the Tab key to select individual buttons.</td>
</tr>
<tr>
<td>Ctrl+Y</td>
<td>Focus the Content area. This transfers focus to the first valid child in the tab order of the Content area of an active document.</td>
</tr>
<tr>
<td>Ctrl+F4</td>
<td>Close current active module - document, tasks, or files. If none are open, nothing happens.</td>
</tr>
<tr>
<td>Ctrl+Shift+H</td>
<td>Toggle the selected theme to change the color scheme of the user interface (UI).</td>
</tr>
<tr>
<td>Ctrl+F6</td>
<td>Enter a frame's content area and focus the first focusable element (if any).</td>
</tr>
<tr>
<td>Ctrl+Shift+F6</td>
<td>Exit the content area of a frame and return focus to the frame itself. You cannot immediately press Ctrl+F6 to return to the iframe, but you can tab to the other controls outside of iframe. To return to iframe after pressing Ctrl+Shift+F6, you can press Tab to move to another control, then Shift+Tab to bring focus back to the iframe and finally Ctrl+F6 to enter the iframe.</td>
</tr>
<tr>
<td>Arrow keys</td>
<td>The built-in way to move around Explore module and access different cells and rows in a grid or tree view.</td>
</tr>
<tr>
<td>Ctrl+L</td>
<td>Presents a list of selectable navigation targets in the Links List window:</td>
</tr>
<tr>
<td></td>
<td>- Go to View Pane</td>
</tr>
<tr>
<td></td>
<td>- Go to Content Area</td>
</tr>
<tr>
<td></td>
<td>- Go to Annotations Area</td>
</tr>
<tr>
<td></td>
<td>- Go to Tab Bar</td>
</tr>
<tr>
<td></td>
<td>- Go to toolbar</td>
</tr>
</tbody>
</table>

**EPM Workspace Graphic with Callouts**

The graphic below shows how to navigate Explore using keyboard shortcuts; other EPM Workspace modes use the same shortcuts.
The EPM Workspace user interface includes these areas.

1. **Menu bar (F10)** — Commands and sub-commands that organize tasks and modules.
2. **Standard toolbar (Ctrl+T)** — Buttons for performing tasks.
3. **View pane (Ctrl+0)** — Area that provides buttons that enable jumps between zero or more panels, each panel having a specific use and corresponding controls.
4. **View pane and content area adjuster (Ctrl+Alt+1)** — Setting to adjust the size of the View pane and content area. Hiding the view pane provides a larger content frame in which to use EPM Workspace. Select View, then View Pane to hide or display the View pane.
5. **Content area (Ctrl+Y)** — Area in which you view active module documents, tasks, or files.
6. **Content tab bar (Ctrl+G)** — Information bar specific to the current module. If multiple documents are open, the current document tab is highlighted.
7. **Search field (Ctrl+F)** — A space where you enter text you want to search for within the Repository.

### Accessibility Behaviors for General UI Elements

Listed below are specific keystrokes that are handled by individual User Interface (UI) elements, as well as expected behavior of screen readers when the UI element is focused:
Table 141  User Interface Element Types

<table>
<thead>
<tr>
<th>UI Element</th>
<th>Key Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Button</td>
<td>Either Enter or Space will activate the button, causing the same action as a left click.</td>
</tr>
<tr>
<td>ComboBox</td>
<td>1. Up or down arrow keys display the popup menu and allow selection of combobox values.</td>
</tr>
<tr>
<td></td>
<td>2. Space or Enter selects a combobox item from the popup.</td>
</tr>
<tr>
<td></td>
<td>3. If editable, alphanumeric keys cause an edit.</td>
</tr>
<tr>
<td>Dialog</td>
<td>1. If the dialog has an accept button defined, Enter key activates it.</td>
</tr>
<tr>
<td></td>
<td>2. The dialog is modal and blocks all other keyboard events.</td>
</tr>
<tr>
<td>Content Area (IFrame)</td>
<td>1. Press Ctrl+F6 to enter a frame, then you may need to press Tab to select the first focusable item.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> If frame contains text or HTML, and there are no focusable items, you have to use Virtual PC Cursor option in JAWS in order to read the text. Press Insert+Z to toggle the Virtual PC Cursor and use up and down arrows to go to the previous and next lines. Turn Virtual PC Cursor off before exiting IFrame.</td>
</tr>
<tr>
<td></td>
<td>2. Press Ctrl+Shift+F6 to exit the content area of a frame and return focus to the frame itself.</td>
</tr>
<tr>
<td>List</td>
<td>1. The up or down arrow keys move selection focus up or down through the list elements. The selection is continually updated. An arrow key press results in a selection event.</td>
</tr>
<tr>
<td></td>
<td>2. Ctrl+Up or Down key: item focus moves up or down without changing the current selection. Spacebar can be used to add the focused item to the selection.</td>
</tr>
<tr>
<td></td>
<td>3. Shift+Up or Down key: item focus moves up or down and the newly focused item is added to the selection.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> If the list supports only a single selection, the Ctrl and Shift modifiers have no effect.</td>
</tr>
<tr>
<td>Tab Bar</td>
<td>Left or right arrow key moves selection focus and selects the new tab immediately. Selection focus <em>wraps around</em> the ends of the tab bar.</td>
</tr>
<tr>
<td>Text Field</td>
<td>1. If editable, alphanumeric keys cause an edit.</td>
</tr>
<tr>
<td></td>
<td>2. Tab proceeds in the tab order. Tab cannot be entered as a character in the text field.</td>
</tr>
<tr>
<td>Tree</td>
<td>The left and right arrow keys collapse or expand the current node if it has children. If it has no children, there is no effect. The expansion is non-recursive. However, if the tree is capable of remembering previous expansion state of any subnodes, it should do so.</td>
</tr>
</tbody>
</table>

Accessibility Behavior for Non-standard Controls

The following text describes the accessibility behaviors for non-standard controls:

- “Content Tab Bar” on page 520
- “Accessibility for File Type Drop-down” on page 520
- “Accessibility for Sidebar Icon List (File Preferences/Properties)” on page 520
- “Accessibility for Show Columns dialog” on page 520
- “Accessibility for Favorites Manager Dialog” on page 521
- “Accessibility for Explore” on page 521
- “Accessibility for File Dialog” on page 522
- “Accessibility for File Accumulator” on page 523
Content Tab Bar

When the Content tab bar is focused, selection focus is on the current tab, if any.

<table>
<thead>
<tr>
<th>Key</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Tab Bar</td>
<td></td>
</tr>
<tr>
<td>Right/Up arrows</td>
<td>When on any document content tab, to select next tab on right. The selection will wrap.</td>
</tr>
<tr>
<td>Left/Down arrows</td>
<td>when on any document content tab, to select next tab on left. The selection will wrap.</td>
</tr>
</tbody>
</table>

Accessibility for File Type Drop-down

The following keyboard shortcuts are supported in the File Type drop-down:

<table>
<thead>
<tr>
<th>Keys</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Down arrow</td>
<td>Drop the menu.</td>
</tr>
<tr>
<td>Arrow up or down</td>
<td>Change selection.</td>
</tr>
<tr>
<td>Enter</td>
<td>Make selection.</td>
</tr>
</tbody>
</table>

Accessibility for Sidebar Icon List (File Preferences/Properties)

The following keyboard shortcuts are supported on the sidebar icon list:

<table>
<thead>
<tr>
<th>Keys</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tab/Shift+Tab</td>
<td>Navigate up/down the items in the list.</td>
</tr>
<tr>
<td>Space bar</td>
<td>Select focused item in the list.</td>
</tr>
</tbody>
</table>

Accessibility for Show Columns dialog

The following keyboard shortcuts are supported in the Show Columns dialog:

<table>
<thead>
<tr>
<th>Keys</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid</td>
<td></td>
</tr>
</tbody>
</table>
### Accessibility for Favorites Manager Dialog

The following keyboard shortcuts are supported in the Favorites Manager dialog:

<table>
<thead>
<tr>
<th>Keys</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrow Up/Down</td>
<td>Change selection.</td>
</tr>
<tr>
<td>Space bar</td>
<td>Check/uncheck the check box. Uncheck to hide that column in the Explore list.</td>
</tr>
<tr>
<td>Move item/up/down arrow image to change the item’s order in the list</td>
<td></td>
</tr>
<tr>
<td>Arrow Up/Down</td>
<td>Select the item to be moved.</td>
</tr>
<tr>
<td>Tab to Up/Down arrow image</td>
<td>Move item up or down.</td>
</tr>
<tr>
<td>Space bar</td>
<td>Activate to move item up/down.</td>
</tr>
</tbody>
</table>

### Accessibility for Explore

The following keyboard shortcuts are supported for Explore/Subheadings:

<table>
<thead>
<tr>
<th>Key</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explore Tree</td>
<td></td>
</tr>
<tr>
<td>Down arrow</td>
<td>When on any node, select next node below current. Selection will not wrap.</td>
</tr>
<tr>
<td>Up arrow</td>
<td>When on any node, select next node above current. Selection will not wrap.</td>
</tr>
<tr>
<td>Page up</td>
<td>When on any node, get to the last visible node on the previous page, or if there is no previous page, the first node on the current page.</td>
</tr>
<tr>
<td>Page down</td>
<td>When on any node, get to the first visible node on the next page, or, if there is no next page, the last node on the current page.</td>
</tr>
<tr>
<td>Right arrow</td>
<td>When on a folder node with plus icon, expand a node.</td>
</tr>
<tr>
<td>Left arrow</td>
<td>When on a folder node with plus icon, go up to next expanded folder</td>
</tr>
<tr>
<td>Key</td>
<td>Action</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td>Right arrow</td>
<td>When on folder node with minus icon, go to next folder.</td>
</tr>
<tr>
<td>Left arrow</td>
<td>When on folder node with minus icon, collapse a node.</td>
</tr>
<tr>
<td><strong>Explore List</strong></td>
<td></td>
</tr>
<tr>
<td>Down arrow</td>
<td>When on any node, select next node below current. Selection will not wrap.</td>
</tr>
<tr>
<td>Up arrow</td>
<td>When on any node, select next node above current. Selection will not wrap.</td>
</tr>
<tr>
<td>Page up</td>
<td>When on any node, get to the last visible node on the previous page, or, if there is no previous page, the first node on the current page.</td>
</tr>
<tr>
<td>Page down</td>
<td>When on any node, get to the first visible node on next page, or, if there is no next page, the last node on the current page.</td>
</tr>
<tr>
<td>Ctrl+Up/Down arrow</td>
<td>When on any node, allows navigation without losing selection.</td>
</tr>
<tr>
<td>Ctrl+Space</td>
<td>When on any node, select/deselect currently focused item.</td>
</tr>
<tr>
<td>Ctrl+A</td>
<td>When on any node, select all nodes.</td>
</tr>
<tr>
<td>Shift+Up/Down arrow</td>
<td>When on any node, select/deselect sequential list of items.</td>
</tr>
<tr>
<td>Enter key</td>
<td>When on a folder node, drill into the folder.</td>
</tr>
<tr>
<td>Enter key</td>
<td>When on any node except folder node, launch the item.</td>
</tr>
</tbody>
</table>

**Accessibility for File Dialog**

The following keyboard shortcuts are supported for the File dialog:

