

Oracle® Hyperion Calculation Manager

Designer's Guide

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Authors: EPM Information Development Team

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About Calculation Manager

You use Calculation Manager to create, validate, deploy, and administer sophisticated calculations that solve business problems. You access Calculation Manager from within Oracle Hyperion Enterprise Performance Management Workspace.

There are three types of objects that can be calculated in Calculation Manager:

- Rulesets, which are objects that contain rules that can be calculated simultaneously or sequentially (See [Chapter 2, “Designing Business Rules and Business Rulesets.”](#))
- Rules, which are objects that contain components and templates (See [Chapter 2, “Designing Business Rules and Business Rulesets.”](#))
- Components, which are objects that contain formula components, script components, condition components, range components, and fixed loop components (See [Chapter 4, “Using Components to Design Business Rules and Templates \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\).”](#))

Prerequisites

Before you log onto EPM Workspace to access Calculation Manager, you must complete the following tasks:

1. You must install and configure Oracle Hyperion Shared Services. (See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.)
2. You must install and configure EPM Workspace. (See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.)
3. **(Oracle Hyperion EPM Architect application users only)** You must install and configure Performance Management Architect. (See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.)

Note: If you are working with an application created with Oracle Hyperion Planning or Oracle Hyperion Financial Management application administration or an Oracle Essbase application, you do not need to install Performance Management Architect.

4. You must install and configure Oracle Hyperion Calculation Manager. (See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.)
5. **Optional:** You must install and configure Financial Management, Planning, Oracle Operational Planning, Oracle Fusion General Ledger, and/or Essbase if you want to deploy business rules to these products. (See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.)
6. **(Performance Management Architect application users only)** There must be at least one Financial Management or Planning application with metadata in Performance Management Architect.
7. You must provision users and assign roles in Shared Services. (See the *Oracle Hyperion Enterprise Performance Management System User and Role Administration Guide*.)
8. You must ensure that these servers are installed and running: (See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.)
 - Shared Services Server
 - EPM Workspace Server
 - **Optional:** Performance Management Architect Application Server
 - **Optional:** Performance Management Architect Dimension Server

Note: The Performance Management Architect Application server and the Dimension server only need to be running if you want to work with Performance Management Architect applications. If you want to work with an application created with Financial Management or Planning application administration, or with Essbase applications, these servers need not be running.

- Financial Management Server, Planning Server, and/or Essbase Server, if you want to deploy business rules and rulesets to Financial Management, Planning, and/or Essbase applications.
 - **Note:** If any of these servers is installed as a service, it may be started automatically.
9. You must launch EPM Workspace and log on. (See [“Logging on to EPM Workspace and Accessing Calculation Manager” on page 21.](#))

10. You must select Navigate, Administer, and Calculation Manager to launch Calculation Manager.

Security

Your ability to create and edit objects (that is, business rules, business rulesets, components, and templates) is determined by the role you are assigned in Shared Services and your ownership of objects in Calculation Manager. (For information on roles and security, see the *Oracle Hyperion Enterprise Performance Management System User and Role Administration Guide*.)

There are three ways in which your assigned role affects your ability to create, edit, and delete business rules and other objects:

- If the application you are working in *is not deployed*, you must have one of four roles to create, edit, and delete business rules and other objects:
 - The global Calculation Manager administrator role enables you to create, edit, and delete objects.
 - **Financial Management users only:** The Financial Management Calculation Manager administrator role enables you to create, edit, and delete Financial Management objects.
 - **Planning users only:** The Planning Calculation Manager administrator role enables you to create, edit, and delete Planning objects.
 - **Essbase users only:** The Essbase administrator role enables you to create, edit, and delete Essbase objects.

Note: The Essbase administrator role is inherited from Essbase; there is no Essbase Calculation Manager administrator role.

After you deploy business rules and other objects, you define launch security. Then you can launch Financial Management business rulesets in Financial Management, Planning business rules in Planning, and Essbase business rules in Oracle Essbase Administration Services or Calculation Manager. General Ledger business rules can be launched from within General Ledger, and Operational Planning rules can be launched from within Operational Planning.

Note: You can launch Financial Management business rulesets only in Financial Management and Planning business rules only in Planning.

- If the application you are working in *is deployed*, and you have *administrator* privileges for that application (that is, you have the role of Financial Management administrator, the role of Planning administrator, or the role of Essbase administrator for the deployed application), you can create, edit, and delete business rules belonging to that application. You can also deploy the application.
- If the application you are working in *is deployed*, and you have *designer* privileges for that application (that is, you have the application specific role of Financial Management Calculation Designer, Planning interactive user, or Essbase calc write privileges for the

deployed application), you can create, edit, and delete your own rules, and see other users' rules. You cannot edit another user's rules unless the other user assigns ownership of the rule to you using the Change Ownership feature. (See [“Changing the Owner of an Object” on page 87.](#))

Note: If the application you are working in is deployed, and you have the application specific role of Financial Management viewer or Planning view user, you can view rules only.

Lifecycle Management

Oracle Hyperion Enterprise Performance Management System Lifecycle Management provides a consistent way for Oracle Enterprise Performance Management System products to migrate an application, a repository, or individual artifacts across product environments and operating systems. The Lifecycle Management interface in Oracle Hyperion Shared Services Console is consistent for all EPM System products that support Lifecycle Management. However, Oracle Enterprise Performance Management System products display different artifact listings and export and import options in the Lifecycle Management interface.

Lifecycle Management features:

- Viewing applications and folders
- Searching for artifacts
- Migrating directly from one application to another
- Migrating to and from the file system
- Saving and loading migration definition files
- Viewing selected artifacts
- Auditing migrations
- Viewing the status of migrations
- Importing and exporting individual artifacts for quick changes on the file system

In addition to providing the Lifecycle Management interface in Oracle Hyperion Shared Services Console, there is a command-line utility called Lifecycle Management Utility that provides an alternate way to migrate artifacts from source to destination. The Lifecycle Management Utility can be used with a third-party scheduling service such as Windows Task Scheduler or Oracle Enterprise Manager.

Lastly, there is a Lifecycle Management Application Programming Interface (API) that enables users to customize and extend the Lifecycle Management functionality.

For detailed information about Oracle Hyperion Enterprise Performance Management System Lifecycle Management, see the *Oracle Hyperion Enterprise Performance Management System Lifecycle Management Guide*.

Logging on to EPM Workspace and Accessing Calculation Manager

To access Calculation Manager, you must log on to EPM Workspace and launch Calculation Manager from within it.

► To log on to EPM Workspace and access Calculation Manager:

- 1 From a Web browser, enter `http://<WebServer>:<port>/workspace/`, where `<WebServer>` is the Web server computer host name and `<port>` is the Web server listen port. For example, the port number is 19000 if you are using the Apache instance configured with Oracle Hyperion Reporting and Analysis.

Note: The Shared Services server, the EPM Workspace server, the Calculation Manager server, and the Performance Management Architect application server and dimension server (if you want to work with Performance Management Architect applications) must all be running before you launch Calculation Manager. See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.

- 2 In the EPM Workspace logon dialog, enter your system user name and password and click **Log On**.

For information on setting up the URL, see the *Oracle Enterprise Performance Management Workspace Administrator's Guide*.

Note: If an error message displays indicating that Performance Management Architect is unable to authenticate the user, ensure the following: the user is provisioned for the application (if not, use Shared Services to provision the user), or the user's token or session is not timed out (in this case, log off, then log back on to start a new session).

- 3 To access Calculation Manager, select **Navigate, Administer, and Calculation Manager**.

The System View of Calculation Manager is displayed with a list of the applications to which you have access.

Depending on the user role you are assigned in Shared Services (you must have a role of interactive user or administrator), you can use Calculation Manager to view, create, and manage business rules, business rulesets, and components. (See the *Oracle Hyperion Enterprise Performance Management System User and Role Administration Guide*.)







Using Toolbars

You have access to toolbars from EPM Workspace, Performance Management Architect (if you are working with a Performance Management Architect application), and Calculation Manager. This section contains an overview of the available toolbars.

Standard Toolbar

The Standard toolbar contains buttons for features and tasks that are common to the applications within EPM Workspace.







Table 1 Standard Toolbar Buttons


Button	Menu Command	Description
	Not applicable	Displays the default startup option for the content area
	File, New, Document	Creates documents, such as books, batches, analysis documents, and scheduled batch jobs
	File, Open, Document	Opens repository documents
	Navigate, Explore	Displays Explore, to display the repository as a file management system
	File, Logoff	Ends the current session
	Help, Help on This Topic	Displays help for the page displayed in the content pane

Calculation Manager Toolbar

The Calculation Manager toolbar displays buttons specific to Calculation Manager, in addition to EPM Workspace buttons. Not all buttons display in all views and designers within Calculation Manager.

Table 2 Calculation Manager Toolbar Buttons

Button	Menu Command	Description
	View, System View	Displays the main view within Calculation Manager. (This is the default view.)
	View, List View	Displays a list of objects that you can filter by application type, application, object type, calculation, plan, or database type, and deployment and validation status.
	View, Custom View	Displays a view you can customize with folders you create and objects you drag and drop into them.
 (This button is available from the List View only.)	Tools, Filter	Opens the Filter dialog that you can use to filter objects in the List View.
	Not applicable	Refreshes the view with your latest changes.
	Actions, Validate	Validates the object with which you are working.

Button	Menu Command	Description
	File, Save	Saves the object with which you are working.

Using Menus

Calculation Manager menus and menu options display in addition to EPM Workspace menus and menu options. The menus and options vary depending on the view you are using and the object with which you are working. This section describes Calculation Manager menus and options that are available from the default view that is displayed when you launch Calculation Manager, the System View.

See these topics:

- [“File Menu” on page 23](#)
- [“Edit Menu” on page 24](#)
- [“View Menu” on page 24](#)
- [“Favorites Menu” on page 25](#)
- [“Tools Menu” on page 25](#)
- [“Actions Menu” on page 26](#)
- [“Help Menu” on page 26](#)

File Menu

The File menu enables you to create new objects, open and close objects, import and export objects, print rules, and log off. The File menu options are EPM Workspace and Calculation Manager options. This section describes the Calculation Manager File menu options only.

Note: Not all of these file menu options are available for the products that use Calculation Manager. For example, if you are working with an Essbase block storage application, there are no rulesets, so there is no menu option to create a ruleset.

Table 3 File Menu

Command	Description
New, Rule	Creates a new rule
New, Ruleset	Creates a new ruleset
New, Custom Defined Template	Creates a new custom defined template
New, Formula Component	Creates a formula component
New, Script Component	Creates a script component

Command	Description
Open	Opens an object selected in the application list
Print	Prints a business rule selected in the application list
Import	Launches the Import dialog
Export	Exports an object selected in the application list

Edit Menu

The Edit menu enables you to edit objects you select. It is available from most of the views and from within the Rule, Component, and Template designers.

Note: This menu is not available in EPM Workspace; it is only available from within Calculation Manager.

Table 4 Edit Menu

Command	Description
Edit, Delete	Deletes an object selected in the System, List, or Custom View
Edit, Copy	Copies selected text
Edit, Paste	Pastes text copied to the clipboard to the right of the cursor
Edit, Copy Reference	Copies the reference to a component
Edit, Copy Group	Copies a component group
Edit, Graphical/Script	Toggles between the graphical representation of a rule or template and its components and the generated script for a rule or template and its components

Note: The Edit menu is not available within the Deployment View.

View Menu

The View menu enables you to open different views. The System View is the default view that is displayed when you launch Calculation Manager. When you select the Deployment View, Calculation Manager leaves the System View open and opens the Deployment View in a *different* tab. When you select the List or Custom View, Calculation Manager closes the System View and replaces it with the List View or Custom View in the *same* tab.

The View menu options are EPM Workspace and Calculation Manager options. This section describes Calculation Manager View menu options only.

Table 5 View Menu

Command	Description
View, View Pane	Displays or hides a list of existing and/or new objects that you can add to rules, rulesets, components, and templates by dragging and dropping them. Note: This is the only View menu option available from within the Rule Designer, Ruleset Designer, Template Designer, and Component Designer.
View, List View	Displays a list of the objects you select on the Filter dialog. The filter dialog enables you to create a filtered list, by application type, of applications, calculation types, plan types, or databases, and objects.
View, System View	Displays a list of the applications, calculation types, plan types, or databases, and objects to which you have access. (This is the default view.)
View, Custom View	Displays a view that you can customize with folders you create and objects you drag and drop into them. This view enables you to organize objects in a way that is meaningful to you.
View, Deployment View	Displays a list, by application type and application, of the rules and rulesets that are deployed and not deployed, and their deployment and validation status.

