

HYPERION® SYSTEM™ 9 BI+™
WEB ANALYSIS STUDIO™
RELEASE 9.3

USER'S GUIDE



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Getting Started

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About Web Analysis Studio

Hyperion® System™ 9 BI+™ Web Analysis Studio™ is an online analysis, presentation, and reporting interface for multidimensional and relational data. This chapter introduces Web Analysis Studio concepts and conventions.

See [Chapter 7, “Navigating Documents.”](#)

Starting Web Analysis Studio

The Sun Java Plug-in is automatically installed when Web Analysis Studio is first used.

► To start Web Analysis Studio:

- 1 In your Web browser's Address bar, enter the Web Analysis Studio URL and press **Enter**.

The server name is case-sensitive. For example, “webAnalysis_Server” is case-sensitive in this URL: `http://hostname:port/WebAnalysis_Server/index.html`

where *hostname:port* is the computer name, or Web Analysis Studio server IP address and port. The default port is 16080 for Tomcat users.

The Logon page is displayed.

- 2 Enter a user name and password.
- 3 Click **Logon**.




The document or interface specified by Startup preferences is displayed. See [“Startup Preferences” on page 263](#).

Web Analysis Studio Interfaces

Web Analysis Studio has four interfaces for accomplishing tasks:

- **Analyze**—Primary interface for analysis, presentation, and reporting; features navigation methods used for investigating information (see [Chapter 7, “Navigating Documents”](#))
- **Desktop**—Centrally collects and presents presentation icons, which function like Windows desktop shortcuts, for access (see [Chapter 2, “Web Analysis Studio Desktops”](#))
- **Document Designer**—Interface for creating custom documents; when active, its component toolbar is displayed below the menu bar (see [Chapter 16, “Creating Custom Documents”](#))
- **Edit Data**—Interface for changing data values, and sending changes back to Hyperion® System™ 9 BI+™ Analytic Services™; accessed from the data object shortcut menu (see [Chapter 17, “Editing Data Values”](#))

➤ To switch between Web Analysis Studio interfaces, use the toolbar buttons:




- Switch to Desktop 
- Switch to Analyze 
- Switch to Document Designer 








Analyze Interface




Analyze interface components:

- **Title bar**—Features minimize, maximize, and close buttons, and a shortcut menu.
- **Masthead**—Crosses the application window below the title bar. It identifies the Hyperion product and enables companies to customize and co-brand the client.
- **Menu bar**—Below the masthead. It centrally organizes principal commands and subcommands.
- **Toolbar**—Located to the right of the menu bar; provides single-click access to principal tasks and modules.

To show or hide the toolbar, select **View > Toolbar**, or press **Ctrl+T**.

Toolbar Button	Description
	Toggle View Pane
	New
	Open

Toolbar Button	Description
	Save
	Save As
	Print
	Undo
	Redo
	Home Page
	Previous Document
	Next Document
	Cube Navigator
	Desktop
	Analyze
	Design

- **Process bar**—Below the toolbar and above the content area. When you begin a complex task with multiple steps, the process bar indicates the number of steps, and the current step. The content area changes with each step, until the process is completed. When not in a process, it indicates the full path to the current document's repository location. The process bar also indicates the current module or interface.
- **View pane**—Extends down the left side of the interface. Buttons atop the View pane switch View pane tabs:
 -  **Browser**—Presents the repository as a node tree. Only files and folders to which you are granted access are listed. This typically consists of your own folder and group folders to which you belong. When navigation panel items are selected, their contents are listed in the selection panel below.
 -  **Information Panel**—Composed of segments summarizing the content area. Each segment features controls and context-sensitive shortcut menus.
 -  **Palette**—Lists the document components in the current document, and their component properties.

To show or hide the View pane, select **View > View Pane**, or press **F6**.

- **Content area**—Largest area of the interface. It is located between the Process bar and the Status bar, and reflects the current module, View pane panel, and document. A content tab bar is displayed at the bottom of the Content area when multiple documents are open. The current content tab is highlighted.
- **Status bar**—At the bottom of the interface, provides applet processing information.

Documents and Data Objects

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
- Free-form grid

You can convert spreadsheets to charts or pinboards. SQL Spreadsheets and Free-form grids must be created using the Document Designer. Prerequisites exist for all display types.

Topics related to documents and data objects:

- [“Filter Panel” on page 20](#)
- [“Page Control Panel” on page 20](#)
- [“Shortcut Menu” on page 21](#)

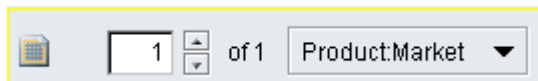
Filter Panel

The Filter panel displays dimension member selections on the Filter axis. When no member selections are made in Filters, dimensions are represented by their highest aggregate. Filter selections focus the intersections, the data values, and consequently the data object analysis.

- To show or hide the Filter panel, select **View > Filters**, or press **F7**.

Page Control Panel

The Page Control panel indicates dimension members assigned to the spreadsheet Pages axis. Spreadsheet row and column intersections are organized by Pages axis dimensions. The Page Control panel is displayed when dimensions are assigned to the Pages axis.



Think of pages as the Z-axis of a three-dimensional graph. Visualize a stack of spreadsheets. Traveling back and forth in the stack enables comparison of values on different pages.

- To navigate Page dimensions:
 - Click Page Control scroll buttons to move in the page series.
 - Select a page dimension member name from the list.

The Page Control panel can display multiple drop-down lists when working with page dimension combinations. Multiple-page drop-down lists display all possible page combinations, whether data exists. Single-page drop-down lists omit page combinations without data. Hyperion recommends single page drop-down lists when working with sparse dimensions.

- To separate page dimensions into multiple drop-down lists, click the Page Control panel page icon.
- To combine multiple-page dimensions into one drop-down list, click the **Page** icon.

Shortcut Menu

Data objects feature a shortcut menu that is context sensitive to headers, cells, dimensions, and data values. It provides immediate access to advanced formatting and functional options:

Command	Description	Submenu
Browse	Displays the Dimension Browser dialog box, used in member selection.	
Keep Only	Deselects all other dimension member selections for the selected Dimension, leaving only the selected member.	
Remove Only	Removes only the member selected.	
Drill	Increases or decreases the level of dimension detail by including or excluding members of the dimensional hierarchy in the display.	Select from the submenu: <ul style="list-style-type: none"> ● Drill ● Down ● Up ● To Top ● Options
Analysis Tools	Applies sorting, ranking, filtering, calculation and conversion definitions to the current selection.	Select from the submenu: <ul style="list-style-type: none"> ● Analysis Tools Manager ● Traffic Lighting ● Sort ● Retrieve Only Top/Bottom ● Restrict Data

Command	Description	Submenu
		<ul style="list-style-type: none"> ● Calculation ● Show/Hide Only ● Format ● Currency Conversion (On SAP BW data sources) ● Unit of Measure Conversion (On SAP BW data sources)
Related Content	Accesses data from other Hyperion sources.	
Search	Searches for a dimension member in the selected dimension.	
Data display	Sets custom data display behavior.	<ul style="list-style-type: none"> ● Selected Member ● Selected Member First ● Default Label Mode ● Product-specific Label Mode ● Dimension Header Sort (Default, Ascending, Descending, Level, Generation) ● Show Linked Reporting Object Indicators ● Suppress (Missing Rows, Shared Members, Zero Rows)
Refresh data	Refreshes the data from the data source.	
Export Data	Exports data values.	<p>You can export to Microsoft Office, to a tab-delimited text file, or to the operating system clipboard in three formats:</p> <ul style="list-style-type: none"> ● Query-ready ● Formatted ● Image
Print	Displays the Print dialog box, used to print the current page of the data object.	
Formatting	Displays the Formatting dialog box, used to set header and cell formatting options.	
Edit data	Edits cell values and writes them back to Analytic Services.	
Spreadsheet Options	Displays the Spreadsheet Options dialog box used to select options. For charts, opens Chart Properties	
Column Sizing	Sets the column width.	<ul style="list-style-type: none"> ● Autosize ● Custom width ● Set all columns to this width

Exiting Web Analysis Studio

- ▶ To exit Web Analysis Studio, select **File > Exit**.

2

Web Analysis Studio Desktops

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Desktop Folders

Desktop folders centrally collect and present presentation icons. Presentations are playlists of documents. They enable documents to be grouped, organized, ordered, distributed, and reviewed. Presentation icons are represented on the Desktop like application shortcuts on the Windows desktop.

Accessing Multiple Desktops

You can create multiple Desktop folders. The Desktop interface displays the Desktop folder specified by the active preference file. You cannot review Desktop folders in inaccessible locations, however.

Although only one Desktop can be current, you can change the active preference file. Each preferences set can specify a different Desktop folder. See [“Folders Preferences” on page 263](#).

Topics that discuss how to access Desktops:

- [“Accessing the Current Desktop” on page 26](#)
- [“Accessing Desktops” on page 26](#)

Accessing the Current Desktop

- To access the current Desktop, select **Go > Desktop**, or click  (Switch to Desktop), or press **F11**.

Accessing Desktops

To access Desktops, you must display preferences and reset the active preference file.

- To access a Desktop:

- 1 Select File > Preferences.**

The User Preferences dialog box is displayed.

- 2 In Active Preferences, select one option:**

- Use **My Preferences**—Sets the current preference files to the preference files in your user folder
- Use **Shared Preferences**—Sets the current preference file to the specified repository location.

- 3 To verify the current Desktop folder, click Folders.**

Desktop folder specifies the folder location used by the Desktop.

- 4 Optional: To specify another repository location as the current Desktop folder, perform these actions:**

- Click the Desktop Folder Browse button (...).
- In **Open**, navigate to a repository location.
- If there is no Desktop folder at that location, click **New Folder**.
- In **File name**, enter a folder name.
- Click **OK**.

The repository location and folder name are displayed in **Desktop Folder**.

- 5 Click OK.**

- 6 Click the Switch to Desktop button.**

The selected Desktop is displayed.

Managing Desktop Presentations

Only presentations, and links or shortcuts to presentations, display on the Desktop. Other files and folders in the Desktop folder do not display as icons.

You must grant access and locate a presentation, link, or shortcut in the Desktop folder for a presentation icon to be displayed.

You cannot hide a presentation in the Desktop folder from the Desktop. If you do not want a presentation to display on the Desktop, relocate it outside the Desktop folder.

Efficient presentation distribution requires planning:

- Hyperion discourages copying presentations to multiple individual Desktops. It is difficult to track and synchronously maintain multiple copies in large repositories.
- It is better to distribute a shortcut or link, than the original presentation. Maintaining only one presentation protects the repository from multiple file footprints of identical information, and enables presentations to be centrally maintained and updated.

Best practices for managing presentations:

1. Create and maintain a presentation in your user Desktop folder.
2. Create groups for each distribution pattern you require.
3. To distribute the presentation, edit Security file properties to grant access to groups.
4. Reference the original presentation by creating links or shortcuts in the group desktop.

Opening Presentations from the Desktop

The Desktop centrally collects and presents presentation icons.

- To open a presentation from the Desktop, perform one action:
 - Right-click the presentation icon and select **Open**.
 - Double-click the presentation icon.

You may be prompted with the Database Logon dialog box, if the selected presentation uses database connections that you do not own. To log on to the database connection, enter the database connection user ID and password, and click OK.

All documents in the presentation playlist are loaded in the Analyze interface. Document names are listed in the tabs bar. The first document in the presentation is opened. Its tab is highlighted as the current document.

Note:

When you open a presentation from the Desktop, all other currently opened documents close.

Editing Presentations from the Desktop

- To edit a presentation from the Desktop, right-click the presentation icon and select **Edit**. The Presentation Wizard is displayed, enabling you to edit the presentation icon, presentation contents, and their order. See [“Editing Presentations” on page 42](#).

Deleting Presentation Icons from the Desktop

Deleted presentations are removed from your repository Desktop folder. This file may be a link or a shortcut referencing a presentation at another location. Although the link or shortcut is deleted, the referenced presentation persists. Deleting a presentation does not delete documents referenced by the presentation.

- To delete a presentation from the Desktop, right-click the presentation icon and select **Delete**. See [“File and Folder Shortcut Menus” on page 51](#).

Editing Presentation File Properties from the Desktop

Presentation file properties enable you to rename the presentation, enter a file description, and set security options.

- To edit a presentation's file properties, right-click the presentation icon and select **Properties**. The File Properties dialog box is displayed. The General tab enables you to rename the presentation, and enter a description. The Security tab enables you to grant or withhold access to users and groups. See [“Setting File Properties” on page 49](#).

Setting Desktop Wallpaper

You can load an image as the desktop wallpaper, clear an image, or indicate how the image covers the desktop.

- To set the Desktop wallpaper:
 - 1 **Right-click the Desktop (not an icon) and select Wallpaper.**
The Select Graphic dialog box is displayed.
 - 2 **Click Load to browse for a graphic file; click Open to select the graphic file.**
 - 3 **In Style, select an option:**
 - **Center**—Centers the graphic on the Desktop
 - **Stretch**— Stretches the graphic across the Desktop
 - **Tile**—Repeats the graphic across the Desktop
 - **Top-Left**—Displays the graphic in the top left corner of the Desktop

You can set the Desktop wallpaper for the current Desktop using the preferences Look and Feel tab.

Refreshing the Desktop

Refreshing updates the current Desktop to reflect changes.

- ▶ To refresh the Desktop, right-click the desktop and select **Refresh**.

3

Managing Documents

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Documents

Documents synthesize formatting definitions with data values from a data source. A document is the content and display formatting. After documents are saved, they become multipurpose files for presentation, analysis, and distribution in numerous formats.

Document tasks include:


- “Opening Documents” on page 32
- “Saving Documents” on page 33
- “Closing Documents” on page 34
- “Modifying Document Properties” on page 34

Additional document procedures are described by these tasks:

- **Renaming Documents**—See “File and Folder Shortcut Menus” on page 51.
- **Distributing Documents**—See “Exporting Documents and Presentations” on page 141, “Printing” on page 149, and “Setting File Properties” on page 49.
- **Importing Document Definitions**—See Chapter 19, “Accessing External Media”

Open Dialog Box


The Open dialog box provides an interface for retrieving repository files.

- To access the Open dialog box, select **File > Open** or click .

Control	Description
Location	Indicates the current repository folder. A list of previously visited locations is stored as a series. Select locations from the series, or use Back and Forward to move through the series.
Back	Moves to the previous location. Assumes you navigated to another location.
Forward	Moves to the next location in the series. Assumes you navigated to a previous location.
Up	Moves up one folder level in the repository.
Favorites	Moves to the current Favorites folder. The Favorites Folder is set for by Folders preferences.
Favorites List	Lists links to available group Favorites folders. Because the Favorites button jumps to only the current user's Favorites folder, this list is provided to navigate to alternate Favorites folders.
Home	Moves to the current Home folder. The Home Folder is set by Folders preferences.
New Folder	Creates a folder at the current location.
View	Changes between Detail, List and Icon views.
Favorites frame	Displays shortcuts to the contents of Favorites folders. Click the dark blue bar to display the contents of that Favorites folder.
Selection frame	Lists the current folder's contents. The selection frame contains the standard shortcut menu that includes: Copy, Cut, Rename, Delete, View, and Properties.
File Name	Indicates the current selection's name.
Files of Type	Indicates the file type filter, used to display the current selection's content in the selection frame.

Opening Documents

- To open a document:

- 1 Select **File > Open**, or click , or press **Ctrl+O**.

The Open dialog box is displayed and lists the current folder content specified by location.

- 2 From **Files of Type**, select **Web Analysis Document**.

- 3 Navigate to the document you want to open.

- 4 **Optional:** To sort large lists of documents and presentations:

- a. Right-click the selection frame and select **View > Detail**.

The selection frame features three columns: **Name**, **File Type**, and **Last Modified**.

- b. Click a column header to sort the contents of the selection frame in ascending order, by that column.

- c. Click the column header again to sort the contents of the selection frame in descending order, by that column.
- 5 **Select a document or documents using these options:**
 - To select a document from the selection frame, click the document name or icon.
 - To select a series of documents from the selection frame, click a document name and press and hold **Shift** while selecting another document name. The first selection, the last selection and all documents in between are selected.
 - To select multiple documents, not necessarily in a series, hold down **Ctrl** while clicking document names in the selection panel.
 - To deselect items, click outside the Name column or on empty white space.
 - Double-click to select and dismiss the Open dialog box.
 - 6 Click **OK**.
 - 7 If prompted, in **Database Login**, enter a User ID and password for the database connection. Click **Save User ID and Password** to store log on credentials for the database connection, and click **OK**.

The selected document is displayed in the content area.

Saving Documents

Saving stores information, such as the query, document properties and formatting. Saving does not send data value updates back to the data source. See [“Editing Data Values” on page 245](#). You can only save documents into folders that you can access.

You can create Services buttons or hotspots that save the current document. See [“Creating Hotspots” on page 223](#).

- ▶ To save previously saved documents, perform one action:
 - Select **File > Save**.
 - Select the **Save** icon.
 - From the Contents Tab bar, right-click the current content tab and select **Save**.
 - Press **Ctrl+S**.
- ▶ To save a document:
 - 1 **Perform one action:**
 - Select **File > Save As**.
 - Select the **Save As** icon.
 - From the Contents Tab bar, right-click the current content tab and select **Save As**.

The Save As dialog box is displayed. It features a selection frame listing the current folder content, specified by **Location**.
 - 2 **From Files of Type, select Web Analysis Document.**

- 3 Navigate to the folder in which to save the document.
- 4 In **Filename**, enter a document name.
- 5 Click **OK**.

Closing Documents

- To close the active document, perform one action:
 - Select **File > Close**.
 - From the Contents Tab bar, right-click the current content tab and select **Close**.
- To close all opened documents, perform one action:
 - Select **File > Close All**.
 - From the Contents Tab bar, right-click the current content tab and select **Close All**.

Unchanged files close. Changed files stored in the repository prompt you to save changes. Unsaved files trigger the Save As dialog box. See [“Saving Documents” on page 33](#).

Modifying Document Properties

Documents properties enable you to specify settings that impact display and use. You set document properties in the File Properties dialog box Advanced tab. Document Usage options prevent subsequent users from using these methods:

- Drill up
 - Drill down
 - Access shortcut menus
 - Change Display Type
- To modify document properties:
 - 1 **Perform one action:**
 - Right-click the content tab for a document and select **Properties**.
 - Right-click the document name in the View Pane **Browser** tab, and select **Properties**.
 - With the document open in the Content area, select **File > Properties**.

- 2 **Click the Advanced tab.**

The Advanced tab shows the document properties for the current document.

- 3 **Optional: To prevent subsequent use of methods, select the corresponding Document Usage options.**

You can prevent use of: drilling up, drilling down, accessing the shortcut menu, and changing the display type.

4 Click **OK**.

4

Managing Presentations

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About Presentations

Presentations are playlists of documents. They enable documents to be grouped, organized, ordered, distributed, and reviewed. Presentations are not documents copied into a set. A presentation is a list of pointers referencing documents in the repository.

Topics that discuss presentation permissions:

- [“Presentation Access and Document Permissions” on page 37](#)
- [“User and Group Permissions” on page 38](#)

Related Topics

[“File and Folder Shortcut Menus” on page 51.](#)

[“Exporting Documents and Presentations” on page 141](#)

[“Printing” on page 149](#)

[“Setting File Properties” on page 49.](#)

Presentation Access and Document Permissions

It is possible to distribute to another user a presentation that contains documents that he or she cannot access. Document access is independent of presentation access.

A document in a presentation is not listed to users without list permissions. A document in a presentation cannot be opened by users without read permission.

Document permissions that withhold access prevent all access to the document, directly or through a presentation. Presentation permissions that withhold access do not prevent access to a document.

User and Group Permissions

Users can access presentations assigned directly to them or presentations assigned to a group to which they belong.

When presentations are assigned to a group, the documents in that presentation must also be assigned to the group. Otherwise, group members can access the presentation, but they cannot access its documents (unless they have individual user access).

To mitigate the risk of conflicting permissions, store presentations with the documents they reference. 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 it is to manage permissions for individual files and individual 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.

Presentation Benefits and Considerations

Folder references simplify presentation maintenance because Web Analysis Studio 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.

Presentation Reference Reconciliation


When presentations are opened, Web Analysis Studio first attempts to reconcile document references, then folder references.

If files are copied and the original file deleted, Web Analysis Studio cannot locate the unique file identifier. In this case, Web Analysis Studio 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

► To open a presentation:

1 Perform one action:

- Select **File > Open**.
- Click .

The Open dialog box is displayed and lists the current folder contents, specified by location.

2 Select Web Analysis Presentation from Files of Type.

3 Navigate to the presentation you want to open.

As you navigate, the selection frame lists the files and folders indicated by **Files of Type**.

4 Optional: Sort large lists of documents and presentations using these options:

- a. Right-click the selection frame and select **View > Detail**.

The selection frame features three columns **Name**, **File Type**, and **Last Modified**.

- b. Click a column header to sort the selection frame contents in ascending order, by that column.
- c. Click the column header again to sort the selection frame contents in descending order, by that column.

5 Select a presentation (or additional documents and presentations) using these options:

- To select a presentation from the selection frame, click the presentation name or icon.
- To select a series of document or presentations from the selection frame, click a file name and press and hold **Shift** while selecting another file name. The first selection, the last selection and all files in between are selected.
- To select multiple files, not necessarily in a series, hold down **Ctrl** while clicking file names in the selection panel.
- To deselect items, click outside the Name column or on empty white space.
- Double-click to select and dismiss the Open dialog box.

6 Click OK.

If the first document in a presentation uses a Database Connection requiring log on, you are prompted by the Database Login dialog box.

- 7 If prompted by the **Database Login** dialog box, enter a **User ID** and password for the Database Connection. Select the **Save User ID and Password** option to store log on credentials for the Database Connection, and click **OK**.

The selected presentation (and other selections) display as content tabs below the content area. The first document in the presentation is opened and displays as the current document.


Important Notes on opening presentations:

- In the Open dialog box, you can select documents and presentation. If you selected multiple files to open, files are opened in the order listed in the selection frame. The order of documents inside the presentation are observed in the context of the other files selected for opening.
- If you open multiple presentations containing the same document, only the first instance of the document is opened. It may appear that the document did not open, or opened in the wrong order. Only one instance of a document can be opened (and modified).

Closing Presentations

- To close all opened presentations, perform one action:
 - Select **File > Close All**.
 - From the Content Tab bar, right-click the current content tab and select **Close All**.
- Unchanged files close. Changed files that are stored in the repository prompt you to save changes. Unsaved files trigger the Save As dialog box. See [“Saving Documents” on page 33](#).

Creating Presentations

- To create a presentation:
 - 1 Perform one:
 - Select **File > New > Presentation**.
 - Click , and select **Presentation**.

The Process bar displays steps for creating a presentation: Content, Order, and Image. In the first step, you must select the presentation content from previously defined documents in the repository. Notice that the Presentation wizard automatically displays the View Pane Browser tab, so you can select documents and folders from the repository.
- 2 In the View Pane **Browser** tab, navigate to a location containing a document, folder, or link.
- 3 To add a file to the presentation playlist:

- Select a file on the Browser tab, and click the **right arrow** button.
- To select a series of files in a folder, click a file name and press **Shift** and select another file name. The first selection, the last selection and all files in between are selected. Click the **right arrow** button.
- To select multiple documents in a folder that are not necessarily in a series, hold down **Ctrl** while clicking multiple file names. The files you click are selected. Click the **right arrow** button.

Your selections display in the Presentation Content list.

4 Optional: To remove content from the selected presentation content panel:

- Click the file name on the Content page and click the **left arrow** button.
- Right-click a file on the Content page and select **Remove** from the shortcut menu.
- To deselect a series of files, click a file name and press **Shift** and select another file name. The first selection, the last selection and all files in between are selected. Click the **left arrow** button.
- To select multiple documents that are not necessarily in a series, hold down **Ctrl** while clicking multiple file names. The files you click are selected. Click the **left arrow** button.

5 Optional: Click Next.

6 Optional: To reorder the selected content, perform one action:

- Select a file on the Order page and click an **Up** or **Down** arrow button to reposition the file in the playlist.
- Right-click a file and select **Move Up** or **Move Down** from the shortcut menu.
- To select a series of files, click a file name and press **Shift** and select another file name. The first selection, the last selection and all files in between are selected. Click the **Up** or **Down** arrow button to reposition the files in the playlist.
- To select multiple documents in a folder that are not necessarily in a series, hold down **Ctrl** while clicking multiple file names. The files you click are selected. Click the **Up** or **Down** arrow button to reposition the files in the playlist.

7 Optional: To select an image for the presentation icon, perform these steps:

- a. Click **Select Graphic**.

The Open dialog box is displayed.

- b. Navigate to a folder containing a JPG or GIF image file, and click to select the file.

- c. Click **Open**.

Your image is displayed as the Desktop Button Image on the Presentation wizard. Clicking **Clear** restores the default desktop button image.

8 When your selected content is in the correct order, click Finish.

The Save As dialog box is displayed that lists the current folder contents, specified by location.

9 Navigate to the folder into which you want to save your presentation and enter a name in Filename.

10 Click **OK**.

The presentation is saved to the specified location, using the specified name.

Editing Presentations

Options for modifying presentations:

- You can edit a presentation by changing the content, order, and presentation icon and saving these changes.
- You can also copy a presentation and paste it to another location, where it can be modified without impacting the original presentation. You can not save a presentation under another name or to another location (Save As).

See [“Copying Files” on page 52](#).

➤ To modify a presentation:

1 Right-click a presentation file name and select **Edit**.

The Presentation Wizard is displayed with the View Pane Browser tab.

2 **Optional:** In the View Pane **Browser** tab, navigate to a location containing a document, folder, or link that you would like to add to the presentation.

3 **Optional:** To add a file to the presentation playlist, perform one action:

- Select a file on the Browser tab, and click the **right arrow** button.
- To select a series of files in a folder, click a file name and press **Shift** and select another file name. The first selection, the last selection and all files in between are selected. Click the **right arrow** button.
- To select multiple documents in a folder that are not necessarily in a series, hold down **Ctrl** while clicking multiple file names. The files you click are selected. Click the **right arrow** button.

Your selections display in the Presentation Content list.

4 **Optional:** To remove content from the selected presentation content panel, perform one action:

- Click the file name on the Content page and click the **left arrow** button.
- Right-click a file on the Content page and select **Remove** from the shortcut menu.
- To deselect a series of files, click a file name and press **Shift** and select another file name. The first selection, the last selection and all files in between are selected. Click the **left arrow** button.
- To select multiple documents that are not necessarily in a series, hold down **Ctrl** while clicking multiple file names. The files you click are selected. Click the **left arrow** button.

5 **Optional:** Click **Next**.

6 **Optional:** To reorder the selected content, perform these actions:

- Select a file on the Order page and click **Up** or **Down** arrow button to reposition the file in the playlist.
- Right-click a file and select **Move Up** or **Move Down** from the shortcut menu.
- To select a series of files, click a file name and press **Shift** and select another file name. The first selection, the last selection and all files in between are selected. Click an **Up** or **Down** arrow button to reposition the files in the playlist.
- To select multiple documents in a folder that are not necessarily in a series, hold down **Ctrl** while clicking multiple file names. The files you click are selected. Click an **Up** or **Down** arrow button to reposition the files in the playlist.

7 Optional: To select an image for the presentation icon:

- a. Click **Select Graphic**.
The **Open** dialog box is displayed.
- b. Navigate to a folder containing a JPG or GIF image file, and click to select the file.
- c. Click **Open**.
Your image is displayed as the **Desktop Button Image** on the Presentation wizard. Clicking **Clear**, restores the default desktop button image.

8 When your selected content is in the correct order, click **Finish.**

5

Managing Files and Folder

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Web Analysis Repository

The repository centrally stores system data in relational database tables, at a shared local area network location. Web Analysis Studio presents the repository as a file management system in the View panel Browser tab.


Browser Tab


The Browser tab is one of three View Pane tabs.

The Browser tab navigation panel presents the repository as a node tree. You can see only files and folders to which you are granted access. This typically consists of your own folder and folders of groups to which you belong. Administrators can designate additional access to individual users and groups as needed.

You can expand, collapse, explore, and select from the repository in the course of your analysis, presentation, and reporting. The Browser tab Selection frame presents the contents of the currently selected Navigation frame folder.

Accessing the Browser Tab

- To display the View Pane Browser tab, perform one action:
 - Select View > View Pane, then click .

- Press F6, then click .

Setting the View

You can display repository contents in the Browser tab in three ways:

- **Detail**—Displays file names in a vertical list with additional File Type and Last Modified information.
- **Icon**—Displays file icons horizontally and vertically on the panel.
- **List**—Displays file names in a vertical listing.

➤ To set the view, perform one action:

- Select **View**, and one of three menu options: **Icon**, **List**, or **Detail**.
- From the shortcut menu, select **View**, and one of three menu options: **Icon**, **List**, or **Detail**.

The interface changes to reflect your selection.

➤ To refresh the interface, perform one action:

- Select **View > Refresh**.
- Press F5.
- From the content area shortcut menu, select **Refresh**.

The interface is updated with the latest repository information.

Filtering the Browser Tab

You can restrict the objects displayed in the View Pane Browser tab to reduce the number and kinds of items displayed in the selected folder.

➤ To filter the Browser tab Selection frame:


1 Select View > Display Items of Type.

2 Select one option:

- **All**—displays all files, regardless of type.
- **Document**—displays only documents
- **Presentation**—displays only presentations
- **Database Connection**—displays only database connections.

Resizing the Browser Tab

You can resize the Navigation frame, the Selection frame and the View Pane Browser tab.

- ▶ To resize the View Pane Browser tab Navigation frame and Selection frame, float the cursor over the border between the two frames, until it changes to a double arrow cursor, then click and drag the cursor to resize the frames vertically.
- ▶ To resize the View Pane Browser tab, float the cursor over the border between the View Pane and the Content area, until it changes to a double arrow cursor, then click and drag the cursor left or right to resize the pane horizontally.
- ▶ To show or hide the View Pane, perform one action:
 - Select **View > View Pane**.
 - Click .
 - Press **F6**.

Folders

Web Analysis Studio installs these folders by default.

The default hierarchy features three (3) main folders:

The *root* folder is specified by the slash character (/). It contains all other files and folders.

The *Groups* folder is directly below the root folder. It is intended to contain all group folders. The Groups folder contains a default group folder named *Everyone*, that enables all users to be managed collectively.

The *Users* folder is also directly below the root folder. It is intended to contain all user profile folders.

While administrators can see all defined users and groups folders and files, you can see only files and folders to which you are granted access. This typically consists of your own folder and folders of groups to which you belong. Administrators can designate additional access to individual users and groups as needed.

Note:

As with all file systems, though the default directories, folders, and files were designed for a purpose there is nothing to prevent you from diverging from this original design. Consider this, when giving users and groups access and permissions to the repository. See [“Setting File Properties” on page 49](#).

User and Group Folders

User folders and group folders contain this standard set of folders:

Databases—Database connections.

Desktop—Presentations to be displayed on the Desktop

Favorites—Most commonly sought content




Every user profile and group profile features a Favorites folder. Files in the Favorites folder are presented for quick access in the Open dialog box, the Save dialog box, and under the Go > Favorites menu, based on the active user specified by preferences.

Reports—Other repository files

Profiles—Preference files used to customize application look-and-feel and behavior

Files

User folders, group folders, and their subfolders organize and manage *files*, *shortcuts*, and *links*. There are four kinds of files:

- **Database connection** —Define the terms, conditions and method for connecting to a data source.
- **Web Analysis documents** —Synthesize formatting definitions and analysis tools definitions with the data values returned from the data source.
- **Presentations** —Playlists of documents, enabling documents to be grouped, organized, ordered, distributed, and reviewed.
- **Preferences**—Customize application look and feel, and behavior.

Although multiple preference files can be defined, only one can be current. You can also change the active preference file to a preference file shared by users.

Shortcuts and Links

Shortcuts navigate to other repository locations. Shortcuts can link to folders, files, or links. Shortcuts do not grant access to target files.

Broken shortcuts are the result of renamed targets, moved targets, or deleted locations. Caution should be used when a broken shortcut is encountered, as another administrator may be updating a dynamic target. You can restore a broken shortcut by creating an object with the specified name at the specified location.

A unique identifier is assigned to every element in the repository. *Links* are references to folders, files, shortcuts and links using these identifiers. Links present their target in the current folder, regardless of where the target is located or how the target is renamed. Links are fixed references to another object in the repository.

Links simplify maintenance by enabling information stored at one location to be presented in multiple, diverse locations in the repository.

Broken links are designated by icons:



Broken links are the result of a deleted target, and they should also be deleted when encountered. You cannot restore a broken link. You must recreate it.

Links to broken links also display as broken links, even though they are operating correctly. This saves you the effort of pursuing a chain of links that is inevitably broken. You must identify and repair the broken link in the chain.

Expanding and Collapsing in the Repository

- To expand a folder in the Navigation frame, click the folder's plus sign (+) node.
- To expand a folder and display its contents in the selection frame, double-click the folder icon or name.
- To collapse an open folder, click the folder's minus sign (-) node.

Selecting Folders and Files

The repository supports most conventions used by other repositories. Selecting a folder also selects all contents of that folder. Several selection methods are supported:

- To select a file, click the file icon or its name.
- To select a series of files, click a file, press **Shift** and select another file.
The first selection, the last selection, and all files in between are selected.
- To select multiple files that are not necessarily in a series, hold down **Ctrl** while clicking multiple files.

Setting File Properties

All repository files have general and advanced properties.

- To display file repository file properties, right-click the file name in the **View Pane Browser** and select **Properties**.

General Properties

- **Name**—Artifact name
- **Description**—User-supplied description

- **Type**—Indicates whether the artifact is a folder, file, shortcut, or link (read-only)
- **Owner**—File creator, a user who can change permissions by default (read-only)
- **Location**—Repository location of the file (read-only)
- **Created**—Time when the artifact was created
- **Modified**—Time when the artifact was last modified

Advanced Properties

Advanced file properties apply to all users and groups:

- **HTML Client Override Template**—JavaServer Pages (JSP) template used to convert documents to HTML Web pages when opened in Hyperion® System™ 9 Workspace™
- **HTML Export Override Template**—JSP template used to convert Web Analysis documents to HTML Web pages using File > Save As HTML; output location is specified in the Save dialog box
- **HTML Batch Export Template**—JSP template used to convert Web Analysis documents to HTML Web pages when running batch export programs
- **Document Usage**—Restricts subsequent users from drilling up, drilling down, accessing shortcut menus, and changing the display type

Notes on JSP Templates

- Web Analysis Studio converts Web Analysis documents to HTML Web pages using predefined JSP templates.
- All JSP templates must be located in your application server's Web Publishing template subdirectory (`wp_templates`), and all templates must be specified by name (including the JSP file extension).
- When no JSP template is specified, Web Analysis Studio uses the `report_publish.jsp` template in `\webapps\WebAnalysis\templates`.
- When you publish presentations, a directory named for the presentation is created in the application server's Web publishing output directory (`wp_output`), if no other directory is specified. When you use the Batch Utility, the default output file location is the application server's Web publishing output directory (`wp_output`), if no other directory is specified; however, you can enter a parameter that specifies an alternate output location.

Related Topics

[“Modifying Document Properties” on page 34](#)

[“Changing and Locking Display Types” on page 103](#)

File and Folder Shortcut Menus

Files and folders share a common shortcut menu. Menu items are enabled and disabled based on user profile permissions, object type, and file state.

Topics that discuss shortcuts:

- [“Opening Files” on page 51](#)
- [“Editing Files” on page 51](#)
- [“Adding Files to Favorites” on page 52](#)
- [“Adding Files to Desktop” on page 52](#)
- [“Copying Files” on page 52](#)
- [“Copying and Pasting Links” on page 53](#)
- [“Moving Files” on page 54](#)
- [“Renaming Files” on page 54](#)
- [“Deleting Files” on page 54](#)

Opening Files

Opening functionality differs by file type and your ability to access a file.

- To open a file, right-click the file name and select **Open**.

File Type	Open Command Result
Document	Opens the document in the Analyze content area.
Database Connection	Open a Auto-Populate Dimension document using the selected database connection. Uses the highest aggregate members of the time and measures dimensions to populate the rows and columns axes of a spreadsheet.
Presentation	Opens all documents in the presentation playlist in the content area.
Shortcut or Link	Determines the file type of the source file for the shortcut or link and responds.

Editing Files

Editing functionality differs by file type and your ability to access a file.

- To edit a file, right-click the file name and select **Edit**.

File Type	Edit Command Result
Document	Opens the document in Document Designer, enabling you to create a custom document.

File Type	Edit Command Result
Database Connection	Opens the database connection wizard, enabling you to set data source parameters.
Presentation	Opens the Presentation Wizard.
Shortcut or Link	Determines the file type of the source file for the shortcut or link, and responds.

Adding Files to Favorites

Every user profile and group profile features a Favorites folder. Files in the Favorites folder are presented for quick access in the Open dialog box, the Save dialog box, and under the Go > Favorites menu based on the active user specified by preferences.

- To create a shortcut to a file in the Favorites folder, right-click the file name and select **Add To > Favorites**.

Note:

Because shortcuts are location based, a shortcut added to the Favorites folder requires the original source file to remain at its original location. Links, however, reference files through unique identifiers that travel with the file wherever it is located. To create a link to a file in the Favorites folder, you must use the Copy > Paste Link shortcut menu option.

Adding Files to Desktop

Every user profile and group profile can feature a Desktop folder. The Desktop folder displays presentation icons for presentations it contains on the Desktop. While all files can be saved to the Desktop folder, only presentations are displayed on the Desktop.

Because there is a Desktop folder for every user and group, the current Desktop is set by the active user specified by preferences.

- To create a shortcut to a presentation in the Desktop folder, right-click the file name and select **Add To > Desktop**.

Copying Files

When you copy files, except for links, to other locations, the files adopts the file permissions set for that location (the folder). Therefore, you need not coordinate file permissions of copied files with file permissions of target locations.

- To copy a file and paste it as another file or shortcut:
 - 1 Right-click the file name and select **Copy**.
 - 2 Navigate to the location where you want to create a copy of the original file.

3 Right-click the View Pane Browser tab Selection frame and select one option:

- **Paste**—Copies the original file; file permissions are inherited from this location
- **Paste Shortcut**—Creates a reference to the location of the original file; file permissions are inherited from this location

A file or shortcut is created at the this location as indicated.

Note:

Because files copied to another location adopt the file permissions set for that location, your copy may grant unlimited access to the copied file. To control access to a copied file, consider copying a link instead. Copying a link enables you to grant unlimited access to a link, while maintaining restricted access to the original file.

Copying and Pasting Links

When you paste a copied file as a link, you must coordinate access to the link and access to the original file. There is no point in creating a link to a file that no one can access, or creating a link with universal access that overrides a file with restricted access.

When no file permissions are set, the original file (or target) and the link are assigned default Read access.

► To copy a file and paste it as a link:

1 Right-click the file name and select Copy.

2 Navigate to the location to create the link.

3 Right-click the View Pane Browser tab Selection frame and Select Paste Link to paste a reference to the original file identifier.

A link is created at this location.

4 Right-click the link and select Properties.

The File Properties dialog box displays. Notice that it has General, Security, Advanced and Target Security tabs.

5 Click the Security tab to make it the current tab.

The Security tab for a link, determines access to the link.

6 Set user and group file permissions to the link.

7 Click the Target Security tab to make it the current tab.

The Target Security tab for a link, determines access to the original file that the link references.

8 Set user and group file permissions to the target.

9 Click OK.

Moving Files

When you cut and paste (or move) a file, the file retains its original file permissions without regard for the file permissions of its new location (the folder).

- To move a file:
 - 1 Right-click the file name and select **Cut**.
 - 2 Navigate to where you want to relocate the file.
 - 3 Right-click the View Pane Browser tab Selection frame and select **Paste**, to relocate the file.

Renaming Files

With permissions, you can rename a file without accessing file properties.

- To rename a file, right-click the file name and select **Rename**.

Deleting Files

With permissions, you can delete a file from the repository.

- To delete a file, right-click the file name and select **Delete**.

6

Creating Documents

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About Documents

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

- Free-form grid

Each display type has prerequisites.

- Pinboards are generated from spreadsheets and charts, and they require traffic lighting definitions. See [“Creating Pinboards” on page 185](#).
- Because custom documents use component combinations that differ, there is no single process for creating custom documents. See [“Creating Custom Documents” on page 211](#).
- SQL spreadsheets enable you to query a relational data source, and display the returned data values on a custom document. You must understand how to compose a SQL query to create a SQL spreadsheet. See [“Creating SQL Spreadsheets” on page 193](#).
- Free-form grids enable you to combine data values from multiple data sources in one data object. Free-form grids leverage custom document database connections. See [“Creating Freeform Grids” on page 203](#).
- You can change spreadsheets into a wide variety of charts. See [“Changing and Locking Display Types” on page 103](#).
- Finally, each display type has formatting options. See [“Formatting Options” on page 93](#).

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.

You can set properties that customize each element.

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 formatting options.

Queries can be explicit, requesting information on dimension members, or dynamic, requesting information about a dimension member that satisfies a set of criteria.

Topics that discuss the three primary ways to create documents:


- [“Creating Documents” on page 56](#)
- [“Creating Documents from Existing Documents” on page 60](#)
- [“Creating Auto-Populate Dimension Documents” on page 60](#)

Creating Documents

A wizard guides you through creating Web Analysis Studio spreadsheets and charts. The wizard requires that you know where a database connection is located, and have permission to use it.

► To create a document:

- 1 Perform one:

- Select **File > New > Document Wizard**.
- Click , and select **Document Wizard**.
- Press **Ctrl+Shift+N**.

The Process bar displays steps for creating documents. Because the repository stores document definitions and not document data, you must identify a data source, and the parameters for connecting to it.

2 Perform one:

- In the text area, enter the path from the root directory (/) to a database connection, including the file name.
- Click **Browse**, select a database connection file from the **Open** dialog box, and click **OK**.

3 Optional: Select **Auto-Populate Dimensions** to automatically populate and display a simple spreadsheet.

Selecting the Auto-Populate Dimension option and clicking Finish skips the remaining steps in the process. Auto-Populate Dimension uses the highest aggregate members of the time and measures dimensions to populate the rows and columns axes of a spreadsheet. This is the quickest method to display a simple spreadsheet using the wizard.

4 Optional: Select **Use Point of View** to populate the query from a predefined point of view (POV) definition.

Selecting Use Point of View and clicking Next inserts the dimensions and members that are of interest to you in documents. You can define multiple POV definitions, but Use Point of View only applies the current POV set in preferences.

Selecting Auto-Populate Dimension and Use Point of View and clicking Finish skips the remaining steps in the process and displays a simple spreadsheet using the active POV.

5 Click **Next**.

In Step 2: Select Row Dimension, you must select the dimensions to be used on the Rows axis. You must have at least one Row axis dimension and one Column axis dimension.

6 Move a dimension name from **Filters** to **Rows**:

- Double-click a dimension name in **Filters**.
- Select a dimension name in **Filters** and click the right arrow button.

The dimension name is displayed in the Rows frame. If no POV definition is applied in Step 1, the highest aggregate member in this dimension is used. If a POV definition is applied, its member selections are used.

7 Optional: To specify dimension member selections, double-click the dimension name hyperlink in **Rows**.

The Dimension Browser dialog box is displayed. The dimension is presented as a node tree in the Browse frame. You must select dimension members in Browse and move them to Selections:

- To expand or contract the dimension hierarchy:
 - Double-click dimension member names
 - Click the plus sign (+) or minus sign (-).
- To select dimension members, click the dimension member name.

A check mark is displayed in the check box of selected members, and the member name is displayed in the Selections list.

- To select dimension members dynamically, right-click a dimension member name and select an advanced member selection method.
- You can set the label mode for each dimension to the default label, an ID label, or the alias table description set in Database Preferences dialog box, through preferences.

See [“Selecting Dimension Members” on page 65](#).

- Click OK to dismiss the Dimension Browser dialog box and return to the Wizard.

8 After indicating all Rows axis dimensions, and defining their member selections, click **Next**.

9 Using the same methods used to define Rows, move a dimension name from **Filters** to **Columns**.

10 **Optional:** Using the same Dimension Browser methods, double-click the dimension name hyperlink in **Columns** to specify member selections for the Column axis.

11 Click **Next**.

In Step 4: Select Page Dimensions, you can select dimensions to be used on the Page axis. While all intersections in the document are relative to all dimension member selections, you can organize these row and column intersections by page dimension members.

12 **Optional:** Using the same methods used to define Rows and Columns, move a dimension name from **Filters** to **Pages**.

13 **Optional:** Using the same Dimension Browser methods, double-click the dimension name hyperlink in **Pages** to specify member selections for the Page axis.

14 Click **Next**.

In Step 5: Customize Filters, you select dimension members to be used on the Filters axis.

All cube dimensions participate in every spreadsheet intersection, regardless of the axis to which dimensions are assigned. The arrangement of intersections is defined by the Rows, Columns and Pages axes. The data values displayed at each intersection are determined by the member selections.

all intersections in the data object are relative to Filter dimension member selections. Filter dimension member selections focus the intersections, the data values, and consequently the data object analysis.

Cube dimensions left in the Filter axis are by default represented by the highest aggregate dimension member defined in the data source outline. If a POV definition is applied, its member selections are used. If you make Filter member selections, all intersections are relative to these selections.

15 **Optional:** To display the Dimension Browser for Filter axis dimensions, perform one:

- Select a Filter dimension and click **Customize**.
- Double-click a dimension name hyperlink in **Filters**.

16 **Optional:** Using the same Dimension Browser methods, make **Filter** axis dimension member selections and click **OK**.

17 Click **Next**.

In Step 6: Set Options, you can set a variety of document options

18 Optional: In the **Select Layout list, select one:**

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 a chart data object and a spreadsheet data object stacked vertically.

Horizontal Combination—Displays the result set as a chart data object and a spreadsheet data object arranged side-by-side.

Custom—Displays a blank palette

You can change the display type of the Vertical Combination and Horizontal Combination layouts; for example you can convert the spreadsheet to a chart type. The objects, however, are linked and maintain a coordinated context.

In case you select a layout, the Cube Navigator dialog box is displayed.

- Select dimensions and members and click OK to generate a Web Analysis document.

19 Optional: You can set the default Label mode to display dimension member IDs, or the alias table description set in database preferences.

This centrally sets all dimensions using the default Label mode to the same setting.

20 Optional: To suppress the display of one or more type of data, click the corresponding check box.

Missing Columns—Columns of data comprised of missing values.

Missing Rows—Rows of data comprised of missing values.

Shared Members—Dimension members that are used in multiple locations of one hierarchy.

Zero Rows—Rows of data comprised of zero (0) data values.

21 Optional: To suppress the display **Linked Reporting Object Indicators, click the corresponding check box.**

Linked Reporting Object Indicators are orange triangles indicating Related Content definitions in Analytic Services. See [“LROs” on page 257](#).

22 Optional: To augment the query with a server-based **Retrieve Only Top/Bottom analysis, click the corresponding button.**

See [“Retrieve Only Top/Bottom” on page 126](#).

23 Optional: To augment the query with a server-based **Restrict Data analysis, click the corresponding button.**

See [“Restricting Data” on page 124](#).

24 Click **Finish to submit the query to the data source.**


The data source is queried. The result set returned is displayed as a data object on a document.

Creating Documents from Existing Documents

When you save a document with other names or to other locations, you use the data source, data object, and query defined by a document. This document creation option leverages existing documents to save time and effort. Before saving the document under a different name, or to another location, you can modify document properties and settings as needed.

► To create documents from existing documents:

1 **Perform one:**

- Select **File > Open**.
- Click .

The Open dialog box is displayed. It features a selection frame that lists the current folder contents specified by **Location**.

2 **Select Web Analysis Document from Files of Type.**

3 **Navigate to the document you want to copy.**

4 **Select the document, and click OK.**


If the document uses a Database Connection requiring you to log on, the Database Login dialog box prompts you.

5 **If prompted by Database Login, enter a User ID and password for the Database Connection. Click Save User ID and Password to store log on credentials for the Database Connection, and click OK.**

The selected document is displayed in the content area.

6 **Modify the document.**

7 **Perform one:**

- Select **File > Save As**.
- Click .
- From the Contents Tab bar, right-click the current content tab and select **Save As**.

The Save As dialog box is displayed. It features a selection frame that lists the current folder contents specified by **Location**.

8 **Navigate to the folder to save your modified document.**

9 **Optional: Enter a name for the document in Filename.**

10 **Click OK.**

The modified document is saved to the specified location, using the specified name.

Creating Auto-Populate Dimension Documents

This is the quickest method for creating a document. It specifies the database connection, and assumes use of the highest aggregate members of the time and measures dimensions to populate

the rows and columns axes of a spreadsheet. You can modify document properties and settings as needed before eventually saving the document.

Note:

You can set the Look and Feel preferences to display Cube Navigator, instead of assuming use of the highest aggregate members of the time and measures dimension.

► To create a Auto-Populate Dimension document:

1 Display the View Pane:

- Select View > View Pane.
- Press F6.

2 Click the View Pane Browser tab.

3 In the repository, navigate to a database connection file, and double-click the file name.

If the Database Connection requires you to log on, you are prompted by the Database Login dialog box.

4 If prompted by the Database Login dialog box, enter a User ID and password for the Database Connection. Select Save User ID and Password to store log on credentials for the Database Connection, and click OK.




A Auto-Populate Dimension document is displayed in the content area.

Modifying Queries

Cube Navigator is an interface used to edit queries. Cube Navigator displays the dimensions returned by the database connection, as they are arranged on four axes:

- Rows
- Columns
- Pages
- Filters

Three kinds of dimensions are differentiated by these icons:

Icon	Dimension
	Dimensions
	Attribute Dimensions
	Attribute Calculations

Every query must have at least a dimension assigned to the Rows axis and the Columns axis, but you can also nest multiple dimensions on one axis. You can organize the Row and Column

dimensions by assigning dimensions to the Page axis. Dimensions not assigned to Rows, Columns, and Pages, remain in the Filter axis.

All dimensions participate in every intersection displayed by a data object, regardless of the axis to which they are assigned. You use Cube Navigator to arrange dimensions, to specify their level of detail, and to specify query options.

Note:

All data objects start as spreadsheets. Charts and Pinboards are still organized by the four axes, despite using metaphors that differ to display data.

- To redefine the current document's query and dimension layout:
 - Click the **Navigate Data Source** toolbar button.
 - Select **View > Cube Navigator**.

- To move a dimension between axes, drag the dimension name from its current axis to another axis.

The cursor displays a box next to it when it is over the axis. When you release the mouse button, the Dimension Browser dialog box displays. Use Dimension Browser to make member selections as needed, and click **OK**.

- To make member selections without moving the dimension to another axis, double click the dimension name.

- To clear all dimension member assignments and start over, click **Reset All**.

Topics that discuss query modification:

- [“Modifying Filter Dimensions” on page 62](#)
- [“Cube Navigator Options” on page 63](#)
- [“Relational Dimension Header Sort” on page 64](#)
- [“Label Mode” on page 64](#)

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 intersections.

Note:

If the `WebAnalysis.properties` variable `filterRestrictToSingleMember= true` is set, all users can select one member from the filter selections. In the Dim Browser, only one member can be selected, therefore the right click menu options are limited to “Find in Tree” and “Search”. Users can select one member in the left pane; additional selections overwrite the previous selection.