Table 148  File Dialog — Accessibility Keys

<table>
<thead>
<tr>
<th>Key</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Down arrow</td>
<td>When on any node, select next node below current. Selection will not wrap.</td>
</tr>
<tr>
<td>Up arrow</td>
<td>When on any node, select next node above current. Selection will not wrap.</td>
</tr>
<tr>
<td>page up</td>
<td>When on any node, get to last visible node on previous page, or, if there is no previous page, the last node on the current page.</td>
</tr>
<tr>
<td>Page down</td>
<td>When on any node, get to the first visible node on next page, or, if there is no next page, the last node on the current page.</td>
</tr>
<tr>
<td>Left arrow</td>
<td>When on any node, drill up to folder node (parent of current node). If already at root node, nothing happens.</td>
</tr>
<tr>
<td>Right arrow</td>
<td>When on a folder node, drill down into folder and present contents.</td>
</tr>
<tr>
<td>Enter key</td>
<td>When on any node except folder node, select the item.</td>
</tr>
</tbody>
</table>
Accessibility for File Accumulator

The following keyboard shortcuts are supported for the File Accumulator:

<table>
<thead>
<tr>
<th>Key</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Left side with items to be added to selected list</strong></td>
<td></td>
</tr>
<tr>
<td>Down arrow</td>
<td>When on any node, select next node below current. Selection will not wrap.</td>
</tr>
<tr>
<td>Up arrow</td>
<td>When on any node, select next node above current. Selection will not wrap.</td>
</tr>
<tr>
<td>Page up</td>
<td>When on any node, move to last visible node on previous page, or, if there is no previous page, the first node on the current page.</td>
</tr>
<tr>
<td>Page down</td>
<td>When on any node, moves to first visible node on next page, or, if there is no next page, the last node on the current page.</td>
</tr>
<tr>
<td>Left arrow</td>
<td>When on any node, drill up to folder node (parent of current node). If already at root node, nothing happens.</td>
</tr>
<tr>
<td>Ctrl+Up/Down arrow</td>
<td>When on any node, allows navigation without losing selection.</td>
</tr>
<tr>
<td>Ctrl+Space</td>
<td>When on any node, select/deselect currently focused item.</td>
</tr>
<tr>
<td>Shift+Up/Down</td>
<td>When on any node, select/deselect sequential list of items.</td>
</tr>
<tr>
<td>Ctrl+A</td>
<td>When on any node, select all nodes.</td>
</tr>
<tr>
<td>Right arrow</td>
<td>When on a folder node, drill down into folder and present contents.</td>
</tr>
<tr>
<td>Right arrow</td>
<td>When on any node except folder node, add item to selected list.</td>
</tr>
<tr>
<td><strong>Right List with items in the selected list</strong></td>
<td></td>
</tr>
<tr>
<td>Down arrow</td>
<td>When on any node, select next node below current. Selection will not wrap.</td>
</tr>
<tr>
<td>Up arrow</td>
<td>When on any node, select next node above current. Selection will not wrap.</td>
</tr>
<tr>
<td>Page up</td>
<td>When on any node, go to last visible node on previous page, or, if there is no previous page, the first node on the current page.</td>
</tr>
<tr>
<td>Page down</td>
<td>When on any node, go to first visible node on next page, or, if there is no next page, the last node on the current page.</td>
</tr>
<tr>
<td>Left arrow</td>
<td>When on any node, remove item from selected list.</td>
</tr>
<tr>
<td><strong>Move Up/Down arrow image to change the item's order in the list</strong></td>
<td></td>
</tr>
<tr>
<td>Arrow Up/Down</td>
<td>Select the item to be moved.</td>
</tr>
<tr>
<td>Tab to Up/Down arrow image</td>
<td>Move item up or down.</td>
</tr>
<tr>
<td>Space bar</td>
<td>Activate to move item up/down.</td>
</tr>
</tbody>
</table>
Accessibility for EPM Workspace Pages

The following keyboard shortcuts are supported by the content area in EPM Workspace pages:

**Table 150  Workspace Pages — Accessibility keys**

<table>
<thead>
<tr>
<th>Keys</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrow keys</td>
<td>Used to Navigate between layout areas on a Workspace page.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> If you want to use the arrow keys to move among the layout areas, make sure you are on a layout area and not in the inner frame of the layout area. To get out of the inner frame of the layout area, press Shift+Tab. To get out of the inner frame of Recently Opened, Workspace Pages, or Quick Links portlet on the Home Page, press Shift+Tab twice.</td>
</tr>
<tr>
<td>a</td>
<td>If focus is on a layout area, then pressing this key adds the selected content in the Content Browser to the layout area.</td>
</tr>
<tr>
<td>Ctrl+a</td>
<td>If focus is on the Content Browser, then pressing this key combination adds the selected content in the left pane as content to the page.</td>
</tr>
<tr>
<td>r</td>
<td>If focus is on a layout area, then pressing this key triggers the remove action on the layout area.</td>
</tr>
<tr>
<td>e</td>
<td>If focus is on a layout area, then pressing this key triggers the edit action on the layout area if the edit action is available for the layout area.</td>
</tr>
<tr>
<td>l</td>
<td>If focus is on a layout area, then pressing this key triggers the launch action on the layout area if the launch action is available for the layout area.</td>
</tr>
<tr>
<td>m</td>
<td>If focus is on a layout area, and the layout area is not maximized, then pressing this key triggers the maximize action on the layout area or else it triggers the restore action on the layout area. The maximize option must be enabled on the layout area.</td>
</tr>
<tr>
<td>Tab/Shift+Tab</td>
<td>Used to navigate to the layout area content (inner frame) or out of the inner frame and return focus back to layout area itself.</td>
</tr>
</tbody>
</table>

Accessibility for EPM Workspace Template Selector Dialog

The following table provides keyboard shortcuts for the Template Selector Dialog:

**Table 151  Template Selector Dialog — Accessibility key**

<table>
<thead>
<tr>
<th>Key</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up/Down/Left/Right</td>
<td>1. Up/Down/Left/Right arrow to navigate and select item in the group.</td>
</tr>
</tbody>
</table>

Accessibility for Financial Reporting

The following table provides keyboard shortcuts for Financial Reporting.
Table 152  Financial Reporting — Shortcut Keys

<table>
<thead>
<tr>
<th>Keys</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ctrl+F6, followed by Tab</td>
<td>To select report in books and batches, if focus is on the whole list.</td>
</tr>
<tr>
<td>Enter</td>
<td>To show report, if report is selected in the list.</td>
</tr>
</tbody>
</table>

**Member Selection**

<table>
<thead>
<tr>
<th>Arrow keys</th>
<th>Navigate through open members, if focus is on option.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter</td>
<td>To open or close tree node, if focus is on +/- sign or open/close folder image.</td>
</tr>
</tbody>
</table>

**POV Bar**

<table>
<thead>
<tr>
<th>Tab</th>
<th>Navigate through dimension buttons, if focus is on whole POV bar.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter</td>
<td>Used to launch member selection dialog.</td>
</tr>
</tbody>
</table>

### Financial Reporting Graphic with Callouts


1. Annotation area (Ctrl+B) — Area that displays annotation information associated with the report.
2. Annotation pane area and content adjuster (Ctrl+Alt+2) — Setting to adjust the size of the annotation pane and content area. Hiding the annotation pane provides a larger content frame in which to use EPM Workspace. Select View, then View Annotations to hide/display the Annotation pane.

### Accessibility for Foundation Services

The following table provides keyboard shortcuts for Oracle's Hyperion® Foundation Services:
Table 153  Foundation Services — Shortcut Keys

<table>
<thead>
<tr>
<th>Keys</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tab</td>
<td>Apart from its standard function, this key is used to get to the right pane from folders' list.</td>
</tr>
<tr>
<td>Space</td>
<td>Apart from its standard function, this key can be used to switch between tabs in various Properties dialogs. It can also be used to sort items in Users, Groups, Roles' table of Properties dialog on Permissions tab.</td>
</tr>
<tr>
<td>Ctrl+&lt;column_number&gt;</td>
<td>This key combination can be used to sort items in Selected table of Properties dialog on Permissions tab.</td>
</tr>
<tr>
<td>Enter</td>
<td>Apart from its standard function, this key can be used to switch between tabs in Import dialogs.</td>
</tr>
<tr>
<td>&lt;column_number&gt;</td>
<td>Press the corresponding table column number to sort the outputs in Jobs’ Output Collection.</td>
</tr>
<tr>
<td>Keyboard context menu button</td>
<td>Show context menu for the item over which the mouse cursor is placed (but not for the one which is focused).</td>
</tr>
</tbody>
</table>

Accessibility for Interactive Reporting

The following table provides keyboard shortcuts for Interactive Reporting.

Note:  Keyboard navigation has been enabled by default in both screen reader and non-screen reader modes for Interactive Reporting documents in EPM Workspace.

Table 154  Interactive Reporting — Shortcut Keys

<table>
<thead>
<tr>
<th>Keys</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ctrl+F6 followed by Tab</td>
<td>If focus is on whole content pane of an Oracle’s Hyperion® Interactive Reporting file opened in Oracle Enterprise Performance Management Workspace, Fusion Edition, use these keys to navigate into the section and its elements.</td>
</tr>
<tr>
<td>Ctrl+Shift+Enter</td>
<td>Display tool tip and read the status bar.</td>
</tr>
<tr>
<td>Shift+F10</td>
<td>Open and close context menu.</td>
</tr>
<tr>
<td>Arrow keys</td>
<td>Navigate through context menu.</td>
</tr>
</tbody>
</table>

Results/Table Section

| Arrow keys or Tab                  | Navigate through the individual cells.                                                                                              |
| Shift+Arrow keys                   | Used to scroll, if the focus is on whole content pane of Results/Table sections.                                                      |
| Ctrl+Alt+Arrow keys                | Select two or more columns.                                                                                                           |
| Ctrl+Space                         | Add/remove current column to the selection.                                                                                           |

Pivot Section

| Arrow keys or Tab                  | Navigate through the individual cells.                                                                                              |
Apart from its standard function, these keys can be used for working with Chart, where there is a two-layer navigation: all the elements are placed in groups (for example, one group includes axis labels, the other one includes pie slices). The user goes between the groups by pressing Tab, and may drill down into particular group and start tabbing in it by pressing Ctrl+Shift.

Visit individual elements of Embedded Objects.

Go through the tables within one Report page.

Visit individual elements of Embedded Objects.

Navigate through the individual cells of CubeQuery table.

---

## Accessibility for Online Help

The table that follows lists the keyboard shortcuts for online help.

<table>
<thead>
<tr>
<th>Shortcut</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ctrl+Shift+1</td>
<td>Open and move focus to the Contents tab.</td>
</tr>
<tr>
<td>Ctrl+Shift+2</td>
<td>Open and move focus to the Index tab.</td>
</tr>
<tr>
<td>Ctrl+Shift+3</td>
<td>Open and move focus to the Search tab.</td>
</tr>
<tr>
<td>Ctrl+Shift+4</td>
<td>Move focus to the content frame, which is the frame that contains help topics.</td>
</tr>
</tbody>
</table>

## Considerations

The following items are noteworthy for accessibility users of this release.

**Note:** Review the Oracle Hyperion Enterprise Performance Management System Certification Matrix for information on system requirements. You can find it at http://www.oracle.com/technology/software/products/ias/files/fusion_certification.html. In the table, under the Product Area heading, select Oracle Business Intelligence.

- When the screen reader is used and the Virtual PC Cursor is disabled, a “blank” word is heard before the actual title or text. This occurs in Menu and Explore when using the Up
and Down arrow keys. The buttons “Delete” and “Backspace” may also cause the “blank” word.