Favorites Menu

The Favorites menu is an EPM Workspace menu that you can use to create bookmarks to pages in EPM Workspace and its products. See the *Oracle Enterprise Performance Management Workspace Users Guide*.

Tools Menu

The Tools menu contains Calculation Manager and EPM Workspace tools that enable you to install other products, search for objects, create a filtered list of objects for the List View, edit the caption of an object, and access the Variable Navigator and Variable Designer. This section describes the Calculation Manager Tools menu options only.

Table 6 Tools Menu

Command	Description
Tools, Filter	Opens the Filter dialog from which you can filter by application type, application, object type (rule, ruleset, formula or script component, or template), calculation type, plan type, or database, and deployment and validation status. You can also select All to display all application types, all applications, all objects, and all calculation types, plan types, and databases, regardless of their deployment and validation status. Note: This menu option is not available within the Deployment View.
Tools, Variables	Opens the Variable Navigator in which you can navigate to a location for which you want to create, edit, copy, or delete a variable. From the location you select in the Variable Navigator, you can display the Variable Designer in which you can create, edit, copy, and delete variables for components. Note: This menu option is not available within the Deployment View.
Tools, Quick Edit	From within the Rule and Template designer, enables you to edit the caption of a component in the flow chart.

Actions Menu

The Actions menu enables you to validate, migrate, launch, and deploy objects that you select from within the List, System, Custom, and Deployment views and from within the Rule, Ruleset, Template, and Component designers. All Actions menu options are not available from within all views and designers.

Note: The Actions menu is available from within Calculation Manager only.

Table 7 Actions Menu

Command	Description
Actions, Validate	Validates the rule, ruleset, script, formula component, or template you select. Note: This is the only Actions menu option available from within the Deployment View.
Actions, Migrate	Migrates the rules or rulesets you select.
Actions, Compare Scripts	Compares the calc scripts of two business rules that you select.
Actions, Deploy	Deploys the rules or rulesets you selected.
Actions, Launch	Essbase business rules only: Launches the business rule.

Help Menu

The Help menu enables you to access Calculation Manager Help, help for other products in EPM Workspace, and other resources on the Oracle Web site.

Table 8 Help Menu

Command	Description
Help, Help on this Topic	Launches context-sensitive help for the Web page you are on
Help, Contents	Launches the help system for the product in which you are working
Help, Oracle Support- http://www.oracle.com/support/index.html	Launches the support pages of the Oracle Web site
Help, Oracle Technology Network- http://www.oracle.com/technology/index.html	Launches the Oracle Technology Network pages of the Oracle Web site
Help, Oracle Web site- http://www.oracle.com/index.html	Launches the Oracle Web site
Help, About EPM Workspace	Launches copyright and version information about EPM Workspace

Using Flow Charts

You can view rules and templates, and the components that comprise them, in a flow chart within the Rule Designer and the Template Designer. When you open a rule or template, you can move amongst the components that comprise it (for example, formulas, scripts, conditions, ranges, and loops) by selecting them in the flow chart. You can also increase or decrease the size of the flow chart to view or hide details of the components.

When you select a component in the flow chart, its properties, usages, and other information are displayed in tabs below the flow chart. As you move amongst the components, the tabs below the flow chart change. For example, if you open a business rule that contains a formula component and a script component, and select the formula component in the flow chart, the properties of the formula (its name, its description, and the application and application type to which it belongs), the usages of the formula (which rules and templates it is used in), and the text of the formula (the variables, members, and functions) are displayed in the tabs below the flow chart. Then if you select the script component in the rule's flow chart, the text of the script component, and its properties and usages, are displayed in the tabs below the flow chart.

Using Views and Filters

Views enable you to see Calculation Manager objects in different contexts. For example, the Deployment View displays objects according to whether they are deployed or not deployed. The Custom View displays objects according to filters and criteria that you select.

See these topics:

- [“List View” on page 27](#)
- [“System View” on page 30](#)
- [“Custom View” on page 30](#)
- [“Deployment View” on page 32](#)
- [“View Pane” on page 32](#)

List View

The List View contains a filtered list of Financial Management, Planning, and/or Essbase applications, calculation types, plan types, or databases, and objects (rulesets, rules, scripts, formula components, and templates) according to filter criteria you specify. From the List View, you can do these tasks:

- Create, open, rename, delete, refresh, and close objects, EPM Workspace pages, and other documents
- Set preferences
- Import and export objects
- Show the usages of objects
- Create a copy of objects

- Print a business rule
- Exit or log off EPM Workspace
- Select views
- Work with favorites
- Perform an advanced search
- Filter objects in the view according to criteria you specify
- Work with variables
- Validate and migrate objects
- Access help for EPM Workspace products

Filtering Objects in the List View

You can use filters in the List View to filter objects according to their application type (Financial Management, Planning, and/or Essbase), their application, their calculation type, plan type, or database, their object type (that is business rules, business rulesets, formula and script components, and templates), and their deployment or validation status.

➤ To create a filtered list of objects in the List View:

1 In the System View, select **View, List View**.

The Filter dialog is displayed the first time you open the List View. If you select filtering options, then close the List View to work in the System or Custom View, when you reopen the List View, the filter dialog is not displayed. If you want to change the filtering options when you reopen the List View, select **Tools, Filter** to open the Filter dialog.

2 In the **Filter** dialog, on **Filter Options**, under **Application Type**, select Financial Management, Planning, or Essbase. (Financial Management is displayed by default.)

3 Do one of these tasks:

Tip: Use Shift + Click and Ctrl + Click to select multiple contiguous and non-contiguous selections.

- **Planning and Essbase users only:** In **Application** and **Object Type**, select the applications and object types you want to display in the List View. (The default is All.)
- **Financial Management users only:** In **Application**, **Object Type**, and **Calculation Type**, select the applications, object types, and calculation types you want to display in the List View. (The default is All.)

4 Under **Deployed Status** and **Validated Status**, clear any check boxes of selections you do not want to display. (All check boxes are selected by default.)

Tip: Click **Reset** to reset the **Filter Options** tab with default values. When you reset values on this tab, the values you specify on the **Advanced Options** tab remain unchanged.

- 5 On **Advanced Options**, for **Object Name**, select one of these options to display only objects whose names match the criteria:
 - **Starts With**, to display only objects whose names start with characters you specify
 - **Ends With**, to display only objects whose names end with characters you specify
 - **Contains**, to display only objects whose names contain characters you specify
 - **Matches**, to display only objects whose names match characters you specify
- 6 In the field to the right of the **Object Name** option you selected, enter the characters that are common to the names of the objects you want to display.
- 7 Select **Ignore case**, if you want to display objects whose names contain characters in either upper or lower case, even if the case does not match the case of the text you entered in [step 6](#).
- 8 In **Created By**, enter the name of the user who created objects you want to display.
- 9 In **Modified By**, enter the name of the user who modified objects you want to display.
- 10 In **Any Text**, select one of these options:
 - **Starts with**, to find any text that starts with the text you enter.
 - **Ends with**, to find any text that ends with the text you enter.
 - **Contains**, to find any text that contains the text you enter.
 - **Matches**, to find any text that matches the text you enter. (This is the default.)
- 11 In the field to the right of the **Any Text** option you select, enter the text string for which you want to search.
- 12 If you want to search for text in the case you typed (that is, upper or lower), clear **Ignore case**. (**Ignore case** is selected by default.)
- 13 For **Created Date**, select **After**, **Before**, or **Between** to display only objects that were created after, before, or between dates you specify. (**Between** is the default.) Click the drop-down arrows to display calendars from which you can select dates.
- 14 For **Modified Date**, select **After**, **Before**, or **Between** to display only objects that were modified after, before, or between dates you specify. (**Between** is the default.) Click the dropdown arrows to display calendars from which you can select dates.
- 15 For **Start Date**, select **After**, **Before**, or **Between** to display only objects that were created after, before, or between dates you specify. (**Between** is the default.) Click the dropdown arrows to display calendars from which you can select dates.
- 16 For **End Date**, select **After**, **Before**, or **Between** to display only objects that were deleted after, before, or between dates you specify. (**Between** is the default.) Click the dropdown arrows to display calendars from which you can select dates.

Tip: Click **Reset** to reset the **Advanced Options** tab with default values. When you reset values on this tab, the values you specify on the **Filter Options** tab remain unchanged.

- 17 Click **OK**.

System View

The System View is the default view that is displayed when you launch Calculation Manager. It contains a list of all of the applications, calculation or plan types, and objects to which you have access. (Your access privileges are determined by the role you are assigned in Shared Services. Access privileges are assigned on an application basis.) For each object, the owner, the user who last made changes to it, and the date changes were last made to it are listed. From the System View, you can do these tasks:

- Create, open, rename, delete, refresh, and close objects, EPM Workspace pages, and other documents
- Set preferences
- Import and export objects
- Show the usages of an object
- Create a copy of an object
- Change the owner of an object
- Create a shortcut to a business rule
- Print a business rule
- Import and export business rules and other objects
- Exit or log off of EPM Workspace
- Select views
- Work with favorites
- Perform an advanced search
- Work with variables
- Validate and migrate objects
- Access help for EPM Workspace products

Custom View

The Custom View enables you to create folders and drag and drop objects into them to create a view that contains only the objects you want. This view enables you to organize objects in a way that is meaningful to you. From the Custom View you can do these tasks:

- Create, open, rename, remove, refresh, and close objects, EPM Workspace pages, and other documents
- Set preferences
- Import and export objects
- Show the usages of an object
- Create a copy of an object
- Change the owner of an object

- Print a business rule
- Import and export business rules and other objects
- Exit or log off of EPM Workspace
- Select views
- Work with favorites
- Perform an advanced search, install other EPM Workspace products, and work with variables
- Validate and migrate objects
- Access help for EPM Workspace products

Creating a Folder in the Custom View

In the Custom View, you can create folders that contain only the business rules, business rulesets, formulas, script components, and templates you want to view and with which you want to work. To add objects to your folders, drag them from the Existing Objects pane and drop them into the folders.

➤ To create a folder in the Custom View:

- 1 In the System View, select **View, Custom View**.
- 2 In the Custom View, right-click the Financial Management, Planning, or Essbase application type, and select **New Folder**.
- 3 In **New Folder**, enter a name for the folder.
- 4 Click **OK**.

Tip: You can create nested folders by right-clicking the folder within which you want to create a folder and selecting New Folder.

Renaming a Folder in the Custom View

You can rename the folders you create in the Custom View.

➤ To rename a folder in the Custom View:

- 1 In the System View, select **View, Custom View**.
- 2 In the Custom View, expand the Financial Management, Planning, or Essbase application type.
- 3 Right-click the folder you want to rename, and select **Rename**.
- 4 In **Rename Folder**, enter a new name for the folder.
- 5 Click **OK**.

Deployment View

The Deployment View contains a list, by application type and application, of the rules and rulesets that are deployable and their deployment and validation status. From this view, you can select rules and rulesets in an application to make them deployable. Then you can deploy one or more rules and rulesets (known as a partial deployment), or you can deploy all rules and rulesets in an application (known as a full deployment). From the Deployment View, you can do these tasks:

- Create, open, rename, remove, refresh, and close objects, EPM Workspace pages, and other documents
- Set preferences
- Import and export objects
- Show the usages of an object
- Create a copy of an object
- Change the owner of an object
- Print a business rule
- Exit or log off EPM Workspace
- Select views
- Work with favorites
- Perform an advanced search
- Work with variables
- Validate and migrate objects
- Deploy objects
- Access help for EPM Workspace products

View Pane

When you create or open an object, you can display the View Pane in the left frame of the window. Depending on whether you are working in the Rule, Ruleset, Template, or Component designer, a Rule Palette, Ruleset Palette, Template Palette, or Component Palette is displayed in the View Pane. From the Rule, Ruleset, Component, or Template palette, you can drag new and existing objects and drop them into the rule, ruleset, template, or component flow chart.

When working with views, you can display or hide the View Pane using the View menu. In the Custom View, you drag and drop new and existing objects from the View Pane into the custom folders you create. In the System and List views, the View Pane is hidden by default. In the Deployment View, the View Pane is not available.

Note: The content of the View Pane varies depending on which view you are in and whether you are working with a ruleset, a rule, a template, or a component.

Searching for and Replacing Objects in Calculation Manager

From the System View, you can perform a global search and replace within a product that uses Calculation Manager, an application, a plan, database or calculation type, rulesets, rules, formula components, and script components. You can search all objects within an application, all business rules or a specific business rule, and all business rulesets or a specific ruleset.