Cube Navigator Options

The bottom of the Cube Navigator dialog box enables you to specify server-based options in the query:

Option	Description
Default Label Mode	Sets all dimensions using the default label mode to: <ul style="list-style-type: none"> ● Descriptions—Current alias table specified by database preferences. ● IDs—Unique ID label. ● Both—When using Hyperion® System™ 9 Financial Management™, you can specify ID and Description simultaneously.
Use Point of View	Enables and disables the active POV definition defined on the current database connection.
Retrieve Only Top/Bottom	Displays the Retrieve Only Top/Bottom dialog box, used to limit and rank the query result set.
Restrict Data	Displays the Restrict Data dialog box, used to restrict the query result set based on criteria.
Show Linked Reporting Object Indicators	Shows/Hides the orange triangle symbols that indicate Related Content definitions in Analytic Services.
Suppress	Omits components, as selected, from the query result set: <ul style="list-style-type: none"> ● Missing Columns—Columns of data comprised of missing values. ● Missing Rows—Rows of data comprised of missing values. ● Shared Members—Dimension members that are used in multiple locations of one hierarchy. ● Zero Rows—Rows of data comprised of zero data values.
Display Entity Currency	When using an Financial Management data source with defined Entity dimension currency information, you can enable the Display Entity Currency option, to append the Entity dimension members with their currency value. This can be set before querying using Cube Navigator options, after querying using the Data Display shortcut menu, and for all subsequently created documents using OLAP Server preferences. See “Financial Management” on page 168 .
Use User Point of View	Selecting it adds a member selection to the Dim Browser for every dimension in the ReportDataSrc. The selected members in the User POV are utilized in the spreadsheet.

Relational Dimension Header Sort

You can also order the result set returned by the SQL query in a relational database connection. You can opt for Ascending, Descending, Selection Order and Default. Default is the natural order in which dimension members are returned, based on the data source outline. Selection Order is the order in which members were selected in Dimension Browser.

You must be aware that unlike OLAP servers, relational cubes are compiled and defined by Web Analysis Studio. The current label mode, alias tables, and selection orders from Dimension Browser are manually coordinated. Sort by alias may perform comparatively slow, as the default query result set is sorted by ID, and sorting by alias requires a complete client-side re-sort.

In addition, the source of the relational dimension header sort impacts performance. Defining a relational dimension header sort using Cube Navigator sorts all dimensions as part of the query result set being displayed.

You alternatively, can sort a relational dimension using the data object shortcut menu: Data Display > Dimension Header Sort. This method requires you to right-click a dimension header.

Lastly, you can apply dimension header sort definitions to relational generation defined in the Generation Editor. These definitions only impact the sort ordering displayed by the Dimension Browser however. Using the Order By Mode list, you can also specify to order members by ID or Alias.

Label Mode

You can set the default label mode to ID or Description in Cube Navigator. This setting impacts only those dimensions set to display the Default label mode in Dimension Browser.

The Description label comes from the alias table setting, saved per database connection and per active user as a database user preference.

You can set the default label mode before querying using Cube Navigator options or the last step in the 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.

► To set the default label mode for the current database connection:

- 1 Click **Options** in the lower left corner of the Cube Navigator dialog box.
- 2 Select **Default Label Mode** from the menu.
- 3 Select the **IDs** or **Descriptions** option.

Note:

Financial Management users have the additional label mode option of Both.

See [“Setting the Label Mode” on page 96](#).

Selecting Dimension Members

Dimension Browser, an interface for selecting members and refining database queries, is used with the 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 Browse and move them to Selections.

Members can be selected individually, by familial relationships, by data-source-specific options, or from predefined selection lists.

- To access the Dimension Browser:
 - Right-click a dimension member label on a data object, and select **Browse**.
 - In the View Pane **Information Panel** tab, right-click a dimension label and select **Browse**.
 - Click the **Navigate Data Source** toolbar button, and double-click a dimension name.
 - Click the **Navigate Data Source** toolbar button, and drag a dimension between axes. Relocating a dimension, prompts you to select members.

- To expand or collapse the dimension hierarchy:
 - Double-click dimension member names
 - Click the plus sign (+) or minus sign (-) nodes.

- To select a dimension member, click the member name in the **Browse** frame.

A check mark is displayed in the check boxes of selected members, and 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 dimension members dynamically, right-click a dimension member name and select an advanced member selection method from the list.

See [“Advanced Member Selection” on page 66](#).

- To remove members from the selection list:
 - Select the member name in the **Selection** list and click **Remove**.
 - Click the dimension member name in the **Browse** list again.

- To remove all members from the selection list, click **Remove All**.

- To set the label mode for the dimension, click a **Dimension Labels** option:
 - Use Default—Preferences default label mode.
 - Descriptions—Current alias table specified by database preferences.
 - IDs—Unique ID label.

- Both—When using Financial Management, you can specify ID and Description simultaneously.

The label displayed by the Description label mode is drawn from the alias table specified by the active user’s database preferences. You can set the alias table for each Active Preferences user ID or group ID.










You can specify label mode in dimensions, using Dimension Browser and the data object shortcut menu.

You can set a default label mode before querying the data source using Cube Navigator options or after querying using the data object shortcut menu.

See [“Alias Tables” on page 267](#).

Advanced Member Selection

In dimensions with large member sets, you can easily define selections using the Dimension Browser shortcut menu. Right-clicking dimension member names enables selection by familial relationship and data source-specific options:

Icon	Shortcut Menu Command	Selects:
	Also Select Children	Currently selected member and its children (one level below)
	Also Select Descendants	Currently selected member and its descendants
	Select Parent	Direct parent of the selected member
	Also Select Ancestors	Currently selected member and its ancestors
	Also Select Siblings	Currently selected member and members on one level with identical parent ancestor
	Select Dim Bottom	All dimension members on the lowest level of the hierarchy
	Select Dim Top	Highest ancestor
	Also Select Level	Currently selected dimension member and all dimension members on one level
	Also Select Generation	Currently selected dimension member and all dimension members in one generation
	Also Select Previous	A number of previous members at one dimension level
	Also Select Subset	An Analytic Services member subset
	Substitution Variables	Sets a substitution variable as the dimension selection
	Select Attribute	A selection from a list of attribute dimensions

Icon	Shortcut Menu Command	Selects:
	User Defined Fields	Financial Management—One of three pre-defined attribute values . Select members featuring these attribute values and compose compound selection statements with AND and OR operators
	Dynamic Time Series	Analytic Services Dynamic Time Series selection (for example: History To Date, Quarter To Date)
	Search	Locates dimension members in large dimensions with search criteria, and adds found members to the Selection list
	Find In Tree	Locates dimension members in large dimensions Expands the dimension hierarchy, but does not add found members to the Selection list

Advanced Member Selection by Data Source

Data Source	Advanced Member Selection Method
Analytic Services	<ul style="list-style-type: none"> ● 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 ● Select Attribute ● Dynamic Time Series ● Search ● Find in Tree
SAP BW	<ul style="list-style-type: none"> ● All Members ● Select Dim Top ● Select Dim Bottom ● Also Select Descendants ● Select Parent ● Also Select Ancestors ● Also Select Children ● Also Select Siblings

Data Source	Advanced Member Selection Method
	<ul style="list-style-type: none"> ● 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 <p>See "SAP BW" on page 171.</p>
Financial Management	<ul style="list-style-type: none"> ● All Members ● Select Dim Top ● Select Dim Bottom ● Also Select Descendants ● Member List ● Also Select Children ● User Defined Field ● Search ● Find in Tree <p>See "Financial Management" on page 168.</p>
JDBC Relational Data Sources	<ul style="list-style-type: none"> ● Also Select Children ● Also Select Descendants ● Select Parent ● Also Select Ancestors ● Also Select Siblings ● Select Dim Bottom ● Select Dim Top ● Also Select Generation ● Find in Tree

Consider the implications of the relational hierarchy in advanced member selections on relational data sources. When the highest ancestor is selected, a default dimension member may be used instead of the aggregation. The relational hierarchy may also equate Also Select Children and Also Select Descendants for example.

Advanced member selection methods depend on your data source implementation.

Searching for Members

Analytic Services users can locate members in large dimensions using search criteria. These searches can be conducted inside the Dimension Browser dialog box when composing a query, or from the data object shortcut menu when analyzing a document.

➤ To search for Analytic Services dimension members in Dimension Browser:

- 1 Right-click a dimension member in the Dimension Browser, and select **Search**.
- 2 Enter search criteria in the corresponding text boxes, and click **OK**.

Search Criteria	Control	Description
Member		The text string for the search function.
Mode	ID	Searches by member name.
	Description	Searches by member alias (description).
	Both	Financial Management data source enables you to search by ID and Description, using this option.
	Expand Tree	When the Expand Tree option is selected, not only is the found member added to the Selections list, but the Browse node tree is expanded to display the found member in the dimension hierarchy. Only the first instance of the search criteria is selected. When the Expand Tree option is not selected, found members are added to the Selections list, without changing the Browse node tree.
Range		Specifies the search of the dimension (All Top Members), or down the hierarchy from the selected member.
Option	Whole	Searches for the whole member name or alias.
	Substring	Searches for the first, last, or middle part of the member, 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.

➤ To search for Analytic Services dimension members in a document data object:

- 1 Right-click a dimension member header and select **Search**.
- 2 Enter search criteria in the corresponding text boxes, and click **OK**.

Note:

Search performance is directly related to the size and complexity of the dimension hierarchy.

Searching For SAP BW Characteristic Values

SAP BW users can locate characteristic values in large dimension hierarchies using search criteria. These searches can be conducted only inside the Dimension Browser dialog box when composing a query.

➤ To locate SAP BW dimension members in Dimension Browser:

- 1 Right-click a dimension member, and select **Search**.
- 2 Enter search criteria in the corresponding text boxes.

Search Criteria	Control	Description
Mode	ID	Searches by member technical name.
	Description	Searches by member alias (description).
Search Criteria		A list enables selection from these operands: <ul style="list-style-type: none"> ● Equal To ● >= ● <= ● > ● < ● Between ● Contains Pattern
		Enter the text string for the search function in the text area. Supports the wildcard characters * and +.
Execute		Runs the search function.
Filtered Members		Displays the search result set.
	Add	Adds the currently selected member from the Filtered Members list to the Selected Members list.
	Remove	Removed the currently selected member from the Selected Members list back to the Filtered Members list.
Selected Members		Displays potential member selections made from the search result set.
	Add All	Adds all Filtered Members to the Selected Members list.
	Remove All	Removes all Selected Members back to the Filtered Members list.
OK		Adds the Search Selected Members list to the Dimension Browser Selections list.

- 3 Click **Execute** to run the search function using the criterion specified in the Mode and Search Criteria groups.

The search result set is displayed in the Filtered Members group.

- 4 Select members from **Filtered Members**, and click **Add** to add them to **Selected Members**.

Only the members added to the Selected Members list are added to the Dimension Browser Selections list when you click OK.

- 5 Click **OK**.

Locating Dimension Members

In large or complex dimension hierarchies, you can locate known dimension members to select neighboring members. This is a useful alternative to composing a search string for unknown members.

- To find a known dimension member, right-click a dimension member in the Dimension Browser **Selections** list, and select **Find In Tree**.

In the Browse frame, the dimension hierarchy expands and the first instance of the selected member is highlighted. You can now select other members based on their relationship to the selected member.

Selecting Intervals

- To select an interval:

- 1 In **Analyze**, open **Dimension Browser**.
- 2 In **Dimension Browser**, right-click a characteristic and highlight **Select Interval Between**.
- 3 In the dialog box that is displayed, enter the interval **To** and **From** values.

For example, for a calendar year characteristic, you could enter 1990 to 1993 as the interval to analyze.

Previewing Member Selections

You can preview the dimension members returned by advanced member selections, before you quit the Dimension Browser dialog box.

- To preview advanced member selections for the current dimension:

- 1 In **Analyze**, open **Dimension Browser**.
- 2 In **Dimension Browser**, click **Preview Selections**.

The data source is queried using the current Selections list. The result set is displayed in the Preview Selections dialog box.

- 3 Click **Close** to return to the Dimension Browser.

Selecting Members Using Analytic Services Subsets

Analytic Services users can define rules that select dimension member subsets by rules composed of data source constructs:

- **UDAs**—Members with a specified user-defined attribute (UDA)
- **Generation**—Members belonging to a specified generation of the dimension hierarchy

- **Level**—Members belonging to a specified level of the dimensional hierarchy
- **Expression**—Members matching a pattern of wildcard characters
- **Attribute dimensions**—Members with a specified database-defined attribute
- **Conditional logic**—Members satisfying advanced subset member selection criteria

You can search all selected member descendants using a maximum of 50 subset conditions. Subset criteria are saved by individual document. Because the filter panel cannot accommodate lengthy selection lists, subset member selections made in Filters are summarized with a description.

Topics that discuss Analytic Services subset selections:

- [“Defining Member Subset Selections” on page 72](#)
- [“Wildcard Characters” on page 73](#)
- [“Expressions” on page 73](#)
- [“UDAs” on page 73](#)

Defining Member Subset Selections

► To define a member subset selection:

- 1 **Right-click a dimension member in the Dimension Browser, and select **Select Subset**.**

The Subset dialog box is displayed. 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.

- 2 **Select a subset type: **UDA, Generation, Level, Expression, or Attribute**.**
- 3 **Select an operand for the subset rule: **is (=)** or **is not (not equal)**.**
- 4 **Select a value for the subset rule from the last drop-down list.**
- 5 **Click **Add** to augment the Total Subset Definition.**

You must add the individual rule to the Total Subset Definition for it to be used. You can define compound and conditional rules by adding multiple rules to the definition, and using Advanced options to connect them:

Advanced Subset Option	Sub menu	Description
Add		Add the current rule to the Total Subset Definition.
Update		Replace the selected rule with the current rule.
Validate		Verifies the parenthetical syntax of the Total Subset Definition.
Remove		Remove the current rule from the Total Subset Definition.
Remove All		Remove all rules from the Total Subset Definition.

Advanced Subset Option	Sub menu	Description
Connect	And	Inserts the AND operand at the end of the currently selected rule. The AND operand is used by default when multiple rules are added to the Definition.
	Or	Inserts the OR operand at the end of the currently selected rule.
Move	Move Up	Moves up the currently selected rule in the Total Subset Definition.
	Move Down	Move the currently selected rule down in the Total Subset Definition.
Parenthesis	Add (Inserts an open parenthesis at the beginning of the currently selected rule.
	Add)	Inserts a close parenthesis at the end of the currently selected rule, but before an operand.
	Remove (Deletes the open parenthesis from the beginning of the currently selected rule.
	Remove)	Deletes the close parenthesis from the end of the currently selected rule.
	Remove All ()	Removes all parentheses from the Total Subset Definition.
Substitution Variable		Presents the Substitution Variable dialog box, enabling you to select a pre-defined substitution variable for the subset rule value.

- 6 **Optional:** To compose a compound subset definition, repeat steps 3 through 6, and click **Add** to augment the Total Subset Definition.
- 7 Click **OK** to finish your subset selection and return to Dimension Browser.

Wildcard Characters

Supported expression wildcard characters include the question mark (?) and the asterisk (*). The asterisk 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, and return all strings satisfying the expressions regardless of the alias table. The onus is on the user to distinguish whether the source of the value is the ID, the Description, or from an alias table, and to refine the query if needed.

UDAs

Analytic Services users can create user-defined attributes (UDAs) for dimension member subsets. A UDA is a word or phrase about the dimension member that is associated with it as a characteristic.

Selecting Financial Management User Defined Fields

Financial Management users can select members with specified attribute criterion. A user defined field is used to define compound selection rules for attributes of a specified value.

➤ To define a user defined field selection:

- 1 **Right-click a dimension member in the Dimension Browser, and select User Defined Field.**

The User Defined Field Selection dialog box is displayed. The controls at the top prompt the user to compose a rule by selecting a user defined field and setting it to a value.

- 2 **Select a field: UserDefined1, UserDefined2, or UserDefined3.**

The equal sign is the sole operand for the rule.

- 3 **Enter a value for the user defined field.**

- 4 **Click Add to augment the Selection Criteria.**

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 use Advanced options to connect them.

Advanced Option	Sub menu	Description
Add		Add the current rule to the Total Subset Definition.
Update		Replace the selected rule with the current rule.
Remove		Remove the current rule from the Total Subset Definition.
Remove All		Remove all rules from the Total Subset Definition.
Connect	And	Inserts the AND operand at the end of the currently selected rule. The AND operand is used by default when multiple rules are added to the Definition.
	Or	Inserts the OR operand at the end of the currently selected rule.
Move	Move Up	Moves the currently selected rule up in the Total Subset Definition.
	Move Down	Move the currently selected rule down in the Total Subset Definition.
Parenthesis	Add (Inserts an open parenthesis at the beginning of the currently selected rule.
	Add)	Inserts a close parenthesis at the end of the currently selected rule, but before an operand.
	Remove (Deletes the open parenthesis from the beginning of the currently selected rule.
	Remove)	Deletes the close parenthesis from the end of the currently selected rule.

- 5 **Optional: To compose compound subset definitions, repeat steps 3 through 5, and click Add to augment the Selection Criteria.**

- 6 **Click OK to finish your user defined field selection and return to Dimension Browser.**

Filtering by SAP BW Member Properties

SAP uses the term *member properties* to indicate member attributes. You can select SAP BW members and filter them by their member properties. This requires you to first make a conventional member selection, or advanced member selection, and further define a filtering definition on the selection.

► To select SAP BW members by their member properties:

1 In Dimension Browser, make a member selection or advanced member selection.

Your member selection is displayed in the Selection frame.

2 Right-click a member selection in the Selection frame and select Filter on Member Properties.

The Member Properties dialog box is displayed. The controls at the top prompt the user to compose a rule by selecting a member property, operand and value.

3 From the list, select a member property for the selection dimension.

4 Select an operand from the operand list.

5 Enter a value for the member property.

6 Click Add, to add the rule to the filter statement.

You must add the individual rule to the filter definition for it to be used. You can define compound and conditional rules by adding multiple rules to the frame, and use Advanced options to connect them:

Advanced Option	Sub menu	Description
Add		Add the current rule to the filtering definition.
Update		Replace the selected rule with the current rule.
Remove		Remove the current rule from the Total Subset Definition.
Remove All		Remove all rules from the Total Subset Definition.
Parenthesis	Add (Inserts an open parenthesis at the beginning of the currently selected rule.
	Add)	Inserts a close parenthesis at the end of the currently selected rule, but before an operand.
	Remove (Deletes the open parenthesis from the beginning of the currently selected rule.
	Remove)	Deletes the close parenthesis from the end of the currently selected rule.
Connect	And	Inserts the AND operand at the end of the currently selected rule. The AND operand is used by default when multiple rules are added to the Definition.
	Or	Inserts the OR operand at the end of the currently selected rule.
Move	Move Up	Moves up the currently selected rule in the Total Subset Definition.
	Move Down	Move the currently selected rule down in the Total Subset Definition.

- 7 **Optional:** To compose compound definition, repeat steps 3 through 6, and click **Add** to augment the definition.
- 8 Click **OK** to finish your filter definition and return to **Dimension Browser**.

SAP BW Select Top/Bottom

SAP BW enables you to limit the size and rank the query result set on the data source server.

- To limit and rank SAP BW members as part of the query:
 - 1 In **Dimension Browser**, make a member selection or advanced member selection.

Your member selection is displayed in the Selection frame.
 - 2 Right-click a member selection in the **Selection** frame and select **Select Top/Bottom**.

The Top/Bottom dialog box is displayed. The controls prompt you to indicate top or bottom, define criteria, and select a dimension member for ranking.
 - 3 **Select Top or Bottom**.

You cannot select both, as when using Analytic Services.
 - 4 From the **Using Function** group, select **Percent**, **Sum**, or **Count**.

You can select only one method for determining rank.
 - 5 Enter a value for the method.

The Percent text area should be a value between one and a hundred. The Sum text area requires you to enter a threshold. All member values summed to and including the threshold are returned. The Count text area requires only an integer indicating how many top or bottom members to return.
 - 6 In **Order By**, select another cube dimension.

Because all dimensions participate in every intersection, you are required to identify the intersection by which the selected dimension is ranked.
 - 7 **Optional:** Click **Selection** to display the dimension browser for the **Order By** dimension.

The Dimension Browser dialog box is displayed. You can select a dimension member from the dimension by which to rank the selected dimension, and click **OK**.
 - 8 Click **OK** to finish your Top/Bottom definition and return to **Dimension Browser**.
 - 9 Click **OK**.

Selecting SAP BW Period to Date

When Period to Date data is configured on the SAP BW server, you can access data as consolidated by a specified date.

- To select dimension members using SAP BW Period to Date:
 - 1 In **Dimension Browser**, make a member selection or advanced member selection.
Your member selection is displayed in the Selection frame.
 - 2 **Right-click** a member selection in the **Selection** frame and select **SAP BW Period to Date**.
The SAP BW Period to Date dialog box is displayed. The control prompts you to select a period definition from the list.
 - 3 **Select a period definition and click OK.**

Providing SAP BW Variables

When SAP BW Variables are configured on BEx Query Cube InfoProviders, you are prompted to provide the replacement value for the SAP BW Variable before submitting the query.

Prompting occurs when you click Finish when completing the Document Creation wizard, or when you click OK after modifying a query using the Data Layout interface.

- To provide SAP BW Variable values when prompted:
 - 1 In **Database Variables ServerName**, read the record for each variable.
It is important to know the variable type, a characteristic value or a hierarchy node.
 - 2 **Click the Edit cell for a variable record.**
The Dimension Browser dialog box is displayed. If the record is a characteristic value, you must select one explicit value at the lowest level of the dimension hierarchy. If the variable is a hierarchy node, you can select a value in the dimensional hierarchy.
 - 3 **Select a characteristic value for the variable type, and click OK.**
 - 4 **Repeat steps 2 and 3 until all variables are assigned values for the query.**
 - 5 **Click OK.**
The query is submitted using the specified variable values.

Selecting Financial Management Member Lists

Member Lists are predefined Financial Management variables for frequently changing information.

- To use a Financial Management Member List in a Dimension Browser member selection:
 - 1 **Right-click a dimension member in the Dimension Browser, and select Member List.**
The Choose Member List dialog box is displayed.
 - 2 **Select a predefined member list from Choose Member List.**
 - 3 **Click OK.**

Selecting Substitution Variables

Substitution variables are predefined Analytic Services variables for frequently changing information.

Substitution variables simplify document maintenance by enabling fluctuating values to be adjusted centrally (in Analytic Services), and enabling documents to reference the changing value dynamically.

► To use a substitution variable in Dimension Browser member selection:

- 1 **Right-click a dimension member in the Dimension Browser, and select **Substitution Variable**.**

The Substitution Variable dialog box is displayed.

- 2 **Select a substitution variable from the list of Analytic Services substitution variables.**
- 3 **Click **OK**.**

Multiple Substitution Variables

Multiple substitution variables can be used using Subset Member Selections.

Tips on Syntax

Substitution variables have their own rules and syntax requirements:

- The substituted value should be a dimension or a member name, and member values should come from the corresponding dimension.
- Do not use the ampersand (&) as the first character of a member name.

Analysis Tools and Substitution Variables

When member selections defined by substitution variables are used in analysis tool definitions, the system resolves the substitution variable to its current value. This ensures accurate aggregations, comparisons, and calculations regardless of the substitution variable definition.

Creating and Selecting Personal Variables

Personal variables simplify complex member selections. After being defined, you can leverage personal variables when you are presented with the corresponding dimension and database connection. Personal variables are containers for an ad hoc collections of otherwise unrelated dimension members.

Defining a personal variable does not include the personal variable in a query. You must select the personal variable from the Dimension Browser when defining the query.

➤ To create a personal variable:

1 Select File > Preferences.

The User Preferences dialog box is displayed, with the active user or group displayed in the Active Preferences list.

2 Click the Databases tab to make it current.

3 Select a database connection name, and click Edit.

The Database Preferences dialog box is displayed.

4 Click Connect.

The Personal Variable and Point of View tabs are enabled.

5 Click Personal Variable.

The Personal Variable tab lists all currently defined personal variables for the database connection.

6 Click Add.

The Personal Variable dialog box is displayed.

7 Enter a name for the personal variable in Name.

8 Select a dimension from the data source from the Dimension list.

The Dimension Browser for the selected dimension is displayed.

9 Select the dimension members to be included in the personal variable.

All conventional Dimension Browser methods and options are supported.

10 Click OK.

The Personal Variable tab is displayed and the personal variable definition is listed. Whenever the database connection and dimension is used, the personal variable definition is displayed as a selection option in the Dimension Browser Browse panel.

➤ To use a personal variable in a query, select the personal variable definition from the Dimension Browser **Browse** panel.

Creating and Applying Points of View

POV database preferences enable you to insert dimensions and members that are of interest to you into the documents of others. POV definitions must be defined and activated by database connection.

When a POV is activated, the Use Point of View option in Cube Navigator and the 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.

POV definitions consist of axes and dimension member selections. The definition is used when documents are created with the activated POV.

When you apply a POV definition to a 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 one axis).

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

Using a POV definition is a three part process. First, you must create a POV definition. Next, you must activate the POV definition. Lastly, you must set a document to use the activated POV definition, or create a document that uses it.

➤ To create a POV and activate it:

1 Select File > Preferences.

The User Preferences dialog box is displayed, with the active user or group displayed in the Active Preferences list.

2 Click Databases.

3 Select a database connection name, and click Edit.

The Database Preferences dialog box is displayed.

4 Click Connect.

The Personal Variable and Point of View tabs are enabled.

5 Click Point of View.

The Point of View tab lists all currently defined POV definitions for the database connection.

6 Click Add.

The Point of View dialog box is displayed.

7 Enter a name for the POV in Name.

Use the Cube Navigator interface to locate dimensions from this data source on axes and make member selections.

8 Define the POV layout, selections, and analysis tools as you would for a query.

9 Click OK.

The Point of View tab is displayed and the definition is listed.

10 To activate this POV definition, select the POV name and click Activate.

11 Click OK.

Whenever the database connection is used, you can apply the activated POV definition in lieu of defining its member selections.

➤ To apply an activated POV definition to an open document:

1 Display Cube Navigator:

- Click the Navigate toolbar button.

- Select **View > Cube Navigator**.

Cube Navigator is displayed for the current document.

2 From the **Option button list, select **Use Point of View**.**

3 Click **OK.**

The activated point of definition is applied to the current document. You must refresh the content area to display POV selections.

4 To refresh the document, perform one:

- Right-click the content tab for the current document and select **Refresh**.
- Select **View > Refresh**.
- Press **F5**.
- Right-click the data object and select **Refresh Data**.

Activated POV selections are applied to the current document.

User POV

User POV enables users to select members in Filters, Pages, Rows, and Columns (Data layout and/or member selection controls) and apply them to multiple Web Analysis documents.

This is exposed through the current POV functionality, where User POV is the name of another POV that is created and utilized in Web Analysis documents. The User POV exist for all database connections and can be set at user level only.

➤ To set a User POV:

1 Right click a spreadsheet and select **Save Selection to save the dimension member selections to the User POV.**

This feature is available in Web Analysis Studio and Workspace.

2 In **Web Analysis User Preferences > OLAP Server, select **Save Filters only for User POV**.**

All Subscription controls have the “Save Selection as a User POV” option. A selection is saved as a filter to the User POV.

If a Subscription control points to multiple `ReportDataSrcs`, all database connections have their User points of view set for the dimensions of the active control.

➤ To enable a User POV, in **Data Layout**, select **Use User POV**

Enabling this item adds a member selection option to the Dim Browser for every dimension in the `ReportDataSrc`. Selected member(s) in the User POV are utilized in the spreadsheet query.

Defining Dynamic Time Series Selections

You can select Dynamic Time Series (DTS) definitions for query selection statements.

DTS definitions must be created in Analytic Services before you can make DTS selections. You select the DTS definition and a corresponding Time dimension member that defines a time period.

You can select DTS substitution variables.

Substitution variables are predefined placeholders for information that changes frequently. Each substitution variable is identified by a variable name and has a temporary value defining its data type. When the substitution variable is used, the temporary value is replaced by a current value. For substitution variables to be used, they must be stored at the database level in Analytic Services.

► To define a DTS selection:

1 Right-click a Time dimension member in the Dimension Browser, and select **Dynamic Time Series.**

Available DTS definitions are displayed in a drop-down list.

2 Select a DTS definition.

The Dynamic Time Series dialog box is displayed.

3 Perform one:

- Select the **Substitution Variable** tab and select a substitution variable from the list.
- Select the **Member tab** and select a dimension member representing the specified date in the "X-to-date" definition.

4 Click **OK.**

Defining Previous Member Selections

Selecting Also Select Previous selects a specified number of previous members at one dimension level.

► To define a previous member selection:

1 In the Dimension Browser, right-click a dimension member, and select **Also Select Previous.**

The Also Select Previous dialog box is displayed.

2 Specify the number of previous members to retrieve, using the list.

3 Click **OK.**

The Dimension Browser is redisplayed. The member that you right-clicked is displayed in the Selections list with the Also Select Previous icon.

Selecting Attributes

Analytic Services can store dimension member names, locations, relationships, and characteristics of members.

Example: The product dimension may indicate that in Women's Apparel, Shirts and Blouses, there is a cotton T-shirt product. An attribute indicates whether each cotton T-shirt is red, cyan, lime, or pink.

Example: The Market dimension may indicate that there is a franchise store in Biloxi, Mississippi. An attribute indicates that the store is 2,500 square feet.

Attributes are stored in the same manner as dimension members. Attribute dimensions are displayed beside the conventional dimensions that they modify in Cube Navigator. It is important to note that attribute dimensions are labeled and function differently though.

To include attribute dimensions in the query, you must select the attribute dimension itself.

To select conventional dimension members using attributes, you must select the conventional dimension, and use the Select Attribute advanced member selection method.

► To select dimension members by their attributes:

1 Right-click a dimension member in the Dimension Browser, and select **Select Attribute**.

2 Select an attribute dimension from the **Select Attribute** sub menu.

The Select Attribute dialog box is displayed for the selected attribute dimension.

3 Select a dimension member attribute from the Select Attribute frame.

4 Click **OK**.

Turning Off Key Figure Attributes

► To turn off a key figure attribute:

1 Right-click the attribute on the Analyze interface.

2 Select **Data Display > Suppress Currency and Units**

Note:

This feature can be applied for all other characteristics too.

Creating Calculated and Restricted Key Figures

► To create or edit key figures:

1 Select **Analysis Tools > Calculated Key Figures**

2 In **Calculated Key Figures**, select **New** or a key figure.

3 If creating a key figure, replace Untitled with a unique name.

4 Select a Function and related information.

Note:

Information requested differs depending on the function selected.

Function	Measure	Cube Hierarchy
Avg	x	x
Var	x	x
Max	x	x
Median	x	x
Min	x	x
Sum	x	x
Count		x

Note:

In the Selections box, you can only add members from the same hierarchy of a dimension

- 5 In **Cube Hierarchy**, double-click an entry to move it to **Selections**.

Caution!

Only one hierarchy can be used. If you attempt to select another hierarchy, Hyperion® System™ 9 BI+™ Web Analysis™ asks if you want to remove all selections made on the other hierarchy.

- 6 Click **OK** to close **Calculated Key Figures**
- 7 In **Key Figures Browser**, select a key figure to move it to **Selections** and click **OK**.

7

Navigating Documents

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Navigating Data Objects and Data Sources

Web Analysis documents contain a variety of non-static data objects:

- Spreadsheets
- Charts
- Pinboards
- SQL Spreadsheets
- Freeform Grids

You can rearrange, expand, change and concentrate dimension intersections; these are called navigation methods because they enable travel through dimensional hierarchies.

Navigation methods vary for data objects and data sources:

Table 1 Web Analysis Studio Supported Data Sources

Type	Data Source
OLAP	Analytic Services
	IBM DB2 OLAP Server
	SAP BW
Hyperion	Financial Management
	Hyperion® System™ 9 Planning™
Relational	IBM DB2 Enterprise Server Edition
	Microsoft SQL Server
	Oracle
	Teradata
	Other JDBC RDBMS

OLAP data sources support all navigation methods described in this chapter. Other Hyperion data sources and relational data sources support fewer navigation methods.

Navigation Methods

Web Analysis Studio navigation methods include:

Navigation	Description	Method
Swapping and Moving Dimensions	<p>Swap—Switches the placement of two dimensions.</p> <p>Move—Relocates a dimension on document axes.</p>	<p>Swap—Drag a dimension onto another dimension.</p> <p>Move—Drag a dimension from one position to another position.</p>
Paging	Maintains the dimensions on the row and column axes, while changing their intersection with dimensions that differ on the Page axis.	Click or scroll the Page Control panel.
Keep Only	Deselects all other dimension member selections for the selected Dimension, leaving only the selected member.	Right-click a dimension member header, and select Keep Only from the shortcut menu.
Remove Only	Deselects the selected member, removing it from the query result set.	Right-click a dimension member header, and select Remove Only from the shortcut menu.
Drilling	Increases or decreases the level of dimension detail by including or excluding members of the dimensional hierarchy in the display.	Double-click dimension member headers. You can customize the drilling behavior.
Drill Linking	Navigates to other documents or executables.	Clicking linked cells and passing the selected cell and the dimension context to another document or data object.
Dragging	Uses the Information panel to rearrange the data object in the content area.	Drag objects on the Information panel.
Undo and Redo	<p>Undo reverses the last executed command, and returns the display to its previous state.</p> <p>Redo reverses the negation of the last command.</p>	<p>Select Edit > Undo. You can select to undo the last ten executed commands.</p> <p>Select Edit > Redo. You can select to redo the last ten executed commands.</p>
Custom Controls	You can define document navigation using controls in custom documents.	Drag a component onto a custom document, and associate a data source or behavior with it. See “Creating Subscription Controls” on page 226 .

It is important to differentiate these navigation methods:

- **Drilling**—Conventional drilling navigates to related dimension members.
- **Linking** (also called drill-linking)—Drill linking passes the selected member to other documents.
- **Linked Reporting Objects (LROs)**—LROs open executables to display cell-notes, Windows executables, or Web page URLs.

Swapping and Moving Dimensions

You can rearrange intersections by swapping and moving dimensions:

- Swapping switches two dimensions, replacing one with the other.
- Moving relocates a dimension.

Swapping and moving are nearly identical in their use of interface drag methods. They differ in where the dimension is dropped. To swap, drop the dimension on another dimension label. To move, drop the dimension between dimension labels.

➤ To swap dimensions:

- 1 **Click and hold a dimension member.**
- 2 **Drag the dimension member on to another dimension member.**

The two dimensions exchange places.

➤ To move a dimension:

- 1 **Click and hold a dimension member.**
- 2 **Drag the dimension member to a point between other dimension members and release the mouse button when a bold rule is displayed.**

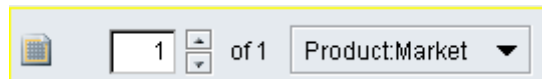
The dimension is relocated to where the rule displayed.

Document creators can lock the ability to swap and move dimensions using Properties.

Paging

Paging maintains the dimensions on the row and column axes, while changing their intersection with dimensions that differ on the Page axis.

You can jump or scroll through pages of intersections using the Page Control panel.



The Page Control panel organizes Page axis intersections so that each page is relevant to a Page dimension member.

- To navigate the Page dimension, perform one action:
 - Click the **Page Control** scroll buttons to move in the page series.
 - Enter a page number for the page series and press **Enter**.
 - From the list, select a page dimension member.

Pages

The Page axis is another axis for organizing dimensions. It is sometimes helpful to think of it as the Z axis of a three-dimensional graph.

Visualize a stack of spreadsheets. Traveling back and forth in the stack enables comparison of values on different pages.

If spreadsheets in the stack must be relevant to Page axis dimensions, each page must represent a Page axis dimension member or dimension member combination.

Multiple and Single Drop-Down Lists

The Page Control panel can display multiple page drop-down lists when you work with page dimension combinations. Multiple-page drop-down lists display all possible page combinations, whether data exists. Single-page drop-down lists omit page combinations that do not contain data. Hyperion recommends using one page drop-down list when working with sparsely populated dimensions.

- To separate Page dimensions into multiple drop-down lists, click the Page Control panel Page icon.
- To combine multiple page dimensions into one drop-down list, click the Page icon.

Keep Only

Keep Only deselects all other dimension member selections for the selected Dimension, leaving only the selected member.

- To deselect all but one dimension member, right-click the dimension member header, and select **Keep Only** from the shortcut menu.

Remove Only

Remove Only deselects a dimension member, removing it from the query result set.

- To remove one dimension member from the query result set, right-click a dimension member header, and select **Remove Only** from the shortcut menu.

Drilling

Drilling increases or decreases the level of document detail by changing the display of dimension members. Because drilling is customizable, the term drilling can mean almost hierarchical navigation prompted by double-clicking a dimension label.

You can customize drilling using three options:

- Drilling options specify the drilling result set.
- Expand on Drill specifies whether the drilling result set replaces or augments the currently displayed dimension members.
- The Selected Member data display option specifies whether the drilled member is included in the drilling result set.

Drilling Options

Web Analysis Studio features these default drilling behaviors:

- **Drill Down**—Includes member's children .
- **Drill Up**—Includes member's parents.
- **Drill to Top**—Includes highest ancestor

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.

Drilling Option	Description
Drill to Next Level	Includes children of drilled member.
Drill to Descendants	Includes all descendants of drilled member.
Drill to Dim Bottom	Includes lowest level descendants of drilled member.
Drill to Siblings	Includes members at one level who share a parent with the drilled member
Drill to Same Level	Includes all members on drilled member's level. Note: Hyperion defines levels as hierarchical layers counted from the lowest descendant (Level 0); other data sources define levels differently. Asymmetric hierarchies may also yield unexpected results
Drill to Same Generation	Includes all members on drilled member's generation Note: Hyperion defines generations as hierarchical layers counted down from the highest ancestor (Generation 0); other data sources define generations differently

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 > 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.

Drilling Variation	Description
Drilling down with Expand Drilling enabled and Data Display > Selected Members disabled	Augments current member selections with the drilled return set and removes the drilled member.
Drilling down with Expand Drilling enabled and Data Display > Selected Members enabled	Augments current member selections with the drilled return set and includes the drilled member.
Drilling down with Expand Drilling disabled and Data Display > Selected Members disabled	Replaces the current member selections with the drilled return set and removes the drilled member.
Drilling down with Expand Drilling disabled and Data Display > Selected Members enabled	Replaces the current member selections with the drilled return set and includes the drilled member.

Drill Linking

Drill linking enables you to navigate to other documents by double-clicking cells with replaced links.

It is important to distinguish drilling from drill linking. Drilling navigates along the lines of the dimensional hierarchy. Linking passes the current member selection to other documents and executables.

Linking differs from LROs in that linking passes the current member selection. LROs are linked to cell notes, file attachments, and URLs.

- To access the Drill Link Options dialog box, right-click and select **Drill > Drill Link Options**.

Drill Linking Option	Description
Link From	Indicates the dimensions, attributes, and data on which links can be set.
Link To	Indicates the destination document of the link.
Add	Displays the Open dialog box to select the link destination.
Remove	Removes the link and restores conventional drill navigation.
Bottom	Executes linking only at the lowest dimension level.
Pass Pages	Passes the Page context to the link destination.
Pass Filters	Passes the Filter context to the link destination.

Defining Drill Links

- To define a drill link:

- 1 Right-click the data object and select **Drill > Drill Link Options**.**

The Drill Link Options dialog box is displayed.

- 2 Click the ellipses (...) **Set Link** (in the Add column) for the dimension on which to place the drill link.**

The Select a Document dialog box is displayed. This dialog box works like the Open dialog box.

- 3 Click the document to be displayed.**

- 4 Click **OK**.**

The Drill Link Options dialog box becomes the current dialog box again.





- 5 Select options in the **Bottom**, **Pages**, and **Filters** columns as needed.**

The Bottom option indicates that the drill link is executed only at the lowest level of the specified dimension. The Pages option passes the Page axis context to the document. The Filter option passes the Filter axis context to the document.

- 6 Click **OK**.**

Dragging

You can drag or move dimension member labels between Information panel axis segments:

Icon	Axis Segment
	Columns
	Rows
	Pages
	Filters

► To move a dimension using the Information panel:

- 1 Select the View Panel Information Panel tab.
- 2 Click an axis segment icon to expand the segment.
- 3 Click and hold dimension member.
- 4 Drag the dimension member between axes or other dimension members and release the mouse button.

The dimension is relocated.

Note:

The requirement to have at least one row dimension and one column dimension, may prevent you from dragging dimensions that leave an axis empty. In this case, use Cube Navigator to rearrange the dimension layout.

Undo and Redo

An index containing the last 10 executed commands is cached on each client. The Undo command reverses the most recent command. The Redo command repeats the last command.

► To undo the last command, perform one action:

- Select **Edit > Undo**.
- Click .

► To reinstate the last command,

- Select **Edit > Redo**.
- Click .

► To undo or redo one of the previous 10 commands, perform these actions:

- 1 Select the undo or redo list from the corresponding toolbar button.
- 2 Select a command from the index.

All commands through that point in the index are undone or redone, as selected.



Formatting Documents

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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
- Free-form grid

Each display type has formatting options. This chapter describes the formatting options for spreadsheets and charts.

Related Topics

[“Creating Pinboards” on page 185.](#)

[“Creating SQL Spreadsheets” on page 193.](#)

[“Creating Freeform Grids” on page 203.](#)

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 98](#). Formatting options include:
 - Measures formatting
 - Default formatting preferences
 - Ad hoc formatting
 - Data formatting analysis tool
 - Cell FormattingSee [“Formatting Data” on page 101](#).
- **Column sizing**—Sizes columns individually, uniformly, or to their default column width using the shortcut menu. See [“Sizing Columns” on page 102](#).

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. See [“Creating OLAP and Hyperion Database Connections” on page 158](#).
2. **Default formatting preferences**—Applied globally to column and row headers, and data values. Settings are saved in preference files. See [“Default Formatting Preferences” on page 265](#).
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 98](#).
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. See [“Data Formatting” on page 128](#).
5. **Cell formatting**—Applied ad hoc to cell ranges, and is stored with the document. See [“Formatting Data” on page 101](#).

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.

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**—Analytic Services 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 96](#).
- **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 97](#).
- **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.

Data Display Option	Description
Selected Member	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.
Selected Member First	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).
Default Label Mode	Toggles between label modes: <ul style="list-style-type: none">○ Descriptions○ IDs○ Both (Financial Management option)
Dimension-Specific Label Mode	Toggles between label mode options: <ul style="list-style-type: none">○ Use Default○ Descriptions○ IDs○ Both (Financial Management option)

Data Display Option	Description
Display Entity Currency	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 Cube Navigator options, after querying using the Data Display shortcut menu, and for all subsequently created documents using OLAP Server preferences. See “Financial Management” on page 168 .
Dimension Header Sort	Orders the selected dimension per the order option: <ul style="list-style-type: none"> ○ Default ○ Ascending ○ Descending ○ Level (OLAP specific) ○ Generation (OLAP specific) ○ Selection Order (Relational specific) <p>The Default option is the order in which dimension members are naturally ordered by data source outlines. Using this option may offer improved performance.</p> <p>For a complete description, See “Sorting Dimension Headers” on page 97.</p>
Show Linked Reporting Object Indicators	Shows or hides small cell triangles indicating the presence of linked documenting objects. Triangles persist for related content.
Suppress	Omits data, as specified, from the query result set: <ul style="list-style-type: none"> ○ Missing Rows ○ Shared Members ○ Zero Rows

Setting the Label Mode

Alias tables are database tables storing alternate description labels for dimension members.

Analytic Services 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. See [“Alias Tables” on page 267](#).

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.

Financial Management 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 Cube Navigator 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 Cube Navigator, 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, Analytic Services 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 > 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. You can opt for Ascending, Descending, Selection Order and Default. Default is the order members are returned 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 Cube Navigator, 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 however. Using the Order By Mode drop-down list, you can also specify orders by ID or Alias.

Formatting Dialog Box

Selecting Formatting from the data object shortcut menu displays the Formatting dialog box. It indicates the members to which these formats are applied:

- Header font properties by member.
- Data value font properties by member.
- Edit the dimension members selected for formatting.
- Restore default formatting preferences.

Control	Description
Selections	Displays all dimension member selection definitions.
Remove All	Deletes all dimension member selection definitions from the Selections panel.
Remove	Deletes the selected dimension member selection definition from the Selections panel.
Edit	Displays the Edit Formatting Selections dialog box, enabling you to define member selection definitions.
Header Font	Displays the Font Properties dialog box.
Data Font	Displays the Font Properties dialog box.
Format Data	Displays the Format Data dialog box, used to specify text and numeric formatting.
Conditional Formatting	Enables conditional formatting of dimension member selections based on the criteria defined in the operand drop-down list and value text box.

Control	Description
Operand drop-down list	Specifies the conditional formatting operand: >, >=, =, <=, <, or <>.
Value Text box	Specified the conditional formatting value.
Restore Defaults	Restores the settings specified by the Default Formatting preferences.

Topics that discuss formatting:

- [“Creating Formatting Definitions” on page 99](#)
- [“Editing Formatting Selection Statements” on page 100](#)
- [“Formatting Data” on page 101](#)

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.

If the default dimension member selection in the Selections panel is satisfactory, proceed to Step 8.

3 To edit the dimension member selection, click **Edit.**

The Edit Selections dialog box is displayed.

4 To display the Dimensions panel, click **Advanced.**

5 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.

6 To specify dimension members, click check boxes in the **Combinations panel.**

Selections display in the Selections panel. Click Remove to delete the current selection, or Remove All to delete all member selections and start over. See [“Editing Formatting Selection Statements” on page 100](#).

7 When dimension member selections are defined, click **OK.**

The Edit Selections dialog box is dismissed, and the Formatting dialog box is displayed. The Selections panel displays the dimension member selection.

8 To specify a formatting definition, perform one action:

- To specify header cell font properties for the dimension member selection, click the Header group **Font** button.

- To specify data cell font properties for the dimension member selection, click the **Data group Font** button.
 - To display the Format Data dialog box, used to specify leading and trailing text and numeric formatting, click **Format Data**. See [“Formatting Data” on page 101](#).
 - To enable conditional formatting, select **Conditional Formatting** and enter a value and select an operand from the corresponding controls. You can further refine formatting definitions using conditional formatting. Conditional formatting requires dimension member selection values to satisfy additional criteria before formatting is applied.
- 9 When you are finished specifying formatting definition properties for the dimension member selection, click the **Formatting dialog box OK** button.

The formatting definition is listed in the Analysis Tools Manager for future reference and the definition is applied to the document.

Editing Formatting Selection Statements

The Edit Selections dialog box enables you to edit the dimension member selections to which formatting options are applied.

➤ To access the Edit Selections dialog box:

- 1 **Right-click a column or row dimension header.**
- 2 **Select **Formatting**.**

The Formatting dialog box is displayed.

- 3 **To edit the dimension member selection, click **Edit**.**

The Edit Selection dialog box is displayed. It features dynamic panels that you can show or hide. If necessary, click the **Advanced** button to display the Dimension panel.

Control	Description
Dimension Panel	Enables you to select from the dimensions in play on the right-clicked axis. See the note on dimensions in play below.
Combinations Panel	Displays aggregate dimension member combinations, and enables you to select them for formatting.
Selections Panel	Displays the dimension member selections to be formatted.
Advanced/Basic Button	Shows or hides the Dimension panel that enables you to select aggregate dimension member combinations.
Remove	Removes the current dimension member selection from the Selections panel.
Remove All	Removes all dimension member selections from the Selections panel.

Initiate formatting by right-clicking a column or row dimension header, and selecting **Formatting** or **Analysis Tools > Format**. The right-click target axis determines the initial selection options in the Edit Selections dialog box:

- Clicking a row header enables selection of row axis dimensions and the current page dimension.
- Clicking a column header enables selection of only column axis dimensions.

The formatting method used determines whether a default selection is provided:

- If you select Analysis Tools > Format from the data object shortcut menu, you do not find default selections in the Formatting dialog box Selections panel.
- If you select Formatting from the data object shortcut menu, you find the right-clicked axis header in the Formatting dialog box Selections panel.

You can select only the current page dimension, and only from the row header shortcut menu. To select current page and column dimension combinations, you must move the column dimension to the rows axis. Conversely, moving row and current page dimension combinations to the columns axis may cancel the formatting.

Formatting Data

You define format definitions in the Format Data dialog box:

Formatting Options	Description
Leading and Trailing Formatting	
Currency Symbol	Inserts currency formatting symbols into the Positive Prefix and Negative Prefix text boxes: Dollar (\$), Cents (¢), Pound (£), Euro(E), Deutschmark (DM), Franc (F), and Yen (¥).
Positive Prefix	Specifies the character to precede positive numeric values.
Positive Suffix	Specifies the character to follow positive numeric values.
Negative Prefix	Specifies the character to precede negative numeric values. Caution: The minus sign (-) is the default prefix. Deleting the default prefix without replacing it displays negative values as positive.
Negative Suffix	Specifies the character to follow negative numeric values.
Numeric Formatting	
Grouped Thousands	Displays numeric digits as grouped by thousands.
Minimum Decimals	Indicates the minimum number of decimal places displayed.
Maximum Decimals	Indicates the maximum number of decimal places displayed.
Scale	Enables abbreviated values by tens, hundreds, thousands, ten-thousands, hundred-thousands, millions, and billions.
Use Negative Color	Indicates that negative numbers are signified by a selected color.
Select Negative Color	Enables you to select the color representing negative values.
Samples	

Formatting Options	Description
Update Samples	Updates the samples panel based on the most recent formatting selections.

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:

Controls	Description
Selections	Displays the cell dimension member selection statement.
Font	Displays the Font Properties dialog box.
Format Data	Displays the Format Data dialog box, used to specify text and numeric formatting.
Restore Defaults	Restores the settings specified by the Default Formatting preferences.

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. The **Freeze Headers** option holds column dimension headers in place as cells scroll independently. After headers are fixed, they can be resized without inadvertent scrolling behavior.

Sizing Individual Columns

- To size a 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 > 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 > 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 > 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**.

See [“Modifying Document Properties”](#) on page 34.

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.

Spreadsheet Option	Description
Display	
Gridlines	Sets the spreadsheet to display table gridlines.
Transparent	Makes the cell background transparent to display a spreadsheet background image.
Row Banding	Sets spreadsheet rows to display alternating banding.
Column Banding	Sets spreadsheet columns to display alternating banding.
Background Color	Opens the Select Color dialog box, to set the background color.
Background Image	Opens the Select Background Image dialog box.
Band Color	Opens the Select Color dialog box, to set the color of row banding.
Column Band Color	Opens the Select Color dialog box, to set the color of column banding.
Headers	
Custom Row Height	Sets a fixed height for spreadsheet rows in point size (from 20-200).
Freeze Headers	Holds column dimension headers in place as cells scroll independently. Note: Freeze Headers must be enabled for Column Sizing.
Row Titles	Displays column headers for nested rows.
Row Header Alignment drop-down list	Aligns row headers left, center, or right or indents them based on generation.
Indent Amount	Indicates the number of pixels to indent row headers for each level from the top of the dimension hierarchy.
Row Group Alignment drop-down list	Aligns rows as a group center, top, or bottom in a cell.
Header Font	Displays the Font Properties dialog box, enabling the selection of header fonts and font formatting.
Header Background Color	Opens the Select Color dialog box, where you can set the header background color.
Sample Header	Displays the current header formatting.
Data	
Align Text	Sets the alignment of textual data values: left, center, and right.
Align Values	Sets the alignment of numeric data values: left, center, and right.