- Keyboard navigation has been enabled by default in both the screen reader and non-screen reader modes for Interactive Reporting documents in the EPM Workspace. You can disable keyboard navigation when the screen reader setting is not active. To disable keyboard navigation: add the parameter:

  DISABLE_KEYBOARD_NAV_IN_NON_508_MODE=true to the Hyperion Interactive Reporting Service (BI) in Dynamic Service properties through the Configuration and Monitoring Console (CMC). For more information, see Oracle Enterprise Performance Management Workspace, Fusion Edition, Administrator’s Guide.

- In some circumstances, the screen reader may read more information than required, such as the image URLs.

- List box controls may not render properly when Oracle Enterprise Performance Management Workspace, Fusion Edition is used in accessibility mode and the display is scrolled. Internet Explorer version 7 and up generally does not have these scrolling issues, although in some circumstances older video cards or drivers may display them. In addition, some list boxes may render as dropdown controls when in accessibility mode.

- When pressing Esc to exit the main menu, you must press Esc one more time after the menu closes to remove focus from the menu bar.
Glossary

! See bang character (!).

#MISSING See missing data (#MISSING).

access permissions A set of operations that a user can perform on a resource.

accessor Input and output data specifications for data mining algorithms.

account blocking The process by which accounts accept input data in the consolidated file. Blocked accounts do not receive their value through the additive consolidation process.

account eliminations Accounts which have their values set to zero in the consolidated file during consolidation.

account type How an account's value flows over time, and its sign behavior. Account type options can include expense, income, asset, liability, and equity.

accountability map A visual, hierarchical representation of the responsibility, reporting, and dependency structure of the accountability teams (also known as critical business areas) in an organization.

accounts dimension A dimension type that makes accounting intelligence available. Only one dimension can be defined as Accounts.

active service A service whose Run Type is set to Start rather than Hold.

activity-level authorization Defines user access to applications and the types of activities they can perform on applications, independent of the data that will be operated on.

ad hoc report An online analytical query created on-the-fly by an end user.

adapter Software that enables a program to integrate with data and metadata from target and source systems.

adaptive states Interactive Reporting Web Client level of permission.

adjustment See journal entry (JE).

Advanced Relational Access The integration of a relational database with an Essbase multidimensional database so that all data remains in the relational database and is mapped to summary-level data residing in the Essbase database.

agent An Essbase server process that starts and stops applications and databases, manages connections from users, and handles user-access security. The agent is referred to as ESSBASE.EXE.

aggregate cell A cell comprising several cells. For example, a data cell that uses Children(Year) expands to four cells containing Quarter 1, Quarter 2, Quarter 3, and Quarter 4 data.

aggregate function A type of function, such as sum or calculation of an average, that summarizes or performs analysis on data.

aggregate limit A limit placed on an aggregated request line item or aggregated metatopic item.

aggregate storage database The database storage model designed to support large-scale, sparsely distributed data which is categorized into many, potentially large dimensions. Upper level members and formulas are dynamically calculated, and selected data values are aggregated and stored, typically with improvements in overall aggregation time.

aggregate view A collection of aggregate cells based on the levels of the members within each dimension. To reduce calculation time, values are pre-aggregated and stored as aggregate views. Retrievals start from aggregate view totals and add up from there.
aggregation  The process of rolling up and storing values in an aggregate storage database; the stored result of the aggregation process.

aggregation script  In aggregate storage databases only, a file that defines a selection of aggregate views to be built into an aggregation.

alias  An alternative name. For example, for a more easily identifiable column descriptor you can display the alias instead of the member name.

alias table  A table that contains alternate names for members.

alternate hierarchy  A hierarchy of shared members. An alternate hierarchy is based upon an existing hierarchy in a database outline, but has alternate levels in the dimension. An alternate hierarchy allows the same data to be seen from different points of view.

ancestor  A branch member that has members below it. For example, the members Qtr2 and 2006 are ancestors of the member April.

appender  A Log4j term for destination.

application  (1) A software program designed to run a specific task or group of tasks such as a spreadsheet program or database management system. (2) A related set of dimensions and dimension members that are used to meet a specific set of analytical and/or reporting requirements.

application currency  The default reporting currency for the application.

area  A predefined set of members and values that makes up a partition.

arithmetic data load  A data load that performs operations on values in the database, such as adding 10 to each value.

artifact  An individual application or repository item; for example, scripts, forms, rules files, Interactive Reporting documents, and financial reports. Also known as an object.

assemblies  Installation files for EPM System products or components.

asset account  An account type that stores values that represent a company’s assets.

assignment  The association of a source and destination in the allocation model that controls the direction of allocated costs or revenue flow within Profitability and Cost Management.

attribute  Characteristic of a dimension member. For example, Employee dimension members may have attributes of Name, Age, or Address. Product dimension members can have several attributes, such as a size and flavor.

attribute association  A relationship in a database outline whereby a member in an attribute dimension describes a characteristic of a member of its base dimension. For example, if product 100-10 has a grape flavor, the product 100-10 has the Flavor attribute association of grape. Thus, the 100-10 member of the Product dimension is associated with the Grape member of the Flavor attribute dimension.

Attribute Calculations dimension  A system-defined dimension that performs these calculation operations on groups of members: Sum, Count, Avg, Min, and Max. This dimension is calculated dynamically and is not visible in the database outline. For example, using the Avg member, you can calculate the average sales value for Red products in New York in January.

attribute dimension  A type of dimension that enables analysis based on the attributes or qualities of dimension members.

attribute reporting  A reporting process based on the attributes of the base dimension members. See also base dimension.

attribute type  A text, numeric, Boolean, date, or linked-attribute type that enables different functions for grouping, selecting, or calculating data. For example, because the Ounces attribute dimension has the type numeric, the number of ounces specified as the attribute of each product can be used to calculate the profit per ounce for that product.

authentication  Verification of identity as a security measure. Authentication is typically based on a user name and password. Passwords and digital signatures are forms of authentication.

authentication service  A core service that manages one authentication system.

auto-reversing journal  A journal for entering adjustments that you want to reverse in the next period.
**automated stage** A stage that does not require human intervention, for example, a data load.

**axis** (1) A straight line that passes through a graphic used for measurement and categorization. (2) A report aspect used to arrange and relate multidimensional data, such as filters, pages, rows, and columns. For example, for a data query in Simple Basic, an axis can define columns for values for Qtr1, Qtr2, Qtr3, and Qtr4. Row data would be retrieved with totals in the following hierarchy: Market, Product.

**backup** A duplicate copy of an application instance.

**balance account** An account type that stores unsigned values that relate to a particular point in time.

**balanced journal** A journal in which the total debits equal the total credits.

**bang character (!)** A character that terminates a series of report commands and requests information from the database. A report script must be terminated with a bang character; several bang characters can be used within a report script.

**bar chart** A chart that can consist of one to 50 data sets, with any number of values assigned to each data set. Data sets are displayed as groups of corresponding bars, stacked bars, or individual bars in separate rows.

**base currency** The currency in which daily business transactions are performed.

**base dimension** A standard dimension that is associated with one or more attribute dimensions. For example, assuming products have flavors, the Product dimension is the base dimension for the Flavors attribute dimension.

**base entity** An entity at the bottom of the organization structure that does not own other entities.

**batch calculation** Any calculation on a database that is done in batch; for example, a calculation script or a full database calculation. Dynamic calculations are not considered to be batch calculations.

**batch file** An operating system file that can call multiple ESSCMD scripts and run multiple sessions of ESSCMD. On Windows-based systems, batch files have BAT file extensions. On UNIX, batch files are written as a shell script.

**batch loader** An FDM component that enables the processing of multiple files.

**batch POV** A collection of all dimensions on the user POV of every report and book in the batch. While scheduling the batch, you can set the members selected on the batch POV.

**batch processing mode** A method of using ESSCMD to write a batch or script file that can be used to automate routine server maintenance and diagnostic tasks. ESSCMD script files can execute multiple commands and can be run from the operating system command line or from within operating system batch files. Batch files can be used to call multiple ESSCMD scripts or run multiple instances of ESSCMD.

**block** The primary storage unit which is a multidimensional array representing the cells of all dense dimensions.

**block storage database** The Essbase database storage model categorizing and storing data based on the sparsity of data values defined in sparse dimensions. Data values are stored in blocks, which exist only for sparse dimension members for which there are values.

**Blocked Account** An account that you do not want calculated in the consolidated file because you want to enter it manually.

**book** A container that holds a group of similar Financial Reporting documents. Books may specify dimension sections or dimension changes.

**book POV** The dimension members for which a book is run.

**bookmark** A link to a reporting document or a Web site, displayed on a personal page of a user. The two types of bookmarks are My Bookmarks and image bookmarks.

**bounding rectangle** The required perimeter that encapsulates the Interactive Reporting document content when embedding Interactive Reporting document sections in a personal page, specified in pixels for height and width or row per page.

**broadcast message** A simple text message sent by an administrator to a user who is logged on to a Planning application. The message displays information to the user such as system availability, notification of application refresh, or application backups.

**budget administrator** A person responsible for setting up, configuring, maintaining, and controlling an application. Has all application privileges and data access permissions.
build method  A method used to modify database outlines. Choice of a build method is based on the format of data in data source files.

business process  A set of activities that collectively accomplish a business objective.

business rules  Logical expressions or formulas that are created within an application to produce a desired set of resulting values.

cache  A buffer in memory that holds data temporarily.

calc script  A set of commands that define how a database is consolidated or aggregated. A calculation script may also contain commands that specify allocation and other calculation rules separate from the consolidation process.

calculated member in MaxL DML  A member designed for analytical purposes and defined in the optional WITH section of a MaxL DML query.

calculated member in MaxL DML  A member designed for analytical purposes and defined in the optional WITH section of a MaxL DML query.

calculation  The process of aggregating data, or of running a calculation script on a database.

Calculation Manager  A calculation module with which Planning, Financial Management, and Essbase users can design, validate, and administer business rules in a graphical environment.

calculation status  A consolidation status that indicates that some values or formula calculations have changed. You must reconsolidate to get the correct values for the affected entity.

calendar  User-defined time periods and their relationship to each other. Q1, Q2, Q3, and Q4 comprise a calendar or fiscal year.

cascade  The process of creating multiple reports for a subset of member values.

Catalog pane  Displays a list of elements available to the active section. If Query is the active section, a list of database tables is displayed. If Pivot is the active section, a list of results columns is displayed. If Dashboard is the active section, a list of embeddable sections, graphic tools, and control tools are displayed.

categories  Groupings by which data is organized. For example, Month.

cause and effect map  Depicts how the elements that form your corporate strategy relate and how they work together to meet your organization’s strategic goals. A Cause and Effect map tab is automatically created for each Strategy map.

CDF  See custom-defined function (CDF).

CDF  See custom-defined macro (CDM).

cell  (1) The data value at the intersection of dimensions in a multidimensional database; the intersection of a row and a column in a worksheet. (2) A logical group of nodes belonging to one administrative domain.

cell note  A text annotation for a cell in an Essbase database. Cell notes are a type of LRO.