➤ To search for text and replace it from the System View:

- 1 In the System View, right-click the application type, application, plan type, calculation type, or database, or the Rules, Rulesets, Formulas, Scripts, or Templates node, and select **Find**.

Note: To search within a specific business rule, ruleset, formula, script, or template, select the object you want to search within and open it. When the object is open for editing, select Edit, and then Find.

- 2 In the **Find** dialog, from **Any text**, select one of these options:

- **Starts with**, to find any text that starts with the text you enter.
- **Ends with**, to find any text that ends with the text you enter.
- **Contains**, to find any text that contains the text you enter.
- **Matches**, to find any text that matches the text you enter. (This is the default.)

- 3 In the field to the right of **Any text**, type the text for which to search.

- 4 Select **Ignore case** to search for text in either upper or lower case. (**Ignore case** is selected by default.)

- 5 Select **Include Basic Properties**, to search for text in the objects basic properties.

Calculation Manager searches the names, descriptions, and captions of objects if you select Include **Basic Properties**. Calculation Manager searches the formulas, scripts, other components, variables and so on that are used in the object by default.

- 6 Click **Find**.

If Calculation Manager finds the text you are searching for, it opens a Find tab with a list of the objects containing the text and the scope of the objects in which you searched. For example, if you searched for text in the Scripts node of a plan type within a Planning application, Calculation Manager displays the number of objects in which the text is found and the application name and plan type within which the objects exist. You can double-click an object in the list to open it.

- 7 To replace text, do either of the following:

- To replace the text for which you searched in a subset of the objects listed in the **Find** tab, select the objects (using Ctrl + click), select **Edit**, and then **Replace Selected**.
 - a. In **Replace With**, enter the text with which you want to replace the text for which you searched.
 - b. Click **Replace Selected**.

- To replace the text for which you searched in *all* of the objects listed in the **Find** tab, select **Edit**, and then **Replace All**.
 - a. In **Replace With**, enter the text with which you want to replace the text for which you searched.
 - b. Click **Replace All**.

Calculation Manager displays a message that lets you know how many objects the text was successfully replaced in and how many objects, if any, contained text that could not be replaced.

2

Designing Business Rules and Business Rulesets

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About Business Rules

Calculation Manager enables you to create, validate, deploy, and administer sophisticated multidimensional business rules. You can also create a business ruleset of two or more related rules (or rulesets) that you can launch simultaneously or sequentially. You typically create business rules and rulesets to:

- Allocate costs among entities
- Perform revenue modeling
- Perform expense modeling
- Prepare a balance sheet
- Calculate cash flow
- Calculate currency translation adjustments
- Calculate group and minority interest
- Calculate deferred taxes

Before you create a business rule or ruleset, you should be familiar with the database outline and the application with which you are working. Having this information will help you create your business rules more efficiently. You should also understand the following about your data:

- How the data is stored and aggregated
- At what level the data gets loaded into the database
- The order of calculations to take place
- The key assumptions that drive the calculations

You can create business rules using components like formulas, scripts, loops, data and member ranges, templates, and variables, including runtime prompt variables. (See [Chapter 4, “Using Components to Design Business Rules and Templates \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\).”](#)) For users to launch the business rule in Planning, you, as the administrator, must give launch privileges to the rule for that location. Users do not need launch privileges to launch a business rule in Financial Management.

Creating a Business Rule

You can create a business rule from the System View. You can also create a business rule from the List, Custom, and Deployment views.

► To create a new business rule:

- 1 In **New Rule**, enter the rule's name.
- 2 Enter the **Application Type**.

Note: The application type is populated by default with the application type in which you are creating the new rule.

If you are working with an Essbase aggregate storage application in Oracle General Ledger, or an Operational Planning application, select the Essbase application type.

- 3 Select an **Application**. The application name must be a valid Performance Management Architect, Financial Management, Planning, Operational Planning, Essbase aggregate or block storage, or Oracle General Ledger. application.
- 4 Do one of these tasks, depending on which application type you selected:
 - If you selected a Financial Management application type and application, select the **Calculation Type**.
 - If you selected a Planning application type and application, select the **Plan Type**.
 - If you selected an Essbase application type and an Essbase, Oracle General Ledger, or Operational Planning application, select the **Database**. In addition, if you selected Operational Planning, you must select a **Calculation Type**.

Note: If you right-click Rules and select New to create a new business rule, the New Rule dialog is populated with the application type, the application, and the calculation type, the plan type, or the database you are working in within the System View.

- 5 Click **OK**.

The new rule is displayed in the Rule Designer. To design the rule, see [“Designing a Business Rule” on page 37](#).

Designing a Business Rule

A business rule is a Calculation Manager object that consists of calculations. The calculations are grouped into components. A rule can contain one or more components, templates, or rules.

You create a business rule for an application to which you have access. (Your ability to create rules is determined by the role you are assigned in Shared Services. See the *Oracle Hyperion Enterprise Performance Management System User and Role Administration Guide*.) The rule is represented graphically in a flow chart into which you can drag and drop components to design the rule.

Note: Before you create a business rule, make sure that an application exists in the product for which you want to create the business rule.

➤ To design a business rule:

- 1 Complete the procedure in [“Creating a Business Rule” on page 36](#).
- 2 To design the business rule, from the **Rule Palette**, drag new and existing objects, and drop them into the flow chart within the **Rule Designer**.

Note: You can also create new objects like formulas and scripts independently of the rule, and add them to the rule later.

From New Objects, drag and drop these components to insert a *new* component into the rule's flow chart:

- (Financial Management, Planning, Operational Planning, and Essbase block storage users only) Formulas: See [“Working with Formula Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 150](#).
- (Financial Management, Planning, Operational Planning, and Essbase block storage users only) Scripts: See [“Working with Script Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 163](#).
- (Financial Management, Planning, Operational Planning, and Essbase block storage users only) Conditions: See [“Working with Condition Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 169](#).
- (Financial Management, Planning, Operational Planning, and Essbase block storage users only) Member Blocks: See [“Working with Member Block Components \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 174](#).
- (Financial Management, Planning, Operational Planning, and Essbase block storage users only) Member Ranges: See [“Working with Member Range Components](#)

(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 178.

- (Financial Management users only) Data Ranges : See “Working with Data Range Components (Financial Management Users Only)” on page 183.
- (Financial Management, Planning, Operational Planning, and Essbase block storage users only) Fixed Loops: See “Working with Fixed Loop Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 188.
- (Essbase aggregate storage and Oracle General Ledger users only) Point of Views: See “Working with Point of View Components (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)” on page 212.
- (Essbase aggregate storage and Oracle General Ledger users only) Allocations: See “Working with Allocation Components (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)” on page 214.
- (Essbase aggregate storage and Oracle General Ledger users only) Formulas: See “Working with Formula Components (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)” on page 221.

From **Existing Objects**, drag existing objects from applications and drop them into the rule's flow chart. When you drag an existing formula or script component into the flow chart, by default, the formula or script becomes a shared object. If you do not want it to be shared, clear the **Shared** check box on the formula or script component's **Properties** tab. See “Sharing Script and Formula Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 201.

Tip: Financial Management, Planning, Operational Planning, and Essbase block storage application users only: If you want to work with the business rule in its non-graphical format (that is, its script format), select **Edit, Script**. (See “Editing a Business Rule in Script Mode (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 58.)

- 3 **Planning, Operational Planning, and Essbase block storage application users only:** If you insert a script component into the business rule, and you want to view it in graphical format, right-click the script component in the business rule flow chart, and select **Convert to Graphical**.

Note: A script component is converted to its graphical format only if the script is valid. If the script is not valid, it is not converted to its graphical format.

Tip: To undo a conversion of a script component to graphical format, right-click the component, and select **Undo convert script to graphical**.

- 4 If you insert a component into the business rule, and you want to disable the component, select the component in the business rule flow chart, and select **Disabled** on the component's **Properties** tab. (For a Member Range component, the **Disabled** check box is on the Member Range tab.) You may want

to disable a component when you want to exclude it from validation to analyze which components are causing validation errors.

After you disable a component, and save the business rule to which it belongs, the component icon becomes gray in the business rule flow chart. Any component that you move to, or create within, the disabled component inherits the Disabled status of the disabled component.

Note: You cannot disable a Condition component.

If you disable a component that is shared, it is disabled only for the business rule in which you disable it.

5 On **Properties**, enter properties for the rule.

Note: The number and contents of the tabs change as you add components to the rule and move amongst the rule's components in the flow chart. To enter properties and other information for the rule's components, select the component in the flow chart. See [Chapter 4, “Using Components to Design Business Rules and Templates \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\).”](#)

- **Optional:** Edit the name by entering a new one of up to 50 characters. (The name defaults from the New Rule dialog.)
- **Optional:** Enter a description of up to 255 characters for the rule.
- **Optional:** Enter a caption for the rule. The caption displays below the rule's icon in the flow chart.
- **Optional:** Enter comments for the rule. For example, you may want to tell users what the rule should be used for.
- **Financial Management users only:**
 - Select **Enable Logging** so, if the rule has log text, it is included in the log file when the rule is launched. You can enable logging for rules, rulesets, and components. However, you specify what log text to include, if any, with a business rule's formula statements.

Note: If logging is not enabled for a ruleset, but is enabled for a rule and component that belong to the ruleset, no log file is created, because the log setting for the ruleset overrides the settings for the rule and component.

- Select **Enable Timer** so the time taken to process the rule is recorded in the log file when the rule is launched. You can enable the timer for rules, rulesets, and components. The process time is included in the log file for every object whose timer is enabled. For example, if you have a ruleset whose timer is enabled and the ruleset contains three rules whose timers are enabled, the time taken to process the ruleset, and each rule in the ruleset, is recorded.
- Select **Disabled** to temporarily disable the business rule while the script is generated.

- Select **Is Function** so the rule is used as a function that can include execution variables that you specify as parameters on the Parameters tab. When the rule is used as a function, it returns a value like a function.

Note: Any business rules with Is Function selected are displayed as functions in the Function Selector.

- **Planning users of Workforce Planning, Capital Expense Planning, Project Planning, and Public Sector Budgeting plan types only:** Use **Create dynamic member** and **Delete dynamic member** to enable members to be created and deleted, respectively, when you also specify a default dynamic parent in a variable of the member type with runtime prompts enabled. If you enable the creation and/or deletion of dynamic members in a business rule, and define a default dynamic parent, the children members of the parent are automatically created *before* the rule is launched, or deleted *after* the rule is launched, in Planning.

Note: If you select Create dynamic member, the newly created members are deleted if the business rule fails to launch.

- **Oracle General Ledger users only:** Use the **Start Date** and **End Date** features to specify a date range during which the business rule may be launched. You will be unable to launch the business rule outside of this date range.
 - Select **Start Date** to access a calendar from which you can select a start date after which the business rule may be launched.
 - Select **End Date** to access a calendar from which you can select an end date prior to which the business rule may be launched.

6 Financial Management users only: On **Parameters**, you can view the execution variables that are used in the business rule and select any execution variables you want to use as parameters. Complete these steps:

Note: When you first open a new business rule, this tab is empty. If you add components to the business rule, and any of those components use variables, the variables are displayed on this tab.

- a. Select **Is Parameter** to use the execution variable as a parameter. If the execution variable has a ruleset scope (that is, it is passed from one business rule to another business rule within the same ruleset) **Is Parameter** is selected by default. If the variable has a rule scope (that is, it may be used only in the business rule for which it is created and is not passed to another business rule) **Is Parameter** is not selected.

Note: If a business rule contains at least one execution variable for which Is Parameter is selected, when you include this business rule in another or the same business rule, you can specify values for its execution variables on the Parameters tab.

- b. In **Passing Method**, select **By Reference** or **By Value**. (**By Reference** is the default.)

7 Planning, Operational Planning, Oracle General Ledger, and Essbase users only: On **Global Range**, specify what dimensions are common to all of the components in the rule by selecting values (that is, members, variables, and functions) for each dimension. The values you select for the dimensions are the values that are calculated when the rule is launched.

- a. Select values for a dimension by clicking its row in the **Select Value** column.
- b. When the **Actions** icon is displayed, click it, and select one of these:
 - Variable (See [“Working with Variables” on page 249](#). This chapter provides detailed procedures for variables.)
 - Member (See [“Working with Members” on page 230](#). This chapter provides detailed procedures for member selection.)
 - Function (See [“Working with Functions” on page 269](#). This chapter provides detailed procedures for functions.)

8 On Variables you can perform any of these tasks:

Note: The Variables tab only displays when click on the begin or the End component of the business rule in the flow chart.