Spreadsheet Option	Description
Cell Font	Displays the Font Properties dialog box enabling the selection of data value fonts and font formatting. Note: Font sizes are limited to a maximum of 100 points.
Cell Background Color	Opens the Select Color dialog box where you can set the cell background color; does not override banding.
Sample Cell	Displays the current data values formatting.

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:

Chart Type	Compares
Bar	Similar elements, represented as vertical bars.
Line	Items over time.
Spline	Displays the document as a spline chart.
Pie	Contributions.
Area	Items over time.
Curve Area	Items over time, represented as a curved area.
Horizontal Bar	Similar elements.
Marks	Items over time.
Pareto	Trends in data.
Box	Displays the document as a box plot chart.
Quadrant	Two members from one dimension over time.
Bubble	Displays the document as a Bubble chart.

Only the first 50 dimension members can be accommodated on chart axes.

Pie Charts

Special features of pie charts:

- Wedge separation
- Pie rotation

Drag pie wedges along the radius of the pie. Click and drag to rotate the pie chart.

Only 19 multiple pie charts can be displayed simultaneously on the data object.

Quadrant Charts

In Quadrant charts, one dimension must be placed on the row axis and two dimensions must be placed on the column axis. 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 106](#)—options for effects, object borders, chart backgrounds, and legends.
- [“Titles Chart Properties” on page 107](#)—options for chart titles.
- [“Axes Chart Properties” on page 108](#)—options for axes, number formatting, gridlines, scale, and labels.
- [“Series Effects Chart Properties” on page 109](#)—options for chart behavior and border formatting.
- [“Series Chart Properties” on page 109](#)—options for chart object properties.
- [“Pie Chart Properties” on page 111](#)—options for pie charts.
- [“Bubble Chart Properties” on page 111](#)—options for bubble charts.

General Chart Properties

Control	Description
Layout	

Control	Description
Chart Type	Enables you to set the Chart Type: Bar, Line, Spline, Pie, Area, Curve Area, Horizontal Bar, Marks, Pareto, Multi, Box, Quadrant, and Bubble.
Stacked	Enables you to arrange chart objects: Side-by-Side, Stacked, and Stacked 100%.
Left Plot Area Margin	Enables you to specify a left margin for the plot area.
Right Plot Area Margin	Enables you to specify a right margin for the plot area.
Effects	
3D	Represents chart objects in three-dimensional space.
Anti-alias Fonts	Enables and disables the use of anti-alias fonts. Although anti-alias fonts are clearer, they sometimes differ from the original font style.
Cluster (Z-axis)	Arranges chart objects along the Z axis in three-dimensional space.
Show Z-axis Labels	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.
Background	
Background Color	Displays the Select Color dialog box where you can set the chart background color.
Plot Area Color	Displays the Select Color dialog box where you can set the plotter background color.
Background Image	Displays the Select Graphic dialog box where you can set the chart background image.
Legend	
Show Legend	Displays a chart legend.
Position	Locates the Legend to the Top, Left, Bottom, or Right of the chart.
Color	Displays the Select Color dialog box to set the legend background color.
Font	Displays the Font Properties dialog box to select font and their formatting.

Titles Chart Properties

Control	Description
Header Title	Sets the text string for the header title.
Footer Title	Sets the text string for the footer title.
Left Title	Sets the text string for the left title.
Right Title	Sets the text string for the right title.
Font	Displays the Font Properties dialog box to select font and their formatting.

Axes Chart Properties

Control	Description
Axis	Indicates the current axis: <ul style="list-style-type: none"> ● X-axis - Sets the Axes tab to display x-axis parameters. ● Y-axis - Sets the Axes tab to display y-axis parameters. ● Secondary Y-axis - Set the Axes tab to display secondary y-axis parameters. See also Series Tab, Assign to Secondary Y-axis.
Show Axis	Displays the current axis.
Scale	
Auto-calculate	Enables the current axis to be calculated automatically based on data values.
Start at Minimum Value	Indicates whether to start numeric labels with the minimum value.
Minimum	Sets the minimum value on the current axis.
Maximum	Sets the maximum value on the current axis.
Step	Sets the number of increments to scale on the current axis.
Scale	Enables you to indicate the multiple by which to scale the current axis: None, Tens, Hundreds, Thousands, Ten Thousands, Hundred Thousands, Millions, or Billions.
Gridlines	
Show Gridlines	Displays gridlines on the current axis.
Style	Represents gridlines using one style: Solid Line, Dash, Dot, and Dash Dot.
Weight	Sets the width of gridlines in pixels (from 1-8).
Color	Displays the Select Color dialog box where you can select a gridline color.
Number Format	
Decimal Places:	Enables you to sets the number of decimal places used to represent data values (0-10).
Format:	Enables you to sets the numeric format for data values: Numeric, Currency, Percent.
Currency Symbol:	Inserts currency formatting symbols: Dollar (\$), Cents (¢), Pound (£), Euro(E), Deutschmark (DM), Franc (F), and Yen (¥).
Labels	
Stagger	Alternates labels on two lines to accommodate larger labels.
Angle	Enables you to indicates the angle at which labels extend from the current axis: 0-360 degrees.
Font	Displays the Font Properties dialog box to select fonts and their formatting.

Series Effects Chart Properties

Series Effects chart properties impact all chart object series in general. Series chart properties are applied only to specific series.

Control	Description
Charting	
Enable Scrolling	Allows you to specify the number of chart object groups to display, and to scroll left to right to display additional groups. Note: Scrolling is not supported on Quadrant, Box, Pie, and Bubble chart types.
Number of Groups Displayed	Specifies the number of chart object groups to display.
Chart All Dimensions	<p>Delineates nested dimensions for chart type requirements and displays each combination set as a series.</p> <p>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 Web Analysis Studio to delineate nested dimensions and display each combination set as a series.</p>
Borders	
Show Borders	Represents chart objects with a border or outline.
Style	Represents the chart object border using one style: Solid Line, Dash, Dot, and Dash Dot.
Width	Sets the width of chart object border in pixels (from 1-8).
Color	Displays the Select Color dialog box where you can set the border color.

Series Chart Properties

Control	Description
Series	Indicates the current dimension member chart object series.
Style	
Show Series	Displays the current series.
Type	Sets the chart type for the series when multiple chart types are enabled: Bar, Line, Area, Spline and Curve Area.
Shape	Sets the series chart object to one shape: Bar, Cylinder, Diamond Bar, or Triangle Bar.
Color	Displays the Fill Properties dialog box where you can set chart object color, pattern fill, or gradient.
Assign to Secondary Y-axis	Displays the current series on the secondary y-axis.

Control	Description
Markers	
Style	Sets the series to one marker: None, Square, Circle, Triangle-Up, Diamond, Cross, Triangle-Down, or Multiple Chart Type.
Image Marker	Displays the Select Graphic dialog box enabling graphics to be used as chart markers. Note: You cannot use animated GIFs as marker images.
Size	Sets the size of the series marker in pixels (1-20).
Point Values	
Show Values	Displays data values with the series.
Font	Displays the Font Properties dialog box where you can select font and their formatting.
Angle:	Indicates the angle at which value labels extend from the current series: 0-360 degrees.
Lines	
Style	Represents the chart object border using one style: Solid Line, Dash, Dot, and Dash Dot.
Width	Sets the width of chart object border in pixels (from 0-8).
Apply selections to all.	Sets all series to the parameters of the current series.

Filling Chart Objects

Like the Select Color dialog box, the Fill Properties dialog box enables you to select colors for a series of chart objects. In addition, it differentiates chart objects with a pattern or gradient fill.

- To fill chart objects with a pattern fill:
 - 1 **Select Chart Properties** from the chart shortcut menu.
 - 2 **Click the Series tab, and Color in the Style group.**
The Fill Properties dialog box is displayed.
 - 3 **Click the Pattern Fill option and select a pattern.**
You can combine two colors in the selected pattern.
 - 4 **Click Color 1 or Color 2 to select a color from the Select Color dialog box.**

- To fill chart objects with a gradient fill:
 - 1 **Select Chart Properties** from the chart shortcut menu.
 - 2 **Click the Series tab, and Color in the Style group.**
The Fill Properties dialog box is displayed.
 - 3 **Click Gradient Fill, and select the direction of the gradient.**

You can combine two colors in the gradient.

- 4 Click **Color 1** or **Color 2** to select a color from the **Select Color** dialog box.

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

Control	Description
Values	
Values	Indicates the current pie slice.
Color	Displays the Select Color dialog box to set color, pattern fill or gradient scale for the current slice.
Labels	
Show Values	Displays data values with pie slices.
Position	Indicates where to display labels: Inside Slices or Outside Slices.
Font	Displays the Font Properties dialog box where you can select font and their formatting.
Show Multiple Pies	Sets Page Dimensions to be displayed as multiple pie charts in one document.

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.

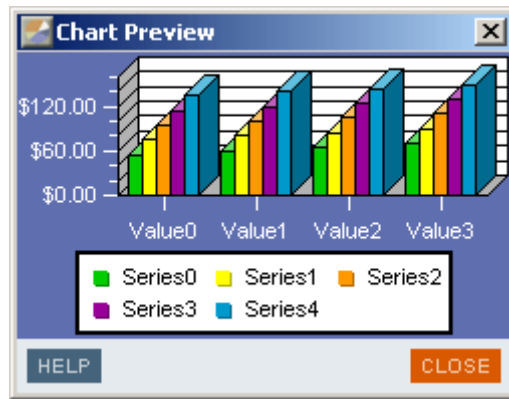
A third column provides the Z value used to determine the bubble size. If no third column is available, a constant of 100 is used to determine the bubble size.

Control	Description
Effects	
Marker Style:	Sets the bubble chart to be displayed using these options: none, square, circle, Triangle Up, Diamond, Cross, Triangle Down, or Multi.
Maximum Size:	Sets the maximum bubble object size in points.

Control	Description
Show Points	Displays plot points.
Point Color	Sets the color of the center point.
Values	
X-member Values:	Indicates the dimension member used to plot x-axis values.
Y-member Values:	Indicates the dimension member used to plot y-axis values.
Z values:	
Constant	Sets the constant used to plot the size of bubble chart objects when no third column is available, so that object sizes match.
Z-member Values:	Indicates the third column used to plot the size of bubble chart objects.
Scaling	
Minimum Scaling:	Sets the minimum bubble size when the bubble object size has reached the Maximum Size limit.
Maximum Scaling:	Sets the maximum bubble size when the bubble object size has reached the Maximum Size limit.
Scale On:	Sets the bubble chart to determine scale using area or diameter.
Borders	
Show Borders	Displays or hides the bubble borders.
Use Traffic Lights for Colors	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
Color	Displays the Select Color dialog box.
Border Width:	Sets the border width in pixels.

Chart Preview

Clicking **Preview** displays an abstract of current chart parameters.



Selecting Color

The Select Color dialog box enables you to set object, font, and component colors.

Control	Description
Swatches Tab	
Recent	Displays recently selected colors.
RGB Float Over Values	Displays the Red-Green-Blue color values when mouse is floated over a color.
HSB Tab	
Hue	Sets the percentage of hue in the current color.
Saturation	Sets the percentage of saturation in the current color.
Brilliance	Sets the percentage of brilliance in the current color.
Red	Displays the red value of the current color.
Green	Displays the green value of the current color.
Blue	Displays the blue value of the current color.
RGB Tab	
Red	Displays the red value of the current color.
Green	Displays the green value of the current color.
Blue	Displays the blue value of the current color.
Preview	Displays the application of the current color.

Font Properties

The Font Properties dialog box enables font selection and formatting.

Control	Description
Font	Sets the font family.
Size	Sets the font point size. Note: Fonts are limited to 100 points in size.
Font Style	
Bold	Displays the bold font.
Italic	Displays the <i>italic</i> font.
Color	Displays the Select Color dialog box, to enable font color selection.
Sample Text	Displays the current font selection.

Selecting Graphics

The Select Graphic dialog box enables you to select the GIF or JPEG files used in Web Analysis Studio.

Control	Description
Center	Centers the selected graphic in the panel.
Stretch	Expands the selected graphic to fill the panel.
Tile	Repeats the selected graphic to fill the panel.
Load	Displays the Open dialog box, to select the GIF or JPEG graphic file.
Clear	Deletes the previously selected image.

9

Managing Analysis Tools

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Analysis Tools

Web Analysis Studio enables you to leverage server-based analytical formatting tools and data source-specific tools from the client. Analysis Tools expedite comparisons, visually organize data, and promote structures and conclusions.

Analysis Tools are data source-specific, and all Analysis Tools are not available in all data objects.

Analysis Tools are centrally organized and applied by the Analysis Tools Manager, accessed using the data object shortcut menu. The Analysis Tools Manager features an Ordered By panel showing the number and order of Analysis Tools definitions activated on the current data object. Toolbar buttons enable you to generate Analysis Tools definitions.

Analysis Tool	Used To:
Traffic Lighting	Color-code dimension member values based on fixed limits or a comparison of values. Traffic Lighting visually associates member values whether they are sorted or ranked.
Sorting	Order the query result set.
Calculations	Create calculated rows and columns.
Data Formatting	Format data values based on member or value criteria.

Analysis Tool	Used To:
Show/Hide Only	Filter data by color, value and member.
Related Content	Create Related Content links to: <ul style="list-style-type: none"> ● LROs - cell notes, URLs, and file attachments stored at Analytic Services intersections ● Hyperion® System™ 9 BI+™ Analytic Integration Services™ drill-through content ● Financial Management cell text and line item details stored at Financial Management intersections ● Hyperion Documents content displayed as HTML or PDF ● Hyperion® System™ 9 Application Builder J2EE™ content
Restrict Data	Restrict the query result set based on criteria.
Retrieve Only Top/Bottom	Limit and rank the query result set.
Currency Conversion	SAP BW—Converts data value currencies ad hoc during analysis, and to save those conversion definitions as analysis tools.
Unit of Measure Conversion	SAP BW—Converts the data value unit of measure ad hoc during analysis, and to save those conversion definitions as analysis tools.
Edit Selected Definition	Opens the Analysis Tool for the specified definition, enabling you to edit the definition.
Remove Selected Definition	Deletes the selected Analysis Tool definition.
Remove All	Deletes all defined Analysis Tools definitions.

Related Content

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 the content of the related content definition but do not impact the existence of the definition. You can activate, deactivate, reorder, and remove related content in the Analysis Tools Manager, but you cannot edit related content definitions.

Ordering Analysis Tools

The order in which Analysis Tools definitions are applied affects data object behavior. You can edit the order in which Analysis Tools are applied by selecting Analysis Tools definitions and moving them in the Ordered By panel.

Default Analysis Tools

The Analysis Tools Manager displays default formatting, measures formatting, and spreadsheet option definitions at the top of the Ordered by list panel. These definitions, originating from preferences, database connection properties, and data object properties, are applied before

subsequent Analysis Tools definitions. They can be edited, but they cannot be removed or disabled.

Activating and Deactivating Analysis Tools

You can activate and deactivate Analysis Tools definitions without removing them from the Analysis Tools Manager. This enables various Analysis Tools combinations to be used.

- ▶ To deactivate Analysis Tools definitions, select the corresponding **Active** option in **Ordered By**.

Editing Definitions

- ▶ To edit an Analysis Tools definition:
 - 1 Right-click a dimension member header and select **Analysis Tools > Analysis Tools Manager**.**
The Analysis Tools Manager is displayed.
 - 2 Select a definition and click **Edit**.**
The corresponding Analysis Tool dialog box is displayed.
 - 3 Make selections and define parameters as needed.**
 - 4 Click **OK**.**
The Analysis Tools Manager is displayed.
 - 5 Click **Close**.**

Show/Hide Only

The Show/Hide Only analysis tool includes or excludes members by member name, traffic lighting color, or data value criteria. It is an effective means of focusing analysis by values.

The Information panel Show/Hide Only segment displays Show/Hide Only definitions that restrict or display information on the current document.

Topics that discuss the Show/Hide Only analysis tool:

- [“Asymmetrical Analysis” on page 118](#)
- [“Multiple Show/Hide Only Definitions” on page 118](#)
- [“Differences in Show/Hide Only Definitions” on page 118](#)
- [“Creating Show/Hide Only Definitions” on page 119](#)

Asymmetrical Analysis

Asymmetric documents feature nested dimensions that differ (by at least one member) across an axis. Web Analysis Studio accommodates asymmetrical analysis by enabling you to hide specified rows, columns, and chart objects.

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

Show/Hide Only definitions are applied differently for each methodology used:

- Show/Hide Only Calculations shows or hides all calculated members.
- Show/Hide Only Members shows or hides dimension members of the dimension header right-clicked in the document.
- Show/Hide Only Values shows or hides dimension members on the axis opposite the dimension header right-clicked in the document.
- Show/Hide Only Colors shows or hides dimension members on the axis opposite the dimension header right-clicked in the document.

Show/Hide Only definitions are created in the Show/Hide Only dialog box:

Control	Description
Select Method	Show - Displays only items satisfying the Show/Hide Only definition criteria. Hide - Hides only items satisfying the Show/Hide Only definition criteria.
Where	
Calculations	Shows or Hides all calculated members.
Member	Bases the Show/Hide Only definition on specified dimension members of the current axis.
Values	Tests whether members of the opposite axis contain values satisfying criteria of the current axis.
All Values	Tests whether all members of the opposite axis contain values satisfying criteria of the current axis.
Colors	Tests whether members of the opposite axis contain colors satisfying criteria of the current axis.
All Colors	Tests whether all members of the opposite axis contain colors satisfying criteria of the current axis.
Set Condition	

Control	Description
Operator drop-down list	Select an operator for your criteria: Greater than (>), Greater Than or Equal To (>=), Equal to (=), Less Than or Equal To (<=), Less Than (<), Not Equal To (<>).
Value Text box	Enables you to enter the value for Show/Hide Only Values conditions.
Color	Opens the Select Color dialog box to set the condition color.
Members	Lists available dimension members and attributes to which the Show/Hide Only definition is applied.
Advanced	Aggregates or separates dimension member combinations.
Apply	Applies the definition to the document.

Creating Show/Hide Only Definitions

► To create a Show/Hide Only definition:

1 Right-click a dimension member header and select Analysis Tools > Show/Hide Only.

The Show/Hide Only dialog box is displayed.

2 From Select Method, select Show or Hide.

3 Define one option:

- To show or hide only calculated members, click the **Where** group **Calculations** option.
- To show or hide specified members, click the **Where** group **Members** option and select dimension members from **Members**.
- To show or hide only dimension members if dimension member value satisfies a condition, perform these actions:
 - a. Click the **Where** group **Values** option.
 - b. Select dimension members from **Members**.
 - c. Use the operator list and the value area to define a condition.
- To show or hide only dimension members when all dimension member values satisfy a condition, perform these actions:
 - a. Click the **Where** group **All Values** option.
 - b. Select dimension members from **Members**.
 - c. Use the operator list and the value area to define a condition.
- To show or hide only dimension members if dimension member value satisfies a traffic lighting color condition, perform these actions:
 - a. Click the **Where** group **Colors** option.
 - b. Select dimension members from **Members**.
 - c. From the operator list, select **Equal To (=)** or **Not Equal To (<>)**.

- d. Click **Color**. The Select Color dialog box is displayed. Select one defined traffic lighting range color. The color displays in the large square. Click **OK**. The button displays the selected color.
- To show or hide only dimension members if all dimension member values satisfy a traffic lighting color condition, perform these actions:
 - a. Click the **Where** group **All Colors** option.
 - b. Select dimension members from **Members**.
 - c. From the operator list, select Equal To (=) or Not Equal To (<>).
 - d. Click **Color**. The Select Color dialog box is displayed. Select one defined traffic lighting range color. The color displays in the large square. Click **OK**. The button displays the selected color.

Note:

Show/Hide Only Members is applied to the named dimension member, and Show/Hide Only Values and Show/Hide Only Colors is applied to the opposite axis, using the values in the selected axis.

Color options are only enabled when the data object features an active traffic lighting definition. An Advanced option specifies conditions for dimension member combinations. Apply enables you to apply the definition to the current data object, without exiting the dialog box. Drag the dialog box title bar to see the data object underneath.

4 Click OK.

The current definition is added to the Analysis Tools Manager.

5 Click Close.

Traffic Lighting

The Traffic Lighting analysis tool color-codes data cells based on dimension member values. You can base color-coding on a comparison of two dimension members or by fixed limits on one dimension member. Colors graphically associate member values, whether they are sorted or ranked. Traffic Lighting definitions are maintained as the document is pivoted and changed.

The Information panel Traffic Lighting segment displays the Traffic Lighting definitions that color-code the current data object.

Traffic Lighting definitions are created in the Traffic Lighting dialog box:

Control	Description
Apply Traffic Lighting To:	Specifies the dimension to which traffic lighting is applied.
Comparing It To:	Specifies the dimension to which the preceding dimension is compared.

Control	Description
Assign Limits	Specifies the interval, set point, and color parameters that compose the traffic lighting definition.
% Differences	Indicates that the color-coding is based on the percent difference of the compared members. When disabled, color-coding is based on the value difference of the compared members.
Enable Financial Intelligence	Enables Hyperion data sources to treat expenses and liabilities as negative values. Works in cooperation with the % differences option to reflect variance and variance percent calculations for the traffic lighting dialog box.
Advanced	Aggregates or separates dimension member combinations.
Apply	Applies the definition to the document.

Topics that discuss traffic lighting:

- [“Financial Intelligence Variations” on page 121](#)
- [“Assign Limits Shortcut Menu” on page 121](#)
- [“Creating Traffic Lighting Definitions” on page 122](#)
- [“Setting Traffic Lighting Opacity” on page 123](#)

Financial Intelligence Variations

The % Differences and Enable Financial Intelligence options cooperate to provide four calculations for the Traffic Lighting dialog box.

- When neither option is selected, the Traffic Lighting dialog box compares selected members using a conventional **subtraction** calculation.
- When only the % Differences option is selected, the Traffic Lighting dialog box compares the selected members using a conventional **percent difference** calculation.
- When the Enable Financial Intelligence option is selected, the Traffic Lighting dialog compares the selected members using an advanced **variance** calculation that recognizes expenses and liability dimensions as negative values.
- When both options are selected, the Traffic Lighting dialog compares the selected members using an advanced **variance percent** calculation that recognizes expenses and liability dimensions as negative values.

Understanding the calculations and the nature of your dimension metadata helps you to better compare dimensions.

Assign Limits Shortcut Menu

The Assign Limits color band and the Set Point arrows feature context-sensitive shortcut menus:

Control	Description
Assign Limits Shortcut Menu	
Add Set point	Inserts a set point within the range.
Set Color	Opens the Select Color dialog box where you can set the range color.
Set Opacity	Opens the Opacity dialog box, enabling you to determine the percentage of transparency for the selected range color.
Set Point Shortcut Menu	
Color Above Set point	Sets the set point color to that of values greater than the set-point.
Color Below Set point	Sets the set point color to that of values less than the set-point.
Delete Set point	Opens the Confirm Deletion message box where you can confirm intentional deletion of the set point.

Note:

Setting traffic lighting colors to colors used by Spreadsheet Options may obscure the color-coding of dimension members.

Creating Traffic Lighting Definitions

► To create a traffic lighting definition:

- 1 Right-click a dimension member header and select **Analysis Tools > Traffic Light**.

The Traffic Lighting dialog box is displayed.

- 2 Select the dimension member to which traffic lighting is applied, from **Apply Traffic Lighting To**.
- 3 From **Comparing It To**, select the dimension member to which the preceding dimension member is compared.
 - Compare to a fixed limit by disabling the % Differences option in the Assign Limits group box, or by selecting Fixed Value from Comparing It To.
 - Select the Advanced option to separate dimension members into combinations. Click it again to select from aggregated dimension members.

The Assign Limits option contains three default set points and colors.

- 4 Right-click ranges to:
 - Insert another set point.
 - Redefine the range color.
 - Set range opacity or transparency.
- 5 Right-click a set point arrow to:
 - Include the set point in the range above.
 - Include the set point in the range below.

- Delete the set point.
- 6 Click the set point text box to enter or edit set point threshold values.
 - 7 Click **Apply**.
 - 8 Click **OK**.

Setting Traffic Lighting Opacity

The Opacity dialog box enables you to define transparent traffic lighting ranges and set points, and to control the percentage of transparency for these ranges and set points.

This is especially valuable when you want background images to show through spreadsheets with color comparisons and traffic lighting definitions.

- ▶ To specify transparency for a traffic lighting range or set point:
 - 1 In the Traffic Lighting dialog box, right-click an **Assign Limits** range or set point and select **Set Opacity**.
 - 2 The Opacity dialog box is displayed.
 - 3 Drag the slider bar to the desired percentage of transparency.
 - 4 If you want to apply this percentage of transparency to all other ranges and set points, click **Apply to All Colors**.
 - 5 Click **OK**.

Sorting

The Sorting analysis tool orders specified dimensions of the query result set in ascending or descending alphanumeric order. Sorting definitions are dynamic and are applied as the document is drilled, pivoted, and changed.

The Information panel Sorting segment displays all client-based sorting definitions.

Multiple sorting definitions are applied in the order presented by the Analysis Tools Manager. Sorting definitions applied to axes with equal values may subsequently 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, even though it may appear that only the last sorting definition is applied.

Sorting Dialog Box

Sorting definitions are created in the Sorting dialog box.

Control	Description
Sort On	Specifies the dimension member to which the sorting definition is applied.
Order	

Control	Description
Ascending	Selects ascending alphanumeric order for the result set display.
Descending	Selects descending alphanumeric order for the result set display.
Apply	Apply the definition to the document.

Creating Sorting Definitions

- ▶ To create a sorting definition:
 - 1 **Right-click a dimension member header and select **Analysis Tools > Sort**.**
The Sorting dialog box is displayed.
 - 2 **Select the dimension member to which sorting is applied, from **Sort On**.**
 - 3 **Select **Ascending** or **Descending**.**
 - 4 **Click **Apply**.**
 - 5 **Click **OK**.**

Restricting Data

The Restrict Data analysis tool provides another means of narrowing the return set, by requiring data values to be relevant to rules and operands. Data can be restricted by a comparison between columns or using fixed limits on one column.

The Information panel Restrict Data segment is displayed Analytic Services Restrict Data definitions for the current document.

Restrict Data is executed by Analytic Services. This can protect the network server from transmitting, and the client from processing, large result sets.

Although you can apply Restrict Data to the result set of a processed query (using the Analysis Tools shortcut menu), you can also define Restrict Data criteria before submitting a query. The last step in the Document Creation wizard enables you to create Restrict Data definitions.

Topics that discuss restricting data:

- [“Restrict Data Controls” on page 125](#)
- [“Creating Restrict Data Definitions” on page 125](#)

Restrict Data Controls

Control	Description
Select Column	Displays the Select Column dialog box, enabling you to select a column from the current document.
Operator drop-down list	Select an operator for your criteria: Greater than (>), Greater Than or Equal To (>=), Equal to (=), Less Than or Equal To (<=), Less Than (<), Not Equal To (<>).
Operand drop-down list	Specifies one of three operands for restricting data: <ul style="list-style-type: none">● A value Of - Restricts Data to a value or range of values.● The Data Value of Column - Displays a secondary Select Column button, enabling you to compare two columns.● A Missing Value - Enables restriction of missing values.
Value Text box	Enables you to enter the value for Restrict Data conditions.

Note:

Only use one member per dimension in filters when restrict data and /or retrieve top/bottom is applied. When multiple members are selected per dimension, the application aggregates the results. Because restrict data and retrieve top/bottom are parts of the Analytic Services query, the aggregation occurs after the query is returned and may result in unexpected result sets.

Creating Restrict Data Definitions

► To create a Restrict Data definition:

1 Perform one:

- Right-click a dimension member header and select **Analysis Tools > Restrict Data**.
- Right-click a dimension member header and select **Analysis Tools**. When the Analysis Tools Manager is displayed, select **New Restrict Data**.
- Select **Restrict Data** from Cube Navigator **Options**.
- In the last step of the Document Creation wizard, click **Restrict Data**.

The Restrict Data dialog box is displayed.

2 Click **Select Column**.

The Restriction Columns dialog box is displayed.

3 Select the Column to which the Restrict Data definition is applied, and click **OK**.

Focus is returned to the Restrict Data dialog box.

4 Select an operator from **Operator**.

5 Select an operand from the Operand menu: **A Value Of**, **The Data Value of Column**, or **A Missing Value**.

6 Enter a data value in **Value**, as needed.

7 Click **Add**.

The restriction criteria is listed in the Restriction Definition frame. You can use the Advanced button to create compound definitions with additional criteria.

8 **Optional:** Click **Advanced** to add criteria, update the definition, remove one or all definitions, connect individual definitions with an AND or OR, or move a criteria.

Advanced Option	Sub menu	Description
Add		Add the current rule to the Total Subset Definition.
Update		Replace the selected rule with the current rule.
Validate		Verifies the parenthetical syntax of the Total Subset Definition.
Remove		Remove the current rule from the Total Subset Definition.
Remove All		Remove all rules from the Total Subset Definition.
Connect	And	Inserts the AND operand at the end of the currently selected rule. The AND operand is used by default when multiple rules are added to the Definition.
	Or	Inserts the OR operand at the end of the currently selected rule.
Move	Move Up	Moves up the currently selected rule in the Total Subset Definition.
	Move Down	Move the currently selected rule down in the Total Subset Definition.

9 Click **OK**.

Retrieve Only Top/Bottom

The Retrieve Only Top/Bottom analysis tool leverages Analytic Services server-based sorting and ranking to control the size and order of an OLAP query result set. This can protect the network server from transmitting, and the client from processing, large result sets. The Retrieve Only Top/Bottom analysis tool is central to top/bottom analysis.

Although you can apply Retrieve Only Top/Bottom to the result set of a processed query (using the Analysis Tools shortcut menu), you can also define Retrieve Only Top/Bottom criteria before submitting a query. Click the Cube Navigator Options button and select the Retrieve Only Top/Bottom menu item, to define a Retrieve Only Top/Bottom definition before sending a query. The last step of the Document Creation wizard also enables you to create Retrieve Only Top/Bottom definitions.

The Information panel Retrieve Only Top/Bottom segment is displayed all Analytic Services Retrieve Only Top/Bottom definitions for the current document.

Behavior of multiple row dimension member selection

Retrieve Only Top/Bottom Analysis Tool restricts the use of multiple row dimension member selections, because Top/Bottom applies only to one dimension. When you add a dimension to

a row and retrieve the top two members of a column, the Top/Bottom Analysis Tool displays the top two members for each member of the first dimension instead of the top two members of the selected column.

Analysis Tools and Multiple Filter Axis Dimension Members

Multiple filter dimension member selections impact Retrieve Only Top/Bottom.

Multiple filter axis dimension members are aggregated before being sent in a query. Because the client-based aggregation does not exist in the data source server, the query is processed in terms of the data values on the server. The discrepancy between client aggregations and server-based sorting and ranking results in irregular result sets.

Nominate only single filter dimension member selections when using Retrieve Only Top/Bottom and Restrict Data analysis tools.

Control	Description
Select Column	Specifies the columns to which the Retrieve Only Top/Bottom definition is applied.
Show	Limits the result set to these criteria:
Top	Selects the number of highest data values indicated by the corresponding value text box.
Bottom	Selects the number of lowest data values indicated by the corresponding value text box.
Sorting	
Ascending	Displays the result set in ascending alphanumeric order.
Descending	Displays the result set in descending alphanumeric order.
Clear	Deletes all Retrieve Only Top/Bottom definitions.

Creating Retrieve Only Top/Bottom Definitions

► To create a Retrieve Only Top/Bottom definition:

1 Perform one:

- Right-click a dimension member header and select **Analysis Tools > Retrieve Only Top/Bottom**.
- Right-click a dimension member header and select **Analysis Tools**. When the Analysis Tools Manager is displayed, select **New Retrieve Only Top/Bottom**.
- Select **Retrieve Only Top/Bottom** from Cube Navigator **Options**.
- In the last step of the Document Creation wizard, click **Retrieve Only Top/Bottom**.

The Retrieve Only Top/Bottom dialog box is displayed.

2 Select the column to which the Retrieve Only Top/Bottom definition is applied from **Select Column.**

- 3 Limit the result set by selecting **Top** or **Bottom** and indicating the number of members in **Value**.
- 4 Sort the result set by selecting **Ascending** or **Descending**.
- 5 **Optional:** To remove all selections from the current definition and start over, select **Clear**.
- 6 Click **OK**.

Data Formatting

Data Formatting options automatically format headers and data values by dimension member and criteria. While formatting options are fixed, the formatting scope varies depending on the formatting source. See [“Formatting Order of Precedence” on page 94](#).

- To create a Data Formatting definition, right-click a dimension member header and select **Analysis Tools > Format**.
- To edit Data Formatting definitions, right-click a dimension member header, select **Analysis Tools > Analysis Tools Manager**, and double-click the desired data formatting definition.

Formatting Dialog Box

The Formatting dialog box indicates the dimension member selection to which the formatting definition is applied.

You can perform these tasks from this dialog box:

- Format header font properties for a dimension member selection.
- Format data value font properties for a dimension member selection.
- Edit the dimension member selection.
- Restore the settings specified by the Default Formatting preferences.

Controls	Description
Selections	Displays all dimension member selection definitions.
Remove All	Deletes all dimension member selection definitions from the Selections panel.
Remove	Deletes the selected dimension member selection definition from the Selections panel.
Edit	Displays the Edit Formatting Selections dialog box, enabling you to define member selection definitions.
Header	
Font	Displays the Font Properties dialog box.
Data	

Controls	Description
Font	Displays the Font Properties dialog box.
Format Data	Displays the Format Data dialog box, used to specify text and numeric formatting.
Conditional Formatting	Enables conditional formatting of dimension member selections based on the criteria defined in the operand drop-down list, and value text box.
Operand drop-down list	Specifies the conditional formatting operand.
Value Text box	Specified the conditional formatting value.
Restore Defaults	Restores the settings specified by the Default Formatting preferences.

Creating Data Formatting Definitions

► To create a data formatting definition:

- 1 **Right-click a column or row dimension header, and select **Analysis Tools > Format**.**

The Formatting dialog box is displayed.

If the default dimension member selection in Selections is satisfactory, proceed to Step 7.

- 2 **Click **Edit** to edit the dimension member selection.**

The Edit Formatting Selections dialog box is displayed.

- 3 **Click **Advanced** to display the Dimensions panel.**

- 4 **Select dimension members.**

If you select one dimension from the Dimensions panel, the corresponding dimension members display in the Combinations panel.

If you select multiple dimensions from the Dimensions panel, the Combinations panel displays dimension member aggregations.

- 5 **In **Combinations**, select the dimension member or dimension member combination to be formatted.**

Selections display in the Selections panel. Click Remove to delete the current selection, or Remove All to delete all member selections and start over.

- 6 **When dimension member selections are defined, click **OK**.**

The Formatting dialog box is displayed. The Selections panel displays the dimension member selection.

- 7 **To specify a formatting definition:**

- Click the Header group **Font** button to specify header cell font properties for the dimension member selection.
- Click the Data group **Font** button to specify data cell font properties for the dimension member selection.

- Click **Format Data** to display the Format Data dialog box, used to specify leading and trailing text, and numeric formatting.
 - Click **Conditional Formatting** to enabling conditional formatting, and enter a value and select an operand from the controls below. You can further refine formatting definitions using conditional formatting. Conditional formatting requires dimension member selection values to satisfy additional criteria before formatting is applied.
- 8 When you are finished specifying formatting definition properties for the dimension member selection, click **OK**.

The formatting definition is listed in the Analysis Tools Manager for future reference and the definition is applied to the document.

Creating Calculations

You can create client-side calculated members, and edit, delete, and analyze these calculations.

The order of calculation definitions in the Analysis Tools Manager establishes a precedent for subsequent compound calculations. You can change the order of calculation definitions, by selecting the definition and clicking the up and down arrow buttons.

The complete list of calculations includes:

Average

- **Function Performed**—Sum of all arguments divided by the number of arguments.
- **Number of Arguments**—Two or more members or calculations.
- **Options**—Whether missing values should be set to 0 in the calculation 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**—Provides a running total.
- **Number of Arguments**—One member or calculation.
- **Options**—Whether missing values should be set to 0 in the calculation.

Example—Consider a spreadsheet with Actual as a column and Colas, Root Beer, and Cream Soda as rows. If the Actual values for these products were 100, 200, and 300, the Cumulative column would be 100, 300, 600.

Difference from Average

- **Function Performed**—Subtracts each argument's average value from each occurrence of the argument.

- **Number of Arguments**—One member or calculation.
- **Options**—Whether missing values should be set to 0 for the purposes of the calculation.

Example—Consider a spreadsheet with Actual as a column and Colas, Root Beer, and Cream Soda as rows. If the Actual values for these products were 100, 200, and 300, the average would be 200. So the Difference from Average column would be -100, 0, 100.

Divide

- **Function Performed**—Arithmetic division
- **Number of Arguments**—Two members or calculation
- **Options**—Whether missing values should be set to zero in the calculation

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 calculation.
- **Options**—Whether missing values should be 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 these time periods were 100, 300, and 600, the Linear Regression column would be 83, 333, 58. Notice that there is now a constant difference between each value (250). All points in the sequence are adjusted. A chart of these numbers would produce a straight line that goes through the original data points.

Maximum

- **Function Performed**—Given two or more arguments, Maximum returns the name of the member or calculation that has the maximum value.
- **Number of Arguments**—Two or more members or calculations.
- **Options**—Whether missing values should be set to 0 in the calculation.

Example—Consider a spreadsheet with East and West as columns and Jan, Feb, Mar as rows. If the East values were 100, 300, and 600 and the West values were 200, 200, 300, the Maximum column would be West, East, East.

Maximum Value

- **Function Performed**—Given two or more arguments, Maximum Value returns the value of the member or calculation that has the maximum value.
- **Number of Arguments**—Two or more members or calculations.

- **Options**—Whether missing values should be set to 0 in the calculation.

Example—Consider a spreadsheet with East and West as columns and Jan, Feb, Mar as rows. If the East values were 100, 300, and 600 and the West values were 200, 200, 300, the Maximum Value column would be 200, 300, 600.

Minimum

- **Function Performed**—Given two or more arguments, Minimum returns the name of the member or calculation that has the minimum value.
- **Number of Arguments**—Two or more members or calculations
- **Options**—Whether missing values should be set to 0 in the calculation.

Example—Consider a spreadsheet with East and West as columns and Jan, Feb, Mar as rows. If the East values were 100, 300, and 600 and the West values were 200, 200, 300, the Minimum column would be East, West, West.

Minimum Value

- **Function Performed**—Given two or more arguments, Minimum Value returns the value of the member or calculation that has the minimum value.
- **Number of Arguments**—Two or more members or calculations
- **Options**—Whether missing values should be set to 0 in the calculation.

Example—Consider a spreadsheet with East and West as columns and Jan, Feb, Mar as rows. If the East values were 100, 300, and 600 and the West values were 200, 200, 300, the Minimum Value column would be 100, 200, 300.

Multiply

- **Function Performed**—Arithmetic multiplication.
- **Number of Arguments**—Two members or calculations, or one member or calculation and a constant.
- **Options**—You can specify a constant as an argument if you want to work with one rather than two members or calculations. You can also choose whether missing values should be set to 0 in the calculation.

Percent

- **Function Performed**—Percentage calculation.
- **Number of Arguments**—Two members or calculations, or one member or calculation and a constant.

- **Options**—You can specify a constant as an argument if you want to work with one rather than two members or calculations. You can also choose whether missing values should be set to 0 in the calculation.

Example—Consider a spreadsheet with Actual and Budget as columns and Jan, Feb, Mar as rows. If the Actual values were 100, 300, and 600 and the Budget values were 200, 200, 400, the Percentage column (Actual % Budget) would be 50, 150, 150.

Percent Difference from Average

- **Function Performed**—Performs the same actions as Difference from Average but displays each result as a percentage of average.
- **Number of Arguments**—One member or calculation.
- **Options**—Whether missing values should be set to 0 in the calculation.

Example—Consider a spreadsheet with Actual as a column and Colas, Root Beer, and Cream Soda as rows. If the Actual values for these products were 100, 200, and 300, the average would be 200. So the Difference from Average (%) column would be -50, 0, 50.

Percent of Difference

- **Function Performed**—Percentage difference calculation.
- **Number of Arguments**—Two members or calculations, or one member or calculation and a constant.
- **Options**—You can specify a Constant as an argument if you want to compare a member with a fixed value. You can also choose whether missing values should be set to 0 in the calculation.

Example—Consider a spreadsheet with Actual and Budget as columns and Jan, Feb, Mar as rows. If the Actual values were 100, 300, and 600 and the Budget values were 200, 200, 400, the Percentage difference column (Actual % diff Budget) would be calculated as $((\text{Actual} - \text{Budget}) / \text{Budget}) * 100$ and shown as -50, 50, 50.

Percent of Member

- **Function Performed**—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.
- **Number of Arguments**—Two or more members or calculations, or one member or calculation and a constant.
- **Options**—You can choose whether missing values should be set to 0 in the calculation.
- **Procedure**—Select a Percent of Member calculation from the Function list, select a dimension member argument, and select a dimension member from the opposite axis using the Opposite Member drop-down list.

Percent of Total

- **Function Performed**—Percentage of total.
- **Number of Arguments**—One member or calculation.
- **Options**—None.

Example—Consider a spreadsheet with Actual as a column and Jan, Feb, Mar as rows. If the Actual values were 100, 300, and 600, the Percentage of Total column would be shown as 10, 30, and 60.

Rank Ascending

- **Function Performed**—Ranking.
- **Number of Arguments**—One member or calculation.
- **Options**—Ascending or descending (the default). If ascending is chosen, the smallest value is given a ranking of 1. If descending is chosen, the largest value is given a ranking of 1.

Example—Consider a spreadsheet with Actual as a column and Jan, Feb, Mar as rows. If the Actual values were 100, 300, and 600, the Rank column would be shown as 3, 2, 1.

Rank Descending

- **Function Performed**—Ranking.
- **Number of Arguments**—One member or calculation.
- **Options**—Ascending or descending (the default). If ascending is chosen, the smallest value is given a ranking of 1. If descending is chosen, the largest value is given a ranking of 1.

Subtract

- **Function Performed**—Arithmetic subtraction.
- **Number of Arguments**—Two or more members or calculations, or one member or calculation and a constant.
- **Options**—You can choose whether missing values should be set to 0 in the calculation.

Sum

- **Function Performed**—Arithmetic addition.
- **Number of Arguments**—Two or more members or calculations, or one member or calculation and a constant.
- **Options**—Whether missing values should be set to 0 in the calculation.

Trend

- **Function Performed**—Trend based on straight-line Linear Regression; that is, the slope of the 'straight line' that a Linear Regression calculation would plot between the points in the original data series.
- **Number of Arguments**—Two or more members or calculation.
- **Options**—Whether missing values should be set to 0 in the calculation

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 calculations, or one member or calculation and a constant.
- **Options**—You can choose whether missing values should be set to 0 in the calculation.

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 calculations, or one member or calculation and a constant.
- **Options**—You can specify a Constant as an argument if you want to compare a member with a fixed value. You can also choose whether missing values should be set to 0 in the calculation.

Complex Calculations

Hyperion recommends breaking complex calculations into smaller components that you combine to create a compound calculation.

Example: To create a calculation for $(A + B) / (C \times 2)$, where A, B, and C are members, divide the formula into steps:

- Create Total for $A + B$, and name it Step 1.
- Create multiplication for $C \times 2$, and call it Step 2.
- Create a third calculation to divide Step 1 by Step 2 to get the result.
- You can use Show Only Members to hide Step 1 and Step 2 so that they do not display in your view. 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.

► To create a calculation:

1 Right-click a dimension member header and select **Analysis Tools > Calculation.**

The Calculation Definition dialog box is displayed. It provides seven labeled groups:

- Name
- Function
- Select Position
- Select Members
- Arguments
- Missing Values
- Formula

2 Enter a name for the Calculation definition in **Name.**

3 Select the calculation type from **Function.**

The calculations type is displayed in the Function text box.

4 Position the calculation by selecting one option in **Select Position:**

- Front/Top
- Back/Bottom
- Insert Before
- Insert After

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.

5 Specify the arguments for the calculation by:

- Click a dimension member label and click the arrow button (>) to replace an undefined argument (?) with the member.
- Enter a value in the **Constant** text box and click the arrow button (>) to replace an undefined argument (?) with a value.
- Select **Advanced** to display dimension member combinations. Click to select a dimension member combination label and click the arrow button (>) to replace an undefined argument (?).
- Select **All Members** to quickly select all available dimension members.
- Select **Ignore Calculations** to exclude calculated members from the equation when All Members is enabled.
- Select an argument and click the remove argument button (<) to remove an argument.

The calculation definition is displayed in Formula.

6 Optional: To indicate how the Calculations Analysis Tool should handle missing values, select one **Missing Values option:**

- **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).

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.

7 Optional: To use Opposite Member:

- 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 **Opposite Member** list.

8 When the calculation is defined, Click Apply and OK.

Modifying Calculations

► To modify a calculation:

1 Right-click a dimension member header and select Analysis Tools > Analysis Tools Manager.

The Analysis Tools Manager is displayed.

2 Click a calculation definition.

3 Click Edit.

The Calculation Definition dialog box is displayed 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 to redefine all arguments. For instructions, See [To create a calculation](#).

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

Web Analysis Studio leverages server-based Analytic Services attribute calculations in the client. Server-based calculations are performed by the server before returning the OLAP query result set. This minimizes the result set and network traffic.

To use attribute calculations, you must use Cube Navigator to select the attribute calculations dimensions to participate in the query. You must use Dimension Browser to select the server-based calculations to be returned by the query result set.

Note:

You can reproduce attribute calculations in Web Analysis Studio, but the onus is on you to define these calculations, and the client to process the result set.

Consider the use of attribute members in these calculations:

- You can select, aggregate and document on data sharing common attributes.
- You can select attributes by their data types: text, numeric, Boolean, and data type.
- You can group numeric data types into statistical ranges.
- You can use sum, count, min, max, and average functions on the attribute calculations dimension automatically generated by Analytic Services.
- You can use numerical attribute values from calculation scripts and member formulas in calculations.
- You can create crosstabs of attribute data for one dimension, and analyze the dimension in terms of each attribute.

Creating SAP BW Currency Conversion Definitions

SAP BW converts data value currencies ad hoc during analysis, and saves conversion definitions as analysis tools. You can activate and deactivate currency conversion definitions without removing them from the Analysis Tools Manager, enabling currency combinations that differ.

➤ To create a currency conversion definition:

- 1 **Right-click a dimension member header and select Analysis Tools > Currency Conversion.**

The SAP Currency Conversion dialog box is displayed. Because exchange rates fluctuate, you must indicate the exchange rates and supported currencies for a date. You can use the arrow controls to the left and right of the current month and year, to scroll to another date.

- 2 **Scroll to the month and year of a date, and click the cell for the date.**

The selected date is highlighted.

- 3 **In the Select Currency To list, select the currency to which you would like a currency converted.**

Your options may be limited to the currencies supported by the date of your exchange rate.

4 In the **Select Currency Rate** list, select the exchange rate used to convert currency.

5 In the **Select Currency From** list, select the currency that you would like to convert.

Your options may be limited to the currencies supported by the date of your exchange rate.

6 Click **OK**.

All data values using the last currency selection are converted to the specified currency, using the specified exchange rate. Repeat this process to convert all data values to one currency.

Creating SAP BW Unit of Measure Conversion Definitions

SAP BW converts data value unit of measure ad hoc during analysis, and saves conversion definitions as analysis tools. You can activate and deactivate unit of measure conversion definitions without removing them from the Analysis Tools Manager, enabling unit of measure combinations that differ.

Note:

To use the Unit of Measure Conversion analysis tool, the 0MATERIAL characteristic must be selected as a data object column, row, or page dimension.

► To convert all units of a measure to another unit of measure:

1 Right-click a dimension member header and select **Analysis Tools > Unit of Measure Conversion**.

The SAP Unit Conversion dialog box is displayed.

2 From the **Unit From** list, select a unit of measure that you would like to convert.

3 From the **Unit To** list, select the unit of measure into which you would like your previous selection converted.

The drop-down list displays known conversion rates from your SAP BW 0MAT_UNIT table. You must define a logical conversion for the analysis tool to work.

4 **Optional:** To define a custom unit of measure conversion using these steps:

a. From the **Unit To** list, select **Custom Unit**.

b. In **Select Custom to Rate**, enter a unit name in **Unit Name**.

c. Enter a custom conversion factor in **Conversion Factor**.

5 Click **OK**.

All data values using the specified unit of measure are converted using the standard or custom conversion rate. Repeat this process to convert all data values to one unit of measure.

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Smart View

Hyperion® System™ 9 Smart View for Office™ for Office provides a common Microsoft Office interface for these Hyperion products:

- Analytic Services
- Financial Management
- Planning
- Hyperion® System™ 9 BI+™ Financial Reporting™
- Hyperion® System™ 9 BI+™ Interactive Reporting™
- Hyperion® System™ 9 BI+™ Production Reporting™
- Web Analysis

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 this functionality:

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

Smart View enables these 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 requery the corresponding Web application to refresh the image.

You can export documents to Microsoft Excel as 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 requery 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 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.

Web Applications	Export Image to Microsoft Word, and PowerPoint	Export Formatted HTML to Excel	Export Query-ready HTML to Excel
Analytic Services	Yes	Yes	Yes
Financial Management	Yes	Yes	Yes
Planning	Yes	Yes	Yes *
Financial Reporting	Yes	Yes	Yes
Interactive Reporting	N/A	N/A	N/A
Production Reporting	N/A	Yes	N/A
Web Analysis	Yes	Yes	Yes

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

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 Microsoft Excel, Word and PowerPoint must be installed on the computer running the Hyperion® System™ 9 BI+™ client.

Exporting Web Analysis Documents to Microsoft Office

- To export a page of a data object from the current Web Analysis document to Microsoft Excel, Word, or PowerPoint:
 - 1 Right-click a data object and select **Export**.
 - 2 Select one option:
 - **Query-Ready > to Microsoft Excel.**
 - **Format > to Microsoft Excel.**

- **Image > to Microsoft Excel 2003, or to Microsoft PowerPoint 2003, or to Microsoft Word 2003.**

Although the image is static, you can requery the Web application as needed.

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

When exporting to Excel, using one of the three methods that populates cells of data (Query Ready, Formatted, Unformatted), Web Analysis evaluates the number of rows and columns in the data and if they are larger than the number of rows and or/columns in Excel, an error message is displayed and the Web Analysis document is not exported.

Exporting to the Clipboard

Web Analysis Studio can export a page of a data object from an Web Analysis document to the operating system clipboard.

➤ To export a page of a data object to the clipboard:

1 Right-click a data object and select **Export Data.**

2 Select one:

- To export a page of a data object as query-ready HTML, select **Query-Ready > To Clipboard** from the submenu.

Note that query-ready HTML is stripped of Web Analysis Studio-specific content. This enables Smart View to reconnect directly to the data source and query it independently of Web Analysis Studio.

- To export a page of a data object as formatted data, select **Formatted > To Clipboard**.

Note that formatted data is converted to HTML with all Web Analysis Studio formatting definitions and calculated members. This enables Smart View to leverage Web Analysis Studio functionality in supported Microsoft Office applications. The data source however cannot update or recognize formatted data generated by Web Analysis Studio.

You cannot export a static image of the data object to the Clipboard.