CHANGED status  Consolidation status that indicates data for an entity has changed.

chart  A graphical representation of spreadsheet data. The visual nature expedites analysis, color-coding, and visual cues that aid comparisons.

chart template  A template that defines the metrics to display in Workspace charts.

child  A member with a parent above it in the database outline.

choice list  A list of members that a report designer can specify for each dimension when defining the report’s point of view. A user who wants to change the point of view for a dimension that uses a choice list can select only the members specified in that defined member list or those members that meet the criteria defined in the function for the dynamic list.

clean block  A data block that where the database is fully calculated, if a calculation script calculates all dimensions at once, or if the SET CLEARUPDATESTATUS command is used in a calculation script.

cluster  An array of servers or databases that behave as a single resource which share task loads and provide failover support; eliminates one server or database as a single point of failure in a system.

clustered bar charts  Charts in which categories are viewed side-by-side; useful for side-by-side category analysis; used only with vertical bar charts.
**code page** A mapping of bit combinations to a set of text characters. Different code pages support different sets of characters. Each computer contains a code page setting for the character set requirements of the language of the computer user. In the context of this document, code pages map characters to bit combinations for non-Unicode encodings. See also *encoding*.

**column** A vertical display of information in a grid or table. A column can contain data from one field, derived data from a calculation, or textual information.

**committed access** An Essbase Kernel Isolation Level setting that affects how Essbase handles transactions. Under committed access, concurrent transactions hold long-term write locks and yield predictable results.

**computed item** A virtual column (as opposed to a column that is physically stored in the database or cube) that can be calculated by the database during a query, or by Interactive Reporting Studio in the Results section. Computed items are calculations of data based on functions, data items, and operators provided in the dialog box and can be included in reports or reused to calculate other data.

**configuration file** The security platform relies on XML documents to be configured by the product administrator or software installer. The XML document must be modified to indicate meaningful values for properties, specifying locations and attributes pertaining to the corporate authentication scenario.

**connection file** See *Interactive Reporting connection file (.oce)*.

**consolidated file (Parent)** A file into which all of the business unit files are consolidated; contains the definition of the consolidation.

**consolidation** The process of aggregating data from dependent entities to parent entities. For example, if the dimension Year consists of the members Qtr1, Qtr2, Qtr3, and Qtr4, its consolidation is Year.

**consolidation file (*.cns)** The consolidation file is a graphical interface that enables you to add, delete or move Strategic Finance files in the consolidation process using either a Chart or Tree view. It also enables you to define and modify the consolidation.

**consolidation rule** Identifies the rule that is executed during the consolidation of the node of the hierarchy. This rule can contain customer specific formulas appropriate for the correct consolidation of parent balances. Elimination processing can be controlled within these rules.

**content** Information stored in the repository for any type of file.

**content browser** A Component that allows users to Browse and select content to be placed in a Workspace Page.

**context variable** A variable that is defined for a particular task flow to identify the context of the taskflow instance.

**contribution** The value added to a parent from a child entity. Each child has a contribution to its parent.

**controls group** Used in FDM to maintain and organize certification and assessment information, especially helpful for meeting Sarbanes-Oxley requirements.

**conversion rate** See *exchange rate*.

**cookie** A segment of data placed on your computer by a Web site.

**correlated subqueries** Subqueries that are evaluated once for every row in the parent query; created by joining a topic item in the subquery with a topic in the parent query.

**critical business area (CBA)** An individual or a group organized into a division, region, plant, cost center, profit center, project team, or process; also called accountability team or business area.

**critical success factor (CSF)** A capability that must be established and sustained to achieve a strategic objective; owned by a strategic objective or a critical process and is a parent to one or more actions.

**crosstab reporting** Categorizes and summarizes data in table format. The table cells contain summaries of the data that fit within the intersecting categories. For example, a crosstab report of product sales information could show size attributes, such as Small and Large, as column headings and color attributes, such as Blue and Yellow, as row headings. The cell in the table where Large and Blue intersect could contain the total sales of all Blue products that are sized Large.

**cube** A block of data that contains three or more dimensions. An Essbase database is a cube.
cube deployment  In Essbase Studio, the process of setting load options for a model to build an outline and load data into an Essbase application and database.

cube schema  In Essbase Studio, the metadata elements, such as measures and hierarchies, representing the logical model of a cube.

currency conversion  A process that converts currency values in a database from one currency into another. For example, to convert one U. S. dollar into the European euro, the exchange rate (for example, 0.923702) is multiplied with the dollar (1 * 0.923702). After conversion, the European euro amount is .92.

Currency Overrides  In any input period, the selected input method can be overridden to enable input of that period’s value as Default Currency/Items. To override the input method, enter a pound sign (#) either before or after the number.

currency partition  A dimension type that separates local currency members from a base currency, as defined in an application. Identifies currency types, such as Actual, Budget, and Forecast.

custom calendar  Any calendar created by an administrator.

custom dimension  A dimension created and defined by users. Channel, product, department, project, or region could be custom dimensions.

custom property  A property of a dimension or dimension member that is created by a user.

custom report  A complex report from the Design Report module, composed of any combination of components.

custom-defined function (CDF)  Essbase calculation functions developed in Java and added to the standard Essbase calculation scripting language using MaxL. See also custom-defined macro (CDM).

custom-defined macro (CDM)  Essbase macros written with Essbase calculator functions and special macro functions. Custom-defined macros use an internal Essbase macro language that enables the combination of calculation functions and they operate on multiple input parameters. See also custom-defined function (CDF).

cycle through  To perform multiple passes through a database while calculating it.

dashboard  A collection of metrics and indicators that provide an interactive summary of your business. Dashboards enable you to build and deploy analytic applications.

data cache  A buffer in memory that holds uncompressed data blocks.

data cell  See cell.

data file cache  A buffer in memory that holds compressed data (PAG) files.

data form  A grid display that enables users to enter data into the database from an interface such as a Web browser, and to view and analyze data or related text. Certain dimension member values are fixed, giving users a specific view into the data.

data function  That computes aggregate values, including averages, maximums, counts, and other statistics, that summarize groupings of data.

data load location  In FDM, a reporting unit responsible for submitting source data into the target system. Typically, there is one FDM data load location for each source file loaded to the target system.

data load rules  A set of criteria that determines how to load data from a text-based file, a spreadsheet, or a relational data set into a database.

data lock  Prevents changes to data according to specified criteria, such as period or scenario.

data mining  The process of searching through an Essbase database for hidden relationships and patterns in a large amount of data.

data model  A representation of a subset of database tables.

data value  See cell.

database connection  File that stores definitions and properties used to connect to data sources and enables database references to be portable and widely used.
**date measure** In Essbase, a member tagged as “Date” in the dimension where measures are represented. The cell values are displayed as formatted dates. Dates as measures can be useful for types of analysis that are difficult to represent using the Time dimension. For example, an application may need to track acquisition dates for a series of capital assets, but the acquisition dates span too large a period to allow for feasible Time dimension modeling. See also *typed measure*.

**Default Currency Units** Define the unit scale of data. For example, if you select to define your analysis in Thousands, and enter “10”, this is interpreted as “10,000”.

**dense dimension** In block storage databases, a dimension likely to contain data for every combination of dimension members. For example, time dimensions are often dense because they can contain all combinations of all members. *Contrast with* *sparse dimension*.

**dependent entity** An entity that is owned by another entity in the organization.

**derived text measure** In Essbase Studio, a text measure whose values are governed by a predefined rule expressed as a range. For example, a derived text measure, called "Sales Performance Index," based on a measure Sales, could consist of the values "High," "Medium," and "Low." This derived text measure is defined to display "High," "Medium," and "Low" depending on the range in which the corresponding sales values fall. See also *text measure*.

**descendant** Any member below a parent in the database outline. In a dimension that includes years, quarters, and months, the members Qtr2 and April are descendants of the member Year.

**Design Report** An interface in Web Analysis Studio for designing custom reports, from a library of components.

**destination** (1) For Business Rules and Calculation Manager, an intersection within the database where allocated values are stored. (2) Within a Profitability and Cost Management assignment, the receiving point for allocated values.

**destination currency** The currency to which balances are converted. You enter exchange rates and convert from the source currency to the destination currency. For example, when you convert from EUR to USD, the destination currency is USD.

**detail chart** A chart that provides the detailed information that you see in a Summary chart. Detail charts appear in the Investigate Section in columns below the Summary charts. If the Summary chart shows a Pie chart, then the Detail charts below represent each piece of the pie.

**dimension** A data category used to organize business data for retrieval and preservation of values. Dimensions usually contain hierarchies of related members grouped within them. For example, a Year dimension often includes members for each time period, such as quarters and months.

**dimension build** The process of adding dimensions and members to an Essbase outline.

**dimension build rules** Specifications, similar to data load rules, that Essbase uses to modify an outline. The modification is based on data in an external data source file.

**dimension tab** In the Pivot section, the tab that enables you to pivot data between rows and columns.

**dimension table** (1) A table that includes numerous attributes about a specific business process. (2) In Essbase Integration Services, a container in the OLAP model for one or more relational tables that define a potential dimension in Essbase.

**dimension type** A dimension property that enables the use of predefined functionality. Dimensions tagged as time have a predefined calendar functionality.

**dimensionality** In MaxL DML, the represented dimensions (and the order in which they are represented) in a set. For example, the following set consists of two tuples of the same dimensionality because they both reflect the dimensions (Region, Year): \{ (West, Feb), (East, Mar) \}

**direct rate** A currency rate that you enter in the exchange rate table. The direct rate is used for currency conversion. For example, to convert balances from JPY to USD, in the exchange rate table, enter a rate for the period/scenario where the source currency is JPY and the destination currency is USD.

**dirty block** A data block containing cells that have been changed since the last calculation. Upper level blocks are marked as dirty if their child blocks are dirty (that is, they have been updated).

**display type** One of three Web Analysis formats saved to the repository: spreadsheet, chart, and pinboard.
**dog-ear** The flipped page corner in the upper right corner of the chart header area.

**domain** In data mining, a variable representing a range of navigation within data.

**drill-down** Navigation through the query result set using the dimensional hierarchy. Drilling down moves the user perspective from aggregated data to detail. For example, drilling down can reveal hierarchical relationships between years and quarters or quarters and months.

**drill-through** The navigation from a value in one data source to corresponding data in another source.

**driver** A driver is an allocation method that describes the mathematical relationship between the sources that utilize the driver, and the destinations to which those sources allocate cost or revenue.

**duplicate alias name** A name that occurs more than once in an alias table and that can be associated with more than one member in a database outline. Duplicate alias names can be used with duplicate member outlines only.

**duplicate member name** The multiple occurrence of a member name in a database, with each occurrence representing a different member. For example, a database has two members named “New York.” One member represents New York state and the other member represents New York city.

**duplicate member outline** A database outline containing duplicate member names.

**Dynamic Calc and Store members** A member in a block storage outline that Essbase calculates only upon the first retrieval of the value. Essbase then stores the calculated value in the database. Subsequent retrievals do not require calculating.

**Dynamic Calc members** A member in a block storage outline that Essbase calculates only at retrieval time. Essbase discards calculated values after completing the retrieval request.

**dynamic calculation** In Essbase, a calculation that occurs only when you retrieve data on a member that is tagged as Dynamic Calc or Dynamic Calc and Store. The member’s values are calculated at retrieval time instead of being precalculated during batch calculation.

**dynamic hierarchy** In aggregate storage database outlines only, a hierarchy in which members are calculated at retrieval time.

**dynamic member list** A system-created named member set that is based on user-defined criteria. The list is refreshed automatically whenever it is referenced in the application. As dimension members are added and deleted, the list automatically reapplies the criteria to reflect the changes.