- View the names of the variables that are used in the business rule.
- View the scope of the variables:
 - Global variable: the scope is empty
 - Application level variable: displays the application name
 - Plan level variable: displays the application name and the plan type name
 - Rule level variable: displays the application name, the plan type name, and the rule name
- Specify whether the variables are hidden or visible to users when the variables are used as runtime prompts.
- Select values for the variables using the Member Selector.
- Select validation values for variables using the Member Selector. This enables you to validate the business rule using different values for the variable.
- Select security settings for runtime prompt variables of the member type:
 - **Use Default:** enables the default security setting if the access to members is not set to None in Planning.
 - **Read:** enables users to view the members they can select for a runtime prompt when they are launching a business rule in Planning.
 - **Write:** enables users to make changes to the members they can select for a runtime prompt when they are launching a business rule in Planning.
 - **Approvals:** enables users to make changes to the members they can select for a runtime prompt if they have write access to the members and the members belong to a planning unit in Planning.

9 Financial Management, Planning, Operational Planning, and Essbase block storage users only: On **Script**, you can view the generated calc script for the rule.

Note: You cannot make changes on this tab. If you want to make changes to the script, select **Edit, Script**. See [“Editing a Business Rule in Script Mode \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 58.

10 Financial Management, Planning, Operational Planning, and Essbase block storage users only: To search for a text string on **Script**:

- Click the **Find** icon to find text within the script.
 - a. Enter the text for which you want to search in the script.
 - b. Select **Match case** if you want the text you are searching for to match the case of the text you enter in the dialog.
 - c. Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.
 - d. Click **Find**.
- Click the **Find and Replace** icon to find and replace text within the script.
 - a. Enter the text you want to find in the script.
 - b. Enter the text you want to replace it with.
 - c. Select **Match case** if you want the text you are searching for to match the case of the text you enter in the dialog.
 - d. Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.
 - e. Click **Replace** to find and replace one instance of the text string at a time.
 - f. Click **Replace All** to find and replace all instances of the text string simultaneously.

11 On Usages, you can view which rules and rulesets use the rule, if any. (You cannot edit any of the information on this tab.) This is the information you can view about the rules and rulesets:

- The names of the business rules and business rulesets that are using the business rule
- The calculation or plan type of the business rules and business rulesets that are using the business rule
- The application name of the business rules and business rulesets that are using the business rule
- Whether the business rules and business rulesets that are using the business rule are deployed
- Whether the business rules and business rulesets that are using the business rule are validated
- A description of the business rules and business rulesets that are using the business rule

Note: By default, a rule is not used by any rules or rulesets when you create it.

12 Planning and Essbase block storage users only: On **Errors and Warnings**, click the button to run script diagnostics for the business rule. When you do this, Calculation Manager analyzes the business rule script, and displays either:

- Validation errors, if the rule *does not validate*. You can click on each of the validation errors to see the source of the error in the **View Script** tab. Then return to the Designer, and select **Edit Script** to fix the errors, save the rule, and rerun the script diagnostics.
- A **Summary** and **Warnings**, if the rule *validates*. You can click on each of the summary and warning items to see the source of the script in the **View Script** tab. Then return to the Designer, and select **Edit Script** to make changes, if necessary. Then save the rule, and rerun the script diagnostics.
 - The **Summary** lists such statistics as the number of data cells in the calculation, the number of passes through the data, and the number of dimensions that are used incorrectly.
 - The **Warnings** lists such information as whether all sparse dimensions are specified for cell references, whether a cell references sparse members, and whether an assignment references sparse dimension members in different data blocks; each of these can affect performance.

13 Repeat these steps for each component you want to add to the business rule.

Tip: As you add components to a business rule, you may want to increase or decrease the size of the component icons and the amount of detail that is displayed in the flow chart. You can use the zoom bar to zoom in and out within the flow chart. You can select a component to view its properties, and edit a component, on the Properties tab.

14 Select File, Save.

After you design and save the rule, you can do any of these tasks:

- Analyze and debug it. (See [“Analyzing and Debugging Business Rules \(Planning, Operational Planning, and Essbase Users Only\)”](#) on page 46.)
- Print it. (See [“Printing a Business Rule”](#) on page 70.)
- Validate it. (See [Chapter 7, “Validating and Deploying Rules, Rulesets, and Formula and Script Components.”](#))
- Deploy it. (See [Chapter 7, “Validating and Deploying Rules, Rulesets, and Formula and Script Components.”](#))
- Launch it from within Planning (for Planning business rules), Operational Planning (for Operational Planning business rules), Oracle General Ledger (for Oracle General Ledger business rules), or from within Calculation Manager or Administration Services (for Essbase business rules). (See the documentation for these products and [Chapter 8, “Launching Essbase Business Rules \(for Essbase Aggregate Storage and Essbase Block Storage Application Users Only\),”](#) in this guide, for more information on launching business rules.)

Note: Only rulesets can be launched in Financial Management.

Using Parameters as a Business Rule (Financial Management Users Only)

The Parameters tab in the Rule Designer enables you to specify parameters you want to use for the business rule. The system checks first to determine whether any execution variables are used within the rule. (The execution variables can have the scope of ruleset or rule. See [“Working with Variables” on page 249](#).) Any execution variables used in the business rule are listed on the grid of the Parameters tab.

In the grid, under the Parameters column, the system selects the check box for any execution variables with a Ruleset scope by default. These execution variables are passed as parameters. The check box for execution variables with a Rule scope is clear by default, because these variables apply only to the business rule in which they are used. These execution variables are not passed as parameters. You can change the default setting for any variables listed in the grid.

In the Passing Method column, the default setting is By Reference, but you can select to pass parameters By Value, too.

Note: The Variables displayed on the Parameters tab are generated automatically. If you make changes to any of these variables in the Variable Designer by adding, deleting, or changing the scope of the variable, any changes that affect the business rule only display when you select the Parameters tab of the rule again.

► To use parameters as a business rule:

1 Complete steps [step 1 on page 37](#) to [step 6 on page 40](#).

Note: On the Properties tab of the business rule, ensure that Is Function is selected so the rule is treated as a function by Calculation Manager.

Parameter passing is available for any business rule, regardless of whether the Is Function option is selected or not. If it is not selected, then it is a normal business rule with parameter passing capability. If it is selected, then the business rule is treated as a function.

2 Save the business rule.

3 Open a second business rule.

4 From **Existing Objects**, drag and drop a copy of the first business rule into the second business rule's flow chart.

A business rule with parameter passing is inserted into another business rule.

5 On **Properties**, enter or edit properties for the business rule.

- **Optional:** Enter or edit the name by entering a new one of up to 50 characters. (The name defaults from the New Rule dialog.)
- **Optional:** Enter or edit the description of up to 255 characters for the rule.
- **Optional:** Enter or edit the caption for the rule. The caption displays below the rule's icon in the flow chart.

- **Optional:** Enter or edit the comments for the rule. For example, you may want to tell users what the rule should be used for.
- Select **Enable Logging** so, if the rule has log text, it is included in the log file when the rule is launched. You can enable logging for rules, rulesets, and components. However, you specify what log text to include, if any, with a business rule's formula statements.

Note: If logging is not enabled for a ruleset, but is enabled for a rule and component that belong to the ruleset, no log file is created, because the log setting for the ruleset overrides the settings for the rule and component.

- Select **Enable Timer** so the time taken to process the rule is recorded in the log file when the rule is launched. You can enable the timer for rules, rulesets, and components. The process time is included in the log file for every object whose timer is enabled. For example, if you have a ruleset whose timer is enabled and the ruleset contains three rules whose timers are enabled, the time taken to process the ruleset, and each rule in the ruleset, is recorded.
- Select **Disabled** to temporarily disable the business rule while the script is generated.
- Select **Is Function** so the rule is used as a function that can include execution variables that you specify as parameters on the Parameters tab.

Note: Any business rules with Is Function selected are displayed as functions in the Function Selector.

6 On Parameters, any execution variables for which the Is Parameter option was selected are listed in the grid. Enter a value for a parameter by clicking its row in the Value column and entering a value, or click Actions, and select one of these options to enter a value:

- Variable (See [“Working with Variables” on page 249](#). This chapter provides detailed procedures for variables.)
- Member (See [“Working with Members” on page 230](#). This chapter provides detailed procedures for member selection.)
- Function (See [“Working with Functions” on page 269](#). This chapter provides detailed procedures for functions.)

Note: The values you enter for the variables apply only to this business rule. You can change the values when you use the business rule within another business rule. The values you enter are validated against the variable type when the script of the business rule is generated.

Note: You cannot delete or add variables displayed in the grid. If you want to make changes to the variables that are passed, you must make these changes in the original business rule.

7 Select File, Save.

Analyzing and Debugging Business Rules (Planning, Operational Planning, and Essbase Users Only)

The Analyze feature enables you to run a business rule and capture statistical information like how long a component took to execute, how many times it was run, and the values of a member intersection before and after the component was run. The Debug feature enables you to run a business rule and examine its script line by line to see how the script executes.

► To analyze or debug a business rule:

- 1 In the **System View**, expand the **Planning**, or **Essbase application type**, the **application**, the **plan type**, or the **database**, and **Rules**.

Note: If you want to open an Operational Planning business rule, after you expand the **Rules** node, expand the **Calculation Type** node that contains the business rule with which you want to work.

- 2 Right-click the rule you want to open, and select **Open**.
- 3 In the **Rule Designer**, perform either of these tasks:
 - Select **Actions, Debug** to debug the business rule. Proceed to [“Debugging a Business Rule” on page 46](#).
 - Select **Actions, Analyze** to analyze the business rule. Proceed to [“Analyzing a Business Rule” on page 48](#).

Debugging a Business Rule

You can debug business rules for Essbase block storage applications if you have write privileges. You can also debug business rules for deployed Planning applications if you have launch privileges. The Debug feature enables you to examine the calc script of a business rule as it is being run:

- You can insert (and remove) break points where you want to stop the execution of the script to examine the values of the intersections of members in the statement. When the execution stops at a break point, the values of the intersection of all members in the statement are displayed.
- You can display a list of the break points.
- You can add a condition to a break point that stops the execution of the statement only if the condition is met. (Only members used in the statement with the breakpoint can be used in the condition.)
- You can display the values of members in a statement before and after their execution.
- You can display execution variable values in a statement before and after the statement is executed.
- You can exit and resume a debugging session.

➤ To debug a business rule:

- 1 Complete steps [step 1 on page 46](#) through [step 3 on page 46](#). (Or, from the System View, right click on a business rule, and select Debug.)
- 2 In the **Rule Designer**, select **Actions, Debug**.

The script of the business rule is displayed in the **Script Debugger**. Each statement in the script is displayed on a separate line in the debugger.

- 3 Perform any of these tasks to debug a statement in the script of the business rule:

Note: You cannot edit a business rule while you are debugging it.

- To add a break point, click in the margin of the statement for which you want to insert the break point. You can add break points to assignment and conditional statements.

Note: You can only add a break point in lines of the script that are preceded by white space; you cannot add a break point to a line preceded by grey space.

Tip: To remove a break point, right-click it, and select **Remove Break Point**.

- To add a condition to the break point, right-click the break point, and select **Add Condition**.

Tip: To edit a condition, right-click it, and select **Edit Condition**.

- To start debugging a statement with a break point, right-click it and select **Start Debug**.

The statement you are debugging is highlighted in the Script Debugger. The members of the statement, the break points, and the values of the intersection of the members before and after execution are displayed in tabs below the Script Debugger.

The bottom pane of the Script Editor has two sections. The left side of the editor contains two tabs---a Members tab and a Breakpoints tab. You can click on either tab to display the members or breakpoints. When you click on Members, it shows the current intersection of members at the debug breakpoint. To see the next intersection of members, resume the debug process. If you click on Breakpoints, it shows the expressions from the script where you entered breakpoints. The right side of the editor displays the expression members with the values as they were before and after the debug was run.

Tip: To resume debugging, click **Debug** (the green arrow), or right-click the **Debug** icon in the Script Editor and click **Resume Debugging**. You need to continue clicking **Resume Debugging** until the debugger debugs all of the member intersections. After the debugger debugs all of the member intersections, you receive the message, “The script debugging is complete.”

- To exit the Script Debugger and return to editing the business rule, select **Actions, Edit**.

If the debug is not complete, you receive the message, “The debugging is in progress. Do you really want to exit debugging? Click Yes to exit debug, click No to continue debugging.”

Analyzing a Business Rule

The Analysis feature enables you to analyze a graphical business rule to determine: how long its components take to run, how many times the components' formulas are run, and the value of the intersection of members before and after the components are run.