Export Data Unformatted

Data in a spreadsheet, chart, or pinboard can now be exported unformatted to Excel, Clipboard or to a file. To access this, right click a report object and select **Export > Unformatted**.

When exporting data to Excel using the Unformatted option (**Export Data > Unformatted > To Microsoft Excel**), filter dimensions with members selected are included in the Excel output. For example, if a Web Analysis document against Analytic Services Sample Basic has the Scenario dimension in the filter, and the member Budget is selected, the Budget member appears in the Excel output above the column headers.

Note:

This feature does not apply to the Query-Ready or Formatted export types.

Exporting to Tab Delimited Text Files

Web Analysis Studio can export a page of a data object of a Web Analysis document to a simple text file delimited with tabs.

► To export the current data object to the clipboard or to a file:

1 Right-click a data object and select **Export Data.**

2 Select one:

- To export the current page of the current data object as query-ready HTML, select **Query-Ready > To File** from the submenu.

Note that query-ready HTML is stripped of Web Analysis Studio-specific content. This enables Smart View to reconnect directly to the data source and query it independently of Web Analysis Studio.

- To export the current page of the current data object as formatted data, select **Formatted > To File** from the submenu.

Note that formatted data is converted to HTML with all Web Analysis Studio formatting definitions and calculated members. This enables Smart View to leverage Web Analysis Studio functionality in supported Microsoft Office applications. The data source however cannot update or recognize formatted data generated by Web Analysis Studio.

- To export the current page of the current data object as a static image, select **Image > To File** from the submenu.

Note that while the image is static, you can use Smart View to re-query Web Analysis Studio and update the image as needed.

The Save dialog box is displayed.

3 Navigate to the folder to save the file.

4 Enter a name for the document in **Filename, and click **OK**.**

Note:

Query-ready HTML and Formatted Data formats are saved with HTML suffixes, and exported images are saved as JPG files.

Exporting Documents and Presentations

You can export documents and presentations to local computers and mapped drives. Exported documents are appended with the ARD file name extension. Exported presentations are appended with the APT file name extension. To export Web Analysis Studio content to Hyperion® System™

9 Shared Services™, See “Exporting XML Document and Presentation Definitions to Shared Services” on page 146.

Exporting the Current Document

- ▶ To export the current document, select **File > Export > Current Document**. In the Save dialog box, indicate the network location to which the file is to be saved and click **OK**.

Exporting Documents and Presentations

- ▶ To export a document or presentation:

1 Perform one:

- Select **File > Export > Documents**.
- Select **File > Export > Presentations**.

The Open dialog box is displayed. It features a selection frame that lists the current folder contents, specified by **Location**.

2 If not specified, select **Web Analysis Document** or **Web Analysis Presentation** from **Files of Type**.

3 Navigate to the document or presentation you want to open:

- In **Location**, type the path to the repository folder whose contents you want displayed, and press **Enter**.
- In **Location**, click the drop-down arrow and select from the location series.
- When you navigate to another folder, you can click **Back** to return to the previous folder.
- Similarly, you can click **Forward** to display the next folder.
- Click **Up** to display the contents of the parent folder in the selection frame.
- Click **Favorites** to jump to the Favorites folder of the current user.
- Click the **Favorites** list to jump to the Favorites folder of groups.
- Click **Home** to jump to and display the contents of the current Home folder in the selection frame.

As you navigate, the selection frame lists the files and folders indicated by **Files of Type**.

4 Select a document or presentation:

- To select one document from the selection frame, click the document name or icon.
- To select a series of documents from the selection frame, click a document name and press and hold **Shift** while selecting another document name. The first selection, the last selection and all documents in between are selected.
- To select multiple documents, not necessarily in a series, hold down **Ctrl** while clicking document names in the selection panel.
- To deselect items, click outside the Name column or on empty white space.

- Double-click to select and dismiss the Open dialog box.

5 Click OK.

The Save dialog box is displayed. It features a selection frame that lists the contents of the current folder, specified by **Look in**. Note that **Files of Type** is set to **Web Analysis Document Definition (*.apt, *.ard, *.arg)**.

6 Navigate to the network location where files are to be saved:

- Click **Up** to display the contents of the parent folder in the selection frame.
- Click **Home** to jump to and display the contents of the current Home folder (set in preferences) in the selection frame.
- Click **Look in** to list mapped drives and network folder locations. Click a location name to display its contents in the selection frame.
- Click the **Create New Folder** icon to create a folder at the current location.

7 Click to select a folder location in the selection frame.

8 Optional: Specify a name for the exported file in File name.

9 Click Save.

The files selected in the Open dialog box are converted to Web Analysis document definitions and stored at the location specified by the Save dialog box.

Note:

The ARD and APT file suffixes are dropped when you export to a folder that has a period (.) in it. To guard against this issue, do not use periods in folder names.

Exporting XML Document and Presentation Definitions to Shared Services

To share Web Analysis Studio content with other Web Analysis Studio environments, you can export Web Analysis document and presentation definitions to a configured Shared Services server.

- To export Web Analysis Studio content to Shared Services:

1 Select File > Export > to Shared Services.

If your administrator has not established global Shared Services connectivity, you may be prompted with the Shared Services dialog box. The Shared Services dialog box requires you to provide a server name, port, user ID and password for connecting to Shared Services.

The Export to Shared Services dialog box is displayed.

2 In Repository, select the document or presentation to be exported.

To expand or collapse the node tree double click a node, or click the plus sign (+) or minus sign (-). To select, click the document or presentation name. Folder icons differ for presentations. Documents are indicated by the page icon.

3 In Shared Services, perform one:

- Select a subfolder into which to copy Web Analysis Studio content.
- Create a subfolder for Web Analysis Studio content by right-clicking the document or presentation folder and selecting **New > Folder**. Enter a folder name in the **New Document Folder** dialog box, and click **OK**.

Each BI+ configuration registered with Shared Services is indicated by a root folder in the Shared Services node tree. When you expand the root folder, a Default project folder is displayed.

Project folders are required under the root folder. Project folders can be used to distinguish departments or environments that differ. When you expand a Project folder, default documents and presentations folders are displayed.

The documents and presentation folders under the project folder are also required. They categorize the kind of content stored on Shared Services. You cannot export Web Analysis document content into the Presentation folder or presentation content into a Reports folder. The Export button is disabled when incompatible content and folders are selected.

Additionally, you are required to create subfolders for individual documents and presentations in the documents and presentations folders.

The Export button is not enabled until you select files from the repository frame and a compatible folder from the Shared Services frame. Remember, you may be required to create projects and folders for exporting Web Analysis Studio content.

Note:

Slash (/) and backslash (\) characters are replaced with an underscore (_) during import and export to prevent exception errors in Shared Services.

4 Click **Export**.

The selection from the repository frame is copied to the Shared Services frame. Click the subfolder plus sign (+) to display subfolder content.

5 Click **Close** to return to the Analyze interface.

Saving As HTML

► To convert a document to HTML:

1 Select **File > Save As HTML**.

The Save As HTML menu is displayed.

2 Select one:

- **Current Document**

- **Presentation**

The Save as HTML dialog box is displayed.

- 3 Specify a file name and a location for saving the output file, and click **Save**.**

E-mailing Document Links

You can e-mail hyperlinks to the URL of the current document.

- ▶ To send a document link of the current document by e-mail:

- 1 Select **File > E-mail As Link**.**

The E-mail As Link submenu is displayed.

- 2 Select one:**

- **Workspace**—Presents the current document in the Workspace.
- **Web Analysis Studio**—Presents the current document in Web Analysis Studio.

The E-mail dialog box is displayed.

- 3 Enter the e-mail address of recipients under **Add and Remove**.**

- 4 Click **Add**.**

The E-mail address is displayed in the Recipients' E-mail Address box.

- 5 Enter your e-mail address in **Sender's E-mail Address**.**

- 6 Replace the default subject string in **Subject**.**

The Body group box is displayed the document link URL of the current document.

- 7 Click **OK**.**

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Printing Options

There are three printing options:

- Print Screen—Prints the content area.
- Print Selected Object—Prints the specified OLAP pages of the current data object.
- Print All Objects—Prints all data object in a Web Analysis 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.

Print All Objects enables printing of all report objects on the current Web Analysis document. The output format is similar to the format of Print Selected Object. Page members can be printed for all report objects for which page members are defined.

Output options:

- Print the content area to the default printer.
- Print the content area to a PDF output file.
- Print the content area to a JPG output file.
- Print the current data object to the default printer.
- Print the current data object to a PDF output file.
- Print all objects to the default printer.
- Print all objects to the PDF output file.
- Print Preview

The Print dialog box features:

- Page tab—Specifies the print output, layout orientation, how to break the output over multiple pages, and whether a document summary page is included.
- Header/Footer tab—Defines custom headers and footers for print output.

An option at the bottom of these tabs enables you to save print specifications with the document definition the next time the document is saved. Selecting "Allow print settings to be saved with document" indicates that print specifications should be saved with the document. Otherwise print specifications persist only as long as the document is open during the current session.

Print Dialog Page Tab

The Page tab specifies print output, layout orientation, how to break the output over multiple pages, and whether a document summary page is included:

Control	Description
Print To	
Printer	Directs print output to the default printer.
PDF	Saves print output as a PDF file.
JPEG	Saves print output as a JPG file.
Orientation	
Portrait	Prints the document with a portrait orientation.
Landscape	Prints the document with a landscape orientation.
Scale	
__ page(s) wide __ page(s) tall.	Fit to page printing. Enables you to determine how document content is broken down into print job pages.
Summary Page	
Include a document page	Automatically inserts a print summary into the printer output when checked.
OLAP Pages	
Page Selection Panel	In Print Current Document context, specifies the OLAP page axis dimensions to print.
Allow print settings to be saved with document	Saves print specifications when the document is saved.
Print Preview	Displays the Print Preview panel.

See also [Print Dialog Headers/Footers Tab](#).

Print Dialog Headers/Footers Tab

The Headers/Footers tab defines custom headers and footers for print output.

Control	Description
Table Headers	
Include row and column headers on all pages.	Automatically inserts row and column headers on all pages when checked.
Headers	
Font	Opens the Font Properties dialog box, enabling you to set font properties for the current text selection.
Insert	Adds a dynamic text label to the header at the location in the string specified by the cursor. See “Dynamic Text Labels” on page 151 .
Clear	Deletes the content of the Header text box.
Header Text box	Adds a header text string.
Footers	
Font	Set font properties for the current text selection.
Insert	Adds a dynamic text label to the footer at the location in the string specified by the cursor. See “Dynamic Text Labels” on page 151 .
Clear	Deletes the content of the Footer text box.
Footer text box	Adds a header text string.
Allow print settings to be saved with document	Enables you to save print specifications when the document is saved.
Print Preview	Displays the Print Preview panel.

See also [Print Dialog Page Tab](#).

Dynamic Text Labels

You can add dynamic text labels to headers and footers, using the Insert button on the [Print Dialog Headers/Footers Tab](#). Dynamic text labels update themselves as strings are changed in the repository.

Dynamic Text Tag	Default Tag	Inserts:
Database Note	<<dbnote>>	Database note in the label.
Cell Reference	<cell 0,0>>	Cell reference string in the label.
Page	<<page>>	Page dimension name in the label.

Dynamic Text Tag	Default Tag	Inserts:
Filter	<<filter 0>>	Filter member name in the label.
Document Description	<<rd>>	Document description string in the label.
Document Name	<<rn>>	Document name string in the label.
Date/Time	<<date,MM-dd-yyyy>>	Date/time string in the label.
Connection Name	<<cn>>	Database connection name string in the label.
Username	<<username>>	User name string in the label.
UserID	<<userid>>	User ID string in the label.

Note:

Because custom documents can contain multiple data objects, dynamic text labels reference the current data object (the spreadsheet, chart, pinboard, or SQL spreadsheet with the yellow border).

Creating Dynamic Text Labels

- To create dynamic text labels, click the text string where the label is to be added, and select the dynamic text label from **Insert**.

After dynamic text labels are placed in the text box, you can edit the tag to display additional information.

Fixed References

Because dynamic text labels change as focus is shifted in composite documents, you may want to fix the dynamic reference. Tags can be associated with specified data sources using these modifications:

Dynamic Text Tag	Default Tag	Fixed Reference
Connection Name	<<cn>>	<<cn DataSourceName1>>
Cell Reference	<<cell 0,0>>	<<cell DataSourceName1,0,0>>
Filter	<<filter>>	<<filter DataSourceName1,0>>
Pages	<<page>>	<<page DataSourceName1>>
Database Note	<<dbnote>>	<<dbnote DataSourceName1>>

Note:

It is not possible to specify a fixed references for a page dimension member.

Time Format Syntax

Time Format strings specify the format of the dynamic date/time label. The count of the ASCII letter pattern determines the format used.

ASCIISymbol	Meaning	Type	Example
G	Era	Text	AD
y	Year	Number	2002
M	Month in Year	Text & Number	July & 07
d	Day in Month	Number	10
h	Hour in am/pm (1-12)	Number	12
H	Hour in Day (0-23)	Number	0
m	Minute in Hour	Number	30
s	Second in Minute	Number	55
S	Millisecond	Number	978
E	Day in Week	Text	Tuesday
D	Day in Year	Number	189
F	Day of Week in Month	Number	2 (meaning 2nd Wed in July)
w	Week in Year	Number	27
W	Week in Month	Number	2
a	am/pm marker	Text	PM
k	Hour in Day (1-24)	Number	24
K	Hour in am/pm (0-11)	Number	0
z	Time Zone	Text	Pacific Standard Time
' (apostrophe)	Escape for Text	Delimiter	
' ' (single quote)	Single Quote	Literal	'

When four or more Text type letters are used, the full form is provided.

When three or more Text & Number type letters are used, text is provided. When only one or two letters are provided for this type, the number is provided.

Numbers use the minimum number of digits. Year can be truncated to two digits. Shorter numbers are zero-padded.

All other characters are used as quoted text strings.

Examples

"yyyy.MM.dd G 'at' hh:mm:ss z" returns 1996.07.10 AD at 15:08:56 PDT

"EEE, MMM d, 'yy" returns Wed, July 10, '96


"h:mm a" returns 12:08 PM

"yyyyy.MMMMM.dd GGG hh:mm aaa" returns 1996.July.10 AD 12:08 PM

Printing

► To print:

1 Perform one:

- Select **Print** from a data object shortcut menu.
- Click .
- Select **File > Print**.
- Press **Ctrl+P**.

The Print dialog box is displayed.

2 Select one from Context:

- **Print Screen**—prints the content area.
- **Print Selected Object**—prints the current data object of the current document.
- **Print All Objects**—prints all data object in a Web Analysis document.

Context determines the scope of the print job. Numerous print options are available on the Page and Headers/Footers tabs.

3 On the Page tab, select one from Print To:

- **Printer**—Sends the print job to the default printer.
- **PDF File**—Sends the print job to a PDF output file.
- **JPG File**—Sends the print job to a JPG output file (Screen only).

Select other print options on the [Print Dialog Page Tab](#) and [Print Dialog Headers/Footers Tab](#).

4 Click Print.

Depending on your Print To list selection, a dialog box is displayed:


- **Operating System Print window**—To select a network printer.
- **Operating System Save dialog box**—To select a network location.

5 Click OK.

Print Preview

► To preview the print job before printing:

1 **Select one:**

- **Print** from a data object shortcut menu.
- Click .
- **File > Print**.

The Print dialog box is displayed.

2 **Click Print Preview.**

The Print Preview dialog box is displayed.

3 **Optional:** To magnify or minimize the print preview, select **Zoom** list and select a size ratio option (25%, 50%, 75%, or 100%).

4 **Click OK** to return to the Print dialog box.

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Database Connections

Database servers typically use a server name, application name, and database name in the creation of unique identifiers. The nature of these identifiers makes database references less portable. Web Analysis Studio uses user-friendly database aliases instead of long identifiers. Not only are database connection names easier to remember and more economical to employ, they enable the database to be maintained on multiple servers.

In short, database connections are portable files that define the terms, conditions and method for connecting to a data source.

System requirements vary for RDBMS (see the *Hyperion System 9 BI+ Installation Guides*), and you must compose a database connection string and provide log on credentials to navigate your relational hierarchy. You can also connect to level 2 or level 4 JDBC RDBMS using other relational data objects (SQL Spreadsheet, freeform grid, relational drill-through and Analytic Integration Services drill-through).

The View Pane Information Panel tab displays the database connection used by the current data object. The Information panel features two database connection segments:

- The Database segment displays the database connection name for the current data object.
- The Database User Name segment displays the user ID by which access to the database connection is granted.

Database Connections

Database connections are stored as repository files and adhere to most file management conventions. You can only see the database connections to which you are granted access. Various permissions are needed to read, write, edit, and change database connection properties.

Database Connection Access and Document Permissions

It is possible to distribute a document or presentation to a user that requires database connections he or she cannot access. Document access is independent of database connection access.

Database connection permissions withholding access prevent access to only one database connection file. You are free to compose another database connection to this data source, or to compose a database connection to an alternate data source. You can leverage the document definition independently of a database connection.

See [“Setting File Properties” on page 49](#).

User and Group Permissions

You can access database connections assigned directly to you or database connections assigned to a group to which you belong.

When documents are assigned to a group, the database connections that the document uses must also be assigned to the group. Otherwise, group members can access the document, but they cannot access its data values (unless they have individual user access).


To mitigate the risk of conflicting permissions, store documents with the database connections they reference. 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 it is to manage permissions for individual files and individual users.

Creating OLAP and Hyperion Database Connections

The database connection wizard guides you through the creation of OLAP and Hyperion database connections. You must know the name of your server, application, and database, and have log on credentials.

➤ To create a document using the document creation wizard:

1 Perform one:

- Select **File > New > Database Connection**.
- Click , and select **Database Connection**.

2 From Database Connection, select a database connection:

- **Analytic Services**
- **Financial Management**

There is an SAP BW and Relational option. See [“SAP BW Features Available in Web Analysis Studio” on page 173](#) and [“Creating Relational Database Connections” on page 180](#).

The Process bar displays steps for creating a database connection: **Server, Database, Formatting, and Drill-through**. On the Server page, you must enter the server name of your data source server, and the log on credentials used to access it.

3 In the Database Server text area, enter the name of the data source server.

4 In the Logon Information group, enter a user ID and password for accessing the data source server.

The current user ID and password are entered by default, in case the data source server uses credentials that match.

5 Optional: If you want to save the credentials , select Save User ID and Password.

6 Click Next.

Clicking Next queries the data source for application and database information. The content area displays the **Database** page.

7 From the list of Available Databases on the right, select a database.

Databases are listed by application. When you select the database, the application and database name are loaded into the text area on the left.

Note that **Next** and **Finish** are enabled at the lower right of the content area. The last two steps of the database connection wizard are optional. If you do not want to specify Measures Formatting or Relational Drill-through connectivity, click **Finish**.

8 Select one:

- Click **Next**, to specify Measures Formatting or Relational Drill-through connectivity.
- Click **Finish**, to skip these optional steps. If you click **Finish**, skip to step 12.

Clicking Next queries the specified database for dimension information. The content area displays the **Formatting** page.

9 Optional: To specify measures formatting for the database connection, select a dimension from Formatted Dimension.

10 Optional: Specify a measures formatting definition, by selecting from these options:

Formatting Option	Description
Formatted Dimension	Specifies the dimension to which the formatted member belongs.
Advanced Member Selection	Specifies the single member or single advanced member selection to which the formatting definition is applied.
Leading and Trailing Formatting	
Currency Symbol	Inserts the currency formatting symbols into the Positive Prefix and Negative Prefix text boxes: Dollar (\$), Cents (¢), Pound (£), Euro(E), Deutschmark (DM), Franc (F), and Yen (¥).
Positive Prefix	Enters character to precede positive numeric values.
Positive Suffix	Enters character to follow positive numeric values.
Negative Prefix	Enters character to precede negative numeric values. Warning: The minus sign (-) is the default prefix. Deleting the default prefix without replacing it causes negative values to display positively.
Negative Suffix	Enters character to follow negative numeric values.
Numeric Formatting	
Grouped Thousands	Displays numeric digits as grouped by thousands.
Maximum Decimals	Indicates the maximum number of decimal places to display.
Minimum Decimals	Indicates the minimum number of decimal places to display.
Replace Missing With	Replaces missing values with a text string or zero as indicated by the option.
Font	
Header Font	Displays the Font Properties dialog box, for specifying Font family, point size, style, and color for the dimension header label.
Data Font	Displays the Font Properties dialog box, for specifying Font family, point size, style, and color for the cell data values.

Note that **Next** and **Finish** are enabled at the lower right of the content area. The last step of the database connection wizard is optional. If you do not want to specify Relational Drill-through connectivity, click **Finish**.

11 Select one:

- Click **Next**, to specify Relational Drill-through connectivity.
- Click **Finish**, to skip this optional step.

If you click **Next**, the content area displays the **Drill Through** page. See [“Creating Relational Drill-Through” on page 163](#).

After clicking **Finish**, the **Save As** dialog box is displayed. It prompts you to navigate to the repository location where you would like the database connection file saved.

12 Navigate to the folder into which you want to save your database connection file:

- Click **Up** to display the contents of the parent folder in the selection frame.
- Click **Home** to jump to and display the contents of the current Home folder (set in preferences) in the selection frame.
- In **Location**, type the path to the repository folder whose contents you want displayed, and press **Enter**.
- In **Location**, click the drop-down arrow and select another location from the repository drop-down list.
- When you navigate to another folder, you can click **Previous** to return to the last folder displayed in the selection frame.
- Similarly, you can click **Next** to display the next folder in the location series.

As you navigate, the selection frame lists the files and folders indicated by **Files of Type**.

13 Optional: When you reach the location where you want to save the file, enter a name for the database connection in **Filename**.

14 Click OK.

Your database connection file is saved to the specified repository location.

Database Connection Properties

Database connection properties are set when the database connection is defined. You define database connections using the database connection wizard. Database connection properties include:

- Servername
- Log on credentials
- Application and database names
- Measures formatting
- Relational drill-through connectivity

It is important to differentiate properties.

- Database Connection properties—Define the terms, conditions, and method for connecting to a data source. They are set using the database connection wizard.
- File Properties—Determine identification and access to the database connection. They are set using the File Properties dialog box.
- Data Object Properties—Specify which database connection is used by the data object.
- Preferences—Specify database connection options that are set for each user (such as log on credentials, alias table, POV definitions, and personal variables).

See also [“Measures Formatting” on page 162](#), [“Creating OLAP and Hyperion Database Connections” on page 158](#), [“Integrating OLAP and Relational Data” on page 162](#), and [“Creating Relational Drill-Through” on page 163](#).

Note:

If you edit the Server Name, Application Name, or Database Name parameter values, you cannot load documents created using parameter values that differ. A better practice is to create a database connection with the desired parameter values.

Measures Formatting

Measures formatting enables you to globally format one dimension used by an OLAP database connection. This global formatting includes leading and trailing characters, numeric formatting of numeric dimension values, and header and data formatting.

Measures formatting options differ from those of data formatting and default formatting preferences. See [“Formatting Order of Precedence” on page 94](#).

You can define measures formatting using an explicit member selection or advanced member selection. Using advanced member selection makes the measures formatting dynamic. As members are added deleted and changed in the database, the formatting maintains itself and does not become obsolete.

See [“Creating OLAP and Hyperion Database Connections” on page 158](#).

Integrating OLAP and Relational Data

You can construct liaisons between OLAP and relational data sources, typically called relational drill-through. After relational drill-through is configured, you can drill from the dimension bottom (level 0) of the OLAP database to specified 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. You can use complex SQL syntax to specify table joins, and select and order by clauses.

Note:

To support a broad array of JDBC relational data sources, relational drill-through does not support queries by levels, generations, or previously selected members.

Relational drill-through is configured as a database connection property of an OLAP database connection. You can set database connection properties through the database connection wizard:

- Select **File > New > Database Connection > Analytic Services** or **Financial Management**.
- Click , and select **Database Connection > Analytic Services** or **Financial Management**.

- In the View Pane Browser tab, right-click an OLAP database connection in the Selection frame and select **Edit**. The database connection wizard for the selected database connection is displayed. Relational drill-through is set by the last step in the wizard process.

Defining Relational Drill-through

Upon accessing the Modify Relational Drill-through Connection dialog box, you complete these tasks in the creation of relational drill-through navigation:

1. Define a JDBC RDBMS connection, using the Configure JDBC Driver dialog box.
2. Test the connection.
3. Indicate the relational database table name.
4. Update the Columns list.
5. Map relational columns to dimensions in the OLAP database.
6. Indicate whether to pass filter dimensions or page dimensions and a row limit (if).
7. Click Apply.

For instructions for creating relational drill-through navigation, See [“Creating Relational Drill-Through” on page 163](#).

Controlling Query Result Set Size

Query governors vary for relational access methods.

Custom document SQL spreadsheets and relational drill-through methods set query governors in the course of creating the SQL query or relational drill-through definition.

When drilling 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 focus and diminish the query result set, you can pass page and filter dimensions specified in the OLAP document.


Other relational access methods rely on the `Webanalysis.properties` file to limit the query result set.

Creating Relational Drill-Through

Users with privileges can create relational drill-through connections using the Database Connection wizard. You must know the name of the relational database table that you intend to access before beginning.

- To create a relational drill-through definition on an OLAP database connection:

1 Perform one:

- Select **File > New > Database Connection > Analytic Services** or **Financial Management**.
- Click , and select **Database Connection > Analytic Services** or **Financial Management**.

- In the View Pane **Browser** tab, right-click an OLAP database connection in the Selection frame and select **Edit**. The database connection wizard for the selected database connection is displayed.

The first two options create a database connection. The last option enables you to define relational drill-through on an OLAP database connection.

The Process bar displays the steps for creating a database connection: **Server**, **Database**, **Formatting**, and **Drill-through**.

This procedure describes the creation of a relational drill-through definition on an OLAP or Hyperion database connection. See also [“Creating OLAP and Hyperion Database Connections” on page 158](#).

- 2 On the **Server, Database, and Formatting** page, click **Next** until the **Drill-through** page is displayed.

Do not click **Finish**, or the wizard close without defining a drill-through connection.

- 3 On the **Drill-through** page, select **Define Relational Drill-through Connection**.

The **Configure JDBC Driver** dialog box is displayed. To successfully create a JDBC RDBMS connection, you must know the kind of relational data source you are accessing, the parameters needed to connect to it, and have a user name and password that supports connectivity.

- 4 Select one from **Driver Type**.

- IBM DB2
- Microsoft SQL Server
- Oracle
- Teradata
- Other

Your JDBC driver selection populates the **Database Connection String** text area with a relational database connection string. If you selected **Other**, you must define your own JDBC connection string.

- 5 In **Database Connection String**, supply values for variables.

Depending on the driver type, there are variables for host name, database name, port, and DSN. You must replace the brackets and the variable.

- 6 Enter a JDBC user name in **Username**.

- 7 Enter a password for the user name in **Password**.

- 8 Click **Test Connection** to verify connectivity.

If the connection fails, repeat steps 6 through 10 until you can establish successful relational database connectivity. Make sure you remove the brackets from string variables.

- 9 After you connect, close the message and click **OK**.

The **Modify Relational Drill-through Connection** dialog box is displayed. With this dialog box, you can redefine a JDBC RDBMS connection, test the connection, identify a relational table, specify a column, and finally map the column to an OLAP dimension.

- 10 Enter a relational database table name in **From**.

11 Click **Update Columns**.

Column names for the specified table are displayed in the Column Name list at the bottom of the dialog box.

12 Designate the OLAP dimensions from which you connect to these table columns. To do this, you must understand the relationship between OLAP and relational data:

- a. Click a cell in the Related Dimension column opposite a relational column name to which you would like to connect OLAP data.

The clicked cell presents a drop-down list with the dimension list of the OLAP database connection.

- b. Click to select an OLAP dimension.

Repeat the process of mapping relational database columns and OLAP dimensions until your mappings are complete.

13 **Optional:**

- Click **Pass Pages** to maintain the current OLAP pages as you drill into relational data.
- Click **Pass Filters** to maintain the current OLAP filters as you drill into relational data.
- Set row limits for the query result set in the "Max rows to return" text box. This protects server and network resources from being consumed unintentionally by very large query result sets.
- Specify SQL Select, Where, and Order By clauses to narrow the relational query result set.

14 Click **OK**.

15 Click **Finish**.

Your relational drill-through definition is saved as a database connection property.

Analytic Services Database Connections

These Analytic Services features are extended through Web Analysis Studio:

Restrict Data

The Restrict Data Analysis Tool enables you to narrow the return set by requiring data values to be relevant to rules and operands. Data can be filtered by comparison to another column or by fixed limits on one column.

See [“Restricting Data” on page 124](#).

Retrieve Only Top/Bottom

The Retrieve Only Top/Bottom Analysis Tool leverages Analytic Services sorting and ranking to control the size and order of an OLAP query result set. This protects the network server from transmitting, and the client from processing, large result sets.

See [“Retrieve Only Top/Bottom” on page 126](#).

Edit Data

Users with permissions can edit data values and write edits back to the Analytic Services database. After edits are applied, you can recalculate the database and measure the impact of changed values.

See [“Editing Data Values” on page 245](#)

Suppress Missing Rows, Zeros, and Shared Members

Web Analysis Studio leverages Analytic Services to suppress missing rows, zeroes and shared members from the query result set. This prevents irrelevant information from being returned, reduces network traffic and increases query speed.

Label Mode and Alias Tables

Label mode enables you to select whether a dimension member is listed by ID number, description, or both. Label mode options are database-specific, and can be set for database connections, documents, and dimensions.

Although the label mode indicates whether the description or ID number is used, it is Analytic Services alias table definitions that provide the displayed value.

See [“Alias Tables” on page 267](#).

Analytic Services Drill Settings

Web Analysis Studio uses Analytic Services features to provide customizable drilling navigation in three ways:

- The nature of the hierarchical navigation
- Whether the current dimension members are replaced or augmented
- Whether the drilled dimension member is replaced or augmented

See [“Drilling Variations” on page 90](#).

LROs

Analytic Services LROs enable user to annotate data values by associating external media with a cell. LRO types include:

- Text documents
- File Attachments
- URLs

See [“Related Content Definitions”](#) on page 255.

Relational Drill-through

Web Analysis Studio enables you to drill through to related relational data from the lowest level of the Analytic Services outline, by defining a link on Analytic Services database connections. You can pass pages, filters, and row limits to focus and control the relational query result set.

See [“Defining Relational Drill-through”](#) on page 163.

Analytic Integration Services Drill-through

Analytic Integration Services enables you to organize, format, and present relational data as an OLAP cube in Analytic Services. Web Analysis Studio you to access Analytic Integration Services document data through Analytic Services LROs by drilling on cells marked for Analytic Integration Services drill-through.

See [“Analytic Integration Services Drill-Through”](#) on page 253.

Analytic Services Advanced Member Selection

In dimensions with large member sets, you can easily define selections with the Dimension Browser shortcut menu. Right-clicking dimension member names enables selection by familial relationship and database-specific selection options.

See [“Advanced Member Selection”](#) on page 66.

Attribute Dimensions and Attribute Calculations

Analytic Services can store dimension member names, locations, and relationships, and characteristics about members. Analytic Services does not store attribute dimensions as part of the OLAP cube, but instead dynamically calculates them upon request. Attribute dimensions are displayed in dimension hierarchies and used in calculations in the same manner as dimension members, despite being stored differently.

Analytic Services Metadata Security and Web Analysis Document Design

If metadata security is established, when you create Web Analysis documents against Analytic Services cube, adhere to these guidelines:

If report member selections contain dimensions that are specified in a METAREAD filter, use dynamic member selections (for example, Children of East) and use only members that users can access. Users accessing a Web Analysis document that contains members that they cannot access receive an “Unknown Member” error.

For example, If METAREAD filter applies to the Market dimension and @Children(East) is specified, when users try to open the Web Analysis document with the METAREAD filter, Unknown Member is displayed, because the user cannot access West, South, and Central.

Note:

Users cannot access the West, South, and Central members and their children.

Financial Management

These Financial Management features are extended through the Web Analysis Studio graphical user interface:

- Org by Period
- Financial Management-specific Advanced Member Selection
- Financial Management Cell Text - Related Content
- Financial Management Line Item Detail - Related Content
- Financial Management Advanced Member Selection Methods
- Financial Management User Defined Fields
- Display Entity Currency

Financial Management Related Content

The Related Content dialog box indicates links to previously configured related content and applications.

When Linked Reporting Object Indicators are enabled, blue triangles are displayed in the spreadsheet cells containing links to related content. Right-clicking these cells and selecting Related Content, displays the Related Content dialog box.

These Financial Management features are accessed as related content:

Cell Text

Web Analysis Studio users can launch Cell Text notes stored in the Financial Management data source. The text string is read-only.

Line Item Detail

Web Analysis Studio users can launch Line Item Detail spreadsheets stored in the Financial Management data source. Line Item Detail information is displayed in a read-only relational spreadsheet.

Recalculating Financial Management

Changes to Cell Text and Line Item Detail items are not displayed in Web Analysis Studio until Financial Management is recalculated and the changes registered.

Org By Period

Financial Management Organization by Period functionality allows an organization's latest consolidation structure to coexist with past structures in one application.

Dimension member hierarchies can be consolidated differently during different periods. Organizational structures can change for many reasons, including acquisitions, disposals, mergers, and reorganizations.

Web Analysis Studio users 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 Cube Navigator Options button displays an Org by Period menu item. The Org by Period dialog box offers you an interface for enabling Org by Period and selecting three corresponding dimension members.

See "Managing Metadata" in the *Hyperion System 9 Financial Management Administrator's Guide*.

Financial Management Advanced Member Selection

In dimensions with large member sets, you can easily define selections with the Dimension Browser shortcut menu. Right-clicking dimension member names enables selection by familial relationship and database-specific selection options. See "[Advanced Member Selection](#)" on page 66.

Financial Management offers a smaller set of advanced member selection methods than its Analytic Services counterpart. Typical Financial Management-specific advanced selection methods include:

Method	Description
All Members	Selects all dimension members. This member selection method is specific to Financial Management.
Select Dim Top	Selects the highest ancestor.
Select Dim Bottom	Selects the lowest descendants.
Also Select Descendants	Selects the currently selected member and its descendants.
Member List	Displays the Member List dialog box, for selecting predefined lists of dimension members. This member selection method is specific to Financial Management.

Method	Description
User Defined Fields 1, 2, and 3	Displays the User Defined Field dialog box, enabling you to select dimension members with User Defined Field values.
Search	Displays the Search dialog box, used to locate dimension members.

User Defined Fields

User Defined Fields are typically defined only for Account, Scenario, Entity, and custom dimensions, and they are limited to 20 characters.

You can compose compound selection statements using values that differ for a User Defined Field (for example, User Defined Field 1= West AND User Defined Field 1= East.).

You cannot define a User Defined Field with an empty string as a value.

Display Entity Currency

Financial Management stores currency metrics in the Value dimension, and as an attribute of the Entity dimension. This enables you to query the data source using a selected currency value, or a default currency value.

When using an Financial Management data source with defined Entity dimension currency information, you can enable the Display Entity Currency option, to append the Entity dimension members with your default currency value. This can be set before querying using Cube Navigator options, after querying using the Data Display shortcut menu, and for all subsequently created documents using OLAP Server preferences.

Financial Management Conventions

Financial Management supports 12 dimensions in outlines. Four are custom and eight are predefined: Period, View, Entity, Account, ICP, Scenario, Value, and Year.

No Drill To Top

If you query Financial Management, you cannot drill to top as you can when querying Analytic Services. Financial Management tracks parent-child relationships differently than Analytic Services. The Financial Management hierarchy enables multiple consolidations, which enables the existence of multiple parents for child.

No Edit Data

You cannot write data back to the Financial Management data source, as you can in Analytic Services.

Adding and Deleting Dimension Members

You must click the Reload button before dimensions with added or deleted members can be displayed.

New Financial Management Databases

Current sessions of Web Analysis Studio cannot interact with Financial Management data sources added during the course of the session. Only those data sources operating when the Web Analysis Studio session is established can communicate with Web Analysis Studio. To connect to new Financial Management databases, log off and log on again.

Deleted Financial Management Users

After you establish a Web Analysis Studio session with Financial Management, your access is not revoked under the sessions ends (that is, until you log out). This applies even when your user ID is deleted server-side.

SAP BW

SAP BW Pre-requisites

To access SAP BW data sources you must first install SAP JCo driver on the Web Analysis Studio server. After installation, you must provide these SAP Logon parameters to create an SAP BW database connection:

- Host name or IP address of the SAP BW server
- Router string
- User name and password
- Client number
- System number
- Language

SAP BW Conventions

SAP BW conventions differ from other data sources. For example, Level 0 is the highest ancestor in SAP, as opposed to the lowest descendant in Analytic Services. SAP Member Properties are analogous to Analytic Services attribute dimensions.

BI+ supports these SAP InfoProviders:

- InfoCubes
- ODS Objects

- InfoSets
- BEx Query Cubes
- Multiproviders

SAP BW Advanced Member Selection

In dimensions with large member sets, define selections with the Dimension Browser shortcut menu. Right-clicking dimension member names enables selection by familial relationship and database-specific selection options. See [“Advanced Member Selection” on page 66](#).

Option	Selects
All Members	All dimension members. This member selection method is specific to Financial Management.
Select Dim Top	The highest ancestor, or in multiple hierarchies all top level ancestors.
Select Dim Bottom	All lowest level descendants.
Also Select Descendants	The currently selected member and its descendants.
Select Parent	The direct parent of the currently selected member.
Also Select Ancestors	The currently selected member and its ancestors.
Also Select Children	The currently selected member and its children (one level below).
Also Select Siblings	The currently selected member and members on one level with a shared parent ancestor.
Also Select Level	The currently selected dimension member and all dimension members on one level.
Select At Level	All members at a specified level of the dimension hierarchy. You can specify the level by name or number.
Also Select Previous	A variable number of previous members from the right-clicked member's level. Uses the MDX LAG command to indicate the number of previous members to return.
Also Select Next	A variable number of next members from the right-clicked member's level. Uses the MDX LEAD command to indicate the number of subsequent members to return.
Date Time Series	Time dimension members based on time definition criteria. SAP BW does not return aggregated values for DTS selections, and returns only the members that satisfy the criteria.
Select Top/Bottom	<p>A variable number of dimension members based on their rank by another specified dimension member.</p> <p>You can select the top values or the bottom values. Rank can be calculated by percentage, sum, or count. Sum uses a threshold value to select dimension members up to and including the value that exceeds the threshold.</p> <p>Result sets may differ from dimension browser preview, due to the influence of custom filter selections on the query.</p>

Option	Selects
Filter on Member Properties	Displays the Member Properties dialog box, for selecting a subset of members by their SAP BW member property values.
Find in Tree	Locates dimension members in large dimensions. Find In Tree expands the dimension hierarchy, but does not add found members to the Selection list.

SAP BW Features Available in Web Analysis Studio

Web Analysis Studio extends these SAP BW features:


- SAP BW Variables
- SAP BW Period To Date
- SAP BW Top Bottom
- SAP BW Member Properties
- Searching for SAP BW Characteristic Values
- SAP BW Currency Conversion
- SAP BW Unit of Measure Conversion

Creating SAP BW Database Connections

Before beginning, you must know the host name of your server or IP address, router string, client number, system number, language, catalogue, and cube, and have log on credentials.

► To create a document using the document creation wizard:

1 Perform one:

- Select **File > New > Database Connection > SAP BW**
- Click , and select **Database Connection > SAP BW**.

The Process bar is displayed the steps for creating an SAP BW database connection: **Server**, and **Database**. The content area displays the **Server** page.

2 In SAP BW Server, enter the host name or IP address of the server.

3 In Router String, enter the SAP BW server router string.

4 Enter a user ID, password, client number, system number, and language.

The current user ID and password are entered, in case known server credentials are used.

5 Optional: To save these credentials, select **Save User ID and Password**.

6 Click Next.

Clicking Next queries the data source for catalogue and cube information. The content area displays the **Database** page.

7 From Available Databases, select a cube.

Cubes are listed by catalogue. When you select the cube, the catalogue and cube name are loaded into the text area on the left.

To search for an InfoProvider:

- a. Under **Enter search criteria**, enter the criteria by which to search.
- b. Under **Search by label**, select whether to search for the InfoProvider based on the technical name, the description, or both.
- c. Click **Search**.
- d. Based on the search criteria entered, Web Analysis displays the technical name of the InfoProvider, the description of the InfoProvider, or both under **Available Databases**.

8 Select Finish.

SQL Server Analysis Services

SSAS Prerequisites

To access SSAS, you must first install the SSAS client. For example, 2000 (version 8) from Pivot Table Services install or 2005 (version 5) from OLE DB 9 installer. The other pre-requisites are:

- Install and configure BI+
- User authorization for Web Analysis
- Access to Microsoft SQL Server Analytic Services as a data source
- Access to the SSAS database and/or your own database

SSAS Advanced Member Selections

Option	Selects
Also select Children	The currently selected member and its children (one level below).
Also select Level	The currently selected dimension member and all dimension members on one level.
Also select Previous	A variable number of previous members from the right-clicked member's level. Uses the MDX LAG command to indicate the number of previous members to return.
Select Dim Bottom	All lowest level descendants.
Date Time Series	Time dimension members based on time definition criteria. SSAS does not return aggregated values for DTS selections, and returns only the members that satisfy the criteria.
Select Top/Bottom	A variable number of dimension members based on their rank by another specified dimension member. You can select the top values or the bottom values. Rank can be calculated by percentage, sum, or count. Sum uses a threshold value to select dimension members up to

Option	Selects
	and including the value that exceeds the threshold. Results may differ from dimension browser preview, due to the influence of custom filter selections on the query.

SSAS features available in Web Analysis Studio

The SSAS features available in Web Analysis Studio are:

- Suppress Missing data or zero
- Select ID/member vs Description/Alias per dimension
- Multiple Hierarchies
- Ragged Hierarchies
- Linked Cubes
- Large Dimensions (1-Million+ Members)
- Cell-Level & Dimension-Level Security
- Data Mining & Mining Dimensions
- Connection Pooling
- MSAS 2005 Aggregates
- Local Cube support
- Server-side Top/Bottom and Hierarchical Sort

SQL Server Analysis Services Connectivity

To connect to Microsoft SQL Server Analysis Services, a Database Connection is needed. If a database connection exist, proceed to Step 2.

1. If no database connection exist:
 - In Web Analysis Studio, select **File > New > Database Connection > SSAS**.
 - For SSAS Server, User ID, and Password enter the required information and click **Next**
 - Select a cube and click **Finish**.
 - Enter a database connection name in the **Save** dialog box.
2. To create a document, select **File > New > Document Wizard**.
3. Click **Browse** and select an SSAS database connection.
4. Select **Auto Populate Dimensions** and click **Next**
5. From **Filters** add one or more dimensions to **Rows**.
6. Double-click a dimension in **Rows** and select members.

Note:

You can right click a member to use dynamic member selections.

7. From **Filters** add one or more dimensions to **Columns**
8. Double-click a dimension in columns and select members
9. Click **Next** to select Page members or click **Finish** to complete.

Relational Access

There are five methods for accessing relational data from the Web Analysis Studio client:

SQL Spreadsheet

SQL Spreadsheets represent relational data sources as spreadsheet, using standard SQL syntax queries. See [Chapter 14, “Creating SQL Spreadsheets.”](#)

Freeform Grid

Freeform grids enable you to combine data values from multiple data sources in one data object. See [Chapter 15, “Creating Freeform Grids.”](#)

Relational Drill-through

Web Analysis Studio users can construct liaisons between OLAP data and relational data sources. This navigation from OLAP to relational data is called "relational drill-through." After configuration, you can drill from the bottom of OLAP dimensions (level 0) to relational data.

Web Analysis Studio stores relational drill-through definitions as database connection properties of an Analytic Services database connections. The query result set is presented in the format of the SQL Spreadsheet described above. See [“Integrating OLAP and Relational Data” on page 162.](#)

Relational Database Connection

Relational database connections specify a relational database type and login credentials and relational tables, and define the properties of the database connection and cube. Web Analysis Studio clients query the specified relational data source, aggregate the result set, and express data in the format of an OLAP cube.

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 liaisons between OLAP and

relational data sources. Unlike conventional relational drill-through, you can drill to the relational document from intersection in the Web Analysis document.

Your Analytic Services Administrator must establish Analytic Integration Services drill-through documents. The relational query is stored as Intersection metadata, and flagged with an LRO indicator. When you double-click flagged cells, the OLAP document navigates to the specified relational document.

See [“Analytic Integration Services Drill-Through” on page 253](#).

Controlling Query Result Set Size

Query governors vary for relational access methods.

SQL spreadsheets and relational drill-through methods enable you to declare query governors while creating 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 focus and diminish the query result set, you can pass OLAP page and filter dimensions.

Other relational access methods rely on the `WebAnalysis.properties` file to limit the query result set.

Relational Database Connections

Before beginning, you must know the kind of supported JDBC RDBMS to which you are connecting, the name of your server and database, and have log on credentials. You also must know the organization and content of relational tables, to select and map column and table selections to a fact table.

Connection Page

The first relational database connection wizard panel, Connection, requires you to configure a JDBC driver by specifying a supported relational database, editing the database connection string, and providing database login credentials.

Text box or Control	Description
Driver Type	Selects one of the supported relational databases: <ul style="list-style-type: none">● IBM DB2 7.2 Personal Edition● IBM DB2 7.2 fp7 and 8.1 fp2 Workgroup and Enterprise Edition● Microsoft SQL Server 2000 sp3● Oracle 8.1.7 and 9.2.1● Teradata 4.1
JDBC Driver	Displays the Java Database Connectivity Driver.

Text box or Control	Description
Database Connection String	Provides a sample database connection string syntax. Edit the string until it specifies the RDBMS computer name and database name.
Username	Indicate a user name for the relational database. Important! You cannot create relational database connections without a user name and password.
Password	Indicate a password for the user name. Important! You cannot create relational database connections without a user name and password.
Test Connection	Click to test the relational connection before proceeding.

Important notes on JDBC drivers:

The JDBC driver connects the application server hosting Web Analysis Studio and the relational database, not the client computer. You must ensure that the application server is able to connect.

Web Analysis Studio currently supplies all drivers that Hyperion supports.

IBM DB2 is release specific. Hyperion provides the JDBC driver for IBM DB2 7. The `DB2java.zip` client drivers must match the `DB2java.zip` archive on the IBM DB2 database server. **Caution:** Be extremely careful when copying files from the RDBMS server to the Web Analysis Studio installation directory! There are extreme consequences if you overwrite the application server local DB2 files used to access configuration information.

The Teradata 4.1 Connection string features four bracketed JDBC connection string parameters. Brackets and parameter names must be replaced with values.

Parameters	Description
{host-name}	Server domain name
{port}	TCP/IP port number
{DSN}	Data source name
{database name}	A database name

Note:

JDBC driver archives must be explicitly referenced by file name within the classpath of the Webapp application server.

Select Fact Table Page

The second relational database connection wizard panel, Select Fact Table, provides filters for locating a fact table by schema and finally table name.

Text box or Control	Select
Schema Filter	A schema type from the corresponding drop-down list.

Text box or Control	Select
Table Type Filter	A table filter from the corresponding drop-down list.
Retrieve Table List	This button retrieves the list of relational tables.

Relational Cube Editor

The third relational database connection wizard panel, Relational Cube Editor, diagrams the relational cube as a node tree.

Default Node	Shortcut Menu	Right-click node and select menu command to:
Relational Cube		
	Rename Cube	Specifies the relational database connection name.
Dimensions		
	Add Dimension	Creates a dimension.
Defined Dimension		
	Add Generation	Specifies a relational column as a dimension generation.
	Rename Dimension	Specifies a name for the dimension.
	Delete Dimension	Removes the dimension from the node hierarchy.
	Preview	Displays a node tree of the selected dimension hierarchy.
Defined Generation		
	Edit Generation	Changes properties for that generation.
	Rename Generation	Specifies a name for that generation.
	Delete Generation	Removes that generation from the node hierarchy.
	Move Up	Moves that generation up in the node hierarchy.
	Move Down	Moves that generation down in the node hierarchy.
	Preview	Displays a node tree of the selected dimension hierarchy.
Measures		
	Edit Measures	Specifies columns as measures.
	Rename	Specifies another name for the measures dimension.
	Preview	Displays a node tree of the selected dimension hierarchy.
Defined Measure		

Default Node	Shortcut Menu	Right-click node and select menu command to:
	Rename Member	Specifies a name for the measure.
	Delete Measure	Removes the measure from the node hierarchy.
	Preview	Displays a node tree of the selected dimension hierarchy.
	Order By Mode	Indicates the label used to determine Dimension Header Sorting. Options include ID and Alias.
	Dimension Header Sort	Indicates the order that relational members are displayed by the Dimension Browser dialog box. Subsequent users must use this dialog box to select members from the relational data source. Options include: <ul style="list-style-type: none"> ● Default (Natural ordering based on outline) ● Ascending ● Descending
Properties		Displays the properties of the currently selected node.


Important notes on relational table properties:

To protect open documents and to expedite network traffic, there is only one cached JDBC connection per user per relational database connection. Therefore, relational database connection edits are not implemented until you log off Web Analysis Studio and log back on.

Creating Relational Database Connections

► To create a relational database connection:

1 Perform one:

- Select **File > New > Database Connection > Relational**.
- Click , and select **Database Connection > Relational**.

The Process bar displays the steps for creating relational database connections: **Connection**, **Select Fact Table**, and **Define Cube**. To successfully create a JDBC RDBMS connection, you must know the kind of relational data source you are accessing, the parameters needed to connect to it, and have a user name and password that supports connectivity.

2 Select one from **Driver Type**:

- IBM DB2
- Microsoft SQL Server
- Oracle
- Teradata
- Other

Your JDBC driver selection populates the **Database Connection String** text area with a relational database connection string. If you selected Other, you must define your own JDBC connection string.

3 Replace Database Connection String variables with values.

Depending on the driver type, there are variables for host name, database name, port, and DSN. You must replace the brackets and the variable.

4 Enter a JDBC user name in Username.

5 Enter a password in Password.

6 Click Test Connection.

If the connection fails, repeat steps 6 through 10 until you can establish successful relational database connectivity. Make sure you remove brackets from string variables.

7 After connecting, close the Test Connection message and click Next.

Step 2: **Select Fact Table** you must select a relational fact table from a list. Schema filters and table type filters are available to narrow long lists of tables.

Note:

Before you can use a schema filter, it must be mapped to the RDBMS database user name used to log on to the database. This user name is specified on the previous wizard page, **Configure JDBC Drivers**.

8 Select a schema from Schema Filter.

9 Select a table type from Table Type Filter.

10 Click Retrieve Table List to query the relational database for tables meeting filter requirements, and display the result set.

To select the fact table, you must understand the relational database. If necessary, ask the relational database administrator to identify the fact table. The fact table must contain at least one column of numeric data that can be used as a measures dimension.

11 Select a table to be used as the fact table from the table result set, and click Next.

Step 3 **Relational Cube Editor** diagrams the relational cube as a node tree in the same manner that the Dimension Browser presents OLAP cubes. Click to select a node. Double-click to expand and collapse nodes. Right-click to edit dimensions and measures.

12 Right-click Measures and select Edit Measures.

The **Measure Editor** dialog box enables you to define relational columns as measures by moving them from the **Available Columns** list to the **Measures Members** list. You can also rename the measures dimension, specify the default dimension, add measures to the cube, and specify aggregation methods for measures dimensions.