**dynamic reference** A pointer in the rules file to header records in a data source.

**dynamic report** A report containing data that is updated when you run the report.

**Dynamic Time Series** A process that performs period-to-date reporting in block storage databases.

**dynamic view account** An account type indicating that account values are calculated dynamically from the data that is displayed.

**Eliminated Account** An account that does not appear in the consolidated file.

**elimination** The process of zeroing out (eliminating) transactions between entities within an organization.

**employee** A user responsible for, or associated with, specific business objects. Employees need not work for an organization; for example, they can be consultants. Employees must be associated with user accounts for authorization purposes.

**encoding** A method for mapping bit combinations to characters for creating, storing, and displaying text. Each encoding has a name; for example, UTF-8. Within an encoding, each character maps to a specific bit combination; for example, in UTF-8, uppercase A maps to HEX41. See also code page and locale.

**ending period** A period enabling you to adjust the date range in a chart. For example, an ending period of “month”, produces a chart showing information through the end of the current month.

**Enterprise View** An Administration Services feature that enables management of the Essbase environment from a graphical tree view. From Enterprise View, you can operate directly on Essbase artifacts.

**entity** A dimension representing organizational units. Examples: divisions, subsidiaries, plants, regions, products, or other financial reporting units.
**Equity Beta** The riskiness of a stock, measured by the variance between its return and the market return, indicated by an index called “beta”. For example, if a stock’s return normally moves up or down 1.2% when the market moves up or down 1%, the stock has a beta of 1.2.

**essbase.cfg** An optional configuration file for Essbase. Administrators may edit this file to customize Essbase Server functionality. Some configuration settings may also be used with Essbase clients to override Essbase Server settings.

**EssCell** A function entered into a cell in Essbase Spreadsheet Add-in to retrieve a value representing an intersection of specific Essbase database members.

**ESSCMD** A command-line interface for performing Essbase operations interactively or through batch script files.

**ESSLANG** The Essbase environment variable that defines the encoding used to interpret text characters. See also *encoding*.

**ESSMSH** See *MaxL Shell*.

**exceptions** Values that satisfy predefined conditions. You can define formatting indicators or notify subscribing users when exceptions are generated.

**exchange rate** A numeric value for converting one currency to another. For example, to convert 1 USD into EUR, the exchange rate of 0.8936 is multiplied with the U.S. dollar. The European euro equivalent of $1 is 0.8936.

**exchange rate type** An identifier for an exchange rate. Different rate types are used because there may be multiple rates for a period and year. Users traditionally define rates at period end for the average rate of the period and for the end of the period. Additional rate types are historical rates, budget rates, forecast rates, and so on. A rate type applies to one point in time.

**expense account** An account that stores periodic and year-to-date values that decrease net worth if they are positive.

**Extensible Markup Language (XML)** A language comprising a set of tags used to assign attributes to data that can be interpreted between applications according to a schema.

**external authentication** Logging on to Oracle’s Hyperion applications with user information stored outside the applications, typically in a corporate directory such as MSAD or NTLM.

**externally triggered events** Non-time-based events for scheduling job runs.

**Extract, Transform, and Load (ETL)** Data source-specific programs for extracting data and migrating it to applications.

**extraction command** An Essbase reporting command that handles the selection, orientation, grouping, and ordering of raw data extracted from a database; begins with the less than (<) character.

**fact table** The central table in a star join schema, characterized by a foreign key and elements drawn from a dimension table. This table typically contains numeric data that can be related to all other tables in the schema.

**Favorites gadget** Contains links to Reporting and Analysis documents and URLs.

**field** An item in a data source file to be loaded into an Essbase database.

**file delimiter** Characters, such as commas or tabs, that separate fields in a data source.

**filter** A constraint on data sets that restricts values to specific criteria; for example, to exclude certain tables, metadata, or values, or to control access.

**flow account** An unsigned account that stores periodic and year-to-date values.

**folder** A file containing other files for the purpose of structuring a hierarchy.

**footer** Text or images at the bottom of report pages, containing dynamic functions or static text such as page numbers, dates, logos, titles or file names, and author names.

**format** Visual characteristics of documents or report objects.

**format string** In Essbase, a method for transforming the way cell values are displayed.

**formula** A combination of operators, functions, dimension and member names, and numeric constants calculating database members.

**frame** An area on the desktop. There are two main areas: the navigation and Workspace frames.
**free-form grid**  An object for presenting, entering, and integrating data from different sources for dynamic calculations.

**free-form reporting**  Creating reports by entering dimension members or report script commands in worksheets.

**function**  A routine that returns values or database members.

**gadget**  Simple, specialized, lightweight applications that provide easy viewing of EPM content and enable access to core Reporting and Analysis functionality.

**genealogy data**  Additional data that is optionally generated after allocation calculations. This data enables reporting on all cost or revenue flows from start to finish through all allocation steps.

**generation**  A layer in a hierarchical tree structure that defines member relationships in a database. Generations are ordered incrementally from the top member of the dimension (generation 1) down to the child members. Use the unique generation name to identify a layer in the hierarchical tree structure.

**generic jobs**  Non-SQR Production Reporting or non-Interactive Reporting jobs.

**global report command**  A command in a running report script that is effective until replaced by another global command or the file ends.

**grid POV**  A means for specifying dimension members on a grid without placing dimensions in rows, columns, or page intersections. A report designer can set POV values at the grid level, preventing user POVs from affecting the grid. If a dimension has one grid value, you put the dimension into the grid POV instead of the row, column, or page.

**group**  A container for assigning similar access permissions to multiple users.

**GUI**  Graphical user interface

**head up display**  A mode that shows your loaded Smart Space desktop including the background image above your Windows desktop.

**highlighting**  Depending on your configuration, chart cells or ZoomChart details may be highlighted, indicating value status: red (bad), yellow (warning), or green (good).

**Historical Average**  An average for an account over a number of historical periods.

**holding company**  An entity that is part of a legal entity group, with direct or indirect investments in all entities in the group.

**host**  A server on which applications and services are installed.

**host properties**  Properties pertaining to a host, or if the host has multiple Install_Homes, to an Install_Home. The host properties are configured from the CMC.

**Hybrid Analysis**  An analysis mapping low-level data stored in a relational database to summary-level data stored in Essbase, combining the mass scalability of relational systems with multidimensional data.

**hyperlink**  A link to a file, Web page, or an intranet HTML page.

**Hypertext Markup Language (HTML)**  A programming language specifying how Web browsers display data.

**identity**  A unique identification for a user or group in external authentication.

**image bookmarks**  Graphic links to Web pages or repository items.

**IMPACTED status**  Indicates changes in child entities consolidating into parent entities.

**Implied share**  A member with one or more children, but only one is consolidated, so the parent and child share a value.

**import format**  In FDM, defines the structure of the source file which enables the loading of a source data file to an FDM data load location.

**inactive group**  A group for which an administrator has deactivated system access.

**inactive service**  A service suspended from operating.

**INACTIVE status**  Indicates entities deactivated from consolidation for the current period.

**inactive user**  A user whose account has been deactivated by an administrator.

**income account**  An account storing periodic and year-to-date values that, if positive, increase net worth.

**index**  (1) A method where Essbase uses sparse-data combinations to retrieve data in block storage databases. (2) The index file.
index cache  A buffer containing index pages.

index entry  A pointer to an intersection of sparse dimensions. Index entries point to data blocks on disk and use offsets to locate cells.

index file  An Essbase file storing block storage data retrieval information, residing on disk, and containing index pages.

index page  A subdivision in an index file. Contains pointers to data blocks.

input data  Data loaded from a source rather than calculated.

Install_Home  A variable for the directory where EPM System products are installed. Refers to one instance of an EPM System product when multiple applications are installed on the same computer.

integration  Process that is run to move data between EPM System products using Shared Services. Data integration definitions specify the data moving between a source application and a destination application, and enable the data movements to be grouped, ordered, and scheduled.

intelligent calculation  A calculation method tracking updated data blocks since the last calculation.

Interactive Reporting connection file (.oce)  Files encapsulating database connection information, including: the database API (ODBC, SQL*Net, etc.), database software, the database server network address, and database user name. Administrators create and publish Interactive Reporting connection files (.oce).

intercompany elimination  See elimination.

intercompany matching  The process of comparing balances for pairs of intercompany accounts within an application. Intercompany receivables are compared to intercompany payables for matches. Matching accounts are used to eliminate intercompany transactions from an organization’s consolidated totals.

intercompany matching report  A report that compares intercompany account balances and indicates if the accounts are in, or out, of balance.

interdimensional irrelevance  A situation in which a dimension does not intersect with other dimensions. Because the data in the dimension cannot be accessed from the non-intersecting dimensions, the non-intersecting dimensions are not relevant to that dimension.

intersection  A unit of data representing the intersection of dimensions in a multidimensional database; also, a worksheet cell.

intrastage assignment  Assignments in the financial flow that are assigned to objects within the same stage.

introspection  A deep inspection of a data source to discover hierarchies based on the inherent relationships in the database. Contrast with scraping.

Investigation  See drill-through.

isolation level  An Essbase Kernel setting that determines the lock and commit behavior of database operations. Choices are: committed access and uncommitted access.

iteration  A “pass” of the budget or planning cycle in which the same version of data is revised and promoted.

Java Database Connectivity (JDBC)  A client-server communication protocol used by Java based clients and relational databases. The JDBC interface provides a call-level API for SQL-based database access.

job output  Files or reports produced from running a job.

jobs  Documents with special properties that can be launched to generate output. A job can contain Interactive Reporting, SQR Production Reporting, or generic documents.

join  A link between two relational database tables or topics based on common content in a column or row. A join typically occurs between identical or similar items within different tables or topics. For example, a record in the Customer table is joined to a record in the Orders table because the Customer ID value is the same in each table.

journal entry (JE)  A set of debit/credit adjustments to account balances for a scenario and period.

JSP  Java Server Pages.

KeyContacts gadget  Contains a group of Smart Space users and provides access to Smart Space Collaborator. For example, you can have a KeyContacts gadget for your marketing team and another for your development team.

latest  A Spreadsheet key word used to extract data values from the member defined as the latest time period.
layer  (1) The horizontal location of members in a hierarchical structure, specified by generation (top down) or level (bottom up). (2) Position of objects relative to other objects. For example, in the Sample Basic database, Qtr1 and Qtr4 are in the same layer, so they are also in the same generation, but in a database with a ragged hierarchy, Qtr1 and Qtr4 might not be in the same layer, though they are in the same generation.

layout area  Used to designate an area on a Workspace Page where content can be placed.

legend box  A box containing labels that identify the data categories of a dimension.

level  A layer in a hierarchical tree structure that defines database member relationships. Levels are ordered from the bottom dimension member (level 0) up to the parent members.

level 0 block  A data block for combinations of sparse, level 0 members.

level 0 member  A member that has no children.

liability account  An account type that stores “point in time” balances of a company’s liabilities. Examples of liability accounts include accrued expenses, accounts payable, and long term debt.

life cycle management  The process of managing application information from inception to retirement.