Note: The Analysis feature is not available for Member Range, Member Block, Fixed Loop, or Condition components.

► To analyze a business rule:

- 1 Complete steps [step 1 on page 46](#) through [step 3 on page 46](#).
- 2 In the **Rule Designer**, select **Actions, Analyze**.

Note: You can analyze only graphical business rules.

The **Enter Analysis Criteria** dialog is displayed. Perform these tasks:

- a. Specify whether to track only values that changed from before and after the rule's components were run. If you do not select this option, all values, both changed and unchanged, are displayed in the Analysis Information tab.
- b. Perform either of these tasks:
 - Enter the number of entries to display. This is the total number of member intersections to be calculated and displayed. For example, assume you have these dimensions in the application:
 - Year = 12 members
 - Measures = 50, 525 members
 - Product = 450 members
 - Market = 2000 members
 - Scenario = 4 members

The number of member intersections to be calculated is: 2, 182, 680, 000 (12 x 50,525 x 450 x 2,000 x 4 or Year x Measures x Product x Market x Scenario)

Note: If you specify to track only changed values, you must still enter a number of entries to display. If you enter a number of entries that is not enough to display all of the member intersections, a message is displayed in the Analysis Information tab letting you know that you need to increase the number of entries.

- Select **Show All** to display all of the member intersections.
- c. Perform one of these tasks:
- Use the Member Selector to select members to be analyzed and displayed.
 - For each dimension listed, click the **Member Selector** icon to select members to be analyzed.
 - Type in the member.

Note: You can only select one member per dimension.

- d. Click **OK** to start the analysis.

A message is displayed letting you know the rule analysis is complete.

- 3** In the Information dialog, which lets you know the analysis is complete, click **OK**.

The analysis information is available for each component in the rule (with the exception of Member Range, Member Block, Fixed Loop, and Condition components) on an **Analysis Information** tab.

- 4** To access the analysis information for each component, click the component in the business rule flow chart, and then click in the Properties pane to display the Analysis Information tab.

Note: Analyze may not show the correct begin and end values because of Essbase optimizations. If analyze does not show a begin and end value for at least one intersection, the Count and the elapsed time might not be correct.

- 5** To export the analysis information data, right click on the grid within the Analysis Information tab, and select **Export**. Then, save or open the file.
- 6** Select **Hide dimensions** to hide the members of the dimensions that are being tracked. If you do not select **Hide dimensions**, all the members processed for the dimension are displayed. If you review the before and after values, they should indicate which member changed the tracking member values. The before and after values shown in the Analysis Information tab are the values for the members you are tracking. For example, if you are tracking Product 200-30, you may see lines for Product 200. The values shown on the line for product 200 are the values for 200-30.
- 7** To return to editing the business rule, click the component to edit in the flow chart.

Note: To capture the statistical information in the Analyze feature, the internal call to Essbase must be surrounded by a member block. If you only leave one dimension empty in the Fix statement, *and you do not use a tracking member from that dimension*, then that dimension or one of its descendants is used for the member block. The Analysis Information tab only displays values for the member you use in the member block. If you only leave one dimension empty in the Fix statement, and you specify a tracking member from that dimension that is a dynamic calc member, then the member block is that dimension or one of its descendants that is not a dynamic calc or label only member. The Analysis Information tab displays values for the tracking member, and also displays the member used in the member block.

Comparing the Scripts of Two Business Rules

You may want to view the scripts of two business rules to see how they are different from each other, to see changes you have made, or to see the scripts of graphical business rules. You can display the scripts of two business rules side-by-side in a window within the System View of Calculation Manager.

► To compare the scripts of two business rules:

- 1 In the **System View**, expand the application type, the application, the calculation type, the plan type, or the database, and **Rules**.

Note: If you want to open an Operational Planning business rule, after you expand the Rules node, expand the Calculation Type node that contains the business rule with which you want to work.

- 2 Use **Ctrl + click** to select the two business rules whose scripts you want to compare.

Note: You cannot compare more than two business rules at a time. Also, you cannot compare versions of a business rule (for example, you cannot compare a previous version of a business rule to the version that you just saved).

- 3 Select **Actions**, and then **Compare Script**.

The components of the two calculation scripts are displayed in a new window, side-by-side. The Compare Scripts window displays the following information:

- If an addition was made to either script, the line displays in a light gray background.
- If a deletion was made from either script, the line displays in a dark gray background.
- If either script was changed, the line displays in a yellow background.
- The first column displays the line number of the script.
- The second column displays one of three characters:
 - * indicates that the line in the script displayed in the left column is different from the line in the script displayed in the right column
 - + indicates a new line was added to the script displayed in the right column when compared to the script displayed in the left column
 - – indicates a line was deleted from the script displayed in the right column when compared to the script displayed in the left column.
- The third and fourth columns display the two scripts.

- 4 In the **Compare Scripts** window, do any of the following tasks:

- Use the **Move Up** and **Move Down** keys to move between the lines to which changes were made.
- Use the **Show/Hide** button to display the bottom pane or hide it from view. The bottom pane is divided into two panes that display the complete lines of the scripts you selected

in the top panes. The first pane displays the script in the left column, and the second pane displays the script in the right column.

- 5 Click **OK** when you finish comparing the scripts.

Loading Predefined Workforce Planning, Capital Asset Planning, and Human Capital Planning Business Rules (Planning Users Only)

If you are working with an Oracle Hyperion Workforce Planning, Oracle Hyperion Capital Asset Planning, or Oracle Hyperion Public Sector Planning and Budgeting application created with Planning application administration, predefined business rules are loaded into the application when it is created and initialized in Planning. These predefined business rules enable you to perform predefined calculations when you are working with Web forms in these applications.

If you make changes to, or delete, these predefined business rules, you may want to reload them in Calculation Manager. Use this procedure to load predefined business rules into Planning applications that have the Wrkforce, Capex, and/or Human Capital Planning plan types enabled.

► To load predefined business rules:

- 1 From the System View, expand the Planning application type and application into which you want to load predefined business rules.
- 2 Right-click the Workforce Planning, the Capital Asset Planning, or the Human Capital Planning plan type, and select **Load Predefined Rules**.

The business rules are loaded into the plan types.

- 3 Click **OK** to exit the message that the predefined rules were loaded successfully.

You should see the predefined rules in the Rules folders of the application and plan type into which you loaded the rules.

Opening Rules, Rulesets, Templates, and Components

Use this dialog to open an object.

- To open a business rule, see [“Opening a Business Rule” on page 52](#).
- To open a business ruleset, see [“Opening a Business Ruleset \(Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only\)” on page 76](#).
- To open a custom defined template, see [“Opening a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 139](#).
- To open a component, see these topics:
 - [“Opening a Formula Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 160](#) to open a formula component

- “Opening a Script Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 167 to open a script component
- “Opening a Condition Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 171 to open a condition component
- “Opening a Member Block Component (Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 175 to open a member block component
- “Opening a Member Range Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 180 to open a member range component
- **Financial Management users only:** “Opening a Data Range Component (Financial Management Users Only)” on page 186 to open a data range component
- “Opening a Fixed Loop Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 190 to open a fixed loop component
- **Essbase aggregate storage and Oracle General Ledger users only:** “Opening a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)” on page 219 to open a point of view or allocation component
- **Essbase aggregate storage and Oracle General Ledger users only:** “Opening a Formula Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)” on page 223 to open a formula component

Opening a Business Rule

You open a business rule from the System View that is displayed by default when you open Calculation Manager. You can also open a rule using File, Open from within the tab of another rule, ruleset, component, or template.

► To open a business rule:

- 1 In the System View, expand the application type, the application, the calculation type, plan type, or database, and **Rules**.

Note: If you want to open an Operational Planning business rule, after you expand the Rules node, expand the Calculation Type node that contains the business rule with which you want to work.

- 2 Do one of these tasks:

- Right-click the rule you want to open, and select **Open**.
- Select the rule you want to open, and select **File, Open**.

Editing Business Rules

See these topics:

- [“Editing a Business Rule” on page 53](#)
- [“Editing a Business Rule in Script Mode \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 58](#)

Editing a Business Rule

You can edit the structure of a business rule by adding to, removing, or changing its components (including formulas, scripts, conditions, ranges, and loops). You can also edit the properties of the business rule's components and the properties of the business rule itself.

You can edit these properties of a business rule:

- The business rule name and caption
- The business rule description and comments
- For Financial Management applications, whether the business rule has a log file and timer, whether the business rule is disabled during script generation, and whether the business rule functions as a parameter
- For Essbase applications, whether the business rule can be launched

You can also edit the range of dimensions and members, and the variables, you include in the business rule.

➤ To edit a business rule:

- 1 In the **System View**, expand the application type, the application, the calculation type, the plan type, or the database, and **Rules**.

Note: If you want to open an Operational Planning business rule, after you expand the **Rules** node, expand the **Calculation Type** node that contains the business rule with which you want to work.

- 2 Do one of these tasks:

- Right-click the rule you want to edit, and select **Open**.
- Select the rule you want to edit, and select **File, Open**.

- 3 To edit the rule, in the **Rule Designer**, add new components, and copy and delete existing components, from the rule's flow chart.

Tip: As you edit components in a business rule, you may want to increase or decrease the size of the component icons and the amount of detail that is displayed in the flow chart. To do this, you can use the zoom bar to zoom in and out within the flow chart. When the flow chart is displayed in small or very small sizes, the component captions do not display, but you can place your mouse pointer over any icon to read its caption. Regardless of the size of the components in the flow chart, you can select a component to view its properties on the Properties tab.

- To delete a component from the flow chart, select the component, right-click it, and select **Remove**.
- To copy and paste a component, select the component, right-click it, and select **Copy**. Then paste it into the flow chart.
- To add a new component:
 - From **New Objects**, drag and drop components to insert a *new* component into the rule's flow chart:
 - (Financial Management, Planning, Operational Planning, Essbase, and Essbase block storage users only) Formulas: See [“Working with Formula Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 150.
 - (Financial Management, Planning, Operational Planning, and Essbase block storage application users only) Scripts: See [“Working with Script Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 163.
 - (Financial Management, Planning, Operational Planning, and Essbase block storage users only) Conditions: See [“Working with Condition Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 169.
 - (Planning, Operational Planning, and Essbase block storage users only) Member blocks: See [“Working with Member Block Components \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 174
 - (Financial Management, Planning, Operational Planning, and Essbase block storage users only) Member Ranges: See [“Working with Member Range Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 178.
 - (Financial Management users only) Data Ranges: See [“Working with Data Range Components \(Financial Management Users Only\)”](#) on page 183.
 - (Financial Management, Planning, Operational Planning, and Essbase block storage users only) Fixed Loops: See [“Working with Fixed Loop Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 188.

- ❑ (Essbase aggregate storage and Oracle General Ledger users only) Point of Views: See [“Working with Point of View Components \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)”](#) on page 212.
- ❑ (Essbase aggregate storage and Oracle General Ledger users only) Allocations: See [“Working with Allocation Components \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)”](#) on page 214.
- ❑ (Essbase aggregate storage and Oracle General Ledger users only) Formulas: See [“Working with Formula Components \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)”](#) on page 221.
- From **Existing Objects**, drag existing objects from Financial Management, Planning, or Essbase applications and drop them into the rule's flow chart.

Note: (Financial Management, Planning, Operational Planning, and Essbase block storage application users only) When you drag an existing formula or script component into the flow chart, by default, the formula or script becomes a shared object. If you do not want it to be shared, clear the Shared check box on the formula or script component's Properties tab. See [“Sharing Script and Formula Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 201.

4 On Properties, edit properties of the rule. (The number and contents of the tabs change as you move amongst the rule's components in the flow chart. To edit the properties of, and other information for, a component, select the component in the flow chart to display its information in the tabs. See [Chapter 4, “Using Components to Design Business Rules and Templates \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\).”](#))

- **Optional:** Edit the name by entering a new one of up to 50 characters. (The name defaults from the New Rule dialog.)
- **Optional:** Edit the description by changing or entering a new one of up to 255 characters.
- **Optional:** Edit the caption for the rule. The caption displays below the rule's icon in the flow chart.
- **Optional:** Enter comments for the rule. For example, you may want to add comments that describe what the rule does in detail.
- **Financial Management users only:**
 - Select **Enable Logging** so, if the rule has log text, it is included in the log file when the rule is launched. You can enable logging for rules, rulesets, and components. However, you specify what log text to include, if any, with a business rule's formula statements.

Note: If logging is not enabled for a ruleset, but is enabled for a rule and component that belong to the ruleset, no log file is created because the log setting for the ruleset overrides the settings for the rule and component.