13 Select a column with a numeric data type from Available Columns, and click the right arrow (>) to move the column to Measure Members.

Note that the selected measure is designated as the default measure dimensions.

- 14 **Optional:** When **Measure Members** contains multiple measures, you can specify the measure used as the default measure by clicking an option in **Default**.
- 15 **Optional:** To change the measure name, double-click **Member Name**, and type a name. Member names must be unique to each other and the name of the measures dimension for SQL parsing to be successful.
- 16 **Optional:** To indicate another member aggregation method, click **Aggregation Type** and select from these aggregation methods. When no aggregation type is specified Sum is used by default:
 - Sum
 - Count
 - Min
 - Max
 - Avg
- 17 When all fact table columns used as measures are specified, click **OK**.

The **Relational Cube Editor** is displayed. Note that the **Measures** node can be expanded to display the measures dimension.

- 18 Right-click **Dimensions** and select **Add Dimension**.

The **New Dimension Name** dialog box is displayed.

- 19 Enter a dimension name to define, and click **OK**.

The **Generation Editor** dialog box is displayed. It enables you to create a generation for the dimension, to name the generation, to indicate the ID and alias tables used for return values, and to relate the dimension back to the fact table.

- 20 Enter a dimension generation name in **Generation Name**.

Note that **Select Member ID and Description Columns** displays the fact table by default.

- 21 To narrow the list of tables, select a filter from **Table Type**.

- 22 Select a table from **Table**.

- 23 Indicate the ID aliases column in the top **Column** list.

- 24 Indicate the Descriptions aliases column in the bottom **Column** list.

By identifying common table columns, you relate the defined dimension generation to the fact table. Typically, several sets of common columns are used to identify a circuit to the fact table.

Ask the relational database administrator for a description of relational tables and their columns to discern common table columns.

Start by identifying tables sharing columns with the dimension generation table. Find tables sharing columns with the fact table. Determine if tables that share columns with the dimension generation also share columns with the fact table. If they do, your relationship is mapped. If not, you must continue comparing columns until you can map a bridge between the dimension generation and the fact table.

Note that **Define Fact Table Mappings** displays the dimension and the fact table by default.

Unless they share a common column, you must select a **Table Type** filter, a table, and a column

that matches the dimension generation. If they do share a common column, you need only indicate that column in the **Column** drop-down list.

When a table and column are selected, a line is added to **Define Fact Table Mappings** below until the dimension generation and fact table relationship is mapped.

Keep these considerations in mind as you make your selections.

- Question marks (?) indicate unspecified columns.
- Left and right **Column** lists must display common columns.
- Each **Define Fact Table Mappings** line should display column sets that differ from the line above.
- To improve performance, specify as few column sets as is possible.

25 In **Define Fact Table Mappings, select a table from **Table** that has a column that matches **Column**.**

The specified table and column display on a line below.

26 Select a **Column at right that matches the **Column** at left.**

27 Repeat steps 25 and 26 until a relationship between the dimension generation and the fact table is mapped, and click **OK.**

The **Relational Cube Editor** is the current dialog box again. Note that the **Dimension**, **generation** and **Measures** nodes can be expanded, by clicking the plus sign (+), to display the relational cube structure.

28 Optional: To add generations to one dimension, right-click the dimension name and select **Add Generation. The **Generation Editor** is displayed again. Repeat steps 20-27.**

29 Optional: To reorder the generations in the dimension hierarchy, right-click a generation name and select **Move Up or **Move Down**.**

The generation node moves in the specified direction in the dimension hierarchy.

30 Optional: To add dimensions to one relational cube, right-click **Dimensions and select **Add Dimension**. Repeat steps 18-29.**

31 When all measures, dimensions, and generations are defined and ordered, click **Finish.**

The **Save As** dialog box is displayed. It prompts you to navigate to the repository location where the database connection is saved.

32 Navigate to the folder into which you want to save your database connection file:

- Click **Up** to display the contents of the parent folder in the selection frame.
- Click **Home** to jump to and display the contents of the current Home folder (set in preferences) in the selection frame.
- In **Location**, type the path to the repository folder whose contents you want displayed, and press **Enter**.
- In **Location**, click the drop-down arrow and select another location from the repository.
- When you navigate to another folder, you can click **Previous** to return to the last folder.
- Similarly, you can click **Next** to display the next folder in the location series.

As you navigate, the selection frame lists the files and folders indicated by **Files of Type**.

- 33 When you reach the location where you want to save the file, enter a name for the database connection in **Filename**, and click **OK**.

Your relational database connection file is saved to the specified repository location. You can use it to create documents, just as you would OLAP database connection.

Editing Database Connections



You edit database connections to select other data sources or change formatting preferences.

- ▶ To edit database connections:
 - 1 In Web Analysis Studio, navigate the repository to locate the database connection file.
 - 2 Select the database connection file, then right click and select **Edit** to display the Database Connection wizard.
 - 3 Change items as desired.

You can select different servers and databases.

- 4 Click **Finish** to save the changes and close the Database Connection wizard.

Changing Database Connections for Report Objects

- ▶ To change the database connection that a report object (that is, spreadsheet, chart, or pinboard) uses:
 - 1 Open a Web Analysis document; if it contains multiple report objects, select a report object to edit by clicking on it.
 - 2 Click  to display the **View Pane**.
 - 3 Right click  **Database** (database node) in the View Pane and select **Change Database**.

The Open dialog box is displayed.

- 4 Select a database connection and click **OK** to change the database connection for the report object.

13

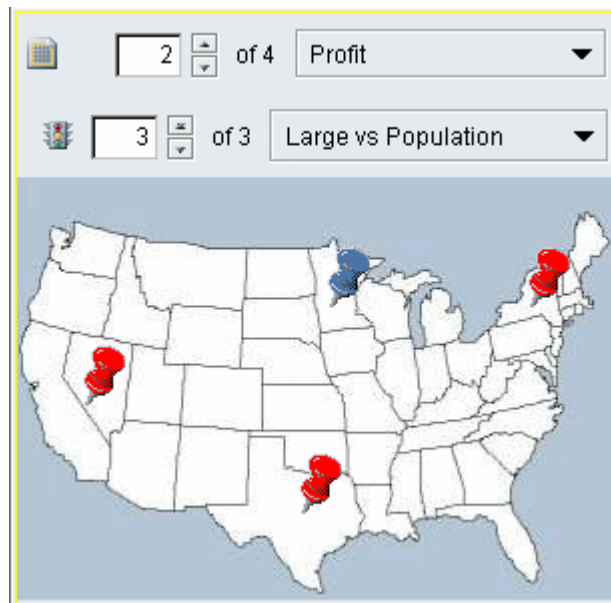
Creating Pinboards

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Pinboards

Pinboards are custom graphic representations of multiple dimensions. Pinboard dimensions are represented by a graphic, pin icons on the graphic, and the color (or state) of the pins.



Pinboards Prerequisites

Because pins dynamically change image or color based on traffic lighting cues, you must establish traffic light definitions for the corresponding spreadsheet before designing the pinboard.

Creating a Pinboard Series

A pinboard series enables drilling from one pinboard to another. You create the first pinboard in the series and use the Pinboard Designer shortcut menu to designate subsequent pinboards. The subsequent pinboards are generated using the children of the previous pinboard's pins. If the current pinboard represents the dimension bottom, no subsequent pinboard can be created in this series. See [“Creating a Pinboard Series” on page 188](#).

Creating Pins

You can use the default pins provided with Web Analysis Studio or create your own pins using the Pin Designer. Pins can change an image or color based on traffic lighting. See [“Creating Pins” on page 188](#).

Traffic Lighting Control Panel

Only the pinboard display type displays a traffic lighting control panel when multiple traffic lighting definitions exist in the document. The traffic lighting control panel enables you to scroll through the series of traffic lighting definitions.

Select Traffic Lighting Dimension Dialog Box

The Select Traffic Lighting Dimension dialog box prompts you to create a pinboard from another display type without traffic lighting. After selecting the dimension to which a traffic lighting definition is applied, the Traffic Lighting dialog box is displayed to finish the definition.

Pinboard Designer

The Pinboard Designer interface includes:

- Pinboard panel— positions pin graphics relative to the background.
- Image Source group—Specifies the background.
- Member Selections group—Specifies dimension members used as pins.
- Null Pins group—Indicates how to display members with null values.
- Select Pin Images group—Specifies the kind of pin to display for each traffic lighting color.

Creating a Pinboard

► To create a pinboard:

- 1 **Open spreadsheet with a traffic lighting definition.**
- 2 **Select Display > Pinboard.**

Note:

If a pinboard is defined for the document, it is displayed as a result of your selection. When no pinboard is defined, the Pinboard Designer is displayed. To edit a Pinboard, right-click the data object and select Edit Pinboard.

Pinboard Designer is displayed, automatically displaying column dimension members as pins and traffic lighting ranges as pin colors in the Select Pin Images group.

- 3 **In the Image Source group, click Set Background.**

The Open dialog is displayed.

- 4 **Navigate to a GIF or JPEG file to use as the background. Select the file name, and click OK.**

The selected image is displayed in the Pinboard Designer panel.

- 5 **Optional: To set the image to fill the Pinboard panel, select Stretch to Fit.**

- 6 **Optional: To change the dimension member selections, perform one:**

- Click the Member Selections list to select other traffic lighted column dimension members.
- Click Add Members to display the Dimension Browser, and change dimension member selections.
- Click Add Calculations to create pins from calculated members.
- Right-click a pin and select Delete Pin, to remove pins without redefining the member selection statement.

- 7 **Optional: To specify to hide pins with null values, select Hide Null Pin.**

- 8 **Optional: You can also select a special color for pins with null values, by clicking Select Null Pin Color.**

The Select Null Pin Color dialog box is displayed, enabling you to select a color, and click OK. See [“Selecting Color” on page 113](#). The selected color is displayed in the box beside the button, after selection.

The specified dimension members are rendered with default pins on the Pinboard panel. The Select Pin Images group reflects the traffic lighting range colors. You can also specify pin images that differ for each traffic lighting range, or a different part of the current pin image to reflect the traffic lighting range color.

See [“Creating Image Pins” on page 190](#), or [“Creating Color Pins” on page 191](#).

- 9 **Drag pin images on the Pinboard background to position them.**
- 10 **Click Pinboard Designer OK to display the finished pinboard.**

Modifying Pinboards

You must have the correct permissions to change pinboards.

- To edit a pinboard, select **Edit Pinboard** from the data object shortcut menu and modify options.

Creating a Pinboard Series

- To create a pinboard series:

- 1 Create the starting pinboard and its pins.**

The starting pinboard must feature pins with descendants.

- 2 Right-click a pin on the Pinboard Designer and select the **Next Pinboard** menu command.**

Pinboard Designer displays a subsequent pinboard using the children of the previous pinboard pins.

- 3 Set the background image, and pin images. Position these pins.**




- 4 Repeat until all pinboards in the series are specified.**

This table describes the Pinboard Designer shortcut menu commands that help to define Pinboard series:

Command	Description
Next Pinboard	Go to the next pinboard in the series. If no next pinboard exists, create one using the children of the previous pinboard pins.
Previous Pinboard	Go to the previous pinboard in the series.
Starting Pinboard	Go to the first pinboard created.
Delete Pinboard	Delete the current pinboard.
Delete Pin	Delete the current pin.

Creating Pins

Pin options:

- A default pin, , is provided by Web Analysis Studio.
- An Image Pin, , displays pin images that differ per an associated traffic lighting definition.
- A Color Pin, , changes its active color per the traffic lighting definition.

Selecting Pins

The Select Pin Images dialog box presents pin graphics available for use in the current pinboard. You can add pins, edit pins (using Pin Designer), or delete pins from the list. The default pin cannot be deleted.

➤ To select a pin for a traffic lighting range:

- 1 Click a **Pin** from Pinboard Designer **Select Pin Images**.

The Select Pin Images dialog box is displayed.

- 2 Select a pin from the list and click **OK**.

The selected pin is displayed next to the traffic light range it represents.

Creating Pins

➤ To add a pin image and set it to a traffic lighting range:

- 1 Click a **Pin** from Pinboard Designer **Select Pin Images**.

The Select Pin Images dialog box is displayed.

- 2 Click **Add**.

The Pin Designer dialog box is displayed.

- 3 In **Pin Image**, click **Load**.

The Open dialog is displayed.

- 4 Navigate to a **GIF** or **JPEG** file to use as the pin image. Select the file name, and click **OK**.

The selected image is displayed in the Pin Designer panel.

Before a pin can be added to the selection list, the "point of the pin" and its active color must be defined. This is accomplished using the Pin Designer shortcut menu:

- 5 **Optional:** To set the point of the pin, right-click the pin image where you think the point should be, and select **Hotspot**.

The grid to the left demonstrates how the pin is positioned relative to this point.

- 6 **Optional:** To set the Active Color, right-click a prominent color in the pin image, and select **Active Color**.

The Active Color panel reflects this selection. You should only elect an Active color when you are going to use one pin image for every traffic lighting range. This enables the selected color to adopt the color of the traffic lighting range.

- 7 Click **OK**.

The pin is displayed in the Select Pin Images dialog box.

- 8 Select the pin from the list and click **OK**.

The pin is displayed next to the traffic light range it represents.

Editing Pins

To redefine pin location point or active color, you can edit pins.

- ▶ To edit a pin, access the Select Pin Images dialog box, select the pin and click **Edit**.
See “[Creating Pins](#)” on page 189.

Deleting Pins

- ▶ To delete a pin, access the Select Pin Images dialog box, select the pin and click **Delete**.

Creating Image Pins

Image pins display pin images that differ per an associated traffic lighting definition. You create Image pins by indicating the pin image to use for corresponding traffic lighting ranges.

Pins on the Pinboard panel may not accurately reflect all pin images and traffic lighting ranges until the Pinboard is finished and displayed as a document.

If you select duplicate images for traffic lighting conditions, you must set the pin Active Color property to differentiate traffic lighting conditions. See “[Creating Color Pins](#)” on page 191.

- ▶ To create an image pin:

- 1 **Click a Pin from the Pinboard Designer Select Pin Images.**

The Select Pin Images dialog box is displayed.

- 2 **Click Add.**

- 3 **The Pin Designer dialog box is displayed.**

- 4 **In Pin Image, click Load.**

The Open dialog is displayed.

- 5 **Navigate to a GIF or JPEG file to use as the pin image. Select the file name, and click OK.**

The selected image is displayed in the Pin Designer panel.

Before a pin can be added to the selection list, the "point of the pin" and its active color must be defined. This is accomplished using the Pin Designer shortcut menu:

- 6 **Optional: To set the point of the pin, right-click the pin image where you think the point should be, and select Hotspot.**

The grid to the left demonstrates how the pin is positioned relative to this point.

- 7 **Click OK.**

The pin is displayed in the Select Pin Images dialog box.

- 8 **Select the pin from the list, and click OK.**

The pin is displayed next to the traffic light range it represents.

9 Repeat steps 1 through 8 for each traffic lighting range.

The traffic lighting definition displays the corresponding pin for each traffic lighting range, when the Pinboard is in Analyze mode.

Creating Color Pins

Color pins change their active color per the traffic lighting definition. You create Color pins by indicating the pin image to use for corresponding traffic lighting conditions, and indicating the Active Color.

Pins on the Pinboard panel may not accurately reflect all pin images and traffic lighting conditions until the Pinboard is finished and displayed as a document.

Pins on the Pinboard Panel may not accurately reflect all pin images and traffic lighting ranges until the Pinboard is finished and displayed as a document.

► To create a color pin:

1 Click a Pin from Pinboard Designer Select Pin Images.

The Select Pin Images dialog box is displayed.

2 Click Add.

3 The Pin Designer dialog box is displayed.

4 In Pin Image, click Load.

The Open dialog is displayed.

5 Navigate to a GIF or JPEG file to use as the pin image. Select the file name, and click OK.

The selected image is displayed in the Pin Designer panel.

Before a pin can be added to the selection list, the "point of the pin" and its active color must be defined. This is accomplished using the Pin Designer shortcut menu:

6 Optional: To set the point of the pin, right-click the pin image where you think the point should be, and select Hotspot.

The grid to the left demonstrates how the pin is positioned relative to this point.

7 To set the Active Color, right-click a prominent color in the pin image, and select Active Color.

The Active Color panel reflects this selection. By electing an Active color, you indicate that this color is replaced by the traffic lighting range color.

8 Click OK.

The pin is displayed in the Select Pin Images dialog box.

9 Select the pin from the list, and click OK.

The pin is displayed next to the traffic light range it represents.

10 Click another Pin from Pinboard Designer Select Pin Images.

The Select Pin Images dialog box is displayed.

11 Select a matching pin image, and click **OK**.

The pin is displayed next to another traffic light range. The Active Color of this pin is replaced by the color of the range.

12 Repeat steps 10 and 11 for all traffic lighting ranges, and click **OK**.

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SQL Spreadsheets

SQL Spreadsheet data objects enable you to query a relational data source, and display the returned data values on a custom document.

Prerequisites for SQL Spreadsheets:

- SQL Spreadsheets can only be created on a custom document.
- You must understand how to compose a SQL query to create a SQL spreadsheet.
- You must be able to connect to a relational data source using supported JDBC drivers.

To create a SQL Spreadsheet you are required to specify:

- Data source that provides data values
- SQL spreadsheet data object that displays these values
- Query that gets data values from the data source and returns them to the data object.

The process of creating SQL spreadsheets assumes that you know your JDBC driver, database application, and logon credentials. The process also assumes that you can compose the SQL query for the SQL spreadsheet data object, or be able to use a SQL Query Builder to create a query.

There are four alternatives for accessing relational data in Web Analysis Studio:

- You can create a relational database connection to be used by regular spreadsheets, charts, and pinboards. See [“Creating Relational Database Connections”](#) on page 180.
- Free-form grids enable you to combine data values from multiple data sources in one data object. Free-form grids leverage custom document database connections. See [“Creating Freeform Grids”](#) on page 203.

- You can create a relational drill-through connection from an OLAP database connection to a relational data source. See “[Creating Relational Drill-Through](#)” on page 163.
- You can leverage pre-defined Analytic Integration Services drill-through documents using the Related Content dialog box. See “[Analytic Integration Services Drill-Through](#)” on page 253.

Note:



To troubleshoot SQL queries, copy the SQL statement from the Enter SQL Query dialog box and run it in an RDBMS SQL tool. Compare the result sets.

Creating SQL Spreadsheets

► To create a SQL spreadsheet:

1 Start Web Analysis Studio.

2 Perform one:

- Select **File > New > Document**.
- Click .
- Click , and select **Document**.
- In the View Pane **Browser** tab, right-click a document and select **Edit**.
- Press **Ctrl+N**.

The Document Designer is displayed.

3 Drag the SQL Spreadsheet icon from the component toolbar to a document panel.

The Enter SQL Query dialog box is displayed.

4 Select a supported JDBC driver type from the JDBC Driver drop-down list.

You can select from Microsoft SQL Server, IBM DB2, Oracle, JDBC-ODBC Bridge, and Other.

When the selection is made, a driver name populates the corresponding Driver text box. If Other is selected, you must enter a driver name definition.

When the selection is made, a sample database connection string syntax populates the corresponding JDBC Connection String text box. When Other is selected, you must enter a JDBC database connection string.

5 Edit the sample database connection string syntax so that it specifies your RDBMS computer name and database name.

6 Enter a user name and password for the relational data source in the corresponding text boxes, or select Username/Password to enter your current logon credentials.

7 Optional: Define query governor parameters for row limits and fetch size.

The default settings limit the result set to 250 rows, being fetched 100.

8 Define a SQL query, using one of these methods:

- Enter a SQL query, using standard SQL syntax, in the panel at the bottom of the dialog box.
- Click **Query Builder** to display the SQL Query Builder Wizard.

See “[SQL Query Builder Wizard](#)” on page 198.

9 Click OK.

The query is sent to the relational data source and a SQL spreadsheet is displayed on the document panel.



Creating SQL Spreadsheets with SQL Query Builder Wizard

The SQL Spreadsheet component offers advanced features for creating dynamic SQL queries and subsequently dynamic relational spreadsheets. You can quickly and conveniently compose SQL queries using the SQL Query Builder Wizard.

► To create a SQL spreadsheet:

1 Start Web Analysis Studio.

2 Perform one:

- Select **File > New > Document**.
- Click .
- Click , and select **Document**.
- In the View Pane **Browser** tab, right-click a document and select **Edit**.
- Press **Ctrl+N**.

The Document Designer is displayed.

3 Drag the SQL Spreadsheet icon from the component toolbar to a document panel.

The Enter SQL Query dialog box is displayed.

4 Select a supported JDBC driver type from the JDBC Driver list.

You can select from Microsoft SQL Server, IBM DB2, Oracle, JDBC-ODBC Bridge, and Other.

When the selection is made, a driver name populates the corresponding Driver text box. If Other is selected, you must enter a driver name definition.

When the selection is made, a sample database connection string syntax populates the corresponding JDBC Connection String text box. When Other is selected, you must enter a JDBC database connection string.

5 Edit the sample database connection string syntax so that it specifies your RDBMS computer name and database name.

6 Enter a user name and password for the relational data source in the corresponding text boxes, or select **Username/Password to enter your current logon credentials.**

7 Optional: Define query governor parameters for row limits and fetch size.

The default settings limit the result set to 250 rows, being fetched 100.

You could define a SQL query by entering standard SQL syntax, in the panel at the bottom of the dialog box, but use the SQL Query Builder as described in these steps.

8 Click Query Builder to display the SQL Query Builder Wizard.

The SQL Query Builder dialog box features tabs corresponding to aspects of your relational data source:

- **Tables**—specifies the relational table(s) to query.
- **Columns**—specifies the columns to be returned by the query.
- **Filters**—narrows the focus of the SQL query by specifying filter criterion for Where clauses.
- **Groups**—organizes relational data on the server before it is returned.
- **Sorting**—orders relational data in ascending or descending order per column.
- **Mappings**—relates relational columns in the SQL query result set to multidimensional dimensions from an OLAP data source.

9 Click Tables, and select one or more tables.

To select a table, click the table name in **Available Tables**, and click one of the arrow buttons. The selection moves to **Selected Tables**. You can also move selected tables up and down in order.

10 Click Columns, and select one or more columns.

To select a column, click the column name in **Available Columns**, and click one of the arrow buttons in the center of the tab. The selection moves to **Selected Columns**.

11 Optional: To change a column name, or apply a function call to the column, click Add Column Advanced, the middle button on the Columns tab before moving the column to the Selected Columns frame.

Add Columns Advanced on the Columns tab displays the Select Column Advanced dialog box, enabling you to apply function calls to a selected column (on the Columns tab) or manually enter a RDBMS supported function call. You can select from these functions: None, Average, Count, Maximum, Minimum, or Sum.

If you would like to change the column name in the SQL spreadsheet display, enter an alternate name in **Displayed As**.

12 Optional: To define Where clauses for the SQL query, click Filters.

The Filters tab enables you to define complex Where clauses by selecting parameters from drop-down lists. Select parameters from four columns: Operator, Column, Comparator, and Value.

To define a Where clause:

- a. Click **Add** to add a row to the Filters frame.
- b. Click the **Column** cell in the row and select a column name from the list.
- c. To filter the selected column, click the **Comparator** cell. You can select from these options:
 - Enter a constant.
 - Right-click and select the value of another column member.

- Enter a dynamic text label, a variable that is dynamically replaced with a value at runtime. See [“Dynamic Text Labels” on page 200](#).
- d. Click the **Value** cell and select a filter value. This limits the return set to those rows that satisfy filter criteria.

You can compose compound statements by adding additional rows, selecting operands from the **Operator** column and parentheses from the (and) lists.

Note that **Select Distinct** changes the selection statement to a **SELECT DISTINCT** statement.

13 Optional: To define a dynamic SQL spreadsheet, enter dynamic text labels for values on Filters.

You can enter Dynamic Text Labels that reference data, metadata, fixed references and time format syntaxes. See, [“Dynamic Text Labels” on page 200](#).

14 Optional: To define a GROUP BY clause for the SQL query, click Groups.

15 Optional: To define a SORT clause for the SQL query, click Sorting.

16 Optional: To map columns in your relational data sources to similar OLAP dimensions, click Mappings.

You can associate columns in your relational data sources with similar dimensions in an OLAP data source, by mapping columns to OLAP dimensions. These mappings, used when drill linking from an OLAP source to a SQL data object, enable the OLAP query to pass its Where clauses to corresponding relational columns.

17 Click OK to query the relational data source and display a SQL spreadsheet.

Enter SQL Query Dialog Box

The Enter SQL Query dialog box enables you to define a relational SQL query that supports the SQL Spreadsheet custom document component. The Enter SQL Query dialog box prompts you to specify a supported JDBC driver, JDBC connection string, log on credentials, and a SQL query. You can compose the SQL query using standard SQL syntax in the panel at the bottom of the dialog box, or you can use a [SQL Query Builder Wizard](#). You can also define row limits and fetch limit parameters for the SQL query.

Control	Description
JDBC Driver Configuration	<p>Enables you to select a supported JDBC driver from a drop-down list:</p> <ul style="list-style-type: none"> ● IBM DB2 ● Microsoft SQL Server ● Oracle ● Teradata ● JDBC-ODBC Bridge—leverages a Microsoft Windows ODBC driver as a JDBC connection. To use this option, you must manually configure the JDBC Connection String using "JDBC:ODBC:<DSN>" (where <i>DSN</i> is the ODBC connection name). ● Other—Specifies alternative JDBC driver parameters.

Control	Description
JDBC Connection String	A sample database connection string syntax is provided in this text box. You must edit the string so that it specifies your RDBMS computer name and database name. In the case of Other, you must enter a database connection string syntax.
JDBC Username	Indicate a user name for the relational database. You cannot create a relational database connection without specifying a password.
JDBC Password	Indicate a password for the user name. Important! Web Analysis Studio requires this text box to be populated. You cannot create a relational database connection without specifying a user name and password.
JDBC Row Limit	Enables you to enter an optional query governor limiting the result set to a number of rows.
JDBC Fetch Size	Enables you to enter an optional query governor limiting the number of rows returned at time. In other words, transactions limited to the fetch size are conducted until the overall row limit is reached.
SQL Query Panel	Enables you to enter a SQL query manually.
Query Builder	Displays the SQL Query Builder Wizard, enabling you to make selections from tabs that are subsequently parsed into a SQL query.

SQL Query Builder Wizard

The SQL Query Builder wizard specifies the elements used in a SQL syntax query. This is helpful if you are familiar with your relational data source, but do not know SQL syntax.

SQL Query Builder Tab	Procedure and Controls	Description
Tables		
	<p>Select tables in the Available Tables panel and move them to the Selected Tables panel using Add and Remove in the middle.</p> <p>To reorder the table selections, select a table in the Selected Table panel and click the up and down arrow buttons.</p>	Prompts you to select tables from the relational data source, prescribed on the Enter SQL Query dialog box, for use in a SQL query.
Columns		
	<p>Select columns in the Available Columns panel and move them to the Selected Columns panel using Add and Remove in the middle.</p> <p>To reorder the Column selections, select a column in the Selected Column panel and click the up and down arrow buttons.</p>	Prompts you to select columns from the relational tables for use in a SQL query.
	Select Column Advanced	Displays the Select Column Advanced dialog box, enabling you to select a function call,

SQL Query Builder Tab	Procedure and Controls	Description
		compose an expression, or enter an alternative column label.
Filters		
	Click Add to enter a Where clause. Click each column cell and make a selection from the drop-down list.	Prompts you to define filter selections for the Where clause on the SQL query. To focus and diminish the query result set, you can define dimension criteria (filters).
	Dynamic Text Labels	You can also employ the powerful dynamic text labels used by the Print function and the Custom Document Label component in your SQL expressions.
	Select Distinct	Sets up the query to return only distinct rows; eliminates duplicate rows.
Groups		
	Select columns in the Available Group By Columns panel and move them to the Selected Group By Columns panel using Add and Remove in the middle. To reorder the column selections, select a column in the Selected Group By Column panel and click the up and down arrow buttons.	Prompts you to define GROUP BY selections for the SQL query. Groupings sort rows based on column members but do not order the rows.
Sorting		
	Select columns in the Available Sort Columns panel and move them to the Selected Sort Columns panel using Add Sort Ascending and Add Sort Descending in the middle. To reorder the Column selections, select a column in the Selected Sort Column panel and click the up and down arrow buttons.	Prompts you to define sorting criteria for the SQL query result set in Ascending or Descending order. Sorting results are influenced by the order of tables, columns, and filters on their corresponding tabs.
Mappings		
	Enter the OLAP dimension name to the right of the relational column supporting drill linking.	Prompts you to define (or map) drill links to or from relational columns to OLAP dimensions in other documents.

Select Column Advanced Dialog Box

The Select Column Advanced dialog box specifies a function call, composes an expression, or enters an alternative column label in a SQL Spreadsheet query. You can access the Select Column Advanced dialog box only from the Columns tab of the [SQL Query Builder Wizard](#).

Control	Description
Function	<p>Enables you to enter a function call related to the column selected on the Column tab of the SQL Query Builder wizard.</p> <ul style="list-style-type: none"> ● None ● Average ● Count ● Maximum ● Minimum ● Sum
Expression	<p>Enables you to manually enter a RDBMS supported function call for the column selected on the Column tab of the SQL Query Builder wizard.</p>
Displayed As	<p>Enters an alternative column label in the SQL Spreadsheet query for the column selected on the Column tab of the SQL Query Builder wizard.</p>

Dynamic Text Labels

Dynamic text labels are variables that are dynamically replaced with values at runtime. Dynamic text labels display the latest information without being manually updated

You can use Dynamic Text Labels in these ways:

- To create dynamically updated labels on custom documents, add dynamic text labels to custom document label objects using the shortcut menu. See [“Creating Dynamic Text Labels” on page 231](#).
- To create dynamically updated headers and footers for your JPG output, PDF output and hardcopy printing, use dynamic text labels in the Print dialog box Headers/Footers tab. See [“Print Dialog Headers/Footers Tab” on page 151](#).
- To create dynamic SQL statements, include dynamic text labels in your SQL filter clauses as values.

Dynamic Text Tag	Default Tag	Description
Cell Reference	<cell 0,0>>	Inserts a cell reference string in the label object.
Filter	<<filter 0>>	Inserts the filter member name in the label object.

After dynamic text labels are entered, you can edit the tag to display additional information.

Dynamic Text Labels for SQL Spreadsheets

Dynamic Text Labels are used primarily in custom report label objects and in the Headers/Footers tab.

Two dynamic text labels are supported with SQL Spreadsheets: *filter* and *Cell* of the print dialog box. Because SQL spreadsheet objects cannot be selected on Web Analysis documents as on standard OLAP spreadsheets, charts, and pinboard, filter and cell functions must use fixed

references to their data source. For example, the filter function must contain `ReportSQLDataSrc`, which is selected when a SQL subscription control is defined:

```
<<filter ReportSQLDataSrc1, 0>
```

A reference without a data-source specification (for example, `<<filter 0>>`) does not function with SQL spreadsheets.

Cell Functions

Cell functions insert cell reference strings in label objects. The fixed reference format for the function is:

```
<<cell SQLDataSourceName1, row, column>>
```

Where

row is the numerical row reference on the spreadsheet and *column* is the numerical column reference on the spreadsheet

Filter Functions

Filter functions insert filter member names in label objects. The fixed reference format for the function is:

```
<<filter SQLDataSourceName1,n>>
```

Where

n is the filter number in the order that is displayed in the SQL WHERE clause:

```
SELECT MONTH, PRODUCT, CITY, SALES, COGS FROM DETAILS WHERE PRODUCT =  
'100-10' AND MONTH = 'Aug'
```

```
<<filter ReportSQLDataSrc1, 0>> returns 100-10
```

```
<<filter ReportSQLDataSrc1, 1>> returns Aug
```

Creating a SQL Subscription Control

► To create a SQL subscription control for a SQL Spreadsheet:

1 Start Web Analysis Studio.

You must open a document containing a SQL Spreadsheet or create a SQL spreadsheet after entering Document Designer.

2 Select File > New > Document.

The Document Designer is displayed.

3 Drag the SQL Subscription Object icon from the component toolbar to a document panel.

4 Select the SQL spreadsheet data source for the subscription object.

The Select Column dialog box is displayed, prompting the user to select a column from the relational data source. The members of this column populate the drop-down list of the control.

Select the asterisk character (*) to return all column members.

5 Select the relational data source column, and click **OK.**

The SQL Subscription Control is displayed on the document panel. The control functionality takes effect when you return to Analyze mode.

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Freeform Grids

Freeform grids present OLAP, relational, and manually entered data on one data object, and enable you to leverage these data sources in integrated dynamic calculations.

Freeform grids are comprised of only rows and columns. There is no visual representation of page dimensions participating in cell intersections. You can still use OLAP database connections with dimension members assigned to the Page axis, but you cannot navigate through these page dimensions unless you create additional subscription controls. In short, only the first page of a multidimensional cube is displayed.

Freeform Grid prerequisites:

- Freeform Grids can only be created on a custom document.
- You must understand how to compose a SQL query to access relational data sources.
- You must be able to connect to a relational data source using supported JDBC drivers.

There are four alternatives for accessing relational data in Web Analysis Studio:

- You can create a relational database connection to be used by regular spreadsheets, charts, and pinboards. See [“Creating Relational Database Connections”](#) on page 180.
- SQL Spreadsheet data objects enable you to query a relational data source, and display the returned data values on a custom document. See [“Creating SQL Spreadsheets”](#) on page 194.
- You can create a relational drill-through connection from an OLAP database connection to a relational data source. See [“Creating Relational Drill-Through”](#) on page 163.
- You can leverage pre-defined Analytic Integration Services drill-through connections using the Related Content dialog box. See [“Analytic Integration Services Drill-Through”](#) on page 253.

To create freeform grids you are required to specify:

- The data sources providing data values
- The Freeform Grid data object that displays these values
- The queries retrieving data values.



The process of creating freeform grids assumes that you know your data sources and logon credentials. Freeform grid querying methods are not unique; you can use the database connections established for other data objects.

Creating Freeform Grids

► To create a freeform grid:

1 Start Web Analysis Studio.

2 Perform one:

- Select **File > New > Document**.
- Click .
- Click , and select **Document**.
- In the View Pane **Browser** tab, right-click a document and select **Edit**.
- Press **Ctrl+N**.

The Document Designer is displayed.

3 Drag the Freeform Grid icon from the component toolbar to a document panel.

An empty freeform grid and the Set Grid Size dialog box are displayed. Note that the grid can consist of only row and column axes.

4 Enter the number of rows in Number of Rows.

5 Enter the number of columns in Number of Columns.

6 Click OK.

The grid is reset to the indicated number of rows and columns.

7 Optional: To move the freeform grid object, click and drag the component with the Move cursor to another location on the document panel.

The conventional cursor is transformed into the Move cursor when it is floated over a selected component. Be careful not to drag over a blue selection handle, as this resizes the component instead of moving it.

8 Optional: To resize the freeform grid object, click and drag the blue selection handles on the sides and corners of the selected grid component.

9 Optional: To anchor the freeform grid object to document panel borders, right-click the component and select **Anchor**, and an anchor option: **Top, Bottom, Left, Right, Slack, None**.

The Anchor property orients selected components to an edge of the panel containing them. Using Slack, you can realign objects to occupy empty space. It is best to design documents in terms of container panels and orient components relative to these panels. Components that are placed with an absolute alignment in the context of the main document panel, maintain their position even as other components fluctuate. This may cause the overlapping and shifting of components.

10 When the custom document is laid out correctly, click Analyze.

The remaining customization is done in the Analyze interface.

Data sources are anchored at cells in a freeform grid. This is done by selecting a cell and composing a query.

11 To specify an OLAP or Hyperion data source, perform these tasks:

- a. Right-click a cell and select **Add Data Source**.

The Select Data Source dialog box is displayed.

- b. You can select a database connection, or select **<Add Data Source>** to define a database connection, and click **OK**.
 - i. If you selected **<Add Data Source>**, the Open dialog box is displayed. Select a database connection, and click **OK**. The Cube Navigator dialog box is displayed, so that you can create a query for the selected cell. Assign dimensions to axes, make members selections, and click **OK**.

Note that you cannot page dimension member selections assigned to the Pages axis, unless you create a subscription control using a matching data source and page dimensions.

- ii. If you selected a database connection, the cell is populated based on the selected database connection.

12 To specify a relational data source:

- a. Right-click a cell and select **Add SQL Query**.

The Enter SQL Query dialog box is displayed.

- b. Enter the JDBC connection information, log on credentials, query governor parameters and SQL statement, and click **OK**. See [“Creating SQL Spreadsheets” on page 194](#).

The query is submitted to the corresponding data source, and the result set origin is displayed at the origin of the selection set.

13 To manually enter data values in the freeform grid, click a cell and enter text.

See [“Formatting Freeform Grids” on page 206](#) and [“Creating Formulas for Freeform Grids” on page 207](#).

Formatting Freeform Grids

You cannot format freeform grids. They inherit formatting definitions from the database connections that they use. You can, however, show and hide numerous aspects of the freeform grid data object:

- To show or hide a freeform grid component, right-click the freeform grid and select one:
 - **Show/Hide Formula Bar.**
 - Show/Hide Headers
 - Show/Hide Horizontal Gridlines
 - Show/Hide Vertical Gridlines

- To insert a row or column in a freeform grid, right-click the freeform grid and select **Insert Row** or **Insert Column**.



- To remove a row in a freeform grid, right-click the freeform grid and select **Remove Row** or **Remove Column**.

- To resize row height or column width:
 - 1 In **Analyze mode**, float the cursor between two header cells until the cursor changes to the **Resize cursor**.
 - 2 Drag column borders left or right, and drag row borders up and down.
 - 3 When the column or row is sized correctly, release your mouse.

- To hide a column or a row, size the header down to 0 pixels.

Note:

Conversely, if you encounter missing columns or rows, you should assume that the header is sized down to 0 pixels to hide the content of that column or row.

- To insert multiple rows and columns in a freeform grid:
 - 1 Click  to return to **Document Designer**.
 - 2 Right-click the grid and select **Properties**.
The Set Grid Size dialog box is displayed.
 - 3 Enter a number of rows and columns, and click **OK**.
The grid is reset to the indicated number of rows and columns.
 - 4 Click  to return to **Analyze mode**.

Creating Formulas for Freeform Grids

Freeform grids leverage diverse data sources in integrated dynamic calculations. Cell references use syntax that matches those supported by Microsoft Excel, where the column letter and the row number indicate the cell address.

Example: =SUM(B8:C8) adds the data values from the cell on the eighth row of the B column to the eighth row of the C column.

Note:

Formula cell addresses are absolute. They do not dynamically change themselves to accommodate the displacement caused by adding or removing rows or columns. As a result, you should not compose freeform grid formulas until you are finished with all other grid formatting.

You can enter these functions in cells or the Formula bar.

- OPERATOR_ADD=+
- OPERATOR_SUBTRACT=-
- OPERATOR_DIVIDE=/- OPERATOR_MULTIPLY=*- OPERATOR_POWER=^- OPERATOR_EQUAL==- OPERATOR_DIFFERENT=<>- OPERATOR_GREATER_OR_EQUAL=>=- OPERATOR_LESS_OR_EQUAL=<=- OPERATOR_GREATER=>- OPERATOR_LESS=<- CONDITION_IF=IF- CONDITION_THEN=THEN- CONDITION_ELSE=ELSE- FUNCTION_LN=LN- FUNCTION_LOG=LOG10- FUNCTION_EXP=EXP- FUNCTION_SQRT=ROOT- FUNCTION_COS=COS- FUNCTION_SIN=SIN- FUNCTION_TAN=TAN- FUNCTION_ACOS=ACOS- FUNCTION_ASIN=ASIN

- FUNCTION_ATAN=ATAN
- FUNCTION_COSH=COSH
- FUNCTION_SINH=SINH
- FUNCTION_TANH=TANH
- FUNCTION_INTEGER=INT
- FUNCTION_ABS=ABS
- FUNCTION_NOT=NOT
- JEKS_FUNCTION_SUM=SUM
- JEKS_FUNCTION_RAND=RAND
- JEKS_FUNCTION_MODULO=MOD
- JEKS_FUNCTION_FACT=FACT
- JEKS_FUNCTION_IF=IF
- JEKS_FUNCTION_AND=AND
- JEKS_FUNCTION_OR=OR
- JEKS_FUNCTION_TRUE=TRUE
- JEKS_FUNCTION_FALSE=FALSE
- JEKS_FUNCTION_DATE=DATE
- JEKS_FUNCTION_DATEVALUE=DATEVALUE
- JEKS_FUNCTION_NOW=NOW
- JEKS_FUNCTION_TIME=TIME
- JEKS_FUNCTION_TIMEVALUE=TIMEVALUE
- JEKS_FUNCTION_YEAR=YEAR
- JEKS_FUNCTION_MONTH=MONTH
- JEKS_FUNCTION_DAY=DAY
- JEKS_FUNCTION_WEEKDAY=WEEKDAY
- JEKS_FUNCTION_HOUR=HOUR
- JEKS_FUNCTION_MINUTE=MINUTE
- JEKS_FUNCTION_SECOND=SECOND
- JEKS_FUNCTION_CHAR=CHAR
- JEKS_FUNCTION_FIND=FIND
- JEKS_FUNCTION_CODE=CODE

These conditional operators are also supported:

- IF
- THEN
- ELSE

Controlling Freeform Grid Content with Data Objects

Due to the variety of data sources available, freeform grids do not offer the navigation methods and Analysis Tools available to other data objects. Instead of navigating directly on the freeform grid, you may use another data object that shares the data source to control grid content.

Because the freeform grid shows only the first Page dimension, you can use other custom document components (such as subscription controls) to navigate through Page axis dimension members.

To control freeform grid content using another data object, you must perform these steps:

1. Create a custom document with a freeform grid.
2. Switch to Analyze mode, right-click and add a data source to the grid.
3. Return to Document Designer, and add another data object to the custom document.
4. The second data object must use the data source used by the freeform grid.
5. Switch to Analyze mode again.

At this point, you have a custom document with a freeform grid and another data object, both of which use a common database connection. You can now apply client-side formatting and analysis tools definitions to the data object. Because the freeform grid's database connection and query match those used by the data object, it reflects all changes to the data object. When you are done formatting the content, you have three options:

- You can leave the data object on the document, as a control.
- You can delete the data object. The grid maintains its state based on the database connection and query, but you cannot revise the grid.
- You can hide the data object by sizing it down, or obscuring it behind another component (send to back). Later, if you revise the grid, you can use the data object control again.



Note:

Formula cell addresses are absolute. They do not dynamically change themselves to accommodate the displacement caused by navigation from a second data object sharing one database connection. Changing the content of a freeform grid, may render formulas obsolete.

► To control freeform grid content using another data object:

1 Start Web Analysis Studio.

2 Perform one:

- Select **File > New > Document**.
- Click .
- Click , and select **Document**.
- In the View Pane **Browser** tab, right-click a document and select **Edit**.

- Press **Ctrl+N**.

The Document Designer is displayed.

3 Drag the **Freeform Grid icon from the component toolbar to a document panel.**

An empty freeform grid and the Set Grid Size dialog box are displayed. Note that the grid can consist of only row and column axes.

4 Enter the number of rows and columns in the corresponding text area, and click **OK.**

The grid is reset to the indicated number of rows and columns. Note that the freeform grid is selected, and displays blue selection handles.

5 Click .

Data sources are anchored at cells in a freeform grid. This is done by selecting a cell and composing a query.

6 To specify an OLAP or Hyperion data source, right-click a cell and select **Add Data Source.**

The Select Data Source dialog box is displayed. You can select a database connection, or select **<Add Data Source>** to select another database connection. When you are done the query is submitted and the result set is displayed in the freeform grid. It is important to note the name of the data source displayed at the result set origin.

7 Click .

8 Drag the **Spreadsheet icon from the component toolbar to the document panel.**

The Data Object Properties dialog box is displayed.

9 Select the data source used by the freeform grid for this data object, and click **OK.**

This is the data source displayed at the result set origin on the freeform grid.

10 Click .

Your custom document contains a freeform grid and another data object, both of which use a common database connection. You can now apply client-side formatting and analysis tools definitions to the data object. Because the freeform grid's database connection and query matches those used by the data object, it reflects all changes to the data object.

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Comparing Web Analysis Studio and Workspace

Web Analysis Studio is a Java applet that enables you to create, analyze, present, and report multidimensional content. The studio offers the complete Web Analysis feature set to designers creating content (including dashboards).

Workspace is a DHTML based, zero-footprint client that provides a user interface for viewing and interacting with content created by authoring studios and enables users to create queries against relational and multidimensional data sources. It is engineered for information consumers who do not require advanced design and content-creation capabilities.

Differences between the Two Clients

- The scrolling feature on charts is not available in Workspace.
- Because Java fonts and HTML fonts are not one-to-one equivalent, font styles and sizes may differ.
- Label Text and Text Area static placement may not be observed and it is recommended that you use the anchoring feature as much as possible.
- Workspace does not render these designer components:
 - Tab selection controls

- Slider selection controls
- Splitter panels

Note:

Splitter panel render in HTML as a two pane panel, however splitter bar and One-Touch Expandable functionality not render in HTML.

- These Service Buttons do not function in the Workspace:
 - Assign Edit Data
 - Close Report
 - Cube Navigator
 - Desktop
 - File Open
 - Home
 - Launch Executable
 - Logout
 - Print
 - Save As
 - Send to Clipboard
 - Send to Excel
 - Toggle Info Panel
 - Toggle Masthead
 - Toggle Menu
 - Toggle Status Bar
 - Toggle Toolbar
 - User Preferences

Font List Differences Between Web Analysis Studio and Workspace

Font availability dependencies in Web Analysis Studio and Workspace:

- **Web Analysis Studio**—Font list is generated from client machine installed fonts
- **Workspace**—Font list is generated from Web Analysis server machine installed fonts

Note:



If a document is created in Web Analysis Studio that uses a font that is installed only on the client machine and is not installed on the Web Analysis server, Workspace users cannot see that font.

Document Designer

The Document Designer creates custom documents. When in Document Designer, the process bar displays the Design label, and a component toolbar is displayed below the menu bar. Document Designer access is controlled cumulatively by user and group roles.

Accessing Document Designer

You can create custom documents from scratch, the current document, or from document that you can access.

- To initiate Document Designer:
 - Select **File > New > Document**.
 - In Analyze, click , and select **Document**.
 - In Analyze, click .
 - Press **Ctrl+N**.
 - Press **F12**.
- To initiate Document Designer for the current document in Analyze, click **Switch to Document Designer**.
- To open document in Document Designer, perform these actions:
 - 1 Select **View > View Pane**, or press **F6**.
The View Pane is displayed.
 - 2 Click the **Repository** tab.
 - 3 Navigate to the document to edit in **Document Designer**.
 - 4 Right-click the document name, and select **Edit**.

The document is opened in Document Designer, and assigned default object properties. For a description of default object properties, See [“Formatting Components” on page 218](#).

Setting Document Designer Options

Before designing custom documents, set these options:

- To show or hide the Document Designer point grid on the master panel, select **View > Grid Toggle**.
- To set the color for the Document Designer grid points on the master panel:
 - 1 Select **View > Grid Color**.

The Select Color dialog box is displayed.

- 2 **Select a color from the Swatches tab, and click OK.**

For a complete description of color options, See [“Selecting Color” on page 113](#).

- To set a background image for the Document Designer master panel:

- 1 **Select View > Load Image.**

The Select Graphic dialog box is displayed. You can select a color to fill the panel, or a graphic background for the panel (using **Load**). The **Style** group box controls image placement inside the master panel. **Clear** resets the panel to the default grey background.

- 2 **Select one Style option:**

- **Center**—Centers the image horizontally on the master panel.
- **Stretch**—stretches the image to the height and width of the master panel.
- **Tile**—repeats the image across the master panel until the area is covered.
- **Top-Left**—Anchors the image in the top left corner of the master panel.

- 3 **Click Load.**

The Open dialog box is displayed.

- 4 **Navigate to a network location and select a JPG or GIF file.**

- 5 **Click Open.**

The image is displayed on the master panel as specified by the Style option.

Design for HTML

When creating custom Web Analysis documents, you can restrict objects and functionality that do not appear in the Workspace rendering of Web Analysis documents. Incompatible controls such as Tab Control and Slider Bar, and some Service Buttons, are disabled and not available to add to a Web Analysis document.

- To create Web Analysis documents for Workspace HTML rendering:

- 1 **From the main menu, select Edit > Design for HTML.**

- 2 **Select Design for HTML option and click OK.**

Note:

Incompatible Workspace objects are not enabled ([“Comparing Web Analysis Studio and Workspace” on page 211](#) for a list of incompatible objects).

- 3 **If objects are overlaid (For Example, a Text Label placed on top of a Spreadsheet), the overlaying objects that do not render in HTML and are highlighted with a red border.**

Note:

If incompatible controls are added when this mode is de-selected, “Design for HTML mode” is enabled and the control is highlighted with a red border

Accessing the Palette Tab

The Palette tab is one of three View Pane tabs.

It lists custom document components as a node tree. You can expand, collapse, and explore the node tree to identify components by name, understand how they are nested, and display component properties.

- To display a node tree of custom document components, select **View > View Pane** (or press **F6**), and click .

Custom Document Components

Web Analysis Studio provides an inventory of coding-free components for custom documents. Twenty-one components can be added to custom documents multiple times, and customized using various options. This provides numerous creative opportunities for custom document designers:

Containers

The [Panel Object](#) and [Split Panel Object](#) control space and layers on custom documents. Design documents using container panels and orient components inside these panels.

Content Panels

There are four additional panels that provide specialized content:

- [Label Object](#)—contains static or dynamic text for titles, labels, or captions.
- [Text Area Object](#)—uses dynamic text to annotate documents.
- [Image Objects](#)—contain graphics for backgrounds, pictures, illustrations, and graphic controls.
- [HTML Browser Object](#)—displays static HTML.

These panels function without additional coding. The label object supports the dynamic text labels used in Printing headers and footers, and SQL spreadsheets.

Four Data Objects

Data objects representing four display types are next on the component toolbar:

- **Chart**—displays the query result set as a chart.
- **Spreadsheet**—displays the query result set as a spreadsheet.
- **Freeform Grid**—displays content from multiple data sources in one spreadsheet.
- **Pinboard**—displays the query result set as a pinboard.

The SQL Spreadsheet data object is in the last segment of the component toolbar. See also [Chapter 15, “Creating Freeform Grids.”](#)

Subscription Controls

A variety of controls enable you to navigate dimensional hierarchies, browse documents, and execute commands:

- **Combo Box Subscription**—displays a member drop-down list.
- **Radio Button Group Subscription**—enables you to select one dimension member option from a series.
- **Check Box Group Subscription**—enables you to select multiple dimension members.
- **Tab Group Subscription**—enables you to select one dimension member tab from a series.
- **Multi-level Combo Box Subscription**—enables you to select from interdependent drop-down lists, whose members change based on previous selections.
- **Slider Subscription**—enables you to select one dimension member from a series.
- **Selection Button Subscription**—displays a control that applies dimension member selections to data objects using a matching data source.
- **Alias Controller Object**—enables you to toggle the data object between alias table labels.
- **Services Button Object**—executes a command. Also used to create hotspots.

All subscription buttons can control data objects that share a common database connection query.

SQL Spreadsheet and SQL Subscription

Two components present and control SQL query result sets:

- **SQL Spreadsheet Objects**—displays a SQL query from a relational data source.
- **SQL Subscription Objects**—displays a relational subscription button.