Lifecycle Management Utility  A command-line utility for migrating applications and artifacts.

line chart  A chart that displays one to 50 data sets, each represented by a line. A line chart can display each line stacked on the preceding ones, as represented by an absolute value or a percent.

line item detail  The lowest level of detail in an account.

lineage  The relationship between different metadata elements showing how one metadata element is derived from one or more other metadata elements, ultimately tracing the metadata element to its physical source. In Essbase Studio, a lineage viewer displays the relationships graphically. See also traceability.

link  (1) A reference to a repository object. Links can reference folders, files, shortcuts, and other links. (2) In a task flow, the point where the activity in one stage ends and another begins.

link condition  A logical expression evaluated by the taskflow engine to determine the sequence of launching taskflow stages.

linked data model  Documents that are linked to a master copy in a repository.

linked partition  A shared partition that enables you to use a data cell to link two databases. When a user clicks a linked cell in a worksheet, Essbase opens a new sheet displaying the dimensions in the linked database. The user can then drill down those dimensions.

linked reporting object (LRO)  A cell-based link to an external file such as cell notes, URLs, or files with text, audio, video, or pictures. (Only cell notes are supported for Essbase LROs in Financial Reporting.) Contrast with local report object.

local currency  An input currency type. When an input currency type is not specified, the local currency matches the entity’s base currency.

local report object  A report object that is not linked to a Financial Reporting report object in Explorer. Contrast with linked reporting object (LRO).

local results  A data model’s query results. Results can be used in local joins by dragging them into the data model. Local results are displayed in the catalog when requested.

locale  A computer setting that specifies a location’s language, currency and date formatting, data sort order, and the character set encoding used on the computer. Essbase uses only the encoding portion. See also encoding and ESSLANG.

locale header record  A text record at the beginning of some non-Unicode-encoded text files, such as scripts, that identifies the encoding locale.

location alias  A descriptor that identifies a data source. The location alias specifies a server, application, database, user name, and password. Location aliases are set by DBAs at the database level using Administration Services Console, ESSCMD, or the API.

locked  A user-invoked process that prevents users and processes from modifying data.
locked data model  Data models that cannot be modified by a user.

LOCKED status  A consolidation status indicating that an entity contains data that cannot be modified.

Log Analyzer  An Administration Services feature that enables filtering, searching, and analysis of Essbase logs.

logic group  In FDM, contains one or more logic accounts that are generated after a source file is loaded into FDM. Logic accounts are calculated accounts that are derived from the source data.

LRO  See linked reporting object (LRO).

managed server  An application server process running in its own Java Virtual Machine (JVM).

manual stage  A stage that requires human intervention to complete.

Map File  Used to store the definition for sending data to or retrieving data from an external database. Map files have different extensions (.mps to send data; .mpr to retrieve data).

Map Navigator  A feature that displays your current position on a Strategy, Accountability, or Cause and Effect map, indicated by a red outline.

Marginal Tax Rate  Used to calculate the after-tax cost of debt. Represents the tax rate applied to the last earned income dollar (the rate from the highest tax bracket into which income falls) and includes federal, state and local taxes. Based on current level of taxable income and tax bracket, you can predict marginal tax rate.

Market Risk Premium  The additional rate of return paid over the risk-free rate to persuade investors to hold “riskier” investments than government securities. Calculated by subtracting the risk-free rate from the expected market return. These figures should closely model future market conditions.

master data model  An independent data model that is referenced as a source by multiple queries. When used, “Locked Data Model” is displayed in the Query section’s Content pane; the data model is linked to the master data model displayed in the Data Model section, which an administrator may hide.

mathematical operator  A symbol that defines how data is calculated in formulas and outlines. Can be any of the standard mathematical or Boolean operators; for example, +, -, *, /, and %.

Max  The multidimensional database access language for Essbase, consisting of a data definition language (MaxL DDL) and a data manipulation language (MaxL DML). See also MaxL DDL, MaxL DML, and MaxL Shell.

MaxL DDL  Data definition language used by Essbase for batch or interactive system-administration tasks.

MaxL DML  Data manipulation language used in Essbase for data query and extraction.

MaxL Perl Module  A Perl module (essbase.pm) that is part of Essbase MaxL DDL. This module can be added to the Perl package to provide access to Essbase databases from Perl programs.

MaxL Script Editor  A script-development environment in Administration Services Console. MaxL Script Editor is an alternative to using a text editor and the MaxL Shell for administering Essbase with MaxL scripts.

MaxL Shell  An interface for passing MaxL statements to Essbase Server. The MaxL Shell executable file is located in the Essbase bin directory (UNIX: essmsh, Windows: essmsh.exe).

MDX (multidimensional expression)  The language that give instructions to OLE DB for OLAP-compliant databases, as SQL is used for relational databases. When you build the OLAPQuery section’s Outliner, Interactive Reporting Clients translate requests into MDX instructions. When you process the query, MDX is sent to the database server, which returns records that answer your query. See also SQL spreadsheet.

measures  Numeric values in an OLAP database cube that are available for analysis. Measures are margin, cost of goods sold, unit sales, budget amount, and so on. See also fact table.

member  A discrete component within a dimension. A member identifies and differentiates the organization of similar units. For example, a time dimension might include such members as Jan, Feb, and Qtr1.
**member list** A named group, system- or user-defined, that references members, functions, or member lists within a dimension.

**member load** In Integration Services, the process of adding dimensions and members (without data) to Essbase outlines.

**member selection report command** A type of Report Writer command that selects member ranges based on outline relationships, such as sibling, generation, and level.

**member-specific report command** A type of Report Writer formatting command that is executed as it is encountered in a report script. The command affects only its associated member and executes the format command before processing the member.

**merge** A data load option that clears values only from the accounts specified in the data load file and replaces them with values in the data load file.

**metadata** A set of data that defines and describes the properties and attributes of the data stored in a database or used by an application. Examples of metadata are dimension names, member names, properties, time periods, and security.

**metadata elements** Metadata derived from data sources and other metadata that is stored and cataloged for Essbase Studio use.

**metadata sampling** The process of retrieving a sample of members in a dimension in a drill-down operation.

**metadata security** Security set at the member level to restrict users from accessing certain outline members.

**metaoutline** In Integration Services, a template containing the structure and rules for creating an Essbase outline from an OLAP model.

**metric** A numeric measurement computed from business data to help assess business performance and analyze company trends.

**migration** The process of copying applications, artifacts, or users from one environment or computer to another; for example, from a testing environment to a production environment.

**migration audit report** A report generated from the migration log that provides tracking information for an application migration.

**migration definition file (.mdf)** A file that contains migration parameters for an application migration, enabling batch script processing.

**migration log** A log file that captures all application migration actions and messages.

**migration snapshot** A snapshot of an application migration that is captured in the migration log.

**MIME Type** (Multipurpose Internet Mail Extension) An attribute that describes the data format of an item, so that the system knows which application should open the object. A file’s mime type is determined by the file extension or HTTP header. Plug-ins tell browsers what mime types they support and what file extensions correspond to each mime type.

**mining attribute** In data mining, a class of values used as a factor in analysis of a set of data.

**minireport** A report component that includes layout, content, hyperlinks, and the query or queries to load the report. Each report can include one or more minireports.

**minischema** A graphical representation of a subset of tables from a data source that represents a data modeling context.

**missing data (#MISSING)** A marker indicating that data in the labeled location does not exist, contains no value, or was never entered or loaded. For example, missing data exists when an account contains data for a previous or future period but not for the current period.

**model** (1) In data mining, a collection of an algorithm’s findings about examined data. A model can be applied against a wider data set to generate useful information about that data. (2) A file or content string containing an application-specific representation of data. Models are the basic data managed by Shared Services, of two major types: dimensional and non-dimensional application objects. (3) In Business Modeling, a network of boxes connected to represent and calculate the operational and financial flow through the area being examined.

**monetary** A money-related value.
**multidimensional database**  A method of organizing, storing, and referencing data through three or more dimensions. An individual value is the intersection point for a set of dimensions. Contrast with relational database.

**multitload**  An FDM feature that allows the simultaneous loading of multiple periods, categories, and locations.

**My Workspace Page**  A page created with content from multiple sources including documents, URL, and other content types. Enables a user to aggregate content from Oracle and non-Oracle sources.

**named set**  In MaxL DML, a set with its logic defined in the optional WITH section of a MaxL DML query. The named set can be referenced multiple times in the query.

**native authentication**  The process of authenticating a user name and password from within the server or application.

**nested column headings**  A report column heading format that displays data from multiple dimensions. For example, a column heading that contains Year and Scenario members is a nested column. The nested column heading shows Q1 (from the Year dimension) in the top line of the heading, qualified by Actual and Budget (from the Scenario dimension) in the bottom line of the heading.

**NO DATA status**  A consolidation status indicating that this entity contains no data for the specified period and account.

**non-dimensional model**  A Shared Services model type that includes application objects such as security files, member lists, calculation scripts, and Web forms.

**non-unique member name**  See duplicate member name.

**note**  Additional information associated with a box, measure, scorecard or map element.

**Notifications gadget**  Shows notification message history received from other users or systems.

**null value**  A value that is absent of data. Null values are not equal to zero.

**numeric attribute range**  A feature used to associate a base dimension member that has a discrete numeric value with an attribute that represents a value range. For example, to classify customers by age, an Age Group attribute dimension can contain members for the following age ranges: 0-20, 21-40, 41-60, and 61-80. Each Customer dimension member can be associated with an Age Group range. Data can be retrieved based on the age ranges rather than on individual age values.

**ODBC**  Open Database Connectivity. A database access method used from any application regardless of how the database management system (DBMS) processes the information.

**OK status**  A consolidation status indicating that an entity has already been consolidated, and that data has not changed below it in the organization structure.

**OLAP Metadata Catalog**  In Integration Services, a relational database containing metadata describing the nature, source, location, and type of data that is pulled from the relational data source.

**OLAP model**  In Integration Services, a logical model (star schema) that is created from tables and columns in a relational database. The OLAP model is then used to generate the structure of a multidimensional database.

**online analytical processing (OLAP)**  A multidimensional, multiuser, client-server computing environment for users who analyze consolidated enterprise data in real time. OLAP systems feature drill-down, data pivoting, complex calculations, trend analysis, and modeling.

**Open Database Connectivity (ODBC)**  Standardized application programming interface (API) technology that allows applications to access multiple third-party databases.

**organization**  An entity hierarchy that defines each entity and their relationship to others in the hierarchy.

**origin**  The intersection of two axes.

**outline**  The database structure of a multidimensional database, including all dimensions, members, tags, types, consolidations, and mathematical relationships. Data is stored in the database according to the structure defined in the outline.
**Outline synchronization**  For partitioned databases, the process of propagating outline changes from one database to another database.

**P&L accounts (P&L)**  Profit and loss accounts. Refers to a typical grouping of expense and income accounts that comprise a company’s income statement.

**Page**  A display of information in a grid or table often represented by the Z-axis. A page can contain data from one field, derived data from a calculation, or text.

**Page file**  Essbase data file.

**Page heading**  A report heading type that lists members represented on the current page of the report. All data values on the page have the members in the page heading as a common attribute.

**Page member**  A member that determines the page axis.

**Palette**  A JASC compliant file with a .PAL extension. Each palette contains 16 colors that complement each other and can be used to set the dashboard color elements.

**Parallel calculation**  A calculation option. Essbase divides a calculation into tasks and calculates some tasks simultaneously.

**Parallel data load**  In Essbase, the concurrent execution of data load stages by multiple process threads.

**Parallel export**  The ability to export Essbase data to multiple files. This may be faster than exporting to a single file, and it may resolve problems caused by a single data file becoming too large for the operating system to handle.