- Select **Enable Timer** so the time taken to process the rule is recorded in the log file when the rule is launched. You can enable the timer for rules, rulesets, and components. The process time is included in the log file for every object whose timer is enabled. For example, if you have a ruleset whose timer is enabled and the ruleset contains three rules whose timers are enabled, the time taken to process the ruleset, and each rule in the ruleset, is recorded.
- Select **Disabled** to temporarily disable the business rule while the script is generated.
- Select **Is Function** so the rule is used as a function that can include execution variables that you specify as parameters on the Parameters tab.

Note: Any business rules with Is Function selected are displayed as functions in the Function Selector.

- **Oracle General Ledger users only:** Use the **Start Date** and **End Date** features to specify a date range during which the business rule may be launched. You will be unable to launch the business rule outside of this date range.
 - Select **Start Date** to access a calendar from which you can select a start date after which the business rule may be launched.
 - Select **End Date** to access a calendar from which you can select an end date prior to which the business rule may be launched.

5 Financial Management users only: On **Parameters**, you can view the execution variables that are used in the business rule and select any execution variables you want to use as parameters. Complete these steps:

Note: When you first open a new business rule, this tab is empty. If you add components to the business rule, and any of those components use execution variables, the execution variables are displayed on this tab.

- a. Select **Is Parameter** to use the execution variable as a parameter. If the execution variable has a ruleset scope (that is, it is passed from one business rule to another business rule within the same ruleset) **Is Parameter** is selected by default. If the variable has a rule scope (that is, it may be used only in the business rule for which it is created and is not passed to another business rule) **Is Parameter** is not selected.

Note: If a business rule contains at least one execution variable for which Is Parameter is selected, when you include this business rule in another or the same business rule, you can specify values for its execution variables on the Parameters tab. See [“Using Parameters as a Business Rule \(Financial Management Users Only\)” on page 44.](#)

- b. In **Passing Method**, select **By Reference** or **By Value**. (**By Reference** is the default.)

6 Planning, Operational Planning, Oracle General Ledger, and Essbase users only: On **Global Range**, you can edit the values (that is, members, variables, and functions) that define the range of values to be calculated when the rule is launched.

- a. Select values for a dimension by clicking its row in the **Value** column.
- b. When the **Actions** icon is displayed, click it, and select one of these:
 - Variable (See [“Working with Variables” on page 249](#). This section provides detailed procedures.)
 - Member (See [“Working with Members” on page 230](#). This section provides detailed procedures.)
 - Function (See [“Working with Functions” on page 269](#). This chapter provides detailed procedures.)

7 On Variables, you can create variables for the rule. (See [“Working with Variables” on page 249](#).)

8 Financial Management, Planning, Operational Planning, and Essbase block storage application users only: On **Script**, you can view the rule in its non-graphical format.

Note: You cannot make changes on this tab. If you want to make changes to the script, select Edit, Script. See [“Editing a Business Rule in Script Mode \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 58](#).

9 Financial Management, Planning, Operational Planning, and Essbase block storage application users only: To search for a text string on **Script**:

- Click the **Find** icon to find a text string within the script.
 - a. Enter the text for which you want to search within the script.
 - b. Select **Match case** if you want the case of the text you are searching for to match the case of the text you enter in the dialog.
 - c. Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.
 - d. Click **Find**.
- Click the **Find and Replace** icon to find and replace a text string within the script.
 - a. Enter the text for which you want to search within the script.
 - b. Enter the text with which you want to replace the text you find.
 - c. Select **Match case** if you want the case of the text you are searching for to match the case of the text you enter in the dialog.
 - d. Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.
 - e. Click **Replace** to find and replace one instance of the text at a time.
 - f. Click **Replace All** to find and replace all instances of the text simultaneously.
- Click the **Show Comments** and **Hide Comments** icon to display or hide system generated comments in the script. (By default, system generated comments are displayed in the script.)

Note: The Show Comments and Hide Comments feature does not affect comments that you and other users add to the script; it affects only comments that Calculation Manager uses to convert the business rule back to its graphical format.

10 On Usages, you can view which rules and rulesets use the rule, if any. This is the information you can view about the rules and rulesets (Financial Management and Planning users only) that use the rule:

Note: You cannot edit any of the information on this tab.

- The names of the business rules and (Financial Management, Planning, and Operational Planning users only) business rulesets that are using the business rule
- The application name of the business rules and (Financial Management, Planning, and Operational Planning users only) business rulesets that are using the business rule
- The calculation, plan type, or database of the business rules and (Financial Management, Planning, and Operational Planning users only) business rulesets that are using the business rule
- The owner of the business rules and (Financial Management, Planning, and Operational Planning users only) business rulesets
- Whether the business rules and (Financial Management, Planning, and Operational Planning users only) business rulesets that are using the business rule are deployed
- Whether the business rules and (Financial Management, Planning, and Operational Planning users only) business rulesets that are using the business rule are validated
- A description of the business rules and (Financial Management, Planning, and Operational Planning users only) business rulesets that are using the business rule

11 Select File, Save.

Editing a Business Rule in Script Mode (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

By default, you create a business rule in graphical mode using the Rule Designer to design the graphical flow of the business rule. After you create and save a business rule, you can edit it in graphical mode or script mode. If you choose to edit it in script mode, you can return to editing in graphical mode later.

For Financial Management business rules, after you edit a graphical business rule in script mode, you are prompted to save the changed rule as a separate script component. The original graphical rule remains unchanged in the database.

► To edit a business rule in script mode:

- 1 In the System View, expand the application type, the application, the calculation type, the plan type, or the database, and Rules.**

Note: If you want to open an Operational Planning business rule, after you expand the Rules node, expand the Calculation Type node that contains the business rule with which you want to work.

2 Do one of these tasks:

- Right-click the rule you want to edit, and select **Open**.
- Select the rule you want to edit, and select **File, Open**.

3 After the rule opens in the Rule Designer, select **Edit, Script.**

You can switch back to graphical mode by selecting **Edit, Graphical**.

Note: When you switch from editing in graphical mode to script mode, if the business rule contains shared components (such as formula and script components) or templates, the script of the business rule contains only references to the shared components and templates in the Script Editor. The complete generated script of the shared components and templates is displayed on the Script tab in the bottom pane.

4 In the Script Editor, do one or more of the following tasks:

- Click **Insert a function and its parameters** to insert a function into the script. (See [“Working with Functions” on page 269.](#))
- Click **Insert member(s) selected from a dimension** to insert members from a dimension into the script. (See [“Working with Members” on page 230.](#))
- Click **Insert a variable** to insert a variable into the script. (See [“Working with Variables” on page 249.](#))
- Select the script of the template you want to edit, and click **Edit Template**.
- **Planning users only:** Click **Insert smartlists** to insert a Smart List into the script. (See [“Working with Smart Lists \(Planning Users Only\)” on page 272.](#))
- Click the **Find** icon to *find* a text string in the script. (See [“Searching for and Replacing a Text String in a Business Rule Script \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 62.](#))
- Click the **Replace** icon to *find and replace* a text string in the script. (See [“Searching for and Replacing a Text String in a Business Rule Script \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 62.](#))
- Click the **Hide Line Number** icon to hide (or display) the script line numbers. Line numbers are displayed by default.
- Select the script lines you want to comment or uncomment, and click the **Comment** and **Uncomment** icons to add and remove comment lines from the script.
- Click the **Set Code Completion Off** icon to suppress suggestions for completing the code. (This icon functions as a toggle. To turn code completion back on, click the icon again. By default, code completion is set to On.)
- Click the **Format Code** icon to format the lines of the script.

When you select Format Code, the lines of the script are grouped together and are indented, and blank lines are removed.

- Click the **Verify Syntax** icon to check the syntax of the script for errors.
- Select the lines of the script you want to copy, and click the **Copy to Clipboard** icon.
- Select the lines of the script you want to cut, and click the **Cut to Clipboard** icon.
- Place the cursor in the location of the script where you want to paste, and click the **Paste from Clipboard** icon.

Note: The Copy to Clipboard, Cut to Clipboard, and Paste from Clipboard options are supported only in the Microsoft Internet Explorer browser.

- Click the **Hide Comments** and **Display Comments** icon to hide or show system keywords that display by default in the script as comments.

Note: This feature does not affect the display of comments that you or other users enter in the script; it affects only the display of comments generated by Calculation Manager.

- Auto suggest is provided for functions. When you type the first few characters of the function, press **CTRL+Space** to display the suggestions. Select one of the suggestions, and click or press **Enter** to complete the function.

5 On **Properties**, edit properties of the rule.

- **Optional:** Enter or edit the name by entering a new one of up to 50 characters. (The name defaults from the New Rule dialog.)
- **Optional:** Enter or edit a description of up to 255 characters for the rule.
- **Optional:** Enter or edit a caption for the rule. The caption displays below the rule's icon in the flow chart.
- **Optional:** Enter or edit comments for the rule. For example, you may want to add a comment that describes what the business rule does in detail.
- **Financial Management users only:**
 - Select **Enable Logging** so, if the rule has log text, it is included in the log file when the rule is launched. You can enable logging for rules, rulesets, and components. However, you specify what log text to include, if any, with a business rule's formula statements.

Note: If logging is not enabled for a ruleset, but is enabled for a rule and component that belong to the ruleset, no log file is created; the log setting for the ruleset overrides the settings for the rule and component.

- Select **Enable Timer** so the time taken to process the rule is recorded in the log file when the rule is launched. You can enable the timer for rules, rulesets, and components. The process time is included in the log file for every object whose timer is enabled. For example, if you have a ruleset whose timer is enabled and the ruleset

contains three rules whose timers are enabled, the time taken to process the ruleset, and each rule in the ruleset, is recorded.

- Select **Disabled** to temporarily disable the business rule while the script is generated.
- Select **Is Function** so the rule is used as a function that can include execution variables that you specify as parameters on the Parameters tab.
- **Oracle General Ledger users only:** Use the **Start Date** and **End Date** features to specify a date range during which the business rule may be launched. You will be unable to launch the business rule outside of this date range.
 - Select **Start Date** to access a calendar from which you can select a start date after which the business rule may be launched.
 - Select **End Date** to access a calendar from which you can select an end date prior to which the business rule may be launched.

6 Financial Management users only: On **Parameters**, you can view the execution variables that are used in the business rule and select any execution variables you want to use as parameters. Complete these steps:

Note: When you first open a new business rule, this tab is empty. If you add components to the business rule, and any of those components use variables, the variables are displayed on this tab.

- a. Select **Is Parameter** to use the execution variable as a parameter. If the execution variable has a ruleset scope (that is, it is passed from one business rule to another business rule within the same ruleset) **Is Parameter** is selected by default. If the variable has a rule scope (that is, it may be used only in the business rule for which it is created and is not passed to another business rule) **Is Parameter** is not selected.

Note: If a business rule contains at least one execution variable for which **Is Parameter** is selected, when you include this business rule in another or the same business rule, you can specify values for its execution variables on the Parameters tab. See [“Using Parameters as a Business Rule \(Financial Management Users Only\)” on page 44.](#)

- b. In **Passing Method**, select **By Reference** or **By Value**. (**By Reference** is the default.)

7 Planning, Operational Planning, and Essbase block storage application users only: On **Variables**, you can create variables for the rule. (See [“Working with Variables” on page 249.](#))

8 Planning, Operational Planning, and Essbase block storage application users only: On **Script**, you can view the entire generated script of the business rule and any components and templates it contains.

Note: You cannot make changes on this tab; you can edit the script only in the Script Editor.

9 On Usages, you can view which rules and rulesets (Financial Management and Planning users only) use the rule, if any. This is the information you can view about the rules and rulesets (Financial Management and Planning users only) that use the rule:

Note: You cannot edit any of the information on this tab.

- The names of the business rules, templates, and (Financial Management, Planning, and Operational Planning users only) business rulesets that are using the business rule
- The application name of the business rules, templates, and (Financial Management, Planning, and Operational Planning users only) business rulesets that are using the business rule
- The calculation, plan type, or database of the business rules, templates, and (Financial Management, Planning, and Operational Planning users only) business rulesets that are using the business rule
- The name of the owner of the business rules and (Financial Management, Planning, and Operational Planning users only) business rulesets
- Whether the business rules, templates, and (Financial Management, Planning, and Operational Planning users only) business rulesets that are using the business rule are deployed
- Whether the business rules, templates, and (Financial Management, Planning, and Operational Planning users only) business rulesets that are using the business rule are validated
- A description of the business rules, templates, and (Financial Management, Planning, and Operational Planning users only) business rulesets that are using the business rule

10 Select **File, Save**.

Searching for and Replacing a Text String in a Business Rule Script (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can use Find or Find and Replace to search for and replace text strings within a business rule that you are editing in Script mode.