See [Chapter 14, “Creating SQL Spreadsheets.”](#)

Creating Container Panels

Design custom documents using container panels. As they are added to panels, components are anchored to one panel edge. Using Slack alignment, you can realign objects to occupy all empty space.

Components placed with absolute alignment in the main document panel maintain their position as other components fluctuate. This may cause overlapping and shifting components. To prevent this, subdivide custom document space using panels, and anchor these panels to the master panel. Subsequently added components in container panels maintain their arrangement.

Adding Custom Document Components

- To add custom document components to a document, drag them from the component toolbar to a document panel.

Undo and Redo

The Undo command reverses the effect of the previous command, returning the display to its prior state. The Redo command reverses Undo, and reinstates the command executed before Undo. Document Designer records the last ten design actions in a series, and enables you to select multiple commands to undo or redo.

- To undo or redo multiple commands, select them from the Undo and Redo drop-down lists.

Selecting Components

- To make a component current, click it. The current component is outlined in blue.

Selecting Multiple Components


- To select multiple components:
 - Hold Ctrl while clicking the components.
 - Click and drag a box around multiple components.

Sizing Components

- To size a selected component, drag the blue selection handles on the corners and edges of the selection outline.



Moving Components

- To move selected component, drag the component with the Move cursor, , to another location.

The conventional cursor is transformed into the Move cursor when it is floated over a selected component. Be careful not to drag over a blue selection handle, as this resizes the component instead of moving it.

Cutting, Copying, Pasting, and Deleting Components

- To edit custom documents, right-click a selected custom document component, and select **Edit** > **Cut**, **Copy**, **Paste**, or **Delete** from the shortcut menu.

You can also select a component by clicking it and using these hot keys:

- Undo—**Ctrl+Z**
- Redo—**Ctrl+Y**
- Cut—**Ctrl+X**
- Copy—**Ctrl+C**
- Paste—**Ctrl+V**
- Delete—Press **Delete**.

Formatting Components

Components feature a shortcut menu, the primary means of formatting and editing. All menus are identical with the exception of component-specific Custom Settings commands:

Command	Submenu	Description
Bring to Front		Brings the selected object to the top and front when objects are layered.
Send to Back		Sends the selected object to the bottom and back when objects are layered.
Edit		
	Cut	Removes the selected object to the clipboard.
	Copy	Saves the selected object to the clipboard.
	Paste	Pastes content from the clipboard into the selected object.
	Delete	Deletes the selected component.
Opaque		Makes the selected object opaque when selected, or transparent when deselected.

Command	Submenu	Description
Border		
	Etched	Sets object borders to an etched style.
	Line	Sets object borders to a solid line.
	Lowered Bevel	Sets object borders to a lowered bevel style.
	Raised Bevel	Sets object borders to a raised bevel style.
	None	Removes object borders.
	Set Border Color	Sets line border color.
	Set Border Size	Sets the (interior) component line border width in pixels. Zero (0) means no border.
Anchor		
	Top	Affixes objects to the top edge of the panel.
	Bottom	Affixes objects to the bottom edge of the panel.
	Left	Affixes objects to the left edge of the panel.
	Right	Affixes objects to the right edge of the panel.
	Slack	Sizes the component to fill unused space.
	None	Positions the component, using the underlying pixel grid.
Align		
	Top Edges	Aligns the top edge of all selected components. Moves all selected components vertically to the current position of the top edge of the top object.
	Vertical Centers	Aligns the center point of all selected components. Center in this case is the vertical center (left and right edges of components). Moves all selected components vertically to a median determined using the top edge of the top component and the bottom edge of the bottom component.
	Bottom Edges	Aligns the bottom edges of all selected components. Moves all selected components vertically to the current position of the bottom edge of the bottom object.
	Left Edges	Aligns the left edge of all selected components. Moves selected components horizontally to the current position of the left edge of the left object.
	Horizontal Centers	Aligns the center point of all selected components. Center in this case is the horizontal center (top and bottom edges of components). Moves all selected components horizontally to a median determined using the left edge of the left component and the right edge of the right component.
	Right Edges	Aligns the right edge of all selected components. Moves all selected components horizontally to the current position of the right edge of the right object.

Command	Submenu	Description
Distribute		
	Top Edges	Evenly spaces the top edge of three or more components vertically.
	Vertical Centers	Evenly spaces the center point of three or more components. Center in this case is the vertical center (left and right edges of components). Moves all selected components vertically to a median determined using the top edge of the top component and the bottom edge of the bottom component.
	Bottom Edges	Evenly spaces the bottom edge of three or more components vertically.
	Left Edges	Evenly spaces the left edge of three or more components horizontally.
	Horizontal Centers	Evenly spaces the center point of three or more components. Center in this case is the horizontal center (top and bottom edges of components). Moves all selected components horizontally to a median determined using the left edge of the left component and the right edge of the right component.
	Right Edges	Evenly spaces the right edge of three or more components horizontally.
Custom Settings		Displays additional component-specific commands. Options are described in component profiles.
Font Properties		Displays the Font Properties dialog box to format caption fonts.
Properties		Displays the component-specific property dialog box, or a series of dialog boxes.

Default Object Properties

Default properties are assigned to documents imported into Document Designer:

Property	Default	Implications
Opaque	Enabled	The object obscures other objects behind it.
Border	Etched	All objects feature a default border.
Anchor	Slack	Change the alignment property, if you intend to resize the data object.
Data Object Properties	Data Source	Be aware that all objects using one data source are coordinated. Navigation in object affects all objects using one data source.
	Display Type	To change display type, select Properties from the shortcut menu.

Setting the Background

To create a uniform background for the custom document, you must create a panel object, and anchor the panel to fill all slack space. You can set the background to a color or arrangement of images. Every custom document begins with a master panel. See [“Setting Document Designer Options” on page 213](#).

- To set a background image for a panel:

- 1 Right-click a panel, and select **Properties**.**

The Select Graphic dialog box is displayed. You can select a background color, or a graphic background for the panel (using **Load**). The **Style** group box controls image placement. **Clear** resets the panel to the default grey background.

- 2 Select one **Style** option:**

- **Center**—Centers the image horizontally on the master panel.
- **Stretch**—Stretches the image to the height and width of the master panel.
- **Tile**—Repeats the image across the master panel until the area is covered.
- **Top-Left**—Anchors the image in the top left corner of the master panel.

- 3 Click **Load**.**

The Open dialog box is displayed.

- 4 Navigate to a network location containing graphic JPG or GIF files, and select a file.**

- 5 Click **Open**.**

The image is displayed on the master panel as specified by the **Style** option.

Aligning Components

Components are positioned relative to the panel containing them. Document designers edit relative component positioning and spacing using alignment controls.

- To align components, right-click the component and select a shortcut menu option.

Anchor Options

The Anchor property orients selected components to an edge of the panel containing them. Using Slack alignment, you can realign objects to occupy empty space.

Design documents using container panels and orient components inside these panels.

Components placed with absolute alignment in the main document panel maintain their position as other components fluctuate. This may cause overlapping and shifting components.

Relative Alignment

Anchored components can also be positioned relative to other components. For example, selection buttons anchored to the left edge of the panel may nevertheless be unevenly spaced.









Align and Distribute controls position components and space components relative to edges or center points.





Spacing Options

Spacing components using the Distribution feature does account for object size or space between objects, only for space between edges or center points.

Spacing between object sizes that differ may vary, even when an edge of three or more components is evenly spaced.

Alignment Options

Shortcut Command	Description
Anchor	
Top	Affixes objects to the top edge of the panel.
Bottom	Affixes objects to the bottom edge of the panel.
Left	Affixes objects to the left edge of the panel.
Right	Affixes objects to the right edge of the panel.
Slack	Sizes the component to fill unused space.
None	Positions the component, using the underlying pixel grid.
Align	
 Top Edges	Aligns the top edge of all selected components. Moves all selected components vertically to the current position of the top edge of the top object.
 Vertical Centers	Aligns the center point of all selected components. Center in this case is the vertical center, evenly spaced from the left and right edges of components. Moves all selected components vertically to a median determined using the center of the top component and the center of the bottom component.
 Bottom Edges	Aligns the bottom edge of all selected components. Moves all selected components vertically to the current position of the bottom edge of the bottom object.
 Left Edges	Aligns the left edge of all selected components. Moves all selected components horizontally to the current position of the left edge of the left object.
 Horizontal Centers	Aligns the center point of all selected components. Center in this case is the horizontal center, evenly spaced from the top and bottom edges of components. Moves all selected components horizontally to a median determined using the center of the left component and the center of the farthest right component.
 Right Edges	Aligns the right edge of all selected components. Moves all selected components horizontally to the current position of the right edge of the farthest right object.
Distribute	
 Top Edges	Evenly spaces the top edge of three or more components vertically.
 Vertical Centers	Evenly spaces the center point of three or more components. Center in this case is the vertical center, evenly spaced from the left and right edges of components. Moves all selected

Shortcut Command	Description
	components vertically to a median determined using the center of the top component and the center of the bottom component.
 Bottom Edges	Evenly spaces the bottom edge of three or more components vertically.
 Left Edges	Evenly spaces the left edge of three or more components horizontally.
 Horizontal Centers	Evenly spaces the center point of three or more components. Center in this case is the horizontal center, evenly spaced from the top and bottom edges of components. Moves all selected components horizontally to a median determined using the center of the farthest left component and the center of the farthest right component.
 Right Edges	Evenly spaces the right edge of three or more components horizontally.

Creating Hotspots

► To create a hotspot:

- 1 **Drag a Services button from the component toolbar to the document panel.**

The Service Properties dialog box is displayed.

- 2 **Select a service type from the **Select Service Type** list.**

The Service button features a gray color and border and an opaque text label by default.

- 3 **If you do not want a text label, delete the default label text.**

- 4 **To indicate a border color, click the **Color** button.**

The Select Color dialog box is displayed, enabling the selection of a color for the button and the border.

- 5 **Click **OK** to return to the Service Properties dialog box.**

The button and the border displays the selected color. If you want transparent hotspots with colored borders, you must finish creating the service button, and disable the opaque property on the service button shortcut menu.

- 6 **Click **OK**.**

The Service button can be sized and located, for component.

Note:

Use the Bring to Front shortcut menu command to locate hotspots on other objects.

Creating Split Panels

► To create a split panel (a panel with a movable splitter bar):

1 In Document Designer, drag a **Split Panel** object from the component toolbar onto the content area.

The Split Panel Properties dialog box is displayed.

2 Select a horizontal or vertical splitter bar from the **Orientation** radio button group.

3 **Optional:** In the **Sizing** group, select **One-Touch Expandable** to add controls to the splitter bar.

The Splitter bar is the slider that divides the split panel. When the One-Touch Expandable option is selected, two arrow controls move the splitter bar in opposing directions with one click.

4 **Optional:** In the **Background Images** group, click **Left/Right** or **Top/Bottom**, to display the Select Graphic dialog box for that half of the Split Panel.

You can set a color for the specified half of the split panel, or load a background image in it. See [“Selecting Graphics” on page 114](#).

5 Click **OK**.

Nesting Split Panels

By dragging a Split Panel object onto another Split Panel object, you can nest split panels inside one another. This enables you to use horizontal and vertical splitter bars simultaneously.

Retrieving Focus From Slack Space Split Panels

Focus must be removed from the split panel before the slider bar can be adjusted. When the split panel alignment is set to Slack Space, the split panel controls the document, and you cannot click outside the split panel. In this case, click the Splitter bar until the Split panel is deselected.

Linking Components by Query

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.

To set properties customizing these elements:

- Database Connection Properties indicate 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 formatting options.
- Queries can be explicit, requesting information on dimension members, or dynamic, requesting information about dimension member that satisfies a set of criteria.

In Document Designer, the query definition is referred to as the data source.

Common Data Sources

Components using one data source are coordinated. Component navigation requires all components using one data source to follow common lines of navigation.

To link dimension in data objects in one document, use Custom Settings. See [“Linking Selected Dimensions” on page 225](#).

Unlinking Components

If you do not want coordinated components, assign another data source to an object. Identical data sources with names that differ are treated separately.

Linking Selected Dimensions

Use Custom Settings to link dimensions in data objects in one document.

Dimensional linking enables data objects sharing dimensions to remain coordinated regardless of data source. Links are unidirectional; navigation on a data object triggers coordinated navigation on other data objects linked to it. Data objects without defined links do not mutually trigger navigation.

- To locate data object custom settings, enter Document Designer and right click a data object.

Data Object Custom Settings	Description
Add/Show Data Source Link	Places the data objects in the current document into Data Source Link mode.
Remove Data Source Link	Deletes all data source links in the selected data object.

- To link selected dimensions of data objects in one document:

- 1 Enter Document Designer.
- 2 Right-click the data object from which links are to be driven.

Links are unidirectional. Bidimensional and multidimensional links must be created by repeating this procedure on each data object. Components using one data source are also coordinated, but these links are not dimension-specific.

- 3 Select **Custom Settings > Add/Show Data Source Link**.

The data object borders are red, green or black.

- Red borders—Indicate the data objects share a data source.
- Green borders—Indicate the data objects available for dimensional linking.
- Black borders—Indicate the data objects with previously defined links.

Black-bordered objects cannot be used to define links. You must remove the link definitions before defining link definitions.

Red-bordered objects share a data source. All dimensions are coordinated.

4 Click a green-bordered object.

The Select Dimensions dialog box is displayed.

5 Click a check box to select a dimension.

You can select multiple dimensions.

6 Click OK.

You are returned to Document Designer. You must return to Analyze before demonstrating linking behavior.

Creating Subscription Controls

You can create five controls using one procedure:

- [Combo Box Subscription](#)
- [Radio Button Group Subscription](#)
- [Check Box Group Subscription](#)
- [Tab Group Subscription](#)
- [Slider Subscription](#)

There are alternative procedures for customizing:

- [Multi-level Combo Box Subscription](#)
- [Selection Button Subscription](#)
- [SQL Subscription Objects](#)

There is also a procedure for making subscription controls dependent on other subscription controls.

Subscription Control Dialog Sequence

After creating a control, an automated dialog sequence helps you set properties:

- The Select Data Source prompts you to relate the control to a data source (query).
- The Select Dimension dialog box prompts you to select a dimension from the query.
- The Select Member dialog box prompts you to specify members and formatting options.

Creating Subscription Controls

► To create subscription controls:

- 1 **Drag a Subscription control object from the component toolbar to the content area of the custom document.**

The Select Data Source dialog box is displayed.

- 2 **Click to select a data source.**

The Make Dependent option makes the subscription controls dependent on other controls sharing this data source. See [“Creating Dependent Subscription Controls” on page 229](#).

- 3 **Click **OK**.**

The Select Dimension dialog box is displayed.

- 4 **Select a dimension name, and click **OK**.**

The Select Member dialog box is displayed.

- 5 **Click **Add**.**

The Dimension Browser for the selected dimension is displayed.

- 6 **Make member selections, and click **OK**.**

Selected members display in the Select Member dialog box. You can also select font properties, color properties, and rename the dimension member labels. The first dimension member in the panel is used as the button label, so it is often helpful to rename the member to a more descriptive label.

These optional subscription control procedures are also available:

- [Ordering Dimension Member Controls](#)
- [Indenting Dimension Member Controls](#)
- [Changing Data Sources](#)
- [Creating Dynamic Dimension Member Controls](#)
- [Creating Dependent Subscription Controls](#)

- 7 **Click **OK**.**

The dimension member control is displayed on the custom document.

Ordering Dimension Member Controls

- To reorder member controls, select a member name and use the arrow buttons to move the member in the index order. The order of members is reflected in the custom document when you Click OK.

Indenting Dimension Member Controls

When creating check box and radio button group subscription controls, you can indent dimension member controls a number of pixels based on each members level from the top of the dimension hierarchy.

- To indent dimension member controls, open **Select Members** and select **Indent Members**.

Saving Subscription Control Selections to User POVs

User POVs enable users to select members in Filters, Pages, Rows, and Columns (Data Layout and/or member selection controls) and apply them to multiple Web Analysis documents.

All Subscription controls have “Save Selection as User POV” option. When a selection is made on the control, it is automatically saved to the User POV as a filter. If the Subscription control points to multiple `ReportDataSrcs`, all of the underlying Database Connections have their User points of view set for the dimension that the control applies to.

In order for a Web Analysis document to utilize the User POV selection, the option “Use User POV” must be enabled in the Data Layout > Options dialog.

Enabling a Subscription Control to “Activate from Service Button”

This feature allows for Subscription Control member selections to be made, and performs a data retrieval by clicking the Service Button. Users can make multiple Subscription Control selections without retrieving data for each selection. Subscription Control’s Properties / Select Members dialog has a option to “Activate From Service Button”. A Service Button for “Apply Subscriptions” must be added to the Web Analysis document to perform data retrieval after making Subscription Control selections.

Changing Data Sources

- To change the data source for a dimension member control, click **Relink**.
The Select Data Source dialog box is displayed.

Creating Dynamic Dimension Member Controls

You can define dimension member controls using an explicit selection or advanced member selection, and use advanced member selections to populate the control. Using advanced member selection to populate a control makes the control dynamic. As members are added deleted and changed in the database, the control maintains itself and does not become obsolete.

For example, you can create a Product dimension member control. You can make a children of Product dimension member control, and you can make a control that displays the Children of Product, whatever they are.

- To create a dynamic dimension member control, select **Dynamic** in **Member**. Dynamic dimension members must utilize an advanced member selection.

Creating Dependent Subscription Controls

You can make subscription controls dependent on other controls sharing a data source. This enables you to create a chain of dependent subscription controls, where dimension member selections in a subscription control prompt the display of the selection's children in dependent controls. Multiple dependent controls can be created to reflect the depth of the dimension hierarchy.

Because check box subscription controls enable multiple member selection, they cannot be used by dependent subscription controls. You are warned when you attempt to delete a subscription control with dependent controls, as dependent controls do not function without the primary subscription control.

- To create a dependent subscription control for a subscription control:
 - 1 **Drag a subscription control object from the Custom Document component toolbar to a document panel.**
The Select Data Source dialog box is displayed.
 - 2 **Select Make Dependent.**
Primary subscription controls are displayed.
 - 3 **Click to select a subscription control and click OK.**
The dependent subscription control is displayed on the custom document. It is populated with the children of the primary subscription control when selections are made.

Creating Selection Buttons

The Selection Button object creates a control button coordinated with other objects in the document using a common data source. Selection button properties differ from other subscription controls.

➤ To create a selection button:

- 1 **Drag the Selection Button object from the component toolbar to the content area of the custom document.**

The Select Data Source dialog box is displayed.

- 2 **Click to select a data source.**

The selection button is coordinated with the data objects sharing one data source.

The Make Dependent option makes the control dependent on other controls sharing this data source. See [“Creating Dependent Subscription Controls” on page 229](#).

- 3 **Click OK.**

The Select Dimension dialog box is displayed.

- 4 **Select a dimension name, and click OK.**

The Select Member dialog box is displayed.

- 5 **Click Add.**

The Dimension Browser for the selected dimension is displayed.

- 6 **Make member selections, and click OK.**

The selected members display in the Select Member dialog box. You can select font properties, color properties, and rename the dimension member labels. The first dimension member in the panel is used as the button label, so it is often helpful to rename the member to a more descriptive label.

You can define dimension member controls using an explicit selection or advanced member selection. In addition, you can use advanced member selections to populate the control. Using advanced member selection to populate a control makes the control dynamic. As members are added deleted and changed in the database, the control maintains itself and does not become obsolete.

These optional subscription control procedures are also available:

- [Ordering Dimension Member Controls](#)
- [Creating Extended Mode Controls](#)
- [Renaming Dimension Member Buttons](#)

- 7 **Click OK.**

Ordering Dimension Member Controls

- To reorder member controls, select a member name and use the arrow buttons to move the member on the index panel. The order of members is reflected in the custom document, when you click **OK**.

Creating Extended Mode Controls

The Extended Mode option enables you to make live member selections, when you review the custom document. Clicking the selection button in Analyze presents another Select Member dialog box that contains options for defined member selections. You can select and display members ad hoc.

- To create an extended mode dimension member control, select **Extended Mode**.

Renaming Dimension Member Buttons

You can rename member text labels on custom controls (combo box, radio button group, check box, tab series, slider bar, and selection button) in the course of setting the data source (query), selecting a dimension from the query, and specifying members.

- To rename member text labels, click **Rename Button** on the Select Member dialog box. When the Enter Member's Display Name dialog box is displayed, enter a text label and click **OK**.

Creating Dynamic Text Labels

- To create dynamic text labels:
 - 1 In Document Designer, drag a label object from the component toolbar onto the content area of the custom document.
The Insert Text dialog box is displayed.
 - 2 Right-click **Caption** and select a dynamic text label from the shortcut menu.
 - 3 Click **OK**.

Dynamic Text Labels

Dynamic text labels are variables that are dynamically replaced with values at runtime. Dynamic text labels display the latest information without being manually updated

You can use Dynamic Text Labels to create these dynamically updated components:

- Labels—Add dynamic text labels to label objects using the shortcut menu. See [“Label Object” on page 236](#).

- Headers and footers—For your JPG, PDF and hardcopy output, use dynamic text labels in the Print dialog box Headers/Footers tab. See [“Print Dialog Headers/Footers Tab” on page 151](#).
- SQL statements—Include dynamic text labels in your SQL filter clauses as values. See [“SQL Spreadsheets” on page 193](#).

Dynamic Text Tag	Default Tag	Inserts this item in the label object:
Database Note	<<dbnote>>	A database note
Cell Reference	<<cell 0,0>>	A cell reference string
Page	<<page>>	A page dimension name
Filter	<<filter 0>>	A filter member name
Document Description	<<rd>>	A document description string
Document Name	<<m>>	A document name string
Date/Time	<<date,MM-dd-yyyy>>	A date/time string
Connection Name	<<cn>>	A database connection name string
Username	<<username>>	A user name string
UserID	<<userid>>	A User ID string

After dynamic text labels are placed in the Insert Text dialog box, you can edit tags to display additional information.

For information on Dynamic Text Labels for SQL Spreadsheet, See [“Dynamic Text Labels for SQL Spreadsheets” on page 200](#).

Fixed References

Because dynamic text labels change as focus is shifted in composite documents, you may want to fix dynamic references. Tags can be associated with specified data sources using these modifications:

Dynamic Text Tag	Default Tag	Fixed Reference
Connection Name	<<cn>>	<<cn DataSourceName1>>
Cell Reference	<<cell 0,0>>	<<cell DataSourceName1,0,0>>
Filter	<<filter>>	<<filter DataSourceName1,0>>
Pages	<<page>>	<<page DataSourceName1>>
Database Note	<<dbnote>>	<<dbnote DataSourceName1>>

Note:

It is not possible to specify a fixed references for a page dimension member.

Time Format Syntax

Time Format strings specify the format of the dynamic date/time label. The number and order of ASCII characters determines the format used:

ASCII Symbol	Meaning	Type	Example
G	Era	Text	AD
y	Year	Number	2002
M	Month in Year	Text & Number	July & 07
d	Day in Month	Number	10
h	Hour in am/pm (1-12)	Number	12
H	Hour in Day (0-23)	Number	0
m	Minute in Hour	Number	30
s	Second in Minute	Number	55
S	Millisecond	Number	978
E	Day in Week	Text	Tuesday
D	Day in Year	Number	189
F	Day of Week in Month	Number	2 (meaning 2nd Wed in July)
w	Week in Year	Number	27
W	Week in Month	Number	2
a	am/pm marker	Text	PM
k	Hour in Day (1-24)	Number	24
K	Hour in am/pm (0-11)	Number	0
z	Time Zone	Text	Pacific Standard Time
' (apostrophe)	Escape for Text	Delimiter	
' (single quote)	Single Quote	Literal	'

When four or more characters are used, a completely spelled value is returned.

When three or more Text & Number types letters are used, text is provided. When only one or two letters are provided for this type, the number is provided.

Numbers use the minimum number of digits. Year can be truncated to two digits. Shorter numbers are zero-padded.

All other characters are used as quoted text strings.

Examples

"yyyy.MM.dd G 'at' hh:mm:ss z" returns 1996.07.10 AD at 15:08:56 PDT

"EEE, MMM d, 'yy" returns Wed, July 10, '96

"h:mm a" returns 12:08 PM

"yyyyy.MMMMM.dd GGG hh:mm aaa" returns 1996,July.10 AD 12:08 PM

Custom Document Components

This section describes each custom document component:

- [Panel Object](#)
- [Split Panel Object](#)
- [Label Object](#)
- [Text Area Object](#)
- [Image Objects](#)
- [HTML Browser Object](#)
- [Combo Box Subscription](#)
- [Radio Button Group Subscription](#)
- [Check Box Group Subscription](#)
- [Tab Group Subscription](#)
- [Slider Subscription](#)
- [Selection Button Subscription](#)
- [Multi-level Combo Box Subscription](#)
- [Alias Controller Object](#)
- [Services Button Object](#)
- [SQL Spreadsheet Objects](#)
- [SQL Subscription Objects](#)

Panel Object

The Panel object creates an empty container for dividing space in the document.



Panel object properties are set using the Select Graphic dialog box. See [“Adding Custom Document Components” on page 217](#).

Using Panels for Object Placement

To fit Web Analysis documents to any screen resolution and to help with object-placement differences between Web Analysis Studio and Workspace, use a panel or split panel object. On the panels, the report designer sets the anchor to Top, Bottom, Left, Right, or Slack:

- Top or Bottom—Anchors the object to the top or bottom of the panel respectively. Thus, the object expands its width to the panel size; however, the height does not change.
- Left or Right—Anchors the object to the left or right of the panel respectively. Thus, the object expands its height to the panel size; however, the width does not change.
- Slack —Consumes all available space in the panel. Thus, it expands its height and width to the panel size.

Split Panel Object

The Split Panel object creates two coordinated panels separated by a splitter bar. See [“Creating Split Panels” on page 224](#)

Control	Description
Orientation	
Horizontal	Sets the Splitter bar to a horizontal orientation that coordinates a top and bottom panel.
Vertical	Sets the Splitter bar to a vertical orientation that coordinates a left and right panel.
Properties	
One-touch Expandable	Enables the Splitter bar to jump to the opposite panel with one click.
Set Current Sizes As Preferred	Enables you to position the Splitter bar using the pixel grid. The Split Panel definition is updated when you click OK , and this setting is refreshed each time the dialog is displayed.
Background Images	
Left	Displays the Select Graphic dialog box to set the background image of the left panel when the Splitter bar is vertical.
Right	Displays the Select Graphic dialog box to set the background image of the right panel when the Splitter bar is vertical.

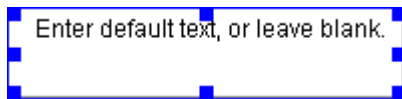
Control	Description
Top	Displays the Select Graphic dialog box to set the background image of the top panel when the Splitter bar is horizontal.
Bottom	Displays the Select Graphic dialog box to set the background image of the bottom panel when the Splitter bar is horizontal.

Label Object

The Label object creates static or dynamic text for use as a title, label, or caption. You can enter label text in the Label Caption dialog box. See [“Adding Custom Document Components” on page 217](#) or [“Creating Dynamic Text Labels” on page 231](#).

Text Area Object

The Text Area object creates a dynamic text box used for annotating documents.



You are prompted to populate the text object with a default text string with the Enter Default Text dialog box.

Image Objects

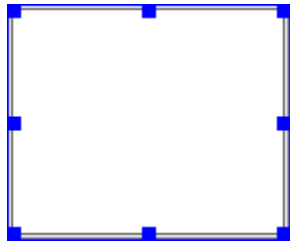
The Image object creates a graphic. This enables you to create backgrounds, pictures, illustrations, and graphic controls.



Image object properties are set using the Select Graphic dialog box. Graphic controls are created in conjunction with the Services Button object. See [“Creating Hotspots” on page 223](#) or [“Services Button Object” on page 239](#).

HTML Browser Object

The HTML Browser object creates a pane for displaying static HTML. The HTML is not interactive. Selecting Properties from the component shortcut menu displays the HTML Object Properties dialog box, used to specify a URL.



Combo Box Subscription

The Combo Box Subscription object creates a drop-down list coordinated with other objects using a data source. See [“Creating Subscription Controls” on page 226](#).

Radio Button Group Subscription

The Radio Button Group Subscription object creates a radio button group (option button group) that is coordinated with other objects using a common data source. See [“Creating Subscription Controls” on page 226](#).

Check Box Group Subscription

The Check Box object creates check boxes coordinated with other objects using a common data source. See [“Creating Subscription Controls” on page 226](#).

Tab Group Subscription

The Tab Group Subscription object creates a tab series coordinated with other objects using a common data source.

The shortcut menu for Tab Group Subscription objects contains a special Custom Settings command. Tab Groups are typically positioned on one side of a coordinated rectangular data object, visually suggesting that the tab emerges from that side of the rectangle. The Orientation options indicate the side of the data object on which the tabs are positioned:

- Top
- Bottom
- Left
- Right

Note:

The tab group area must be resized to display correctly.

See [“Creating Subscription Controls” on page 226](#).

Slider Subscription

The Slider Subscription creates a bar control coordinated with other objects using a common data source. The shortcut menu for Slider Subscription objects contains a special Custom Settings command:

Custom Setting	Description
Orientation	The alignment of the slider subscription in relation to the document.
Horizontal	
Vertical	
Show Ticks	Shows or hides the member points on the slider bar track.
Show Track	Shows or hides the slider bar track.
Show Labels	Show or hides the member labels on the slider bar track.
Snap to Ticks	Requires the slider to snap to tick points on the slider bar track.

See [“Creating Subscription Controls” on page 226](#).

Selection Button Subscription

The Selection Button object creates a control button (command button) coordinated with objects using a common data source.

The Select Member dialog box Extended Mode option enables you to make live member selections when reviewing the custom document. Clicking the selection button in Analyze presents another Select Member dialog box, containing check boxes for defined member selections. You can select and display these members ad hoc. See [“Creating Dependent Subscription Controls” on page 229](#).

Multi-level Combo Box Subscription

The Multi-Level Combo Box Subscription object creates multiple coordinated drop-down lists representing the dimensional hierarchy. They are also coordinated with other objects using a common data source.

The combo boxes cascade. Selections made in a previous combo box populate subsequent dialog boxes with hierarchical descendents. Use the Custom Setting shortcut menu command to indicate the number of levels to cascade from the initial dimension member selection.

Multi-Level Combo Box Subscription objects feature a special Custom Settings shortcut menu command:

Custom Settings	Description
Orientation	Arranges the cascading multiple combo boxes horizontally or vertically. Note: The component area must be resized to display correctly. Also consider that asymmetric hierarchies require a component area providing for the greatest number of combo boxes.
Horizontal	
Vertical	
Set Depth	Displays the Enter Maximum Depth dialog box, used to indicate the number of levels from the member the multi-level combo box should cascade (the number of subsequent combo boxes).

Alias Controller Object

The Alias Controller object enables custom document you to specify the alias table to use when the label mode is set to Descriptions (for the coordinated data object). The Alias Controller and the data object (Chart, Spreadsheet, or Pinboard) must be configured to share a common data source.

Use the Select Data Source dialog box to select a data source for the Alias Controller object. You can access the Select Data Source dialog box by dragging an Alias Controller object into the Document panel, or by selecting Properties from the Alias Controller object shortcut menu.

Services Button Object

The Services Button object creates a button that calls Web Analysis Studio services. Services are application actions or behaviors. The Select Service dialog box sets Services Button object properties.

Select Service Control	Services Button Action
Logout	Initiates logging off or existing from Web Analysis Studio
Previous Tab	Navigates to the previous tab series option
Home	Displays the Web Analysis Studio Home page
File Open	Opens the Open dialog box
Print	Opens the Print dialog box
Open Document	Opens a specified document without use of the Open dialog box
Edit Data	Puts the current document in edit data mode
Dimension Browser	Displays the dimension browser for a selected dimension of a related data object
Close Document	Closes the specified document

Select Service Control	Services Button Action
Save	Saves the current document
Toggle Toolbar	Shows or hides the toolbar for the current document
Toggle Information Panel	Shows or hides the View Pane Information Panel for the data object
Toggle Menu	Shows or hides the current document's menu bar
Send to Clipboard	Exports the current page of the current data object of the current document to the operating system clipboard
Member Search	Displays the Search dialog box, used to locate members in large dimension hierarchies See "Searching for Members" on page 68
Change Display Type	Changes the data object display type
Display Type drop-down list	Specifies the display type, which is applied by the Change Display Type service button
Next Tab	Navigates to the next tab series option
Desktop	Displays the Web Analysis Studio Desktop
User Preferences	Opens the User Preferences dialog box
Reload Document	Reloads the current document
Analytic Services Calculation Script	Triggers the specified calculation script of an Analytic Services data source The calculation script consolidates the OLAP cube, reflecting changes implemented through edit data mode or an update
Open Presentation	Opens a specified presentation
Assign Edit Data	Initiates edit data mode for a specified data object
Launch Executable	Opens a specified application executable
Cube Navigator	Opens the Cube Navigator dialog box for the current data object
Save As	Opens the Save dialog box
Toggle Masthead	Shows or hides the masthead for the current document
Toggle Status Bar	Shows or hides the Status bar for the current document
Send to Excel	Exports the current page of the current data object of the current document to Microsoft Excel
Apply Subscriptions	Performs a data retrieval when subscription controls that have "Activate From Service Button" are enabled
Launch External Browser	Launches a browser session for the specified URL This URL enables passing of an SSO token, similar to related content URLs, using the token syntax \$SSO_TOKEN\$

Select Service Control	Services Button Action
	Valid in both Workspace and Web Analysis Studio

Services Button Properties	Description
Enter Text Label	Applies a static text caption to the Services button
Font	Opens the Font Properties dialog box for formatting the caption font
Color	Opens the Select Color dialog box for selecting button and border color
Select Graphic	Opens the Select Graphic dialog box for setting the Services button background image
Clear Graphic	Deletes the Services button background image

Hotspots

A hotspot is an area that is linked to a Web Analysis Studio service. It is an invisible button that performs a predefined action. You can create a hotspot by making services buttons transparent. The invisible service button can be located over a graphic image, giving the appearance that an area of the image triggers the service.

Designers control the level of transparency. The hotspot can be completely invisible, display a border, or display a border and a text label. Completely opaque Service buttons are considered buttons, not hotspots. see [“Creating Hotspots” on page 223](#).

Services Button Custom Settings

Services buttons feature a Custom Settings shortcut menu command:

Services Button Custom Setting	Description
Location	
Leading	Positions icon before the text label
Trailing	Positions icon after the text label
Horizontal Text Alignment	
Left	Positions the text label to the left side of the Services button
Center	Horizontally centers the text label on the Services button
Right	Positions the text label to the right side of the Services button
Vertical Text Alignment	
Top	Positions the text label to the top of the Services button
Center	Vertically centers the text label on the Services button

Services Button Custom Setting	Description
Bottom	Positions the text label to the bottom of the Services button

SQL Spreadsheet Objects

SQL Spreadsheet objects represent relational data sources as a spreadsheet, using standard SQL syntax queries. A SQL Subscription object enables you to create coordinated controls for the SQL spreadsheet. See [“SQL Spreadsheets” on page 193](#).

SQL Subscription Objects

The SQL Subscription control enables you to select relational column definitions from a drop-down list. The control is coordinated with a SQL Spreadsheet object using a matching relational data source (SQL query). The shortcut menu for SQL Subscription objects contains a Custom Settings command that indicates the type of subscription control used to present dimension member selections:

- Combo box
- Radio button group
- Slider
- Tab group

See [“Creating a SQL Subscription Control” on page 201](#).

Minimizing Document Load Times

Here are some general design recommendations for improving Web Analysis document load times. Please note that these recommendations do not represent limitations of the product, but general guidelines to allow a document to load faster. All references to a “query” are referring to one Report Data Source in a document.

- No more than four (4) queries per document.
- No more than 100,000 of cells returned on a query.
- No more than four (4) OLAP selection/subscription controls that have “dynamic” enabled per Web Analysis document and should only contain a maximum of 5000 members for each.
- No more than 1000 pages on a query.
 - No more than twenty (20) Traffic Lighting definitions with a maximum of seven (7) levels per query.
 - No more than twenty (20) Show/Hide definitions per query.
 - No more than twenty (20) Calculations per query.
 - No more than twenty (20) Data Formatting definitions per query.

- Only one (1) Retrieve Top/Bottom per query.
- No more than twenty (20) Restrict Data conditions per query.
- No more than 1/2 MB of total size of graphics on a Web Analysis document. This includes graphics used on pinboards.
- When LROs or Analytic Integration Services Drill Through report are not necessary, disable the Show Linked Reporting Object Indicators to improve performance.
- When using advanced member selections to apply database formatting on a database connection, limit the use on small outlines no more than 10,000 members.

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Edit Data

Users with permissions 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, right-click a cell and select **Edit Data**.

The Edit Data Bar is displayed at the bottom of the content area and features these controls:

Button	Control	Description
	Close and Disable Edit Data mode	Closes Edit Data mode.
	Send/Commit changes to database server	Applies edits to the database.
	Calculate database	Prompts the database server to recalculate the database.
	Refresh Data	Reload the last saved data values.

Editing Data Values

- ▶ To edit data values:
 - 1 **Right-click a cell and select **Edit Data**.**
The Edit Data Bar is displayed.
 - 2 **Double-click a cell to edit its data value.**

The cell border becomes gray, and cell formatting is disabled.

- 3 Enter a data value and click outside the cell.
- 4 Click **Send/Commit changes to the database server**.

Only authorized users can successfully write changes to the database. The Confirmation dialog box is displayed if write-back is successful.

- 5 **Optional:** To recalculate the database, click **Calculate database**.
- 6 To exit Edit Data mode, click **Close and Disable Edit Data mode**.

Copying, Cutting, and Pasting To and From Microsoft Excel

When in Edit Data, you can cut, copy and paste a range of cells from a Microsoft Excel spreadsheet into the Web Analysis Studio spreadsheet. These edits can be posted to Analytic Services. You can also cut, copy, and paste between values in Web Analysis Studio.

You can use these keyboard shortcuts:

- **Copy**—Select a range of cells and press Ctrl+C
- **Cut**—Select a range of cells and press Ctrl+X
- **Paste**—Select a range of cells and press Ctrl+V

Tips for Edit Data Mode

- You cannot edit calculated members, because these values do not reside in the database.
- You cannot edit attribute dimensions, because these values do not reside in the database.
- Dimensions composed of implied shares (or user-defined hierarchies) aggregate differently than conventional dimension hierarchies. Therefore, the implied share may overwrite data edits made to the Parent of an implied share 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.

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Portlets

Portlets are reusable Web components that display relevant information to portal users. Examples for portlets are Email, Weather, Discussion forum, and News.

Subscription Controls Functional in Portlets

In Web Analysis portlets, all navigation are performed through the Subscription Controls.

The Subscription Controls working principle is based on JavaScript functions. Using namespace encoding provided by the portlet tag library, you can create separate JavaScript functions for multiple instances of the same portlet on a portal page. In VIEW mode, the Web Analysis portlet represents the Web Analysis document selected by administrator in EDIT mode, which contains all data source and design objects as well as Subscription Controls. No right-click functions are available.

Designer Components Not Supported in Portlets

The HTML Web Client does not render these designer components:

- Tab selection controls
- Slider delection controls
- Splitter panels
- Some service buttons
 - Assign Edit Data
 - Cube Navigator

- Send to Excel
- Send to Clipboard
- Toggle Toolbar
- Toggle Status Bar
- Toggle Menu
- Logout
- Dimension Browser
- User Preferences
- Launch Executable
- Print
- Close Report

Launch Out to Workspace

“Launch Out to Workspace” enables launching a section of the screen in a Workspace window with fully interactive menus.

Note:

Modifications to the launched instance are not applied back to the portlet instance.

Points of View, Personal Variables, and Subscription Controls

Member-selection related points of view and personal variables are passed to the launch out instance, so that the same exact Web Analysis document (dimension layout, member selection, data) is displayed. If points of view or personal variables are used for member selection in the portlet (probably also in the source Web Analysis document overall), they should be selected.

Subscription controls reflect the member selections from the portlet. This is consistent with drill linking one Web Analysis document to another (that is, if the target Web Analysis document has subscription controls, member selections from the source Web Analysis document that are passed are appended to the subscription controls in the target Web Analysis document).

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Importing Documents and Presentations

You can import previously exported documents and presentations from local computers and mapped drives. Exported documents are appended with the ARD file name extension. Exported presentations are appended with the APT file name extension.

See, “Exporting Documents and Presentations” on page 144 and “Importing XML Document and Presentation Definitions from Shared Services” on page 251.

► To import a document or presentation:

1 Select File > Import > From Local File.

The Import wizard is displayed. The Import wizard has two steps: Choose Files and Map Resources.

2 Perform one:

- Enter the fully qualified path from your client to a file you would like to import in **Select a file to Import**.
- Click the ellipses (...) button to Browse to the file using the Open dialog box.

3 Perform one:

- Enter the path from the root directory to the repository location to save the imported file.
- Click the ellipses (...) button to Browse to the repository location using the Open dialog box.

4 Optional: Select one:

- Click **Create entire** to recreate the database connections and documents used by the file, from xml definitions in the file.

- Click **Map to existing files** to use database connections and documents currently in the repository, instead of generating duplicates.

If no selection is made, Map to existing is used by default.

In Step 2, you must map database connections, and for presentations, you must map document playlists back to repository documents.

5 Optional: To locate a database connection for an unmapped document, perform these tasks:

- a. Click a document row with a **<Missing>** status.

Three command buttons are enabled at the bottom of the dialog box.

- b. Click **Locate**.

The Open dialog box is displayed, with the Files of type set to database connections.

- c. Navigate to a database connection, select it, and click **OK**.

The Open dialog box is dismissed. The Step 2 frame displays the document database connection status as OK.

6 Optional: To create a database connection for an unmapped document:

- a. Click a document row with a **<Missing>** status.

Three command buttons are enabled at the bottom of the dialog box.

- b. Click **Create New**.

The Database Editor dialog box is displayed with the Server tab current.

- c. Enter a server name in **Database Server**.

Web Analysis Studio enters the cached user ID and password information in the Login Information group.

- d. **Optional:** Replace **User ID** and **Password** credentials.

- e. Click **Connect**.

The Database tab is enabled.

- f. Click the **Database** tab to make it current.

The Database tab features Application and Database areas and a Available Database selection frame listing the databases on the connected data source.

- g. In **Available Database**, select a database application.

The selection populates the corresponding area.

- h. **Optional:** To define measures formatting criterion, click **Formatting**. See [“Creating OLAP and Hyperion Database Connections” on page 158](#).

- i. **Optional:** To define a relational drill-through connection to a relational data source, click the **Relational Drill-through** tab. See [“Creating Relational Drill-Through” on page 163](#).

- j. Click **OK**.

The Database Editor dialog box is dismissed. The Step 2 frame displays the document database connection status as OK.

- 7 Optional: To restore the original database connection exported with the document:**
 - a. Click a document row with a <Missing> status.
Three command buttons are enabled at the bottom of the dialog box.
 - b. Click **Restore**.
 - c. The Save As dialog box prompts you for a location to which database connections and document definitions are saved. Navigate to a repository location, enter a file name, and click **OK**.

The Step 2 frame displays the document database connection status as <Creating>. The connection is not created until you map all document rows.
- 8 Repeat steps 5, 6, and 7 until all documents are mapped to a database connection.**
- 9 Click **Finish**.**
- 10 When database connections are mapped for all imported documents in the selected repository folder, click **Close**.**

Importing XML Document and Presentation Definitions from Shared Services

You can import Web Analysis Studio content from a configured Shared Services server.

- To import Web Analysis Studio content from Shared Services:

- 1 Select **File > Import > from Shared Services**.**

The Import from Shared Services dialog box is displayed.

- 2 In **Shared Services**, select **Web Analysis content** from the node tree.**

Each BI+ configuration registered with Shared Services is indicated by a root folder in the Shared Services node tree. When you expand the root folder, a Default project folder is displayed.

Project folders are required under the root folder. Project folders can be used to distinguish departments or to differentiate environments. When you expand a Project folder, default Documents and Presentations folders are displayed.

The Documents and Presentation folders under the project folder are also required. They categorize the kind of content stored on Shared Services. Only document content can be stored in Documents subfolders and only presentation content can be stored in Presentation subfolders.

When you expand Documents and Presentations folders, subfolders are displayed. Subfolders contain and group individual documents and presentations in the Documents and Presentations folders.

- 3 In **Repository**, select a repository folder into which to copy the selected document or presentation:**

To expand or collapse the node tree double click a node, or click the plus sign (+) or minus sign (-). To select, click the repository folder name.

Note:

Slash (/) and backslash (\) characters are replaced with an underscore (_) during import and export to prevent exception errors in Shared Services.

- 4 If you want Web Analysis Studio to automatically create database connections for all imported documents, or documents for all imported presentations, select **Auto Create All Imported Resources**.**

- 5 Click **Import**.**

Web Analysis Studio parses the exported XML document or presentation definition into a definition stored in the repository.

If you selected Auto Create All Imported Resources, Web Analysis Studio regenerates documents and database connections from your XML definitions. The auto create process assumes you have access and permissions to the original data sources used by the database connection definition.

If you are not certain that you can access the original data sources used by the database connection definition, do not select Auto Create All Imported Resources. You are prompted to map documents to data sources you can access, instead.

If you do not want to load the repository with redundant document definitions, do not select Auto Create All Imported Resources.

When a document or database connection cannot be found, the Import from Shared Services dialog box lists individual imported documents, and the status of their database connections. Documents with <Missing> status must be mapped to a database connection, or have a database connection created for them. For presentations, the document playlist must be mapped to documents in the repository or have documents regenerated from XML definitions.

- 6 Optional: To locate a database connection for an unmapped document:**

- a. Click a document row with a <Missing> status.

Three command buttons are enabled at the bottom of the dialog box.

- b. Click **Locate**.

The Open dialog box is displayed, with Files of type set to database connections.

- c. Navigate to a database connection, select it, and click **OK**.

The Open dialog box is dismissed. The Import from Shared Services dialog box displays the document database connection status as OK.

- 7 Optional: To create a database connection for an unmapped document:**

- a. Click a document row with a <Missing> status.

Three command buttons are enabled at the bottom of the dialog box.

- b. Click **Create New**.

The Database Editor dialog box is displayed with the Server tab current.

- c. Enter a server name in **Database Server**.

Web Analysis Studio enters the cached user ID and password information in the Login Information group box.

- d. **Optional:** Replace **User ID** and **Password** credentials.

- e. Click **Connect**.
The Database tab is enabled.
- f. Click the **Database** tab to make it current.
The Database tab features Application and Database text areas and a Available Database selection frame listing the databases on the connected data source.
- g. In **Available Database**, select a database application.
The selection populates the corresponding text areas.
- h. **Optional:** To define measures formatting criterion, click the **Formatting** tab. See [“Creating OLAP and Hyperion Database Connections” on page 158](#).
- i. **Optional:** To define a relational drill-through connection to a relational data source, click the **Relational Drill-through** tab. See [“Creating Relational Drill-Through” on page 163](#).
- j. Click **OK**.
The Database Editor dialog box is dismissed. The Import from Shared Services dialog box displays the document database connection status as OK.

8 Optional: To restore the original database connection exported with the document:

- a. Click a document row with a **<Missing>** status.
Three command buttons are enabled at the bottom of the dialog box.
- b. Click **Restore**.
- c. The Save As dialog box prompts you for a location to which database connections and document definitions are saved. Navigate to a repository location, enter a file name, and click **OK**.
The Step 2 frame displays the document database connection status as **<Creating>**. The connection is not created until you map all document rows.

9 Repeat steps 6, 7, and 8 until all documents are mapped to a database connection.

10 Click **OK.**

11 When database connections are mapped for all imported documents in the selected repository folder, click **Close.**

Analytic Integration Services Drill-Through

Analytic Integration Services drill-through is a server-based form of relational drill-through. As with conventional relational drill-through, you can construct liaisons between OLAP data and relational data sources. With Analytic Integration Services drill-through, you can also drill to the relational document from an intersection in the Web Analysis Studio document.

Your Analytic Services Administrator must establish Analytic Integration Services drill-through documents. The relational query is stored as intersection-specific metadata and flagged as a linked documenting object. When you double-click flagged cells, the OLAP document navigates to the specified relational document.

Web Analysis Studio enables read access to Analytic Integration Services through the Related Content dialog box.

Linked documenting object indicators, blue triangles, indicate related content such as drill-through documents. Each Analytic Integration Services drill-through document is unique to the drilled intersection.

- To access an Analytic Integration Services document, double-click cells displaying linked documenting object indicators, and select the drill-through document from the **Related Content** dialog box.

Accessing Related Content

You can use Web Analysis Studio to create and retrieve related content definitions. Related content can include, but is not limited to:

- LROs - cell notes, URLs, and file attachments stored at Analytic Services intersections
- Analytic Integration Services drill-through content
- Financial Management cell text and line item details stored at Financial Management intersections
- Hyperion Documents content displayed as HTML or PDF
- Application Builder J2EE content

Web Analysis Studio passes the context of the current document to Application Builder J2EE and other Web Analysis documents. This enables the related content target to reflect the current POV.

When passing context to Hyperion Documents, only dimensions in the current Hyperion Documents POV are imported.

After they are defined, 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 the content of the related content definition but do not impact the existence of the definition. You can activate, deactivate, reorder, and remove related content definitions in the Analysis Tools Manager, but you cannot edit definitions in that dialog box.

- To access related content definitions:

1 Perform one:

- Double-click a cell displaying an LRO indicator.
- Right-click a cell displaying an LRO indicator and select **Related Content** from the shortcut menu.

The Related Content dialog box is displayed.

2 To display the corresponding content, double-click a related content definition, or click **Launch**.

If necessary, select one client option from the shortcut menu, or the Launch drop-down list.

Related Content Definitions

You can apply related content definitions to these cell ranges:

- All cells in a row by dimension member
- All cells in a column by dimension member
- Cells specified by a selection statement
- Specified cell intersections

When the Related Content dialog box is displayed, it lists all related content definitions for that intersection. Related content definitions defined for cell intersections are differentiated by *italicized text*.

Related Content Dialog Box

The Related Content dialog box lists previously configured related content links. Related Content links are defined using the Add Related Content dialog box.

The Add Related Content dialog box saves document, dimension, or cell information to registered Hyperion applications. Hyperion applications must be registered by administrators using Shared Services or the `webanalysis.properties` file.

For system integrity, only externally authenticated users can create related content definitions. When no integrated Hyperion applications are registered with BI+, the Available panel is empty.

Control	Used To:
Add Text Note	Create a text note linked documenting object. Cell Intersections only.
Add URL	Define an URL linked documenting object. Cell Intersections only.
Add File	Specify the location of a Microsoft Windows file attachment (LRO). Cell Intersections only.
Add Related Content	Pass context to other registered Hyperion applications.
Launch	Display the linked documenting object or related content application specified by the definition.
Edit	Create the selected definition.
Delete	Delete the selected related content definition.
Delete All	Delete all related content definitions for the current selection.