**Parent adjustments**  The journal entries that are posted to a child in relation to its parent.

**Parents**  The entities that contain one or more dependent entities that report directly to them. Because parents are both entities and associated with at least one node, they have entity, node, and parent information associated with them.

**Partition area**  A sub cube within a database. A partition is composed of one or more areas of cells from a portion of the database. For replicated and transparent partitions, the number of cells within an area must be the same for the data source and target to ensure that the two partitions have the same shape. If the data source area contains 18 cells, the data target area must also contain 18 cells to accommodate the number of values.

**Partitioning**  The process of defining areas of data that are shared or linked between data models. Partitioning can affect the performance and scalability of Essbase applications.

**Pattern matching**  The ability to match a value with any or all characters of an item entered as a criterion. Missing characters may be represented by wild card values such as a question mark (?) or an asterisk (*). For example, “Find all instances of apple” returns apple, but “Find all instances of apple*” returns apple, applesauce, applecranberry, and so on.

**Percent consolidation**  The portion of a child’s values that is consolidated to its parent.

**Percent control**  Identifies the extent to which an entity is controlled within the context of its group.

**Percent ownership**  Identifies the extent to which an entity is owned by its parent.

**Performance indicator**  An image file used to represent measure and scorecard performance based on a range you specify; also called a status symbol. You can use the default performance indicators or create an unlimited number of your own.

**Periodic value method (PVA)**  A process of currency conversion that applies the periodic exchange rate values over time to derive converted results.

**Permission**  A level of access granted to users and groups for managing data or other users and groups.

**Persistence**  The continuance or longevity of effect for any Essbase operation or setting. For example, an Essbase administrator may limit the persistence of user name and password validity.

**Personal pages**  A personal window to repository information. You select what information to display and its layout and colors.

**Personal recurring time events**  Reusable time events that are accessible only to the user who created them.

**Personal variable**  A named selection statement of complex member selections.
perspective A category used to group measures on a scorecard or strategic objectives within an application. A perspective can represent a key stakeholder (such as a customer, employee, or shareholder/financial) or a key competency area (such as time, cost, or quality).

pie chart A chart that shows one data set segmented in a pie formation.

pinboard One of the three data object display types. Pinboards are graphics, composed of backgrounds and interactive icons called pins. Pinboards require traffic lighting definitions.

pins Interactive icons placed on graphic reports called pinboards. Pins are dynamic. They can change images and traffic lighting color based on the underlying data values and analysis tools criteria.

pivot The ability to alter the perspective of retrieved data. When Essbase first retrieves a dimension, it expands data into rows. You can then pivot or rearrange the data to obtain a different viewpoint.

planner Planners, who comprise the majority of users, can input and submit data, use reports that others create, execute business rules, use task lists, enable e-mail notification for themselves, and use Smart View.

planning unit A data slice at the intersection of a scenario, version, and entity; the basic unit for preparing, reviewing, annotating, and approving plan data.

plot area The area bounded by X, Y, and Z axes; for pie charts, the rectangular area surrounding the pie.

plug account An account in which the system stores any out of balance differences between intercompany account pairs during the elimination process.

post stage assignment Assignments in the allocation model that are assigned to locations in a subsequent model stage.

POV (point of view) A feature for setting data focus by selecting members that are not already assigned to row, column, or page axes. For example, selectable POVs in FDM could include location, period, category, and target category. In another example, using POV as a filter in Smart View, you could assign the Currency dimension to the POV and select the Euro member. Selecting this POV in data forms displays data in Euro values.

precalculation Calculating the database prior to user retrieval.

precision Number of decimal places displayed in numbers.

predefined drill paths Paths used to drill to the next level of detail, as defined in the data model.

presentation A playlist of Web Analysis documents, enabling reports to be grouped, organized, ordered, distributed, and reviewed. Includes pointers referencing reports in the repository.

preserve formulas User-created formulas kept within a worksheet while retrieving data.

primary measure A high-priority measure important to your company and business needs. Displayed in the Contents frame.

process monitor report Displays a list of locations and their positions within the FDM data conversion process. You can use the process monitor report to monitor the status of the closing process. The report is time-stamped. Therefore, it can be used to determine to which locations at which time data was loaded.

product In Shared Services, an application type, such as Planning or Performance Scorecard.

Production Reporting See SQR Production Reporting.

project An instance of EPM System products grouped together in an implementation. For example, a Planning project may consist of a Planning application, an Essbase cube, and a Financial Reporting server instance.

property A characteristic of an artifact, such as size, type, or processing instructions.

provisioning The process of granting users and groups specific access permissions to resources.

proxy server A server acting as an intermediary between workstation users and the Internet to ensure security.

public job parameters Reusable, named job parameters created by administrators and accessible to users with requisite access privileges.

public recurring time events Reusable time events created by administrators and accessible through the access control system.

PVA See periodic value method (PVA).
**qualified name** A member name in a qualified format that differentiates duplicate member names in a duplicate member outline. For example, [Market].[East].[State].[New York] or [Market].[East].[City].[New York]

**query** Information requests from data providers. For example, used to access relational data sources.

**query governor** An Essbase Integration server parameter or Essbase server configuration setting that controls the duration and size of queries made to data sources.

**range** A set of values including upper and lower limits, and values falling between limits. Can contain numbers, amounts, or dates.

**reciprocal assignment** An assignment in the financial flow that also has the source as one of its destinations.

**reconfigure URL** URL used to reload servlet configuration settings dynamically when users are already logged on to the Workspace.

**record** In a database, a group of fields making up one complete entry. For example, a customer record may contain fields for name, address, telephone number, and sales data.

**recurring template** A journal template for making identical adjustments in every period.

**recurring time event** An event specifying a starting point and the frequency for running a job.

**redundant data** Duplicate data blocks that Essbase retains during transactions until Essbase commits updated blocks.

**regular journal** A feature for entering one-time adjustments for a period. Can be balanced, balanced by entity, or unbalanced.

**Related Accounts** The account structure groups all main and related accounts under the same main account number. The main account is distinguished from related accounts by the first suffix of the account number.

**relational database** A type of database that stores data in related two-dimensional tables. Contrast with multidimensional database

**replace** A data load option that clears existing values from all accounts for periods specified in the data load file, and loads values from the data load file. If an account is not specified in the load file, its values for the specified periods are cleared.

**replicated partition** A portion of a database, defined through Partition Manager, used to propagate an update to data mastered at one site to a copy of data stored at another site. Users can access the data as though it were part of their local database.

**Report Extractor** An Essbase component that retrieves report data from the Essbase database when report scripts are run.

**report object** In report designs, a basic element with properties defining behavior or appearance, such as text boxes, grids, images, and charts.

**report script** A text file containing Essbase Report Writer commands that generate one or more production reports.

**Report Viewer** An Essbase component that displays complete reports after report scripts are run.

**reporting currency** The currency used to prepare financial statements, and converted from local currencies to reporting currencies.

**repository** Stores metadata, formatting, and annotation information for views and queries.

**resources** Objects or services managed by the system, such as roles, users, groups, files, and jobs.

**restore** An operation to reload data and structural information after a database has been damaged or destroyed, typically performed after shutting down and restarting the database.

**restructure** An operation to regenerate or rebuild the database index and, in some cases, data files.

**result frequency** The algorithm used to create a set of dates to collect and display results.

**review level** A Process Management review status indicator representing the process unit level, such as Not Started, First Pass, Submitted, Approved, and Published.

**Risk Free Rate** The rate of return expected from “safer” investments such as long-term U.S. government securities.
role  The means by which access permissions are granted to users and groups for resources.

classification  See consolidation.
oot member  The highest member in a dimension branch.

RSC services  Services that are configured with Remote Service Configurator, including Repository Service, Service Broker, Name Service, Event Service, and Job Service.
un-time prompt  A variable that users enter or select before a business rule is run.

sampling  The process of selecting a representative portion of an entity to determine the entity’s characteristics. See also metadata sampling.

saved assumptions  User-defined Planning assumptions that drive key business calculations (for example, the cost per square foot of office floor space).

scaling  Scaling determines the display of values in whole numbers, tens, hundreds, thousands, millions, and so on.

scenario  A dimension for classifying data (for example, Actuals, Budget, Forecast1, and Forecast2).

scope  The area of data encompassed by any Essbase operation or setting; for example, the area of data affected by a security setting. Most commonly, scope refers to three levels of granularity, where higher levels encompass lower levels. From highest to lowest, these levels are as follows: the entire system (Essbase Server), applications on Essbase servers, or databases within Essbase server applications. See also persistence.

score  The level at which targets are achieved, usually expressed as a percentage of the target.

scorecard  Business object that represents the progress of an employee, strategy element, or accountability element toward goals. Scorecards ascertained this progress based on data collected for each measure and child scorecard added to the scorecard.

scraping  An inspection of a data source to derive the most basic metadata elements from it. Contrast with introspection.

Search gadget  Searches the Reporting and Analysis repository. The Search gadget looks for a match in the document keywords and description, which are set when you import a document.

secondary measure  A low-priority measure, less important than primary measures. Secondary measures do not have Performance reports but can be used on scorecards and to create dimension measure templates.

security agent  A Web access management provider (for example, Netegrity SiteMinder) that protects corporate Web resources.

security platform  A framework enabling EPM System products to use external authentication and single sign-on.

serial calculation  The default calculation setting. Divides a calculation pass into tasks and calculates one task at a time.

services  Resources that enable business items to be retrieved, changed, added, or deleted. Examples: Authorization and Authentication.

servlet  A piece of compiled code executable by a Web server.

shared member  A member that shares storage space with another member of the same name, preventing duplicate calculation of members that occur multiple times in an Essbase outline.

Shared Services Registry  Part of the Shared Services database, the Shared Services Registry stores and re-uses information for most installed EPM System products, including installation directories, database settings, deployment settings, computer names, ports, servers, URLs, and dependent service data.

Shared Workspace Page  Workspace Pages shared across an organization which are stored in a special System folder and can be accessed by authorized users from the Shared Workspace Pages Navigate menu.

sibling  A child member at the same generation as another child member and having the same immediate parent. For example, the members Florida and New York are children of East and each other’s siblings.

single sign-on  Ability to access multiple EPM System products after a single login using external credentials.

smart slice  In Smart View, a reusable perspective of a data source that contains a restricted set of dimensions or dimension members.
**Smart Space client software**  Runs on the client’s computer and provides gadgets, instant collaboration and access to the Reporting and Analysis repository. It is composed of the Smart Space framework and gadgets.

**Smart Space Collaborator**  A service that enables users or systems to send messages and share Reporting and Analysis repository content. The message can take many forms, including instant message style discussions, meetings, and toast messages.

**smart tags**  Keywords in Microsoft Office applications that are associated with predefined actions available from the Smart Tag menu. In EPM System products, smart tags can also be used to import Reporting and Analysis content, and access Financial Management and Essbase functions.

**SmartBook gadget**  Contains documents from the Reporting and Analysis repository or URLs. All documents are loaded when the SmartBook is opened so you can access all content immediately.

**SmartCut**  A link to a repository item, in URL form.

**snapshot**  Read-only data from a specific time.

**source currency**  The currency from which values originate and are converted through exchange rates to the destination currency.

**sparse dimension**  In block storage databases, a dimension unlikely to contain data for all member combinations when compared to other dimensions. For example, not all customers have data for all products. *Contrast with dense dimension.*

**SPF files**  Printer-independent files created by an SQR Production Reporting server, containing a representation of the actual formatted report output, including fonts, spacing, headers, footers, and so on.