► To search for and replace a text string in a script:

- 1** In the System View, expand application type, the application, the calculation type, the plan type, or the database, and **Rules**.

Note: If you want to open an Operational Planning business rule, after you expand the Rules node, expand the Calculation Type node that contains the business rule with which you want to work.

- 2** Do one of these tasks:

- Right-click the rule that contains the script you want to search, and select **Open**.
- Select the rule that contains the script you want to search, and select **File, Open**.

The business rule is displayed in the Rule Designer.

3 Select the **Script tab.**

4 In the Script Editor, do one or more of these tasks:

- Click the **Find** icon to *find* a text string within the script.
 - a. Enter the text string for which you want to search.
 - b. Select **Match case** if you want the case of the text you are searching for to match the case of the text you enter in the dialog.
 - c. Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.
 - d. Click **Find**.
- Click the **Find and Replace** icon to *find and replace* a text string within the script.
 - a. Enter the text string for which you want to search.
 - b. Enter the text with which you want to replace the text string you find.
 - c. Select **Match case** if you want the case of the text you are searching for to match the case of the text you enter in the dialog.
 - d. Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.
 - e. Click **Replace** to find and replace one instance of the text string at a time.
 - f. Click **Replace All** to find and replace all instances of the text string simultaneously.

5 Select **File, **Save**.**

Searching for and Replacing Text in a Graphical Business Rule

You can search for text strings within a graphical business rule. When you search for a string, Calculation Manager starts the search with the first component after the component selected in the flow chart, continues through to the end of the flow chart, and starts over at the beginning of the flow chart until it reaches the component selected in the flow chart. After one occurrence of the text string is found, if you want to search for another, you need to start the search again to find the next occurrence.

You can also replace text strings in a graphical business rule.

➤ To search for and replace text in a graphical business rule:

1 In the System View, expand the application type, the application, the calculation type, the plan type, or the database, and **Rules.**

Note: If you want to open an Operational Planning business rule, after you expand the Rules node, expand the Calculation Type node that contains the business rule with which you want to work.

2 Do one of these tasks:

- Right-click the rule that contains the text string for which you want to search, and select **Open**.
- Select the rule that contains the text string for which you want to search, and select **File, Open**.

The business rule is displayed in the Rule Designer.

3 You can perform any of these tasks:

- To search for the first or subsequent occurrences of a text string, select **Edit, Find** or **Edit, Find Next**, respectively, and perform these tasks:
 - a. In **Find What**, enter the text string for which you want to search.
 - b. Select **Match case** if you want the case of the text you are searching for to match the case of the text you enter in the dialog.
 - c. Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.
 - d. Select **Include Basic Properties**, if you want to include the business rule and its components' names, descriptions, comments, and captions in the search.
 - e. Click **Find**.
- To replace all occurrences of a text string, select **Edit, Replace All**, and perform these tasks:
 - a. In **Find what**, enter the text string for which you want to search.
 - b. In **Replace with**, enter the text string to replace all occurrences of the text string in **Find What**.
 - c. Select **Match case** if you want the case of the text you are searching for to match the case of the text you enter in the dialog.
 - d. Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.
 - e. Select **Include Basic Properties**, if you want to include the business rule and its components' names, descriptions, comments, and captions in the search.
 - f. Click **Find**.
 - g. Click **Replace All** to replace all instances of the text string.

Note: If the business rule for which you replace a text string contains shared components, the text string is also replaced in the shared components. However, if the business rule contains another business rule (and embedded business rule), the text string is not replaced in the embedded business rule.

If the business rule for which you replace a text string contains a variable, the variable is replaced with the text string.

4 Select **File, Save**.

Copying a Business Rule to Another Application

You can copy a business rule to another application and calculation type, plan type, or database from the System View. When you copy a business rule to another application, you create a new business rule with another name. Any variables used in the business rule are also copied to the new application.

Note: You cannot copy a business rule to the same application. You must use **Save As** from within the Rule Designer to create a copy of the business rule with a new name, so two business rules with the same name do not exist in the application.

➤ To copy a business rule to another application, calculation type, plan type, or database:

- 1 In the **System View**, expand the application type, the application, the calculation type, the plan type, or the database, and **Rules**.

Note: If you want to open an Operational Planning business rule, after you expand the **Rules** node, expand the **Calculation Type** node that contains the business rule with which you want to work.

- 2 Right-click the rule you want to copy, and select **Copy To**.

- 3 In **Copy To**, enter a new name for the business rule or accept the default name, and select an application and calculation type, plan type, or database.

Note: You cannot copy to more than one application and calculation type, plan type, or database.

- 4 If you copy the business rule with shared components to a different application, and you want the shared components to copy to that application, select **Copy Shared Components**. This creates the shared components in the copied application, and the copied rule uses the shared components from its application and plan type. If you do not select **Copy Shared Components**, the shared components are copied in the rule, but the copied rule uses the shared components from the original rule's application and plan type.

Note: When you copy a business rule that has variables from one application to another application, the variables are created in the copied to application. If the variables already exist in the copied to application, the variables are created as rule level variables when copied.

- 5 If you copy shared components, select **Replace Existing Objects** to overwrite objects with the same name.

Copying and Pasting the Children of a Business Rule Component

When you are working with a business rule that has components, you may want to copy a component's children (that is, the components that are grouped underneath a component in a flow chart).

You can copy the children of components and paste them into the same business rule or into a different business rule in a different application as long as it belongs to the same application type. For Financial Management business rules and components, when you copy children of components, you must paste them into only business rules of the same calculation type or of the Generic calculation type.

➤ To copy and paste the children of a business rule component:

1 In the **System View**, expand the application type, the application, the calculation type, the plan type, or the database, and **Rules**. Do one of these tasks:

Note: If you want to open an Operational Planning business rule, after you expand the Rules node, expand the Calculation Type node that contains the business rule with which you want to work.

- Right-click the rule that contains the component whose children you want to copy and paste, and select **Open**.
- Select the rule that contains the component whose children you want to copy and paste, and select **File, Open**.

2 In the **Rule Designer** flow chart, select the member range, data range (Financial Management users only) fixed loop, or condition component whose children you want to copy and paste.

3 Select **Edit, Copy Group**.

4 Do one of these tasks:

- If you want to paste the component's children into the *same* business rule, select the component to the left of the location you want the component's children to display in the flow chart. (The component's children display to the right of the component you select.)
- If you want to paste the component's children into a *different* business rule, open the business rule into which you want to paste the component's children, and select the component to the left of the location you want the component's children to display in the flow chart.

5 Select **Edit, Paste**.

6 Select **File, Save**.

Note: When you copy and paste the children of a component, any shared components are also copied.

Copying and Pasting the Reference to a Business Rule Formula or Script Component

When you copy and paste a reference to a business rule script or formula component, you copy and paste a shortcut to the component; the component itself is not copied. Only one copy of the

component exists in the original business rule from which you copied the reference. The reference functions as a pointer to the business rule that contains the component.

You can copy and paste a reference to a formula or script component within the same business rule or within a different business rule if the business rule belongs to the same application type.

Note: For Financial Management business rules and components, when you copy the reference to a component, you must paste it into business rules of the same calculation type or of the Generic calculation type.

➤ To copy and paste a reference to a formula or script component:

1 In the **System View**, expand the application type, the application, the calculation type, the plan type, or the database, and **Rules**. Do one of these tasks:

Note: If you want to open an Operational Planning business rule, after you expand the Rules node, expand the Calculation Type node that contains the business rule with which you want to work.

- Right-click the rule that contains the formula or script component whose reference you want to copy and paste, and select **Open**.
- Select the rule that contains the formula or script component whose reference you want to copy and paste, and select **File, Open**.

2 In the **Rule Designer** flow chart, select the formula or script component whose reference you want to copy and paste.

3 Select **Edit, Copy Reference**.

4 Do one of these tasks:

- If you want to paste the component's reference into the *same* business rule, select the component to the left of the location you want the component's reference to display in the flow chart. (The component's reference displays to the right of the component you select.)
- If you want to paste the component's reference into a *different* business rule, open the business rule into which you want to paste the component's reference, and select the component to the left of the location you want the component's reference to display in the flow chart.

Note: You can copy and paste the reference into a business rule that belongs to the same application or a different application, as long as the application belongs to the same application type (Financial Management, Planning, or Essbase).

5 Select **Edit, Paste**.

6 Select **File, Save**.

Saving a Business Rule

You must save a business rule after you create or edit it. When you save the business rule, it is saved to the application and application type for which you created it. After you save it, you can deploy, validate, and launch it. You can deploy and validate it in Calculation Manager; you can launch it from Planning (for Planning business rules), Operational Planning (for Operational Planning business rules), Oracle General Ledger (for Oracle General Ledger business rules), and Calculation Manager or Administration Services (for Essbase business rules).

Note: You can launch only business rulesets from Financial Management; you cannot launch business rules.

► To save a business rule after you create or edit it, select **File, Save**.

Note: To see the business rule in the System View after you save it, you may need to refresh the application list. To do this, right-click the application type, the application, the calculation type, the plan type, or the database, and select Refresh.

Saving a Rule, Ruleset, Template, or Formula or Script Component with a Different Name

Use this dialog to save a copy of an object with a different name. See these topics:

- [“Saving a Business Rule with a Different Name” on page 68](#) to save a copy of a business rule
- [“Saving a Business Ruleset with a Different Name \(Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only\)” on page 83](#) to save a copy of a business ruleset
- [“Saving Formula and Script Components with a Different Name \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 204](#) to save a copy of a formula or script component
-

Saving a Business Rule with a Different Name

You can save a business rule with a different name using Save As. You can also copy a rule from one ruleset to another within the same ruleset type using Save As. Save As creates a copy of the original business rule with a different name to distinguish it from the original.

► To save a business rule with a different name:

- 1 In the System View, expand the application type, the application, the calculation type, the plan type, or the database, and **Rules**.

Note: If you want to open an Operational Planning business rule, after you expand the Rules node, expand the Calculation Type node that contains the business rule with which you want to work.

2 Right-click the rule you want to save with a different name, and select **Open**.

3 In the **Rule Designer**, select **File, Save As**.

4 In **Save As**, enter the rule's new name, and select the **Application Name**.

5 Do one of the following tasks:

- If the rule is a Financial Management rule, select the **Calculation Type**.
- If the rule is a Planning or Operational Planning rule, select the **Plan Type**.

In addition, if you are working with an Operational Planning rule, select the **Calculation Type**.

- If the rule is an Essbase or Oracle General Ledger rule, select the **Database**.

Note: You cannot change the application type, or the calculation, plan type, or database of a rule you save with a different name. You can change the application to which a rule belongs when you save the rule with a different name.

6 Click **OK**.

The new rule is added to the application list in the System View.

Creating a Shortcut to a Business Rule

A shortcut lets you share a business rule across applications without having to create a copy of the rule for each application. When you create a shortcut to a rule, the shortcut provides a cross reference to the rule.

You can also use a shortcut to deploy a business rule to other applications than, or in addition to, the one for which the rule was created. By default, when you deploy a business rule, it is deployed to the application for which it was created.

Note: You can create shortcuts only for business rules.

➤ To create a shortcut for a business rule:

1 In the **System View**, expand the application type, the application, the calculation type, the plan type, or the database, and **Rules**.

Note: If you want to open an Operational Planning business rule, after you expand the Rules node, expand the Calculation Type node that contains the business rule with which you want to work.

2 Right-click the rule you want to create a shortcut to, and select **Create Shortcut**.

3 In **Create Shortcut**, expand the applications for which you want to create a shortcut to the rule.

- 4 Select the option buttons next to the calculation types, plan types, and databases for which you want to create a shortcut. You can select multiple calculation types, plan types, and databases in multiple applications belonging to the same application type.

Note: A business rule's name must be unique in an application, so the application in which you created the business rule is not displayed in the Create Shortcut dialog; you can only create a shortcut for a business rule in another application. Further, any applications containing a business rule with the same name as the rule you want to create a shortcut for do not display in the Create Shortcut dialog.

- 5 Click **OK**.

A shortcut to the rule is copied to the calculation type, plan type, or database you selected. The shortcut appears as an upward arrow in the lower left of the rule icon.