Creating Related Content Definitions

Creating related content definitions is a two-part process, as described in these topics:

1. [“Specifying Related Content Dimension Members” on page 256](#)
2. [“Defining Related Content” on page 256](#)

Specifying Related Content Dimension Members

- To apply a related content definition to a cell, right-click the cell and select **Related Content**.
- To apply a related content definition to all cells in a row or column by dimension member, right-click the dimension member row or column header.
- To apply a related content definition to a selection statement:
 - 1 **Right-click the dimension member row or column header.**
 - 2 **Select Related Content.**

The Related Content dialog box is displayed.
 - 3 **To edit the dimension member selection displayed in Apply to, click Edit.**

The Edit Selections dialog box is displayed.
 - 4 **To display Dimensions, click Advanced.**
 - 5 **Click a check box to select dimension members.**

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, Combinations displays dimension member aggregations.
 - 6 **To specify the dimension member, click check boxes in Combinations.**

Selections display in **Selections**. Click Remove to delete the current selection, or Remove All to delete all member selections and start over.
 - 7 **When dimension member selections are defined, click OK.**

The Edit Selections dialog box is dismissed, and the Related Content dialog box is displayed. The **Apply To** panel displays the dimension member selection. You can now create a related content definition, using the next procedure.

Defining Related Content

- To create a related content definition:
 - 1 **Right-click the cell or dimension member header in which the related content is to be embedded.**
 - 2 **Select Related Content.**

The Related Content dialog box is displayed.
 - 3 **Click the Add Related Content icon.**

The Add Related Content dialog box is displayed. In the Available panel, Hyperion applications are listed as nodes. Each node can be expanded to list available application content.
 - 4 **To locate application content, perform one:**

- Double-click a node name to expand the node.
- Click a node plus sign (+) to expand the node.

Notice that applications such as Web Analysis Studio enable you to specify the client with which the content displays.

5 Click to select the application content.

6 To move the selection to Selected Related Content, click Add.

If the “Show Properties When Adding Content” option, at the bottom of the Add Related Content dialog box, is selected the Related Content Properties dialog box is displayed.

7 Optional: To set Related Content Properties for Selected Related Content, perform one:

- Select a related content definition and click **Properties**.
- Right-click a related content definition and select **Properties**.

The Related Content Properties dialog box is displayed.

You can optionally set properties:

- To change the related content definition name, enter a name in **Label**.
- To indicate how related content is displayed, select options in **Client Options**. Hyperion documents related content can be displayed in HTML or PDF.
- To edit the URL of the related content definition, edit the URL of the corresponding tab.

8 Click OK to close the Related Content Properties dialog box.

9 Click OK to close the Add Related Content dialog box.

The related content definition is displayed in the Related Content dialog box.

10 Click Close.

The document displays the LRO indicator(s).

LROs

LROs embed cell notes, URLs, and file attachments in document cells. LROs are connections to external media stored in Analytic Services.

LROs are available to Analytic Services users who enabled the Analytic Services Grid API feature.

An LRO indicator triangle indicates the presence of a drillable LRO. LROs are embedded in, and move with, multidimensional intersections.

You can display or hide Linked Documenting Object indicators using the Data Display shortcut menu.

Linked Documenting Objects can only be applied to cell intersections, unlike other related content definitions (which can be applied to cells, rows, columns, or selection statements).

Creating LROs

Note:

You must first configure and enable the Analytic Services Grid API, before you can create LROs.

► To create an LRO:

1 **Right-click the cell in which the LRO is to be embedded.**

2 **Select *Related Content***

The Related Content dialog box is displayed.

3 **Click one of the first three icons to define a cell note, URL or file attachment.**

4 **Perform one or more of these actions:**

- Enter cell note information.
- Enter a URL and a description in the corresponding text areas.
- Enter a file attachment description, click **Browse**, navigate to the file attachment, and click **Open**.

5 **Click *OK*.**

6 **Click *OK*.**

The document displays the LRO indicator.

Accessing LROs

► To access an LRO:

1 **Perform one:**

- Double-click a cell displaying an LRO indicator.
- Right-click a cell displaying an LRO indicator and select **Related Content** from the shortcut menu.

The Related Content dialog box is displayed.

2 **To display the corresponding content, double-click a related content definition, or click *Launch*.**

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Working with Preference Files

You can customize the Web Analysis display and set behavior for documents by setting preferences.

- To display the User Preferences dialog box, select **File > Preferences**.

Preferences are stored in the repository as a preference file. Although multiple preference files can be defined, only one can be current, or active. Multiple users can share a common active preference file, also called shared preferences.

User preference files for a user are located in a user's `Profiles` folder and are named "Analyzer Preferences"; for example, `Users/username/Profiles/Analyzer Preferences`. When user preferences are modified, all changes are saved to this file.

An administrator can create a shared preference file that other users can select as their active preferences.

Note:

Shared preference files can be created and edited only in Web Analysis Studio.

At the top of the User Preferences dialog box, the Active Preferences controls specify the current preference file. Changing active preferences does not impact currently opened documents in the content area. Preferences are only applied to subsequently opened and created documents.

Note:

Some preferences may take effect only when documents are reloaded.

Topics that discuss preference files:

- [“Setting Active Preferences” on page 260](#)
- [“Creating Preference Files” on page 261](#)
- [“Editing Shared Preference Files” on page 261](#)
- [“Managing Shared Preference Files” on page 261](#)

Setting Active Preferences

- To set active preferences, perform one:
 - To use the preference file in your `Users/username/Profiles` directory, click **Use My Preferences**.
 - To use another preference file, click **Use Shared Preferences**, and click **Browse** to navigate to the preference file.

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.

Order of Formatting Precedence

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

See [“Formatting Order of Precedence” on page 94](#).

Spreadsheet preferences and chart preferences are identical to spreadsheet options and chart properties. They are only applied to subsequently created documents, however. See [“Spreadsheet Options” on page 104](#) and [“Charts and Chart Types” on page 105](#).

Creating Preference Files

Administrators can create preference files that users can select as shared preferences in Web Analysis Studio and Workspace. The default folder for shared preferences is `Users/{Profiles}`.

► To create a preference file that can be shared by users:

1 **Select File > New > Preferences.**

The Save As dialog box is displayed.

2 **Navigate to a repository folder and enter a file name.**

3 **Click OK to display User Preferences.**

4 **Edit user preferences, and click OK to save changes.**

Editing Shared Preference Files

► To change preferences settings in a shared preference file:

1 **In Web Analysis Studio, navigate the repository to locate a shared preference file and select it.**

2 **Right-click the preference file and select Edit to open User Preferences.**

3 **Change user preferences, and click OK to save the changes and close User Preferences.**

Managing Shared Preference Files

Preference files can be shared with among users to utilize as their active preferences.

► To enable user access to shared preference files:

1 **In Workspace, navigate to a preference file, right-click it, and select Properties.**

2 **In Properties, under General Properties, click Edit Permissions.**

3 **Assign users, groups, or roles to the file (in the same manner as you would permissions to repository objects).**

Finding Preferences

Preferences are organized onto nine (9) tabs. Click a tab to make it current.

Panel	Preferences
General	Home Page and Startup
Folders	Reports folder, Databases Folder, Desktop Folder, and Favorites Folder
Look and Feel	Use of Cube Navigator in documents, Desktop Wallpaper, and Interface Elements

Panel	Preferences
Drilling	Drilling Methods, Linking, Append or Replace Member Selections (Expand on Drill)
Spreadsheet	Spreadsheet Options
Chart	Chart Properties
Default Formatting	Leading and Trailing Formatting, Replace Missing With, and Numeric Formatting
OLAP Server	Suppression, Show Linked Document Object Indicators, Financial Management Entity Currency (Financial Intelligence)
Databases	Database Alias Table, Default Log on, POV Definitions, Personal Variable Definitions

General Preferences

General preferences are divided into three groups:

- [Home Page Preferences](#)
- [Startup Preferences](#)

Home Page Preferences

The toolbar and the Go menu offer single-click access to a Web Analysis Studio Home page. The home page should be a frequently used repository location.

You can specify the Desktop or a document as the Web Analysis Studio Home page. The specified document is displayed when you click the Home toolbar button.

► To set the Web Analysis Studio Home page using preferences:

1 Select File > Preferences.

The User Preferences dialog box is displayed. Note that you are setting the Home page for active preferences. If it is a shared preference, you are setting the Home page for all users sharing this preference file.

2 Click to make General the current tab.

3 In Home Page, perform one:

- Click **Use Desktop** to set the Desktop Folder, as specified by Folder preferences, as the Home Page.
- Click **Use Current Document** to set the current document as the Home Page.
- Click the ellipses (...) button to select a repository location from the Open dialog box as the Home Page.
- Enter a repository location in the text area to be used as the Home Page.

4 Click OK.

► To go to the Web Analysis Studio Home Page in Analyze:

- Click .
- Select **Go > Home**.
- Press **Alt+Home**.

Startup Preferences

Startup preferences enable you to specify the document or document group to be displayed at startup:

- The Analyze mode interface (None)
- The Open dialog box
- The Web Analysis Studio Home Page
- A presentation
- A document

► To set startup preferences:

1 Select File > Preferences.

The User Preferences dialog box is displayed. Note that you are setting the startup option for active preferences. If it is a shared preference, you are setting the startup option for all users sharing this preference file.

2 Click to make General the current tab.

3 In Startup, select one:

- None
- Start in Open Dialog
- Home Page
- Document

4 Optional: If you select Document, you must also specify which document to use:

- Click the ellipses (...) button to select a repository location from the Open dialog box as the Startup document.
- Enter a repository location in the text area to be used as the Startup Document.

You can specify a document or a presentation as the startup document.

5 Click OK.

Folders Preferences

Folders preferences display the repository locations currently set as these folders for the active user or group:

- Reports folder
- Databases folder
- Desktop folder
- Favorites folder

You can only reset the folder locations for the active user.

Note:

As with all file systems, though the default directories, folders, and files were designed for a purpose there is nothing to prevent you from diverging from this original design. See [“User and Group Folders” on page 47](#).

➤ To reset Folder preferences:

1 Select File > Preferences.

The User Preferences dialog box is displayed. Note that you are setting folders for active preferences. If it is a shared preference, you are setting folders for all users sharing this preference file.

2 Click to make Folders the current tab.

3 Perform one:

- In a text area, enter a repository location to be used for the corresponding folder.
- Alternatively, click the ellipses (...) button and select a repository location from the Open dialog box, to be used for the corresponding folder.

4 Click OK.

Look and Feel Preferences

Look and Feel preferences are organized into three groups:

Look and Feel Preferences	Description
New Documents	<p>Specifies Web Analysis Studio behavior for opening a database connection.</p> <p>When disabled (default), opening a database connection through the Open Menu, Open toolbar button or View Pane shortcut menu, results in a Auto-Populate Dimension document. Auto-Populate Dimension documents assume use of the highest aggregate members of the time and measures dimensions to populate the rows and columns axes of a spreadsheet.</p> <p>When enabled, the use of a spreadsheet is still assumed, but you must assign dimensions to axes with Cube Navigator as part of creating a document.</p>
Desktop	Sets the Desktop wallpaper graphic, using the Select Graphic dialog box.
Display	<p>Sets interface elements to be displayed by default:</p> <ul style="list-style-type: none"> ● Content tabs

Look and Feel Preferences	Description
	<ul style="list-style-type: none"> ● Main menu (menu bar) ● Toolbar ● Masthead ● Filter panel ● View pane ● Status bar ● Multi-page drop-down

Drilling Preferences

Drilling preferences are organized into these three groups:

Drilling Preferences	Description
Method	<p>Sets drilling navigation through the dimension hierarchy to one of these menu options:</p> <ul style="list-style-type: none"> ● Next Level - Returns the next lowest level. ● Descendants - Returns all descendants. ● Dimension Bottom - Returns the lowest level (level 0). ● Siblings - Returns members on one level that share a parent. ● Same Level - Returns members on one level ● Same Generation - Returns members equidistant from the highest ancestor.
Linking	<p>Sets drilling navigation to Pass Page dimension and/or Pass Filter dimension context during drill-through operations to other documents:</p> <ul style="list-style-type: none"> ● Pass Pages - sets drill linking to pass the page dimension member context. ● Pass Filters - sets drill linking to pass the filter dimension member context.
Expand On Drill	<p>Augments the drilled member with the drilling result set. See “Drilling” on page 89.</p>

Default Formatting Preferences

Formatting options format headers and data based on dimension member selections.

While the formatting options are fixed, the scope of the formatting varies depending on the source of the formatting. See [Chapter 8, “Formatting Documents.”](#)

Formatting Options	Description
Leading and Trailing Formatting	
Currency Symbol	<p>Inserts currency formatting symbols into the Positive Prefix and Negative Prefix text boxes: Dollar (\$), Cents (¢), Pound (£), Euro(E), Deutschmark (DM), Franc (F), and Yen (¥).</p>

Formatting Options	Description
Positive Prefix	Enters character to precede positive numeric values.
Positive Suffix	Enters character to follow positive numeric values.
Negative Prefix	Enters character to precede negative numeric values. Warning: The minus sign (-) is the default prefix. Deleting the default prefix without replacing it causes negative values to display positively.
Negative Suffix	Enters character to follow negative numeric values.
Numeric Formatting	
Grouped Thousands	Displays numeric digits as grouped by thousands.
Minimum Decimals	Indicates the minimum number of decimal places to display.
Maximum Decimals	Indicates the maximum number of decimal places to display.
Scale	Enables abbreviated values by tens, hundreds, thousands, ten-thousands, hundred-thousands, millions, and billions.
Use Negative Color	Indicates that negative numbers are signified by a selected color.
Select Negative Color	Enables you to select the color representing negative values.
Samples	
Update Samples	Updates the samples panel based on the most recent formatting selections.
Replace Missing With	Replaces missing values with a text string or zero. <ul style="list-style-type: none"> ● Zero ● Text

OLAP Server Preferences

OLAP server preferences set features of the OLAP server from Web Analysis Studio.

OLAP Server Preferences	Description
Suppress	Omits components, as selected, from the query result set: <ul style="list-style-type: none"> ● Missing Rows ● Shared Members ● Zero Rows
Show Linked Reporting Object Indicators	Enables and disables the display of LRO icons (triangles).
Display Entity Currency	When using a Financial Management data source with defined Entity dimension currency information, you can enable the Display Entity Currency option, to append the Entity dimension members with your currency value. This can be set before querying using Cube Navigator options, after querying using the Data Display shortcut menu, and for all

OLAP Server Preferences	Description
	subsequently created documents using OLAP Server preferences. See “Financial Management” on page 168 .
Save Filters only for User POV	<p>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 Web Analysis documents.</p> <p>All Subscription controls have Save Selection as a User POV option. A selection is saved as a filter to the User POV.</p>

Analytic Services imposes a maximum limit of 256 columns. Web Analysis Studio sets a column limit of 50,000 data cells for a query. There is also a query governor that enables you to set limits on the number of cells returned by a query; the default is also 50,000 data cells.

Database Preferences

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

To review the database preferences for a database connection, you must select the database connection name from the list and click **Edit**. The Database Preferences dialog box is displayed. It has three tabs:

- General
- Point of View
- Personal Variable

You must click **Connect** to connect to the data source and retrieve the values for these settings. If you are unable to connect, you may browse to another database connection file.

See also [“Creating and Applying Points of View” on page 79](#) and [“Creating and Selecting Personal Variables” on page 78](#).

Alias Tables

Alias tables are database tables that store aliases, or alternate description labels, for dimensions or members. Only Analytic Services enables you 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 user preference.

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

Although the label mode indicates whether the description or ID number is used, it is the database alias table that provides the displayed value.

You can set the alias table before opening a document using Database preferences.

You can set a default label mode before querying the data source using Cube Navigator options, and after querying using Data Display options on the Main Display panel shortcut menu.

You can specify which description label to use in dimensions, using Dimension Browser and using Data Display options on the data object shortcut menu.

Setting Alias Tables and Default Logon Method

► To specify a default alias table for a database connection:

1 Select File > Preferences.

The User Preferences dialog box is displayed. Note that you are setting the default alias table for active preferences. If it is a shared preference, you are setting the default alias table for all users sharing this preference file.

2 Click to make Databases the current tab.

3 Optional: To edit database preferences for a database connection, select the database connection from the list and click Edit.

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

The Database Preferences dialog box is displayed. It has three tabs: General, Point of View, and Personal Variables. Note that the Point of View and Personal Variable tabs are disabled until a database connection is identified.

5 Optional: To identify a database connection file, perform one:

- Click the **Browse** button and navigate to an database connection file in the repository. Select the file and click the Open dialog box **OK**.
- Enter the repository location and file name for a database connection file in the text area.

If you cannot access database connections, See [Chapter 12, “Managing Database Connections,”](#) or consult your Web Analysis Studio administrator.

6 Click Connect, to retrieve the latest values.

You may be prompted by the Database Login dialog box, to log on to the data source. Enter logon credentials, and click **OK**.

When you connect to the data source, the Database File Location text area is disabled, and **Connect** is converted to **Disconnect**. If you are using a data source that supports POV, Personal Variables and Alias Tables, these controls are enabled.

7 Select an alias table from Alias Table.

8 Select one of these options from the Default Logon group:

Default Logon Options	Description
Use User's ID and Password	Connects to the database connection using the Web Analysis Studio user ID and password.

Default Logon Options	Description
Prompt for User ID and Password	Connects to the database connection by prompting the user for a Web Analysis Studio user ID and password.
Enter User ID and Password	Connects to the database connection using a user ID and password for the database connection, if it varies from the Web Analysis Studio Login parameters. You must enter values in the corresponding text areas.

9 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.

POV Definitions

POV database preferences insert dimensions and members that are of interest to you into the documents of others. POV definitions are defined and activated by database connection.

When a POV is activated, the Use Point of View option 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.

POV definitions consist of axes and dimension member selections. The definition is used when documents are created with the activated POV.

When you apply a POV definition to a 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 one axis).

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

Using a POV definition is a three part process. First, you must create a POV definition. Next, you must activate the POV definition. Lastly, you must set a document to use the activated POV definition, or create a document that uses it.

Consider these four (4) benefits:

Generic and Specific Documents

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

Replacing Member Selection Statements

You can apply the complex calculations and analysis tool definitions of others' documents to the dimensions and members they track, using points 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 points of view are activated, the document-creation process is simplified. Cube Navigator is loaded with the dimension member selections designated by the current POV.

Session-based Points of View

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

Reloading Documents

You must reload the document for the applied POV definition to be displayed.

POV Definitions and Personal Variables

POV definitions replace all member selections for corresponding dimensions and database connections. Personal variables can instead augment member selections for one dimension.

You can also leverage personal variables in the creation of POV definitions.

See [“Creating and Applying Points of View” on page 79](#).

Personal Variables

Personal variables enable you to define and name complex member selections. After being defined, you can select personal variables when they are presented (with the corresponding dimension and database connection).

Generic and Specific Documents

Other users can create personal variables using matching name, dimension, and database connection that contain the dimensions members that are of interest to them.

This technique enables everyone to create hybrid documents that feature generic and user-specific content.

POV Definitions and Personal Variables

POV definitions replace all member selections for corresponding dimensions and database connections. Personal variables can instead augment member selections for one dimension.

You can also leverage personal variables in the creation of POV definitions. See [“Creating and Selecting Personal Variables”](#) on page 78.

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Web Analysis Configuration Options

`WebAnalysis.properties` contains variables that control Web Analysis functionality. Administrators must modify this file to support their implementations.

`WebAnalysis.properties` location when using Apache Tomcat 4.0.1 application server:

```
C:\Hyperion\WebAnalysis\deployments\webapps\WebAnalysis\WEB-INF\conf
```

`WebAnalysis.properties` location when using IBM WebSphere application servers:

```
C:\Hyperion\appserver\hosts\default_host\WebAnalysis\classes
```

► To edit `WebAnalysis.properties` variables:

- 1 Stop the application server.
- 2 In a text editor, open `WebAnalysis.properties`.

The default installation location is `\\Hyperion\WebAnalysis\conf\WebAnalysis.properties`.

- 3 Edit variables and save changes.
- 4 Restart the application server.

Topics that explain Web Analysis configuration options:

- “Controlling Result Sets” on page 274
- “Configuring Java Plug-in Versions” on page 274
- “Configuring the Repository” on page 275
- “Configuring Analytic Provider Services” on page 275

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Controlling Result Sets

Users and system administrators can set row limits to control relational and OLAP query result set size. This protects server and network resources from being consumed by large query result sets.

The Relational Drill-through dialog box features a “Max rows to return” field that controls the number of rows returned during relational drill-through.

You must set other OLAP and relational row limits in `WebAnalysis.properties`, the path to which varies by application server configuration.

`WebAnalysis.properties` contains variables that control the query result sets in terms of rows:

- `MaxDataCellLimit`—OLAP database connection query result set size; default is 50000
- `MaxJdbcCellCount`—Relational database connection query result set size; default is 50000

Note:

“MaxJdbcCellCount” is located in the Analytic Services Config section.

Configuring Java Plug-in Versions

Web Analysis Studio is configured to use a specific Sun Java Plug-in, which administrators can update by editing the static versioning statement in `WebAnalysis.properties`. This mandates the loading of the Sun Java plug-in specified version when clients log on to Web Analysis Studio, but does not impact the JDK used by the server.

► To edit the `WebAnalysis.properties` static versioning statement:

- 1 Stop the application server.

- 2 In a text editor, open `WebAnalysis.properties`.

The default location is `\\Hyperion\WebAnalysis\conf\WebAnalysis.properties`.

At the top of the file are three variables:

```
_JREVersion=1.4
_JREClassID=CAFEEFAC-0014-0002-0006-ABCDEFEDCBA
_JRECodeBaseVersion=j2re-1_4_2_06-windows-i586-p.exe
```

- 3 Edit these values and remove the preceding underscore to change the Sun Java Plug-in version.

Alphabetic characters at the beginning and end of the string are set by Sun. Do *not* change these characters. The first two sets of numeric digits indicate the Sun Java plug-in version. The third set of numeric digits indicates the patch number. For example, this is the class identifier (CLSID) value for Sun Java plug-in 1.3.1_10:

```
clsid:CAFEEFAC-0013-0001-0010-ABCDEFEDCBA
```

- 4 Save your changes.
- 5 Restart the application server.

Configuring the Repository

The Repository Config section of `WebAnalysis.properties` sets a series of variables supporting JDBC connectivity for supported repositories:

```
db.type=
db.subprotocol=
db.driver=
db.alias=
db.user=
db.password=
db.password-encrypted=true
```

Alternate values for each variable are commented out on the line after the variable. To use an alternate value, remove the pound sign (#) and place it before the old value.

When moving, migrating, or upgrading the repository, you may need to edit these variables and re-encrypt the password (see [“Repository Password Encryption Utility”](#) on page 282).

Configuring Analytic Provider Services

`WebAnalysis.properties` supports variables that enable Hyperion® System™ 9 BI+™ Analytic Provider Services™, which provides Analytic Services connection alternatives for administrators running Web Analysis on Solaris operating systems.

Review [“Repository Password Encryption Utility”](#) on page 282 before configuring Analytic Provider Services.

See the *Hyperion System 9 BI+ Analytic Provider Services Installation Guide* for complete information on installing, configuring, and using this service.

Variable	Description
UseEES	A value of true prompts ADM to use Analytic Provider Services to access Analytic Services; a value of false enables ADM to use the default JNDI driver
EESDriverName	Analytic Provider Services driver to ADM; do <i>not</i> modify
EESServerName	Server running Analytic Provider Services
EESLocale	Locale for Analytic Provider Services
EESDomain	Domain for Analytic Provider Services; do <i>not</i> modify this variable
EESORBType	ORB type for Analytic Provider Services; only TCP/IP is supported
EESPort	Analytic Provider Services communication port
EESUseConnPool EESConnPerOp	Method ADM uses for Analytic Provider Services connection pooling A connection pool is a set of login sessions from Analytic Provider Services to an Analytic Services server. Analytic Provider Services uses a connection pool to process requests for Analytic Services services. There are three combinations of these properties: <ul style="list-style-type: none"> ● EESUseConnPool=false EESConnPerOp is ignored—Connection pooling is not used ● EESUseConnPool=true EESConnPerOp=false—Connection pooling is used; connection is held from when cube view is opened until it is closed ● EESUseConnPool=true EESConnPerOp=true—Connection pooling is used; connection is released immediately after each operation
EESUseReportOption	Set to true only if using Microsoft's JVM
UseUnicodeAdmConnection	Default value is false. Set to true on this configuration: Web Analysis server: OS HP-UX 11i, LANG=ko_KR.utf8, LC_ALL=ko_KR.utf8, ESSLAN=Korean_Korea.MS949@Binary Analytic Services server: ESSLAN=Korean_Korea.MS949@Binary

Considerations for Configuring Analytic Provider Services

Keep in mind these items when configuring Analytic Provider Services:

- User name and password used by the ADM Analytic Provider Services driver must be valid on the Analytic Provider Services server and the Analytic Services server.
- ChangePassword and SetPassword server actions attempt to modify Analytic Provider Services and Analytic Services OLAP server passwords. To be successful, `olap.server.autoChangePassword` must be set to `true`, and the administrator user ID specified in the `EDS_ES_HOME/bin` directory (`olap.server.admin.name=admin`) must differ from the user ID being passed by the action.
- Two archives installed with Analytic Provider Services must be defined in Web Analysis classpath: `ess_es_server.jar` and `ess_japi.jar`.

- Hyperion does not recommend implementing Analytic Provider Services in conjunction with AIX platforms.

Resolving Analytic Services Subscriptions in Web Analysis

Administrators can set the `WebAnalysis.properties` file variable `FastResolveAnalyticServicesSubscriptions=true` to realize a Web Analysis performance improvement, as long as they are not conducting hybrid analysis. Setting to true indicates use of Analytic Services pass-through methods to generate dimension member lists of subscription controls. Because there is no way for Web Analysis to detect hybrid analysis, this variable is set to false by default.

`FastResolveAnalyticServicesSubscriptions=false` indicates to use standard Analytic Services resolve member methods to generate dimension member lists for subscription controls.

Improving Analytic Services Search Performance

The `WebAnalysis.properties` file variable `DisableFastSearch` (true/false) controls how the Search dialog in Member Selection retrieves the list of descendants to search. The default value is false; however, when set to true, the Analytic Services server perform the search (for training wildcard searches only) instead of the Web Analysis server, which should improve performance in most cases.

Configuring a Web Analysis Mail Server

► To configure a Web Analysis mail server:

- 1 Stop the application server.
- 2 In a text editor, open `WebAnalysis.properties`.
The default location is `\\Hyperion\WebAnalysis\conf\WebAnalysis.properties`.
- 3 Scroll to the end of the file.
- 4 For the `MailServer=<localhost>`, remove the pound signs (#) and enter a value for `localhost`.
- 5 Save the file.
- 6 Restart the application server.

Formatting Data Value Tool Tips

`WebAnalysis.properties` contains a variable that controls the format of data value tooltips, which display as small boxes over data cells when the cursor triggers a float-over event.

When the variable `FormatToolTips=true`, tooltips displays data values in scientific notation unformatted to up 1E7. When `FormatToolTips=false`, or when the variable is not specified, tooltips display data values in a format that matches the spreadsheet grid.

Setting Web Analysis to Log Queries

Setting the `WebAnalysis.properties` variable `LogQueries=true` redirects the ALE query report and Analytic Services report specification created by ADM to the Web Analysis output log. This variable is set to false by default, to minimize the amount of logged information.

Exporting Raw Data Values to Excel

Setting the `WebAnalysis.properties` variable `ExportDataFullPrecision=true` exports data values directly from data sources to Microsoft Excel (in lieu of data values with client-based formatting).

Configuring MS Office to Support Web Analysis

The `WebAnalysis.properties` file variable `ExcelPath` indicates where Web Analysis should search for the Microsoft Excel executable file, used in conjunction with the Export to Excel feature:

```
ExcelPath=C:\\My_Excel_Path\\Excel.exe;C:\\Your_Excel_Path\\Excel.exe
```

Word and PowerPoint paths can also be defined in a similar manner in the `WebAnalysis.properties` file as follows:

```
WordPath=C:\\My_Word_Path\\WINWORD.EXE;C:\\Your_Word_Path\\WINWORD.EXE
```

```
PPTPath=C:\\My_PPT_Path\\POWERPNT.EXE;C:\\Your_PPT_Path\\POWERPNT.EXE
```

Note:

Paths should be reflected using short names for the folders. For example `C:\\Progra~1\\Micros~2\\OFFICE11\\POWERPNT.EXE`

Configuring SQL Server Analysis Services 2000 with Web Analysis

The `WebAnalysis.properties` file setting `SSASImpersonate (true/false)` configures the authentication for SQL Server Analysis Services (SSAS) 2000: By default, when using SSAS 2000, any user can login to the data source. To correct this, you must set `SSASImpersonate=false`, in this case, Web Analysis use native MSAS authentication instead.

Restricting Users from Selecting Multiple Members in Filters

Setting the `WebAnalysis.properties` variable `FilterRestrictToSingleMember=true`, restricts users from selecting multiple members in a report object filter.

If the value is set to true, all users can select one member from the filter selections. In the Dim Browser, only one member can be selected, therefore the right click menu options are limited

to “Find in Tree” and “Search”. Users can select one member in the left pane; additional selections overwrite the previous selection.

Note:

If the value of the variable is initially set to “false”, multiple filter selections are made and the Web Analysis document is saved. If the value is changed to “true”, and the Web Analysis document is reopened, all filter selections are removed—the dimension filter does not contain selections.

Configuring Default Print Behavior

Setting the `WebAnalysis.properties` variable `WorkspacePrintDefault` controls the default print behavior in Workspace. The two possible settings are `WorkspacePrintDefault=PDF` or `WorkspacePrintDefault=HTML`.

Note:

If the option is set to PDF, HTML options are not available. If it is set to HTML, PDF options are not available.

PDF Print Behavior

If PDF is specified, these menu options are available:

- File > Print > Print Screen
- File > Print > Print Selected Object

Print PDF launches a browser instance with Adobe Reader. The output of the Web Analysis document or report object is embedded in Adobe Reader.

The output is rendered, as it is in the Web Analysis Studio. Settings such as Portrait and Landscape can be set. Other settings such as header and footer are saved with the Web Analysis document, by the designer in the Web Analysis Studio.

Note:

From the Print dialog box, users cannot print multiple pages.

HTML Print Behavior

If HTML is specified, File > Print HTML is available:

Print HTML launches a browser instance that displays the selected object.

Limiting Web Analysis Studio Shortcut Menu Options

Administrators can control, at the role level (for example, Viewer), the shortcut menu options that users see. Whether menu options are hidden or displayed is determined by settings in an XML file on the Web Analysis server.

In `WebAnalysis.properties`, you specify the location of the XML file and the module to which the functionality applies (the only valid module value is `WebAnalysisStudio`):

```
WASstudioMenuControl= C:/Hyperion/Analyzer/conf/WAMenu.xml
ModuleName=WebAnalysisStudio
```

The XML file has these elements and attributes:

Element	Element Description	Attribute	Attribute Description
BIPlus	Top-level element used to specify BI+ overall		
WebAnalysisStudio	Specifies Web Analysis Studio as the BI+ module that requires menu control		
Role	Specifies the roles to which the shortcut menu restrictions apply Note: The highest role assigned to a user overwrites the shortcut menu restriction. For example, if a user is assigned the Explorer and Content Publisher roles, and the Explorer role has restrictions while the Content Publisher role does not, the user has no restrictions.	Name	Name of the BI+ role All BI+ roles are valid except for BI+ Administrator and BI+ Global Administrator
ShortCutMenu	Restricts menu items in shortcut menus	Name	Menu item name that is displayed on the shortcut menu, at any level; ending ellipses (...) are optional
		Display	Set as true or false; where false is the value that hides, or restricts, the menu item Enables administrators to easily make menu items available or unavailable to users
		ParentName	Specifies the <i>parent</i> menu item for menu options that can be accessed from multiple menu items (for example, "To Microsoft Excel" appears under the Query Ready, Formatted, and Unformatted menu items) <ShortCutMenu Name="To File" ParentName="Formatted" Display="false" />

Element	Element Description	Attribute	Attribute Description
			In such cases, if you do not specify ParentName, the attribute is ignored

Note:

For shortcut menu options that are labeled specific to a dimension (for example, Year Label Mode) including definitions for multiple dimensions in the XML file can be tedious. There should be a generic XML file definition for all instances of this shortcut menu option called “Dimension Label Mode”. For example: `<ShortcutMenu Name="Dimension Label Mode" Display="false" />`

Sample XML File

```
<BIPlus>
<WebAnalysisStudio>
<Role Name="Viewer">
<ShortcutMenu Name="Drill Link Options" Display="false" />
<ShortcutMenu Name="Drill to Siblings" Display="false" />
<ShortcutMenu Name="Drill to Same Level" Display="false" />
<ShortcutMenu Name="Drill to Same Generation" Display="false" />
<ShortcutMenu Name="Edit Data" Display="false" />
<ShortcutMenu Name="To File" ParentName="Formatted" Display="false" />
</Role>
</WebAnalysisStudio>
</BIPlus>
```

The XML file disables only menu items (attribute of `display=false`). You can disable all shortcut menu options using Report Properties.

Disabling a menu option that has child menus (for example, Drill) disables the child menus (Drill Down, Drill Up, and so on).

Restricting a menu option (for example, Drill) to a particular areas of the software such as Charts and Spreadsheets restricts the menu option in all areas of the software. In other words, there is no way to restrict Drill only to Charts and not to Spreadsheets.

Controlling Sizes of Web Analysis Documents that are Exported to Excel

When exporting to Excel, using one of the three methods that populates cells of data (Query Ready, Formatted, Unformatted), Web Analysis evaluates the number of rows and columns in the data and if they are larger than the number of rows or columns in Excel, an error message is displayed and the Web Analysis document is not exported.

Setting the `webAnalysis.properties` variables `XLExportMaxRows` and `XLExportMaxColumns` controls the size of a Web Analysis document that can be exported to Microsoft Excel.

If upcoming releases of Microsoft have row and column width maximums that differ from Excel 2003, set these variables in `WebAnalysis.properties`:

`XLExportMaxRows=`

`XLExportMaxColumns=`

Note:

If these two entries do not exist, the current Office 2003 defaults are used (65,536 and 256)

In Custom Reports, the token Number of Rows displays the total number of rows in a Web Analysis document, on retrieval.

Example:

```
<<nrows ReportDataSrc1>>
```

Web Analysis Utilities

Topics that explain Web Analysis utilities:

- [“Repository Password Encryption Utility” on page 282](#)
- [“Web Analysis Configuration Test Servlet” on page 283](#)

Repository Password Encryption Utility

When moving, migrating, and upgrading repositories, users may change the repository user ID and password values listed in `WebAnalysis.properties`. Because these file values are viewable over the Web using the Configuration Test Servlet, a method exists to encrypt password values.

► To change and encrypt repository passwords:

1 Stop the application server.

2 In a text editor, open `WebAnalysis.properties`.

The default location is `\\WebAnalysis\conf\WebAnalysis.properties`.

3 In the `Repos Config` section, locate these variables:

- `db.user=<userID>`
- `db.password=<encrypted password>`
- `db.password-encrypted=true`

4 Edit values for user ID and password.

Note that the password is not encrypted.

5 Change the `db.password-encrypted` value to `false`.

6 Save your changes.

- 7 **Navigate to** `\\WebAnalysis\conf\` **and run** `EncryptUtil.bat` **or** `EncryptUtil.sh`.

You may use alternative methods to execute this file. `EncryptUtil` locates the user ID, password, and encryption variable, encrypts the password, and resets `db.password-encrypted` to `true`.

To review the changes, open `WebAnalysis.properties`.

- 8 **Restart the application server.**

Web Analysis Configuration Test Servlet

Use Web Analysis Configuration Test Servlet to diagnose and resolve connectivity issues. The servlet displays links that centrally report environmental variables and `WebAnalysis.properties` parameters, and test connectivity to the class factory, the repository, the external authentication configuration file, and the Analytic Services driver.

- To launch Configuration Test Servlet, open a Web browser and type this URL:

`http://<hostname>/WebAnalysis/Config`

Configuration Test Servlet provides links to configuration information:

- [“List Environment Variables” on page 283](#)
- [“View Web Analysis Property Files” on page 283](#)
- [“Services Framework Test” on page 284](#)
- [“Test Pages for Analytic Services, Financial Management, and SAP BW ODBO” on page 284](#)

Tip:

Use the browser’s **Back** button or the **Available Tests** link at the page bottom to return to the Configuration Test Servlet home page.

List Environment Variables

The List Environment Variables page provides information about Java system properties and system environment variables, such as `user.name`, `Java.class.path`, `Java.home`, `HYPERION_HOME`, `LOGONSERVER`, and `CLASSPATH`.

View Web Analysis Property Files

The Web Analysis Property Files page provides links to and locations for `WebAnalysis.properties` and `CssConfig.xml`.

Services Framework Test

The Test ATF Configuration page retrieves information from the repository and tests the repository connection. The last line on the page indicates whether the test executed successfully. If the test failed, a stack trace is displayed to help you troubleshoot problems.

Test Pages for Analytic Services, Financial Management, and SAP BW ODBO

The test pages for Analytic Services, Financial Management, and SAP BW ODBO, provide this configuration information:

- ADM Environment Variables
- ADM Property File Locations (click a link to view the property file)
- ADM Jar Locations
- Version Information

You use these pages to test your connectivity (using ADM) to Analytic Services, Financial Management, and SAP BW ODBO.

Changing Web Analysis Ports

You can change Web Analysis port numbers without rerunning the Configuration Utility.

This procedure describes how to change Web Analysis port numbers for Tomcat Application Servers. You must match port numbers in three locations to successfully change Web Analysis port numbers.

Note:

Web Analysis must not be running during this process. At the end of the process, you must restart applications that use the HTTP Server.

► To change Web Analysis port numbers:

1 Change the Web Analysis port number on Tomcat Application Servers:

- In Windows Explorer, navigate to %BIPlus_Home%\AppServer\InstalledApps\Tomcat\5.0.28\WebAnalysis\conf and open `Server.xml` file for editing.
- Change values for shutdown and service connector ports:
(At the top) Server port = "*port_number*"
(At the bottom) Connector port = "*port_number*"
- Save and close `Server.xml`.

2 Update the HTTP Server with the Web Analysis port number:

- In Windows Explorer, navigate to %HYPERION_HOME%\common\httpServers\Apache\2.052\conf and open `HYSLWorkers.properties` for editing.

- b. Change the Web Analysis port number to match the AJP port specified by the Service Connector port parameter in `Server.xml` (Connector port=).
 - c. Save and close `HYSLWorkers.properties`.
- 3 Update the Hyperion Apache application server HTTP with the Web Analysis port number:**
- a. In Windows Explorer, navigate to `%HYPERION_HOME%\common\httpServers\Apache\2.052\conf` and open `HTTP.conf` for editing.
 - b. Change the Listen port number to match the port specified by the Service Connector port parameter in `Server.xml` (Connector port=).
 - c. Save and close `HTTP.conf`.
- 4 Restart Hyperion Apache HTTP Server and applications that use the HTTP Server.**

Improving Web Analysis Studio Responsiveness

To improve the performance and applet load time of the Web Analysis Studio through Windows Control Panel, increase the maximum amount of memory allocated to the plug in.

1. Open the Java plug-in console by selecting **Start > Control Panel > Java Plug-In**.

Note:

If multiple Java Plug-in versions are installed, select the version that the Web Analysis Studio uses.

2. Select the **Advanced** tab and add these parameters to Java Runtime Parameters:
`-Xms64m -Xmx256m -Xss6m`

For information on parameters, please see the JRE documentation

Improving Web Analysis Studio Performance

McAfee virus scan on servers and clients decrease performance. McAfee's Internet WebScanx, which searches internet files for viruses, scans `AnalyzerClient.jar`, which resides in the internet cache of the PC, every time Web Analysis Studio is launched.

- To improve Web Analysis Studio performance:
- 1 **Run the SysInternal Filemon program and determine which file analyzers are using and excluding the relevant folder and files.**
 - 2 **Disable WebScanx.**
 - 3 **Disable Allow Scanning Inside Archives.**

Importing ARU Files to Set User and Active Preferences

Web Analysis user preferences can be imported from an .ARU (XML format) file using a command line utility.

The supporting import functionalities are discussed in these topics:

- “Creating Personal Variables” on page 287
- “Removing Personal Variables” on page 288
- “Creating POV Definitions” on page 288
- “Removing POV Definitions” on page 289
- “Adding Personal Database Connections” on page 289
- “Setting User Preferences” on page 290
- “Setting Active Preferences” on page 260

Note:

Member names that contain special characters need modification; for example, `<Member Name="P&O" />` should be `<Member Name="P& ;O" />`

Processing Order

The ARU file is processed in this order:

1. Add database connection.
2. Remove Personal Variables
3. Remove POV
4. Add/replace Personal Variables
5. Add/replace POV
6. Define user preferences

Importing ARU Files

To import and execute an ARU file using the command line, enter this command:

```
ARUUtil.bat [ServerURL] [UserID] [Password] [ImportFile] [LogFile]
```

All arguments needed for the `ARUUtil.bat` are defined in `ARUImport.properties`.

Note:

`ARUUtil.bat` (and `.sh`) is located in `BIPLUS_HOME/bin` and `ARUImport.properties` is located in `BIPLUS_HOME/common/config`.

Here is sample content of `ARUImport.properties`:

```
ServerURL=http://localhost:16000/WebAnalysis/processor
UserID=hyper1
Password=hyper1
ImportFile=D:\Welcome\createuser.xml
LogFile=d:\Welcome\Import.log
```

Property	Description
ServerURL	URL of started Web Analysis
UserID	Provisioned user name
Password	Provisioned user password
ImportFile	File path to import
LogFile	File path to log status messages

Note:

Login credentials of a user with administrators privileges must be used.

ARU Import File Format Supported Tags

- AnalyzerAdmin
- ModifyUsers
- User
- AddPersonalVariable
- Member
- AddPointOfView
- AxisSelections
- Dimension
- RemovePersonalVariable
- RemovePointOfView
- Settings
- Database

Creating Personal Variables

To create a Personal Variable, use this file format:

```
<?xml version="1.0" encoding="UTF-8"?>
<AnalyzerAdmin>
<ModifyUsers>
<User LoginID="hyper1">
<AddPersonalVariable Name="MarketPV" Database="epmsd030:Sample:Basic"
Dimension="Market">
```

```

<Member Name="Market" SelectionMode="CHILDREN" />
<Member Name="East" SelectionMode="CHILDREN" />
</AddPersonalVariable>
</User>
</ModifyUsers>
</AnalyzerAdmin>

```

User and LoginID define the user login for which the Personal Variable is added. If a database connection exist with a specified name (see Database) for a specified user, a Personal Variable is added. The database connection file name is formed from the Database property by replacing «:» on «_». The connection file is searched in the Database folder of the specified user. If a connection file does not exist, the operation aborts. If a Personal Variable exists for the database connection, it is replaced by the new definition.

AddPersonalVariable initiates a request to create a Personal Variable. Member identifies the members within the dimension that make up the Personal Variable, and the selection mode for each member. Selection modes are: MEMBER, CHILDREN, DESCENDANT, PARENT, ANCESTOR, SIBLING, DIMBOTTOM, DIMTOP, LEVEL, GENERATION, and PREVIOUS. Default selection mode is MEMBER.

Removing Personal Variables

To remove a Personal Variable, use this file format:

```

<?xml version="1.0" encoding="UTF-8"?>
<AnalyzerAdmin>
<ModifyUsers>
<User LoginID="vefim">
<RemovePersonalVariable Name="MarketPV" Database="epmsd030:Sample:Basic" />
</User>
</ModifyUsers>
</AnalyzerAdmin>

```

RemovePersonalVariable deletes the Personal Variable named *MarketPV* which is defined against database *epmsd030:Sample:Basic*.

Name defines the name of the Personal Variable to delete. Database defines the database connection file name.

Creating POV Definitions

To create a POV, use this file:

```

<?xml version="1.0" encoding="UTF-8"?>
<AnalyzerAdmin>
<ModifyUsers>
<User LoginID="vefim">
<AddPointOfView Name="BatchPOV" Database=" epmsd030:Sample:Basic" Active="True">
<AxisSelections Axis="Columns">
<Dimension Name="Market">
<Member Name="East" />
<Member Name="West" SelectionMode="CHILDREN" />
</Dimension>

```

```

<Dimension Name="Product">
<Member Name="Product" SelectionMode="CHILDREN"/>
</Dimension>
</AxisSelections>
<AxisSelections Axis="Rows">
<Dimension Name="Year">
<Member Name="Year" SelectionMode="CHILDREN"/>
</Dimension>
</AxisSelections>
<AxisSelections Axis="Pages">
<Dimension Name="Scenario">
<Member Name="Scenario" SelectionMode="CHILDREN"/>
</Dimension>
</AxisSelections>
</AddPointOfView>
</User>
</ModifyUsers>
</AnalyzerAdmin>

```

AddPointOfView initiates a request to create a POV. The Name and Database name for the POV must be provided. The user may optionally indicate whether this POV should be active. Default Active value is *False*. If a POV of the same name exists for the database connection, it is replaced by the new definition.

AxisSelections identifies the axis to which the dimension selections are to be applied. Axes are Rows, Columns, Pages, and Filters. Default axis is Filters.

Dimension defines the dimension to be placed on the axis.

Member identifies the members within the specified dimension to be placed on the axis. Selection modes are: MEMBER, CHILDREN, DESCENDANT, PARENT, ANCESTOR, SIBLING, DIMBOTTOM, DIMTOP, LEVEL, GENERATION, and PREVIOUS. The default selection mode is MEMBER.

Removing POV Definitions

To remove a POV definition, use this file format:

```

<?xml version="1.0" encoding="UTF-8"?>
<AnalyzerAdmin>
<ModifyUsers>
<User LoginID="vefim">
<RemovePointOfView Name="123" Database="epmsd030:Sample:Basic"/>
</User>
</ModifyUsers>
</AnalyzerAdmin>

```

RemovePointOfView requests to delete the POV named *123* which is defined against database *epmsd030:Sample:Basic*.

Adding Personal Database Connections

To add a personal database connection, use this file format:

```

<?xml version="1.0" encoding="UTF-8"?>
<AnalyzerAdmin>
<ModifyUsers>
<User LoginID="hyper1">
<Database Name="DBName" Server="epmsd030" Database="Sample" Cube="Basic"
AliasTable="Long Names" Type="1" User="admin" Password="password"
LoginMode="1">
</User>
</ModifyUsers>
</AnalyzerAdmin>

```

Database requests to add a database connection. If a database connection file with the same name exists, the operation is aborted.

Database Attributes	Description	Permitted values	Example
Name	Connection File name—File is created in /Users/ <i>user_name</i> /Databases/. <i>user_name</i> —User’s name, defined in tag User. For this, user connection is created.		
Server	Analytic Services server host name		
Database	Application Name		
Cube	Cube Name		
AliasTable	Which alias to use		
Type	Type of connection to create. Only Analytic Services connections can be created.	1	
User	User’s login for connection		
Password	Password for connection		
LoginMode	Login mode of DB connection	1 - Use User’s ID and Password; 2 - Prompt for User ID and Password; 3 - Enter User ID and Password	1 - Example, ["hyper1", "hyper1"] 2 - always show dialog "Database Logon" 3 - Use specified in User, Password properties values

Setting User Preferences

Note:

Some user preferences cannot be imported.

Import user preferences using this syntax:

```
<?xml version="1.0" encoding="UTF-8"?>
<AnalyzerAdmin>
<ModifyUsers>
<User LoginID="hyper1">
<Settings MissingZero="0" MissingText="n/a" PageComboBoxesStyle="0"
ShowInfoPanel="0" ShowFilterPanel="1" ShowToolbar="1" ShowMenu="0"
DrillType="0" DrillMethod="1" Wallpaper="" TileWallpaper="1"
StretchWallpaper="0"/>
</User>
</ModifyUsers>
</AnalyzerAdmin>
```

Supported Preferences

- ShowInfoPanel
- ShowFilterPanel
- ShowToolbar
- ShowMenu
- PageComboBoxesStyle
- DrillType
- DrillMethod
- UseGridAPI
- ShowCurrency
- Wallpaper
- SuppressMissing
- ShowGridLines
- MissingZero
- MissingText
- HomePage
- DefaultView
- ShowInfoPanel
- ShowFilterPanel
- ShowToolbar
- ShowMenu
- PageComboBoxesStyle
- DrillType

Setting Active Preferences

Each user's Web Analysis preference file is located under `/Users/username/Profiles` and is invisible to all users. An administrator can copy, paste and maintain all user preference files. In addition, the `/Users/{Profiles}` folder is the common profiles directory, from which users can select any preference file to use as their *active* preference.

To set active preferences for a user during ARU import, the repository location of the file must be specified.

To set active preferences for a user, use this syntax:

```
<?xml version="1.0" encoding="UTF-8"?>
  <AnalyzerAdmin>
    <ModifyUsers>
      <User LoginID="PersParamEditor1">
        <SetGroupPrefs Name="/Users/&lt;Profiles&gt;/GlobalAdmin2Prefs4" />
      </User>
      <User LoginID="Analyst3">
        <SetGroupPrefs Name="/Users/&lt;Profiles&gt;/GlobalAdmin2Prefs4" />
      </User>
      <User LoginID="DataEditor1">
        <SetGroupPrefs Name="/Users/&lt;Profiles&gt;/GlobalAdmin2Prefs4" />
      </User>
      <User LoginID="DataSourcePublisher1">
        <SetGroupPrefs Name="/Users/&lt;Profiles&gt;/GlobalAdmin2Prefs4" />
      </User>
    </ModifyUsers>
  </AnalyzerAdmin>
<SetGroupPrefs Name="\Users\<Profiles>\group_prefs1"/>
```

Notes

1. In XML files, you must use `<` instead of `<` and `>` instead of `>`.
2. If more than one `SetGroupPrefs` element is specified for a user, the last preference file specified is established for that user.

Rename Utility

The Rename Utility is a stand-alone application designed to update objects in a Web Analysis repository based on the data source metadata changes. For example, if a member name, and/or dimension name changes in an Essbase® or Analytic Services cube, the utility searches the repository and changes all objects (such as documents and database connections) to reflect the metadata changes. The metadata change mapping must be created in a map file, as there is no direct link to the data source to detect the changes.

Please note, the utility supports only Essbase and Analytic Services data sources.

These objects are updated:

- Documents
- Database formatting

- Essbase and Analytic Services database connections
- Personal variable definitions
- POV definitions

These metadata changes are supported:

- Renaming references to existing dimensions (name and alias/description)
- Renaming references to existing members (name and alias/description)
- Adding references to new dimensions (default member selected)

Note:

The Rename Utility installer is not included as part of the Web Analysis installer. See [“Rename Utility Installation” on page 294](#).

Rename Utility Important Considerations

- The Rename Utility modifies the content of various tables within the Web Analysis repository. You must back up *all* repositories before running this utility.
- The map file must correctly reflect old and new mapping names. If errors exist, these results may occur
 - Errors in old names:
 - No member is found; nothing is renamed
 - The wrong member is found; the wrong member is renamed
 - Errors in new names:
 - A name does not match a member. When the document is executed, an error message is displayed, and the member is removed from the document.
 - (A name matches a member (the wrong member). When the document is executed, an error message is not displayed, but the wrong member is selected..

Rename Utility Files

The Rename Utility files can be executed from the folder in which the utility resides, which is *installation_folder\renamer*.