**Spotlighter**  A tool that enables color coding based on selected conditions.

**SQL spreadsheet**  A data object that displays the result set of a SQL query.

**SQR Production Reporting**  A specialized programming language for data access, data manipulation, and creating SQR Production Reporting documents.

**stage**  A task description that forms one logical step within a taskflow, usually performed by an individual. A stage can be manual or automated.

**stage action**  For automated stages, the invoked action that executes the stage.

**staging area**  A database that you create to meet the needs of a specific application. A staging area is a snapshot or restructured version of one or more RDBMSs.

**standard dimension**  A dimension that is not an attribute dimension.

**standard journal template**  A journal function used to post adjustments that have common adjustment information for each period. For example, you can create a standard template that contains the common account IDs, entity IDs, or amounts, then use the template as the basis for many regular journals.

**Status bar**  The status bar at the bottom of the screen displays helpful information about commands, accounts, and the current status of your data file.

**stored hierarchy**  In aggregate storage databases outlines only. A hierarchy in which the members are aggregated according to the outline structure. Stored hierarchy members have certain restrictions, for example, they cannot contain formulas.

**strategic objective (SO)**  A long-term goal defined by measurable results. Each strategic objective is associated with one perspective in the application, has one parent, the entity, and is a parent to critical success factors or other strategic objectives.

**Strategy map**  Represents how the organization implements high-level mission and vision statements into lower-level, constituent strategic goals and objectives.

**structure view**  Displays a topic as a simple list of component data items.

**Structured Query Language**  A language used to process instructions to relational databases.

**Subaccount Numbering**  A system for numbering subaccounts using non-sequential, whole numbers.

**subscribe**  Flags an item or folder to receive automatic notification whenever the item or folder is updated.
**Summary chart** In the Investigates Section, rolls up detail charts shown below in the same column, plotting metrics at the summary level at the top of each chart column.

**super service** A special service used by the startCommonServices script to start the RSC services.

**supervisor** A user with full access to all applications, databases, related files, and security mechanisms for a server.

**supporting detail** Calculations and assumptions from which the values of cells are derived.

**suppress rows** Excludes rows containing missing values, and underscores characters from spreadsheet reports.

**symmetric multiprocessing (SMP)** A server architecture that enables multiprocessing and multithreading. Performance is not significantly degraded when a large number of users connect to a single instance simultaneously.

**sync** Synchronizes Shared Services and application models.

**synchronized** The condition that exists when the latest version of a model resides in both the application and in Shared Services. See also **model**.

**system extract** Transfers data from an application’s metadata into an ASCII file.

**tabs** Navigable views of accounts and reports in Strategic Finance.

**target** Expected results of a measure for a specified period of time (day, quarter, and so on).

**task list** A detailed status list of tasks for a particular user.

**taskflow** The automation of a business process in which tasks are passed from one taskflow participant to another according to procedural rules.

**taskflow definition** Represents business processes in the taskflow management system. Consists of a network of stages and their relationships; criteria indicating the start and end of the taskflow; and information about individual stages, such as participants, associated applications, associated activities, and so on.

**taskflow instance** Represents a single instance of a taskflow including its state and associated data.

**taskflow management system** Defines, creates, and manages the execution of a taskflow including: definitions, user or application interactions, and application executables.

**taskflow participant** The resource who performs the task associated with the taskflow stage instance for both manual and automated stages.

**Taxes - Initial Balances** Strategic Finance assumes that the Initial Loss Balance, Initial Gain Balance and the Initial Balance of Taxes Paid entries have taken place in the period before the first Strategic Finance time period.

**TCP/IP** See **Transmission Control Protocol/Internet Protocol (TCP/IP)**.

**template** A predefined format designed to retrieve particular data consistently.

**text list** In Essbase, an object that stores text values mapped to numeric identifiers. Text Lists enable the use of text measures.

**text measure** A data type that allows measure values to be expressed as text. In Essbase, a member tagged as “Text” in the dimension where measures are represented. The cell values are displayed as predefined text. For example, the text measure “Satisfaction Index” may have the values Low, Medium, and High. See also **typed measure**, **text list**, **derived text measure**.

**time dimension** Defines the time period that the data represents, such as fiscal or calendar periods.

**time events** Triggers for execution of jobs.

**time line viewer** An FDM feature that allows a user to view dates and times of completed process flow steps for specific locations.

**time scale** Displays metrics by a specific period in time, such as monthly or quarterly.

**time series reporting** A process for reporting data based on a calendar date (for example, year, quarter, month, or week).

**Title bar** Displays the Strategic Finance name, the file name, and the scenario name Version box.

**toast message** Messages that appear in the lower right corner of the screen and fade in and out.

**token** An encrypted identification of one valid user or group on an external authentication system.
**top and side labels** Column and row headings on the top and sides of a Pivot report.

**top-level member** A dimension member at the top of the tree in a dimension outline hierarchy, or the first member of the dimension in sort order if there is no hierarchical relationship among dimension members. The top-level member name is generally the same as the dimension name if a hierarchical relationship exists.

**trace allocations** A feature of Profitability and Cost Management that enables you to visually follow the flow of financial data, either forwards or backwards, from a single intersection throughout the model.

**trace level** Defines the level of detail captured in the log file.

**traceability** The ability to track a metadata element to its physical source. For example, in Essbase Studio, a cube schema can be traced from its hierarchies and measure hierarchies, to its dimension elements, date/time elements, and measures, and ultimately, to its physical source elements.

**traffic lighting** Color-coding of report cells, or pins based on a comparison of two dimension members, or on fixed limits.

**transformation** (1) Transforms artifacts so that they function properly in the destination environment after application migration. (2) In data mining, modifies data (bidirectionally) flowing between the cells in the cube and the algorithm.

**translation** See currency conversion.

**Transmission Control Protocol/Internet Protocol (TCP/IP)** A standard set of communication protocols linking computers with different operating systems and internal architectures. TCP/IP utilities are used to exchange files, send mail, and store data to various computers that are connected to local and wide area networks.

**transparent login** Logs in authenticated users without launching the login screen.

**transparent partition** A shared partition that enables users to access and change data in a remote database as though it is part of a local database

**triangulation** A means of converting balances from one currency to another via a third common currency. In Europe, this is the euro for member countries. For example, to convert from French franc to Italian lira, the common currency is defined as European euro. Therefore, in order to convert balances from French franc to Italian lira, balances are converted from French franc to European euro and from European euro to Italian lira.

**triggers** An Essbase feature whereby data is monitored according to user-specified criteria which when met cause Essbase to alert the user or system administrator.

**trusted password** A password that enables users authenticated for one product to access other products without reentering their passwords.

**trusted user** Authenticated user.

**tuple** MDX syntax element that references a cell as an intersection of a member from each dimension. If a dimension is omitted, its top member is implied. Examples: (Jan); (Jan, Sales); ( [Jan], [Sales], [Cola], [Texas], [Actual] )

**two-pass** An Essbase property that is used to recalculate members that are dependent on the calculated values of other members. Two-pass members are calculated during a second pass through the outline.

**typed measure** In Essbase, a member tagged as “Text” or “Date” in the dimension where measures are represented. The cell values are displayed as predefined text or dates.

**unary operator** A mathematical indicator (+, -, *, /, %) associated with an outline member. The unary operator defines how the member is calculated during a database roll-up.

**Unicode-mode application** An Essbase application wherein character text is encoded in UTF-8, enabling users with computers set up for different languages to share application data.

**Uniform Resource Locator** The address of a resource on the Internet or an intranet.

**unique member name** A non-shared member name that exists only once in a database outline.

**unique member outline** A database outline that is not enabled for duplicate member names.
upgrade  The process of replacing an earlier software release with a current release or replacing one product with another.

upper-level block  A type of data block wherein at least one of the sparse members is a parent-level member.

user directory  A centralized location for user and group information. Also known as a repository or provider.

user variable  Dynamically renders data forms based on a user’s member selection, displaying only the specified entity. For example, user variable named Department displays specific departments and employees.

user-defined attribute (UDA)  User-defined attribute, associated with members of an outline to describe a characteristic of the members. Users can use UDAs to return lists of members that have the specified UDA associated with them.

user-defined member list  A named, static set of members within a dimension defined by the user.

validation  A process of checking a business rule, report script, or partition definition against the outline to make sure that the object being checked is valid. For example, in FDM, validation rules ensure that certain conditions are met after data is loaded from FDM to the target application.

value dimension  Used to define input value, translated value, and consolidation detail.

variance  Difference between two values (for example, planned and actual value).

varying attribute  An attribute association that changes over one or more dimensions. It can be used to track a value in relation to these dimensions; for example, the varying attribute Sales Representative, associated with the Product dimension, can be used to track the value Customer Sales of several different sales representatives in relation to the Time dimension. Varying attributes can also be used for member selection, such as finding the Products that a Sales Representative was responsible for in May.

version  Possible outcome used within the context of a scenario of data. For example, Budget - Best Case and Budget - Worst Case where Budget is scenario and Best Case and Worst Case are versions.

view  Representation of either a year-to-date or periodic display of data.

visual cue  A formatted style, such as a font or a color, that highlights specific types of data values. Data values may be dimension members; parent, child, or shared members; dynamic calculations; members containing a formula; read only data cells; read and write data cells; or linked objects.

Web server  Software or hardware hosting intranet or Internet Web pages or Web applications.

weight  Value assigned to an item on a scorecard that indicates the relative importance of that item in the calculation of the overall scorecard score. The weighting of all items on a scorecard accumulates to 100%. For example, to recognize the importance of developing new features for a product, the measure for New Features Coded on a developer’s scorecard would be assigned a higher weighting than a measure for Number of Minor Defect Fixes.

wild card  Character that represents any single character or group of characters (*) in a search string.

WITH section  In MaxL DML, an optional section of the query used for creating re-usable logic to define sets or members. Sets or custom members can be defined once in the WITH section, and then referenced multiple times during a query.

work flow  The steps required to process data from start to finish in FDM. The workflow consists of Import (loading data from the GL file), Validate (ensures all members are mapped to a valid account), Export (loads the mapped members to the target application), and Check (verifies accuracy of data by processing data with user-defined validation rules).

workbook  An entire spreadsheet file with many worksheets.

Workspace Page  A page created with content from multiple sources including documents, URL, and other content types. Enables a user to aggregate content from Oracle and non-Oracle sources.

write-back  The ability for a retrieval client, such as a spreadsheet, to update a database value.

ws.conf  A configuration file for Windows platforms.

wsconf_platform  A configuration file for UNIX platforms.

XML  See Extensible Markup Language (XML).
**XOLAP**  An Essbase multidimensional database that stores only the outline metadata and retrieves all data from a relational database at query time. XOLAP supports aggregate storage databases and applications that contain duplicate member names.

**Y axis scale**  Range of values on Y axis of charts displayed in Investigate Section. For example, use a unique Y axis scale for each chart, the same Y axis scale for all Detail charts, or the same Y axis scale for all charts in the column. Often, using a common Y axis improves your ability to compare charts at a glance.

**Zero Administration**  Software tool that identifies version number of the most up-to-date plug-in on the server.

**zoom**  Sets the magnification of a report. For example, magnify a report to fit whole page, page width, or percentage of magnification based on 100%.

**ZoomChart**  Used to view detailed information by enlarging a chart. Enables you to see detailed numeric information on the metric that is displayed in the chart.
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