Table 2 Rename Utility Folder Structure

\renamer	Contains all necessary files to execute the Rename Utility
AnalyzerResource_xx.jar AnalyzerServer.jar log4j-1_2_8.jar	From the current Web Analysis install (for example, the deployed WEB-INF\lib folder)
db2java.zip	JDBC drivers for all database types supported by the Rename Utility

db2jcc.jar	
mssqlserver.jar	
msutil.jar	
mysql-connector-java.jar	
oracle.zip	
xercesImpl.jar	Provide XML support
xml-apis.jar	
renamer-map.xml	Map file used to define all of the dimensions and members to rename; see the “Rename Utility Map File” on page 295
Renamer.properties	Provides default choices to the input fields in the Rename Utility; see “Renamer.properties” on page 299
renamer-services.xml	Defines ATF services by the Rename Utility.
renamer-map.dtd	Currently unused; represent an attempt to develop a DTD or an XML Schema for map file validation
renamer-map.xsd	
RenameUtil.bat	Start the utility on Windows or UNIX platforms, respectively.
RenameUtil.sh	
\renamer\renamer common.profile db2.profile hsqldb.profile mssqldb.profile mssqldb7.profile mysql.profile oracle.profile	Contains repository profiles used to connect to the supported database types

Rename Utility Installation

- To install the Rename Utility:
 - 1 **Back up all repositories before using the Rename Utility.**
 - 2 **Install Web Analysis.**
 - 3 **Uncompress `rename_utility.zip` to the Rename Utility folder (for example, `C:\renamer`).**
 - 4 **Copy these files from the Web Analysis `WEB-INF\lib` folder to the Rename Utility folder:**
 - `AnalyzerServer.jar`

- AnalyzerResource_*.jar
 - log4j-1.2.8.jar
- 5 Verify that the `JAVA_HOME` environment variable exists and points to a Java 1.4 run-time home folder (for example, `C:\jdk1.4.2`).
You can also edit `RenameUtil.bat` or `RenameUtil.sh` to set the `JAVA_HOME` environment.
 - 6 **Optional:** Edit `Renamer.properties` to set the default choices for running the Rename Utility as described in [“Renamer.properties” on page 299](#).
 - 7 Launch the start script (`RenameUtil.bat` or `RenameUtil.sh`).

Rename Utility Map File

The Rename Utility map file defines the dimensions and members to be renamed in the repository. It is an XML file that defines the complete logical path to each dimension and member. Here is a sample map file (with line numbers) along with a description of each section:

```
[01] <map name="Rename Map 01">
[02]   <server name="essbase9x"
[03]     <serverAlias>essbase9x.hyperion.comserverAlias>essbase9x.hyperion.com>
[04]     <application name="Sample">
[05]       <database name="Basic">
[06]
[07]         <dim oldName="Year" newName="NewYear" />
[08]
[09]         <dim oldName="Market" newName="NewMarket"
[10]           oldAlias="Market" newAlias="My New Market">
[11]           <member oldName="South" newName="NewSouth" />
[12]           <member oldName="East" newName="NewEast" />
[13]           oldAlias="Eastern" newAlias="New Eastern">
[14]         </dim>
[15]
[16]         <newDim name="NewDim" alias="NewDim Alias" />
[17]
[18]         <newDim name="Attr" alias="Attribute" parentDim="product">
[19]
[20]           <newDim name="Features" alias="Prod Features">
[21]             <attrDim name="Attr1" />
[22]             <attrDim name="Attr2" />
[23]             <attrDim name="Attr3" />
[24]           </newDim>
[25]
[26]         </database>
[27]       </application>
[28]     </server>
[29]
[30]     <server name="server2">
[31]       <...>
[xx]     </server>
[xy]
[xz] </map>
```

map Element

The topmost element of the map file must be the `<map>` element shown on line [01]. It must have a name attribute, which can be any text enclosed in quotes. There can be only one `<map>` element in a map file. This element is used internally to contain the list of servers included in this map file. It can contain only one or more `<server>` elements.

server Element

This element identifies an Essbase or Analytic Services server that has renamed dimensions or members. Examples are shown on lines [02] and [30]. As shown in the example, there can be multiple `server` elements in a map file. It has the single attribute `name` which is required. This name must match the server name in the Essbase or Analytic Services database connection stored in the Web Analysis repository. No DNS or hosts lookup is performed, and no IP address translation is done. Thus, `<server name="127.0.0.1">` is not the same as `<server name="localhost">`. The `server` element can contain only one or more `application` elements.

serverAlias Element

This element enables the user to specify alternate names that identify the same Essbase or Analytic Services server. For example, the server, `ess9x` might also be known as `ess9x.hyperion.com`, `172.27.31.126`, or `localhost`. Using `serverAlias` elements in the map file allows the dimension and member mappings for a server to be applied to that server, regardless of how it is referenced in the repository. An example is shown on line [03]. This example associates all dimensions and members for the server `essbase9x` with the alternate name `essbase9x.hyperion.com`. The `serverAlias` element does not have attributes and its body specifies the server alias.

application Element

This element identifies a specific instance of an Essbase or Analytic Services application. An example is shown on line [04]. The `application` element has one attribute, `name`, which is required. This name must match the application name in the Essbase or Analytic Services database connection stored in the Web Analysis repository. The `application` element can contain only one or more `database` elements.

database Element

This element identifies a specific instance of an Essbase or Analytic Services database. An example is shown on line [05]. The `database` element has one attribute, `name`, which is required. This name must match the database name in the Essbase or Analytic Services database connection stored in the Web Analysis repository. The `database` element must contain one or more `dim` or `newDim` elements.

dim Element

This element identifies a specific instance of an Essbase or Analytic Services dimension within a unique database. Examples are shown on lines [07] and [09]. The `dim` element must contain the attribute `oldName` to identify the dimension. There are three optional attributes for each element:

- `newName`—New name for this dimension
- `oldAlias`—Current alias for this dimension
- `newAlias`—New alias for this dimension

If there is no `newName` or `newAlias` attribute for the `dim` element, it is not renamed. An example of this could be the case when a dimension name did not change, but members within that dimension were renamed. The `oldAlias` attribute should be included if it is defined in the outline, so that top level member selections using the alias can be identified. This is necessary because in Essbase or Analytic Services, the top level member of a dimension uses the dimension name and alias. Because members may be stored by name or alias in repository objects, `oldName` and `oldAlias` must be included for all `dim` elements. This element can contain zero or more `member` elements only. This would be the case if only the dimension name or alias changed, but no members in that dimension were renamed.

member Element

This element identifies a specific instance of an Essbase or Analytic Services member within a unique dimension. Examples are shown on lines [11] and [12]. The `member` element must contain the attribute `oldName` to identify the member. There are three optional attributes for each element:

- `newName`—New name for this member
- `oldAlias`—Current alias for this member
- `newAlias`—New alias for this member

The `oldAlias` attribute should be included if it is defined in the outline, so that member selections using the alias can be identified. Because members may be stored by name or alias in repository objects, `oldName` and `oldAlias` must be included for all `member` elements. This element may not contain other elements.

newDim Element

This element identifies a specific instance of a new Essbase or Analytic Services dimension within a unique database. The `newDim` element must contain the attribute `name` to uniquely name the dimension. An optional attribute `alias` may exist to define an alias for this dimension. An example of this is shown on line [16].

If the dimension is an attribute dimension, the required XML attribute `parentDim` must be included in the element to associate the attribute dimension with its parent dimension. An example of this is shown above on line [18].

Finally, if the dimension has associated attribute dimensions, they must be defined in `attrDim` elements. This is the only case when the `newDim` element may contain child elements, and there can be multiple `attrDim` elements in it.

attrDim Element

This element identifies a specific instance of an Essbase or Analytic Services attribute dimension to associate with a new dimension. Examples are shown on lines [21], [22], and [23]. The

`attrDim` element must contain the attribute `name` to uniquely identify the attribute dimension. This element cannot contain other elements.

Using the Rename Utility

► To use the Rename Utility:

- 1 **Make a backup of the Web Analysis repository.**
- 2 **Create a map file that defines old and new values in the data source that need to be replaced in the Web Analysis repository. See “Rename Utility Map File” on page 295.**
- 3 **Launch the start script** (`RenameUtil.bat` or `RenameUtil.sh`).
- 4 **Select the Repository Type** (Microsoft SQL Server, DB2, MySQL or Oracle).
- 5 **Enter the necessary RDBMS Repository connection fields:**
 - Server Name
 - Database Name / Tablespace Name (Oracle)
 - Port Number
 - SID (Oracle only)
 - Web Analysis User
 - Web Analysis Password
- 6 **Select the map file location.**

7 **Click Finish.**

The Confirm tab is displayed with connection confirmation and map file verification.

8 **Click Rename.**

A confirmation message is displayed.

9 **Click Yes to proceed with processing.**

The process begins with all activity listed in the Confirm tab. For example:

```
Preparing rename mapping rules...
Reading rename mappings from renamer-map.xml
Building list of rename mappings.

Processing Web Analysis Reports
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Product Sales" (ID = 214)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Product Profitability" (ID =
217)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Regional Analysis" (ID = 220)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/KPI Scorecard" (ID = 223)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Expense Analysis" (ID = 226)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/State Rankings" (ID = 229)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/High\Low States" (ID = 232)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Margin Chart" (ID = 235)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Product Share" (ID = 238)
```

```
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Product Budget" (ID = 241)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Sales Forecast" (ID = 244)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/Profit vs Sales" (ID = 247)
Report "/Groups/Everyone/Reports/_Sample Reports/Samples/KPI Details" (ID = 250)
```

Renamer.properties

The `Renamer.properties` file provides the default choices displayed by the Rename Utility in the Hyperion Web Analysis Renamer dialog box.

Use of `Renamer.properties` is optional; it eliminates the need to enter information that is repeated each time the utility is run. If properties are not included in `Renamer.properties`, the corresponding input fields are left blank. Users can enter values for fields from within the Renamer Utility. `Renamer.properties` provides descriptive comments and sample entries for each property, and contains these variables:

Variable Name	Description
# MapFile	Map file name
# ReposServer	Server name where the repository exist
# ReposType	Type of repository selected
# ReposSID	Repository SID
# ReposName	Repository database name
# ReposUser	User name
# ReposPassword	User password

Glossary

! See *bang character (!)*.

#MISSING See *missing data (#MISSING)*.

access permissions A set of operations that a user can perform on a Hyperion resource.

accessor Input and output data specifications for data mining algorithms.

account A dimension that represents an accounting container that identifies the location and primary nature of the data.

account type The definition of how an account's value flows over time, and its sign behavior. Account type options can include expense, income, asset, liability, and equity. Expense examples: payroll expenses, salaries, office supplies, legal expenses, and rent. Revenue examples: sales, interest income, and other income. Asset examples: cash, accounts receivable, fixed assets, and accumulated depreciation. Liability examples: accounts payable, accrued expenses, and long-term debt. Equity examples: common stock, preferred stock, additional paid-in-capital, and retained earnings.

accountability map A visual, hierarchical representation of the responsibility, reporting, and dependency structure of your organization. An Accountability map depicts how each accountability team in your organization interacts to achieve strategic goals. An accountability team is also known as a critical business area. For example, team, department, or office.

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.

active user A user who is entitled to access the system.

active user/user group The user or user group identified as the current user by user preferences. Determines default user preferences, dynamic options, access, and file permissions. You can set the active user to your user name or any user group to which you belong.

activity-level authorization Defines user access to application components and the types of activities they can perform on the application component. Activity-level authorization controls whether a given user may perform a certain action in an application and is independent of the data that will be operated on by the action. Data access is controlled by data-level authorization.

ad hoc report An online analytical query created on-the-fly by an end user.

adaptive states Interactive Reporting level of permission. There are six levels of permission: view only, view and process, analyze, analyze and process, query and process, and data model and analyze.

adjustment See *journal entry (JE)*.

Advanced Relational Access Advanced Relational Access is the integration of a relational database with an Analytic Services multidimensional database. However, with Advanced Relational Access, you can build entire dimensions, with the exception of the Account dimension, so that all data remains in the relational database and is mapped to summary-level data residing in the Analytic Services database. Advanced Relational Access uses MDX extensively and only works with aggregate storage outlines. Hybrid Analysis will continue to use SQL as the data access mechanism and work with both aggregate storage and block storage outlines.

agent An Analytic 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 that summarizes or performs analysis on data. Sum, calculation of an average, and identification of a maximum value are examples of aggregate functions.

aggregate limit A limit placed on an aggregated request line item or aggregated metatopic item.

aggregate storage database The database storage model provided by Enterprise Analytics. It is designed to support large-scale, sparsely distributed data which is categorized into many, potentially large dimensions. Upper level members and formulae are dynamically calculated, and selected data values are aggregated and stored, typically with improvements in overall aggregation time.

aggregate view An aggregation point based on the levels of the members within each dimension. These are used by the Enterprise Analytics kernel to quickly derive data values for queries. For example, instead of aggregating from the bottom of an outline, Enterprise Analytics starts at the closest possible aggregate view and adds 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.

algorithm A method (set of instructions) that the Data Mining Framework uses to analyze data.

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.

Analytic Server The server component of Analytic Services.

Analytic Server log A record of actions performed by the Analytic Server (agent).

Analytic Services An OLAP engine in the Hyperion platform. An instance of Analytic Services is an Analytic Server.

Analyze The main Web Analysis interface for analysis, presentation and reporting.

ancestor A branch member that has members below it. For example, in a dimension that includes years, quarters, and months, the members Qtr2 and 2006 are ancestors of the member April.

appender A Log4j term for destination.

applet In Java, a program that can run in a Web browser. Small programs written in languages other than Java are sometimes referred to as applets.

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.

ARBORPATH An environment variable that specifies the Analytic Services root directory.

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, financial reports and so forth. Also referred to as an object.

asset account An account type that stores values that represent a company's assets.

attribute Characteristics of a dimension member. For example, an Employee Number dimension member may have attributes of Name, Age, or Address or a product dimension 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 the following 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, by 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, or date 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.

attributes In data mining, a class of values used as a factor in analysis of a set of data.

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.

automated stage A stage that does not require human intervention, for example, a data load.

auto-reversing journal A journal for entering adjustments that you want to reverse in the next period.

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.

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 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 Analytics 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.

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 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.

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.

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 A pane displaying a list of elements available to the active section. For example, if Query is the active section, the Catalog pane displays a list of database tables. If Pivot is the active section, the Catalog pane displays a list of results columns. If Dashboard is the active section, the Catalog pane displays a list of embeddable sections, graphic tools, and control tools.

categories Groupings by which data is organized (for example, month).

cause and effect map A map that depicts how the elements that form your corporate strategy are interrelated and how they work together to meet your organization's strategic goals. A Cause and Effect map tab is automatically created for each of your Strategy maps.

CDF See *custom-defined function (CDF)*.

CDM 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 of up to 599 bytes for a cell in an Analytic Services database. Cell notes are a type of LRO.

CHANGED status A consolidation status that indicates data has changed for an entity.

chart A graphical representation of spreadsheet data. The visual nature of charts expedites analysis, color-coding, and visual cues that aid comparisons. There are many different chart types.

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 Two or more servers or databases connected together in such a way that they behave as a single resource to share task loads and provide failover support. Clustering 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 within a given category; useful for side-by-side category analysis. Clustering is only done 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 Analytic Services Kernel Isolation Level setting that affects how Analytic Services 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 an XML document to be configured by the product administrator or installer of the software. 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 \(.oce\)](#).*

console The console is displayed on the left side of the Enterprise Metrics workspace. The console is context sensitive, depending on the page displayed.

consolidation The process of gathering data from dependent entities and aggregating the data to parent entities. For example, if the dimension Year consists of the members Qtr1, Qtr2, Qtr3, and Qtr4, its consolidation is Year.

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 area The content area is displayed on the right side of the Workspace and provides specific information for the page that you are using.

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.

conversion rate See *exchange rate*.

cookie A small piece of information placed on your computer by a Web site.

correlated subqueries Subqueries that are evaluated once for every row in the parent query. A correlated subquery is created by joining a topic item in the subquery with one of the topic items 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. A CSF is owned by a strategic objective or a critical process and is a parent to one or more actions.

crosstab reporting A type of reporting that categorizes and summarizes data in a table format. The cells within the table 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 Analytic Services database is a cube.

currency conversion A process that converts currency values in a database from one currency into another currency. 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 partition A dimension type that separates local currency members from a base currency, as defined in an application. A currency partition 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. For example, channel, product, department, project, or region could be custom dimensions.

custom property A property of a dimension or a 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) Analytic Services calculation functions that are developed in the Java programming language and added to the standard Analytic Services calculation scripting language by means of MaxL. See also *custom-defined macro (CDM)*.

custom-defined macro (CDM) Analytic Services macros that are written with Analytic Services calculator functions and special macro functions. Custom-defined macros use an internal Analytic Services 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 A type of function that computes aggregate values, including averages, maximums, counts, and other statistics, that summarize groupings of data.

data load rules A set of criteria or rules that determines how to load data from a text-based file, a spreadsheet, or a relational data set into a database.

data lock A user-controlled mechanism that prevents changes to data according to specified criteria, such as period or scenario.

data mining The process of searching through an Analytic Services 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 A file that stores definitions and properties used to connect to data sources. Database connections enable database references to be portable and widely used.

dense dimension In block storage databases, a dimension likely to contain data for every combination of dimension members. For example, a time dimension is typically a dense dimension because it contains all combinations of all members. Contrast with sparse dimension.

dependent entity An entity that is owned by another entity in the organization.

descendant Any member below a parent in the database outline. For example, 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 currency The currency to which the 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. For example, 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. Each dimension usually contains a hierarchy of related members grouped within it. For example, a Year dimension often includes members for each time period, such as quarters and months.

dimension build The process of adding new dimensions and members (without data) to an Analytic Services outline.

dimension build rules Specifications, similar to data load rules, that Analytic Services 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 Enterprise Metrics, a table in a star schema with one part primary key. (3) In Analytic Integration Services, a container in the OLAP model for one or more relational tables that define a potential dimension in Analytic Services.

dimension type A dimension property that enables the use of predefined functionality. Dimensions that are 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 directly in the exchange rate table. The direct rate is used for currency conversion. For example, assume you want to convert balances from JPY to USD. In the exchange rate table, you 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 organization of the dimensional hierarchy. Drilling down moves the user perspective from general aggregated data to more detailed data. For example, drilling down can reveal the hierarchical relationships between year and quarters or between quarters and months.

drill-through The navigation from a data value in one data source to corresponding data in another data source.

duplicate alias name A name that occurs more than once in an alias table and that can be associated with two or more different members 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. Each occurrence of the name represents a different member in the database. For example, two members named “New York” exist in the same database. One member represents New York state and the other member represents New York city.

duplicate member outline A database outline that contains duplicate member names.

Dynamic Calc and Store members A member in a block storage outline that Analytic Server calculates only upon the first retrieval of the value. Analytic Server then stores the calculated value in the database. Subsequent retrievals of a Dynamic Calc and Store member do not require calculating.

Dynamic Calc members A member in a block storage outline that Analytic Server calculates only at retrieval time. Analytic Server discards calculated values after the retrieval request is complete.

dynamic calculation In Analytic Services, a calculation that occurs only when you retrieve data on a member that has been 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 the members are calculated at retrieval time.

dynamic member list A named member set that is a system-created list based on predefined criteria. The dynamic member list is automatically refreshed whenever the list is referenced in the application. As dimension members are added and deleted, the dynamic member list automatically reflects the changes by reapplying the user-defined criteria.

dynamic reference A pointer in the rules file to header records in a data source.

dynamic report A report containing current data. A report becomes a dynamic report when you run it.

Dynamic Time Series A process that performs period-to-date reporting

dynamic view account An account type indicating that the account value is calculated dynamically from the data that you are viewing.

Edit Data An interface for changing data values and sending edits back to Essbase Analytics.

elimination The process that occurs when certain transactions are zeroed out or “eliminated” because they were generated between entities within the same organization.

employee Users responsible for, or associated with, specific business objects. Employees do not necessarily work for an organization, such as an analyst or consultant. An employee must be associated with a user account for authorization purposes.

encoding A method for mapping bit combinations to text characters for creating, storing, and displaying character text. Each encoding has a name; for example, UTF-8. Within a specific 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 that enables you to adjust the date range shown in the chart. For example, an ending period of “month”, produces a chart that shows information through the end of the current month.

Enterprise View An Administration Services feature that enables viewing and managing of the Analytic Services environment from a graphical tree view. From Enterprise View, you can operate directly on Analytic Services objects.

entity A dimension representing organizational units. Examples include divisions, subsidiaries, plants, regions, products, or other financial reporting units.

essbase.cfg The name of an optional configuration file for Analytic Services. Administrators may enter parameters and values in this file to customize Analytic Server functionality. Some of the configuration settings may also be used with Analytic Services clients to override the Analytic Server settings.

EssCell The spreadsheet cell retrieve function into an Analytic Services database. An EssCell function is entered into a cell in Essbase Spreadsheet Add-in to retrieve a single database value that represents an intersection of specific database members.

ESSCMD A command-line interface that is used to perform Analytic Services operations interactively or through a batch script file.

ESSLANG The Analytic Services environment variable that defines the encoding that Analytic Server uses 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 an exception is generated.

exchange rate A numeric value used to convert 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 associated with an exchange rate. Different rate types are used because there may be multiple rates for a period and year. Users traditionally define a rate at period end for the average rate of the period and also a rate for the end of the period. Additional rate types are historical rates, budget rates, forecast rates, and so on. All these exchange rate types apply to the same point in time.

expense account An account type that stores periodic and year-to-date values that decrease net worth if the value is positive.

Extensible Markup Language (XML) A language comprised of a set of tags used to assign attributes to data that can be interpreted between applications based on the schema used.

external authentication Logging on to Hyperion applications by means of user information stored outside the application, typically in a corporate user directory such as MSAD or NTLM.

externally triggered events Non-time-based events that are used to schedule job runs.

Extract, Transform, and Load (ETL) Data source-specific programs that are used to extract and migrate data to an application.

extraction command A type of Analytic Services reporting command that handles the selection, orientation, grouping, and ordering of raw data extracted from a database. These commands begin with the less than (<) character.

extrapolation A means of showing projected figures. Extrapolation from the current date to the end of the current period is displayed on Enterprise Metrics charts with a white area of the bar. If a line chart shows extrapolation, the line that is extrapolated is dotted.

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.

field A value or item in a data source file that will be loaded into an Analytic Services database.

file delimiter One or more characters, such as commas or tabs, that separate fields in a data source.

filter A constraint placed on data sets to restrict values to specific criteria. For example, to exclude certain tables, metadata, data values, or to control access.

flow account An unsigned account type that stores periodic and year-to-date values.

folder A file that contains other files for the purpose of ordering and structuring a hierarchy.

footer The text or images that are displayed at the bottom of each page in a report. A footer can contain a page number, date, company logo, document title or file name, author name, and so on. Footers can contain dynamic functions and static text.

format The visual characteristics of a document or a report object.

formula A combination of operators and calculation functions, as well as dimension names, member names, and numeric constants, used to perform specific calculations on members of a database.

frame An area of the desktop where information is displayed to the user. There are two main areas on the desktop: the navigation frame and the workspace frame.

free-form grid A data object that presents manually entered data and data from different types of data sources, enabling you to integrate data in dynamic calculations.

free-form reporting A method of creating reports in which you type members of dimensions or report script commands in a worksheet.

function A predefined routine that returns a value, a range of values, a Boolean value, or one or more database members.

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.

generation name A unique name that describes a generation.

generic jobs Jobs that are neither Production Reporting nor Interactive Reporting jobs.

global report command A command that is executed when it occurs in the report script file and that stays in effect until the end of the report file or until another global command replaces it.

grid POV A means for specifying members for a dimension on a grid without placing the dimension on the row, column, or page intersection. A report designer can set the POV values at the grid level, preventing the user POV from affecting that particular grid. If a dimension has only one value for the entire grid, the dimension should be put into the grid POV instead of the row, column, or page.

group A container that enables the assignment of similar access permissions to a group of users.

GUI Graphical user interface

header record One or more records at the top of a data source. Header records describe the contents of the data source.

High Availability Server A server running the Analytic High Availability Services software that manages requests between the client and Analytic Servers, in addition to providing various services, such as event handling and clustering.

highlighting Depending on your configuration, you may see highlighting applied to a chart cell value or ZoomChart detail values. A value can be highlighted in red (indicating the value is bad), yellow (indicating that the value is a warning), or green (indicating the value is good).

holding company An entity that is part of a legal group of entities, and has either a direct or indirect investment in all the other entities within the legal 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 LSC.

Hybrid Analysis The integration of a relational database with an Analytic Services multidimensional database so that lower-level data remains in the relational database and is mapped to summary-level data residing in the Analytic Services database. Hybrid Analysis enables Analytic Services to take advantage of the mass scalability of a relational database while maintaining a multidimensional view of the data in a live environment.

hyperlink A link to a file, Web page, or an HTML page on an intranet.

Hypertext Markup Language (HTML) A programming language of tags that specify how Web browsers display data.

identity A unique identification of one valid user or group existing on an external authentication repository.

image bookmarks Graphic links to Web personal pages or repository items.

IMPACTED status A consolidation status indicating that the data that rolls up to this parent entity has changed.

implied share A member with only one child, or a member with multiple children of which only one child is consolidated. For this reason the parent and child share the same value.

inactive group A group that cannot access the system because an administrator inactivated it.

inactive service A service that is on hold or excluded from the list of services to be started.

INACTIVE status A consolidation status indicating this entity is not active for the current period.

inactive user A user who cannot access the system because an administrator inactivated the user account.

income account An account type that stores periodic and year-to-date values that increase net worth if the value is positive.

index (1) A method that Analytic Services uses to retrieve block storage data. The retrieval is based on the combinations of sparse dimensions. (2) The index file.

index cache A buffer in memory that holds index pages.

index entry A pointer to an intersection of sparse dimensions. Each index entry points to a data block on disk and locates a particular cell within the block by means of an offset.

index file A file that Analytic Services uses to store data retrieval information from block storage databases. The index file resides on disk and contains index pages.

index page A subdivision of an index file containing entries that point to data blocks.

input block A type of data block that has at least one loaded data value.

input data Any data that is loaded from a data source and is not generated by calculating the database.

Install_Home A variable name for the path and directory where Hyperion applications are installed. Refers to one instance of a Hyperion application when multiple applications are installed on the same computer.

integration Process that is run to move data between Hyperion applications 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 that tracks which data blocks have been updated since the last calculation.

Interactive Reporting connection file (.oce) Files that encapsulate database connection information. Interactive Reporting connection files(.oce) specify the database API (ODBC, SQL*Net, etc.), database software, the network address of the database server, and your database user name. Administrators create and publish Interactive Reporting connection files(.oce).

interactive user Interactive users can review and approve budgets, set up e-mail notification to other users, create Web-based data forms, create worksheets using Hyperion Smart View for Office, create reports using Hyperion Reports, create and launch integrations using Hyperion Application Link, create and launch business rules using Hyperion Business Rules and/or Analytic Services, enter and view data in Web data forms and Hyperion Smart View.

intercompany elimination See *elimination*.

intercompany matching The process of comparing balances for pairs of intercompany accounts within an application. Intercompany receivables are typically matched or compared to intercompany payables. The system uses these matching accounts to eliminate any intercompany transactions from your organization's consolidated totals.

intercompany matching report A report that compares the balances of a group of intercompany accounts and indicates if the accounts are in balance or out of balance for any branch of an organization.

interdimensional irrelevance A situation in which a specific dimension does not intersect with other dimensions. The data is not irrelevant, but because the data in the specific dimension cannot be accessed from the other dimensions, those other dimensions are not relevant to the specific dimension.

intersection A unit of data representing the intersection of dimensions in a multidimensional database; also, a worksheet cell.

Investigation See *drill-through*.

isolation level An Analytic Services 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.

job parameters The compile time and runtime values necessary to run a job.

job parameters Reusable, named job parameters that are accessible only to the user who created them.

jobs A collection of documents with special properties and that can be executed to generate output. A job can contain Interactive Reporting documents, Production Reporting documents, or generic documents.

join A link between two relational database tables based on common content in a column or record or a relational database concept indicating a link between two topics. A join typically occurs between identical or similar items within different topics. For example, a row record in the Customer table is joined to a related record in the Orders table when the Customer ID value for the record 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.

latest A key word that is used to extract data values based on the member defined as the latest period of time.

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. This means that Qtr1 and Qtr4 are also in the same generation. However, in a different database with a ragged hierarchy, Qtr1 and Qtr4 might not necessarily be in the same level simply because they are in the same generation.

legend box An informative box containing color-keyed labels to identify the data categories of a given dimension.

level A layer of a hierarchical tree structure that defines database member relationships. Levels are ordered incrementally from the bottom member of the dimension (level 0) up through the parent members.

level 0 block A data block that is created for sparse member combinations when all of the members of the sparse combination are level 0 members.

level 0 member A member that has no children.

liability account An account type that stores “point in time” balances that represent 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.

line chart A chart that displays one to 50 data sets, with automatic, uniform spacing along the X-axis. Each data set is rendered by a line. A line chart can optionally show each line set stacked on the preceding ones, using either the absolute value or a normalized value from 0 to 100 percent.

line item detail The lowest level of detail in an account.

link (1) Fixed references to a specific object in the repository. Links can reference folders, files, shortcuts, and other links using unique identifiers. (2) The point during the execution of a taskflow instance where the activity in one stage ends and control passes to another stage, which starts.

link condition A logical expression that is evaluated by the taskflow engine to decide the sequence of stage execution within a taskflow.

linked data model Documents that are linked to a master copy in a repository

linked partition A form of shared partition that provides the ability to use a data cell to link together two different databases. When a user clicks a linked cell in a worksheet, for example, Analytic Services opens a new sheet displaying the dimensions in the second database. The user can then drill down into the available dimensions in the second database.

linked reporting object (LRO) A cell-based link to an external file such as cell notes, URLs, or files that contain text, audio, video, or pictures. Note that support of Analytic Services LROs in Financial Reporting applies only to cell notes at this time (by way of Cell Text functions).

local currency 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 Results of other queries within the same data model. These results can be dragged into the data model to be used in local joins. Local results are displayed in the catalog when requested.

locale A computer setting that identifies the local language and cultural conventions such as the formatting of currency and dates, sort order of the data, and the character set encoding to be used on the computer. Analytic Services uses only the encoding portion of the locale. *See also [encoding](#) and [ESSLANG](#).*

locale header record An additional 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 the data from being modified by any process, user, or other means.

locked data model Data models that cannot be modified by a user.

LOCKED status A consolidation status indicating that an entity contains data that is locked for the specified period.

Log Analyzer An Administration Services feature that enables filtering, searching, and analysis of Analytic Services logs.

LRO *See [linked reporting object \(LRO\)](#).*

LSC services The services that are configured with the Local Service Configurator. They include Global Services Manager (GSM), Local Services Manager (LSM), Session Manager, Authentication Service, Authorization Service, Publisher Service, and in some contexts, Data Access Service (DAS) and Interactive Reporting Service.

managed server An application server process running in its own Java Virtual Machine (JVM).

manual stage A stage that requires human intervention to complete the stage.

Map Navigator A feature that displays your current position on a Strategy, Accountability or Cause and Effect map. Your current position is indicated by a red outline on the Map Navigator.

master data model A data model that exists independently and is referenced as a source by multiple queries. When you use a master data model, the text “Locked Data Model” is displayed in the Content pane of the Query section. This means that the data model is linked to the master data model displayed in the Data Model section, which may be hidden by an administrator.

mathematical operator A symbol that defines how data is calculated. A mathematical operator can be any of the standard mathematical or Boolean operators; for example, +, -, *, /, and %. Mathematical operators are used in formulas and outlines.

MaxL The multidimensional database access language for Analytic Services, 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 Analytic Services for batch or interactive system-administration tasks.

MaxL DML Data manipulation language used in Analytic Services for data query and extraction.

MaxL Perl Module A Perl module (essbase.pm) that is part of the MaxL DDL component of Analytic Services. The essbase.pm module can be added to the Perl package to provide access to Analytic Services databases from Perl programs.

MaxL Script Editor A script-development environment provided by Administration Services Console. The MaxL Script Editor is an integrated alternative to using a text editor and the MaxL Shell for creating, opening, editing, and running MaxL scripts for Analytic Services system administration.

MaxL Shell An interface for passing MaxL statements to Analytic Server. The MaxL Shell executable file, located in the bin directory for Analytic Services, is named essmsh (UNIX) or essmsh.exe (Windows).

MDX (multidimensional expression) The language used to give instructions to OLE DB for OLAP-compliant databases, as SQL is the language used for relational databases. When you build the OLAPQuery section's Outliner, Intelligence Clients translate your requests into MDX instructions. When you process the query, MDX is sent to the database server. The server returns a collection of records to your desktop that answer your query. *See also [SQL spreadsheet](#).*

measures Numeric values in an OLAP database cube that are available for analysis. Measures may be 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 other member lists within a dimension.

member load In Analytic Integration Services, the process of adding new dimensions and members (without data) to an Analytic Services outline.

member selection report command A type of Report Writer command that selects ranges of members based on database 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 the member to which it is associated and executes the format command before it processes the member.

merge A data load option that clears existing values from the accounts specified in the data load file and then replaces them with the values in the data load file. Unlike the Replace option, the Merge option clears only the values from the accounts specified in the 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 sampling The process of retrieving a sample of the members of a selected dimension in a drill-down operation.

metadata security Security set at the member level to control users from accessing certain members in an outline.

metaoutline In Analytic Integration Services, a template containing the structure and rules for creating an Analytic Services outline from an OLAP model.

metric A numeric measurement computed from your business data. Metrics help you assess the performance of your business and analyze trends in your company.

migration The process of copying an application or users from one environment or computer to another.

MIME Type (Multipurpose Internet Mail Extension) An attribute that describes the format of data in an item, so that the system knows which application to launch to open the object. A file's mime type is determined either by the file extension or the HTTP header. Plug-ins tell browsers what mime types they support and what file extensions correspond to each mime type.

minireport A minireport is a component of a report, and includes layout, content, hyperlinks, and the actual query or queries to load the report. Each report can include one or more minireports.

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 used (applied) against a wider set of data to generate useful information about that data. (2) A file or string of content containing an application-specific representation of data. Models are the basic data managed by Shared Services. Models are 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.

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 column heading format for report columns that displays data from more than one dimension. For example, a column heading that contains both 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 type of model in Shared Services 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.

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 range of values. For example, to classify customers by age, an Age Group attribute dimension can be defined that contains members for the following age ranges: 0-20, 21-40, 41-60, and 61-80. Each member of the Customer dimension can be associated with a particular Age Group range. Data can then be retrieved based on the age ranges rather than based on individual age values.

ODBC Open Database Connectivity. A database access method used from any application without regard to 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 Online Analytical Processing.

OLAP Metadata Catalog In Analytic 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 Analytic 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 A hierarchy of entities 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 Analytic Services data file.

page heading A type of report heading that lists members that are 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 an extension of PAL. Each palette contains 16 colors that complement each other and can be used to set the color elements of a dashboard.

parallel calculation An optional calculation setting. Analytic Services divides a calculation into tasks and calculates some of the tasks at the same time.

parallel data load In Analytic Services, the concurrent execution of different stages of a single data load by multiple process threads.

parallel export The ability to export Analytic Services 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 subcube within a database. A partition is composed of one or more areas. These areas are composed of cells from a particular portion of the database. For replicated and transparent partitions, the number of cells within an area must be the same for both the data source and the data 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 Analytic Services applications.

pattern matching The ability to match a value with any or all characters of an item that is entered as a criterion. A missing character may be represented by a wild card value 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 Analytic Services operation or setting. For example, an Analytic Services administrator may limit the persistence of user name and password validity.

personal pages Your personal window to information in the repository. 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 Analytic Services 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 slice of data at the intersection of a scenario, version, and entity. It is the basic unit for preparing, reviewing, annotating, and approving plan data.

plot area The area bounded by the X, Y, and Z axes; For pie charts, the rectangular area immediately 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.

POV (point of view) A feature that lets you work with dimension members that are not assigned to a row, column, or page axis. For example, you could assign the Currency dimension to the POV and select the Euro member. By selecting this POV in a data form, all the data in the form is displayed in Euro values.

precalculation The process of calculating the database prior to user retrieval.

precision Number of decimal places displayed in a number.

predefined drill paths Paths that enable you to drill directly 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. Presentations are not reports copied into a set. A presentation is a list of pointers referencing reports in the repository.

preserve formulas The process of keeping user-created formulas within a worksheet while retrieving new data.

primary measure A high-priority measure that is more important to your company and business needs than many other measures. Primary measures are displayed in the Contents frame and have Performance reports.

product In Shared Services, a product is an application type, such as Planning or Performance Scorecard.

Production Reporting A specialized programming language for data access, data manipulation, and creating Production Reporting documents.

project An instance of Hyperion products that are grouped together to comprise an implementation. For example, a Planning project may consist of a Planning application, an Analytic Services cube, and a Financial Reporting Server instance.

promote The action to move a data unit to the next review level, allowing a user having the appropriate access to review the data. For example, an analyst may promote the data unit to the next level for his supervisor's review.

promotion The process of transferring artifacts from one environment or machine to another; for example, from a testing environment to a production environment.

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 Hyperion resources.

proxy server A server that acts as an intermediary between a workstation user and the Internet to ensure security.

public job parameters Reusable, named job parameters created by an administrator and accessible to users who have the requisite access privileges.

public recurring time events Reusable time events created by an administrator 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 To request information from a data provider. For example, queries are used to access a relational data source.

query governor An Analytic Integration Server parameter or Analytic Server configuration setting that controls the duration and size of the queries made to the data source.

range A set of values that includes an upper and lower limit, and the values that fall between the limits. A range can consist of numbers, amounts, or dates.

reconfigure URL URL used to reload servlet configuration settings dynamically when a user is already logged on to the Workspace.

record In a database, a group of fields that make up one complete entry. For example, a record about a customer might contain fields for name, address, telephone number, and sales data.

recurring template A journal template used to make identical adjustments in every period.

recurring time event An event that specifies a starting point and the frequency for running a job.

redundant data Duplicate data blocks that Analytic Services retains during transactions until Analytic Services commits the updated blocks.

regular journal A feature used to enter one-time adjustments for one period only. Regular journals can be balanced, balanced by entity, or unbalanced.

relational database A type of database that stores data in the form of related two-dimensional tables. *Contrast with [multidimensional database](#).*

replace A data load option that clears the existing values from all accounts for the periods specified in the data load file, and then loads the values from the data load file. If an account is not specified in the load file, its values for the specified periods are cleared during the load.

replicated partition A portion of a database, defined through Partition Manager, that is used to propagate an update to data that is mastered at one site to a copy of data that is stored at another site. Users are able to access the data as though it were part of their local database.

replication In Analytic High Availability Services, the copying of data from one Analytic Services application database to another.

Report Extractor An Analytic Services component that retrieves report data from the Analytic Services database when a report script is run.

report object A basic element in report designs. Report objects have specific properties that define their behavior or appearance. Report objects include text boxes, grids, images, and charts.

report script A text file containing Analytic Services Report Writer commands that generate one or more production reports.

Report Viewer An Analytic Services component that displays the complete report after a report script is run.

reporting currency The currency in which an enterprise prepares its financial statements. Currency is converted from local currencies to one or more reporting currencies. The converted reporting currency values are stored.

resources Objects or services that the system manages. Examples of a resource include a role, user, group, file, job, publisher service, and so on.

restore An operation to reload data and structural information after a database has been damaged or destroyed. The restore operation is typically performed after you shut down and restart the database.

restructure An operation to regenerate or rebuild the database index and, in some cases, the data files.

result frequency The algorithm used to create a set of dates for the collection and display of results.

review level A Process Management review status indicator that represents the process unit level. Review levels include the following: Not Started, First Pass, Review Level 1, Review Level 2 ... Review Level 10, Submitted, Approved, and Published.

role The means by which access permissions are granted to users and groups for Hyperion resources.

roll-up See [consolidation](#).

root member The highest member in a dimension branch.

row heading A report heading that lists members down a report page. The members are listed under their respective row names.

RSC services The services that are configured with the Remote Service Configurator. They include Repository Service, Service Broker, Name Service, Event Service, and Job Service.

rules User-defined formulas.

runtime prompt A system variable that allows values to be entered during the execution of an allocation process. Values can be members, strings, or numbers.

sampling The process of selecting a representative portion of an entity for the purpose of determining the characteristics of that entity. *See also [metadata sampling](#).*

saved assumptions Planning assumptions, created globally or locally, that can be named, saved and referenced in planning methods and allocations to help drive plan and budget values.

scale The range of values on the Y axis of a chart.

scaling Determines how currency values are displayed in a data form or report: in whole numbers, tens, hundreds, thousands, millions, and so on.

scenario A dimension that specifies a data classification. Examples include Actuals, Budget, Forecast1, and Forecast2.

schedule Specify the job that you want to run and the time and job parameter list for running the job.

scope The area of data encompassed by any Analytic Services 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 (Analytic Server), applications on Analytic Server, or databases within Analytic Server applications. *See also [persistence](#).*

score The level at which specified targets are being achieved. It is usually expressed as a percentage of the target for a given time period.

scorecard Business Object used to represent the progress of an employee, strategy element, or accountability element toward specific goals. Scorecards ascertain this progress based on the data collected for each measure and child scorecard you add to the scorecard.

scorecard report A report that presents the results and detailed information about scorecards attached to employees, strategy elements, and accountability elements.

secondary measure A low-priority measure that is less important to you than primary measures. Secondary measures do not have Performance reports but can be used on scorecards and to create dimension measure templates.

Section pane Lists all sections that are available in the current Intelligence Client document.

security agent A Web access management solutions provider employed by companies to protect Web resources; also known as Web security agent. The Netegrity SiteMinder product is an example of a security agent.

security platform A framework enabling Hyperion applications to use external authentication and single sign-on using the security platform driver.

serial calculation The default calculation setting. Analytic Services divides a calculation pass into tasks and calculates one task at a time.

services Resources that provide the ability to retrieve, modify, add, or delete business items. Some services are Authorization, Authentication, Global Service Manager (GSM).

servlet A piece of compiled code executable by a Web server.

Servlet Configurator A software utility for configuring all of the locally installed servlets.

session The time between login and logout for a user connected to Analytic Server.

set In MaxL DML, a required syntax convention for referring to a collection of one or more tuples. For example, in the following MaxL DML query, `SELECT { [100-10] } ON COLUMNS FROM Sample.Basic { [100-10] }` is a set.

shared application An application in Shared Services that enables two or more products to share their models. *See also [model](#).*

shared member A member that shares storage space with another member of the same name. A storage property designates members as shared. The use of shared members prevents duplicate calculation of members that occur more than once in an Analytic Services outline.

Shared Services Application enabling users to share data between supported Hyperion products by publishing data to Shared Services and running data integrations.

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 siblings of each other.

single sign-on A feature that enables you to access multiple Hyperion products after logging on just once using external credentials.

slicer In MaxL DML, the section at the end of a query that begins with and includes the keyword WHERE.

smart tags Predefined properties that associate available actions with keywords in Microsoft Office applications. Smart tags are the mechanism by which the Hyperion menu is displayed and the end user can import content from Hyperion System 9 BI+ or use functions to display information from Financial Management or Analytic Services.

SmartCut A link to an item in the repository, in the form of a special URL.

snapshot Read-only data from a specific point in time.

source currency The currency from which the balances originate and 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 source currency is EUR.

sparse dimension In block storage databases, a dimension unlikely to contain data for all combinations of dimension members when compared to other dimensions. For example, not all customers have data for all products.

SPF files Printer-independent files created by a Production Reporting server that contains 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.

stacked charts A chart where the categories are viewed on top of one another for visual comparison. This type of chart is useful for subcategorizing within the current category. Stacking can be used from the Y and Z axis in all chart types except pie and line. When stacking charts the Z axis is used as the Fact/Values axis.

stage A description of a task that forms one logical step within a taskflow, usually performed by a single individual. A stage can be manual or automated.

stage action For automated stages, the action that is invoked to execute the stage.

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. Instead of creating a new regular journal every month, you can create a standard template that contains the common account IDs, entity IDs, or amounts. You can then use the template as the basis for many regular journals that contain similar adjustment information.

Start in Play The quickest method for creating a Web Analysis document. The Start in Play process requires you to specify a database connection, then assumes the use of a spreadsheet data object. Start in Play uses the highest aggregate members of the time and measures dimensions to automatically populate the rows and columns axes of the spreadsheet.

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 for an organization that is stated in concrete terms whose progress is determined by measuring results. Each strategic objective is associated with one perspective in your application, has one parent, the entity, and is a parent to critical success factors or other strategic objectives. It also has measures associated with it.

Strategy map A detailed representations of how your organization translates its high-level mission and vision statements into lower-level, constituent strategic goals and objectives.

structure view A view that displays a topic as a list of component items allowing users to see and quickly select individual data items. Structure view is the default view setting.

Structured Query Language The language used to give instructions to relational databases. When you build the Query section's Request, Limit, and Sort lines, Interactive Reporting translate your requests into SQL instructions.

subscribe Register an interest in an item or folder to receive automatic notification whenever the item or folder is updated.

Summary chart A chart that is displayed at the top of each chart column in the Investigate Section and plots metrics at the summary level, meaning that it rolls up all of the Detail charts shown below in the same column. All colors shown in a stacked bar, pie, or lines Summary chart also appear above each Drill button of the Detail charts and extend across the row, acting as the key.

super service A special service used by the startCommonServices script to start the RSC services.

supervisor A defined type of user who has 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. Supporting detail can include text, values, and operators that define how data aggregates.

suppress rows The option to exclude rows that contain missing values and to underscore characters from spreadsheet reports.

symmetric multiprocessing (SMP) A server architecture that enables multiprocessing and multithreading. Analytic Server supports multiple threads over SMP servers automatically. Thus, performance is not significantly degraded when a large number of users connect to a single instance of Analytic Server simultaneously.

sync The ability to synchronize models in Shared Services with models in the application.

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 A feature that allows you to transfer data from an application's metadata into an ASCII file.

target The expected result for a measure for a specified period of time, such as a day, quarter, month and so on. You can define multiple targets for one measure.

task list A listing of tasks for a particular user along with detailed status information for each task.

taskflow The automation of a business process in whole or in part, during which tasks are passed from one taskflow participant to another for actions, according to a set of procedural rules.

taskflow definition The representation of the business process in the taskflow management system, which enables the process to be automated. The taskflow definition consists of a network of stages and their relationships; criteria to indicate the start and end of the taskflow; and information about individual stages, such as participants, associated applications, associated activities, and so on.

taskflow instance The representation of a single instance of a taskflow including its state and associated data.

taskflow management system A system that defines, creates, and manages the execution of a taskflow. It enables the creation of taskflow definitions, interaction with taskflow participants (users or applications), and the launching of other applications during the execution of a business process.

taskflow participant The resource that performs the task associated with the taskflow stage instance. The taskflow system requires a participant for both manual and automated stages. For a manual stage, the task is shown on the task list for the user to execute the task. For an automated stage, Shared Services, along with the application, executes the task. For automated stages, the application executes the task on behalf of the participant.

TCP/IP *See* [Transmission Control Protocol/Internet Protocol \(TCP/IP\)](#).

template A predefined format that is designed to retrieve particular data on a regular basis and in a consistent format.

time dimension A dimension that defines the time period that the data represents, such as fiscal or calendar periods.

time events Triggers for execution of jobs.

time scale A scale that enables you to see the metrics by a specific period in time, such as monthly or quarterly.

time series reporting A process of reporting data based on a calendar date (for example, year, quarter, month, or week).

token An encrypted identification of one valid user or group on an external authentication system.

top and side labels In the Pivot section, the column and row headings on the top and sides of the pivot. These define categories by which the numeric values are organized.

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 name as the dimension name if a hierarchical relationship exists.

trace level A means of defining the level of detail captured in the log file.

traffic lighting Color-coding of report cells, or pins based on a comparison of two dimension members, or on fixed limits.

transformation (1) The process of transforming an artifact so that it functions properly in the destination environment after application migration. (2) In data mining, a way to modify 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 that is adapted by many companies and institutions around the world and that links 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 A mechanism that enables users who have been previously authenticated by external security criteria to log in to a Hyperion application, bypassing the login screen.

transparent partition A form of shared partition that provides the ability to access and manipulate remote data transparently as though it is part of a local database. The remote data is retrieved from the data source each time a request is made. Any updates made to the data are written back to the data source and become immediately accessible to both local data target users and transparent data source users.

trend How the performance of a measure or scorecard changed since the last reporting period or a date that you specify.

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.

triangulation currency A currency through which exchange rates can be derived. For example, if you set up the Euro/Dollar exchange rate and the Euro/Yen rate, the Dollar/Yen rate can be derived by using Euro as the triangulation currency.

triggers An Analytic Services feature that enables efficient monitoring of data changes in a database. If data breaks rules that you specified, Analytic Services alerts the user or system administrator.

trusted password A password that enables users who have been previously authenticated in another system to have access to other applications without reentering their passwords.

trusted user A user authenticated by some mechanism in the environment.

tuple In MaxL DML, a required syntax convention for referring to a member or a member combination from any number of dimensions. For example, in the Sample Basic database, (Jan) is a tuple, and so is (Jan, Sales), and so is ([Jan], [Sales], [Cola], [Texas], [Actual]).

two-pass calculation An Analytic Services 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 database outline.

UDA User-defined attribute, associated with members of an outline to describe a characteristic of the members. Users can specify UDAs within calculation scripts and reports so that they return lists of members that have the specified UDA associated with them. UDAs can be applied to dense as well as sparse dimensions.

UI User interface

unary operator A group of mathematical indicators (+, -, *, /, %) that define how roll-ups take place on the database outline.

unbalanced journal A journal in which the total debits do not equal the total credits.

uncommitted access An Analytic Services Kernel setting that affects how Analytic Services handles transactions. Under uncommitted access, concurrent transactions hold short-term write locks and can yield unpredictable results.

Unicode-mode application An Analytic Services application wherein character text is encoded in UTF-8, enabling users with their computers set up for different languages to share the application data. A Unicode-mode application can be created only on a Unicode-mode server.

Uniform Resource Locator (URL) 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. Shared instances of the unique member name can occur in the outline, but all instances represent the same member in the database.

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 that is created for sparse member combinations when at least one of the sparse members is a parent-level member.

URL See *Uniform Resource Locator (URL)*.

user directory A centralized, corporate store of user and group information. May also be referred to as a repository or provider.

user variable A variable that dynamically renders data forms based on a user's member selection, displaying only the specified entity. For example, the user variable named Department enables you to display only specific departments and employees.

user-defined attribute See *UDA*.

user-defined member list A named, static set of members within a dimension defined by the user. As dimension members are added to an application, member lists remain constant and will not reflect any changes made to the application outline.

validation A process of checking a rules file, report script, or partition definition against the outline to make sure that the object being checked is valid.

value dimension A dimension that is used to define the input value, translated value, and consolidation detail.

variance The difference between two values (for example, between a planned and actual value).

version A possible outcome used within the context of a scenario of data. For example, Budget - Best Case and Budget - Worst Case where Budget is the scenario and Best Case and Worst Case are the versions.

view The 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 A 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 A wild card is a character that represents any single character (?) or any 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.

workbook An entire spreadsheet file with many worksheets.

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)*.

Y axis scale The range of values on the Y axis of the charts displayed in the Investigate Section. You can 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 A software tool that identifies the version number of the most up-to-date plug-in on the server.

zoom A feature that sets the magnification of a report. The report can be magnified to fit the whole page, page width or a percentage of magnification based on 100%.

ZoomChart A feature that makes it easy to view detailed information by enlarging a chart. Zooming in on a chart enables you to see detailed numeric information on the metric that is displayed in the chart.

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