Deleting a Business Rule

You delete a business rule from the System View. You can delete a business rule only if it is not used by other rules or rulesets. If the rule is being used, you must remove the business rule from the rules and rulesets using it, or make copies of it for the rules and rulesets using it, before you delete it. To see if a rule is used by other rules and rulesets, you can show the usages of the rule. (See [“Showing the Usages of a Business Rule or Business Ruleset”](#) on page 86.)

► To delete a business rule:

- 1 In the System View, expand the application type, the application, the calculation type, the plan type, or the database, and **Rules**.

Note: If you want to open an Operational Planning business rule, after you expand the Rules node, expand the Calculation Type node that contains the business rule with which you want to work.

- 2 Make sure the rule you want to delete is not being used by another ruleset or rule. See [“Showing the Usages of a Business Rule or Business Ruleset”](#) on pages 86.
- 3 Right-click the rule you want to delete, and select **Delete**.
- 4 Click **OK** to confirm deletion of the rule.

Printing a Business Rule

You can print a business rule's properties, its flow chart, and the details of its components. For example, if you print a business rule that contains a formula component for allocation expenses, the print out shows the formula syntax, the functions and variables that comprise the formula, a summary of the steps in the rule's flow chart (not in graphical form), and the rule's properties.

Note: You cannot print business rulesets, templates, or components. You can only print templates and components if they are used in a business rule that you print.

➤ To print a business rule:

- 1 In the System View, expand the application type, the application, the calculation type, the plan type, or the database, and **Rules**.

Note: If you want to open an Operational Planning business rule, after you expand the Rules node, expand the Calculation Type node that contains the business rule with which you want to work.

- 2 Select the rule you want to print.
- 3 Select **File, Print**.

Note: You can also select File, Print from within the Rule Designer to print a rule.

- 4 In **Print Preview**, do these tasks:

a. Select the Print options:

- Select the paper size.
- Select the print orientation: **portrait** or **landscape**.

b. Select the Rule Information options:

- Select **General Rule Information** if you want to print the rule's description and other details from the **Properties** tab, such as the rule's name, the application to which it belongs, its owner, the date it was created, and the date it was last modified.
- Select **Flow Chart** and **Expanded** or **Collapsed**, if you want to print the flow chart, and you want to print it with the component details expanded or collapsed.
- Select the number of pages you want to print the components across (horizontally).
- Select the number of pages to print the components down (vertically).

c. Select the Page Order options:

- **Down, then across:** the components in the flow chart print down (vertically, as rows do) on the number of pages you specified in the previous step, then the components print across (horizontally, as columns do) on the number of pages you specified in the previous step.
- **Across, then down:** the components in the flow chart print across (horizontally, as columns do) on the number of pages you specified in the previous step, then the components print down (vertically, as rows do) on the number of pages you specified in the previous step.

d. Select the remaining Rule Information options:

- Select **Summary**, if you want to print a summary of the components in the flow chart.
- Select **Variable Section** if you want to print information on any variables used in the rule.
- Select **Detail Section** if you want to print detailed information about the components in the rule.

- Select **Page break before sections** if you want to create a page break between summary, variable, and detail sections. (This option is selected by default.)
- Select **Nested Rules** if you want to print rules contained in other rules.

5 Select Generate PDF.

A PDF file of the business rule is opened in Adobe Acrobat.

Note: If you print a business rule that is in script only: 1) the Rule Details section of the PDF file contains the business rule script, 2) the Flow Chart section of the PDF file contains only a Begin and an End node, and 3) the Flow Summary section of the PDF file is empty.

6 Click the Print icon in Adobe Acrobat.

7 In the Print dialog, select the print options specific to the printer you are using, and click Print.

About Business Rulesets (Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only)

You create a business ruleset by combining business rules (or business rulesets) that can be launched simultaneously or sequentially.

You create a business ruleset for a Financial Management, Planning, Operational Planning, or Oracle General Ledger application. (Your ability to create rulesets is determined by the role you are assigned in Shared Services. See the *Oracle Hyperion Enterprise Performance Management System User and Role Administration Guide*.) You add rules and rulesets to a ruleset by dragging and dropping them into it.

After you create and save the ruleset, you can validate and deploy it. Then you can launch it in Financial Management (for Financial Management rulesets), Planning (for Planning rulesets), Operational Planning (for Operational Planning rulesets), or Oracle General Ledger (for Essbase rulesets used in Oracle General Ledger).

Note: Rulesets are not supported in Essbase aggregate storage or block storage applications. Rulesets are supported in Essbase aggregate storage applications used in Oracle General Ledger.

Creating a Business Ruleset (Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only)

You can create a business ruleset from the System View. You can also create a business rule from the List, Custom, and Deployment views and from within the Ruleset, Template, and Component designers.

➤ To create a business ruleset:

- 1 Enter the ruleset's name.
- 2 Enter the **Application Type** (Financial Management, Planning, or Essbase).

If you are working with an Essbase aggregate storage application in Oracle General Ledger, or an Operational Planning application, select the Essbase application type.

- 3 Select an **Application**.

- 4 Do one of these tasks:

- If you selected a Financial Management application type and application, select the **Calculation Type**.
- If you selected Planning application type and application, select the **Plan Type**.
- If you selected an Essbase application type and an Operational Planning application, select a **Calculation Type**.

Note: From the System View, if you right-click Rulesets and select New to create a new business ruleset, the New Ruleset dialog is populated with the application type, the application, and the calculation type, plan type, or database in which you are working.

- 5 Click **OK**.

The new ruleset is displayed in the Ruleset Designer. See [“Designing a Business Ruleset \(Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only\)” on page 73](#) to design the business ruleset.

Designing a Business Ruleset (Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only)

After you create a ruleset in the New Ruleset dialog, the ruleset is displayed in the Ruleset Designer.

➤ To design a business ruleset:

- 1 Complete the procedure in [“Creating a Business Ruleset \(Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only\)” on page 72](#).
- 2 In the **Ruleset Designer**, to create the ruleset, from **Ruleset Palette**, drag existing rules and rulesets and drop them into the flow chart.

Tip: You can use the up and down arrow buttons below the Navigate menu to reorder the rules in the ruleset. To move a rule up or down, select the rule and click the up or down arrow button until the rule is in the correct location. Rules in Financial Management applications are launched sequentially within a ruleset, so the order of the rules is important.

Note: Planning, Operational Planning, and Essbase rulesets can contain rules and rulesets that are created in, and deployed to, different applications. Financial Management rules and rulesets must belong to the same calculation type or belong to the Generic calculation type.

3 On Properties, enter properties for the ruleset. (In the Ruleset Designer, if you select a rule or ruleset within the ruleset you are creating, its properties are displayed on Properties instead of the new ruleset's properties.)

- **Optional:** Edit the name by entering a new one of up to 50 characters. (The name defaults from the **New Ruleset** dialog.)
- **Optional:** Enter a description of up to 255 characters for the ruleset.
- **Optional:** Select **Enable Parallel Execution** if you want the rules and rulesets in the ruleset to launch simultaneously. By default the rules and rulesets belonging to a ruleset launch sequentially: each rule or ruleset in the ruleset must run without errors before the next rule or ruleset is launched.

If the ruleset contains nested rulesets, and the nested rulesets have a different Enable Parallel Execution setting than the parent ruleset, the setting of the nested ruleset applies. For example, if you have ruleset1 (that is flagged for *parallel* processing) and it contains rule1, rule2, and ruleset2 (that is flagged for *sequential* processing), the rules and rulesets in ruleset2 are processed sequentially, even though ruleset1 is flagged for parallel processing.

- **Optional:** Enter comments for the ruleset. For example, you may want to enter a comment that describes what the business ruleset does.
- **Financial Management users only:**
 - Select **Enable Logging** so, if the rules in the ruleset have log text, the log text is included in the log file when the ruleset is launched. You can enable logging for rules, rulesets, and components. However, you specify what log text to include, if any, with a business rule's formula statements.

Note: If logging is not enabled for a ruleset, but is enabled for a rule and component that belong to the ruleset, no log file is created because the log setting for the ruleset overrides the settings for the rule and component.

- Select **Enable Timer** so the time taken to process the ruleset is recorded in the log file when the ruleset is launched. You can enable the timer for rules, rulesets, and components. The process time is included in the log file for every object whose timer is enabled. For example, if you have a ruleset whose timer is enabled and the ruleset contains three rules whose timers are enabled, the time taken to process the ruleset, and each rule in the ruleset, is recorded.
- Select **Enable Launch** so the ruleset can be launched in Financial Management.

Note: You cannot launch business rules in Financial Management.

- **Oracle General Ledger users only:** Use the **Start Date** and **End Date** features to specify a date range during which the business ruleset may be launched. You will be unable to launch the business ruleset outside of this date range.
 - Select **Start Date** to access a calendar from which you can select a start date after which the business ruleset may be launched.
 - Select **End Date** to access a calendar from which you can select an end date prior to which the business ruleset may be launched.

4 On Usages, you can see which rulesets are using this ruleset, if any. (You cannot change any of the information on this tab.) This is the information you can view about the rulesets that use this ruleset:

- The names of the business rulesets that are using the business ruleset
- The calculation, plan type, or database of the business rulesets that are using the business ruleset
- The application name of the business rulesets that are using the business ruleset
- Whether the business rulesets that are using the business ruleset are deployed
- Whether the business rulesets that are using the business ruleset are validated
- A description of the business rulesets that are using the business ruleset

Note: By default, a ruleset is used by no other rulesets when you create it.

5 Financial Management users only: To search for a text string on Script:

- Click the **Find** icon to find a text string within the script.
 - Enter the text for which you want to search within the script.
 - Select **Match case** if you want the case of the text you are searching for to match the case of the text you enter in the dialog.
 - Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.
 - Click **Find**.
- Click the **Find and Replace** icon to find and replace a text string within the script.
 - Enter the text for which you want to search within the script.
 - Enter the text with which you want to replace the text you find.
 - Select **Match case** if you want the case of the text you are searching for to match the case of the text you enter in the dialog.
 - Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.
 - Click **Replace** to find and replace one instance of the text at a time.
 - Click **Replace All** to find and replace all instances of the text simultaneously.
- Click the **Show Comments** and **Hide Comments** icon to display or hide system generated comments in the script. (By default, system generated comments are displayed in the script.)

Note: The Show Comments and Hide Comments feature does not affect comments that you and other users add to the script; it affects only comments that Calculation Manager uses to convert the business rule back to its graphical format.

- 6 If you are working with Planning, Operational Planning, Essbase, or Oracle General Ledger variables, on **Variables**, select **Merge Variables** to merge all instances of the *same variable* used in the rules within this ruleset so only the first instance of each variable is displayed when the rule is launched. If you do not select this check box, all instances of each variable are displayed.

Note: If you select Merge Variables, the first value that the user enters for the runtime prompt is used for all subsequent occurrences of that runtime prompt during validation and launch.

You can perform any of these tasks on **Variables**:

- View the names of the variables that are used in the business ruleset.
- View the scope of the applications in which the variables are used.
- Specify whether the variables are hidden or visible to users when the variables are used as runtime prompts.
- Select values for the variables using the Member Selector.
- Select validation values for variables using the Member Selector. This enables you to validate the business rules in the business ruleset using different values for the variable.
- Select security settings for Planning runtime prompt variables of the member type:
 - **Use Default:** enables the default security setting if the access to members is not set to None in Planning.
 - **Read:** enables users to view the members they can select for a runtime prompt when they are launching a business rule in Planning.
 - **Write:** enables users to make changes to the members they can select for a runtime prompt when they are launching a business rule in Planning.
 - **Approvals:** enables users to make changes to the members they can select for a runtime prompt if they have write access to the members and the members belong to a planning unit in Planning.

- 7 Select **File**, **Save**.

Opening a Business Ruleset (Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only)

You open a business ruleset from within the System View. You can also open a ruleset from within the Rule Designer, the Component Designer, and the Template Designer by selecting File, then Open.

➤ To open a business ruleset:

1 In the System View, expand the application type and the application.

2 Do one of these tasks:

- **Financial Management users only:** Expand the calculation type and **Rulesets**, right-click the ruleset you want to open, and select **Open**.
- **Planning, Essbase, and Oracle General Ledger users only:** Expand **Rulesets**, right-click the ruleset you want to open, and select **Open**.

Note: For Financial Management applications, there is a Rulesets node for each calculation type within the application. For Planning, Essbase, and Oracle General Ledger applications, there is only one Rulesets node for each application at the same level as the plan types and databases.

- **Operational Planning users only:** Expand **Rulesets**, expand the calculation type that contains the ruleset you want to open, right-click the ruleset, and click **Open**.

Opening a Business Rule within a Business Ruleset (Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only)

You can open a business rule from within a business ruleset from the System View or from the Ruleset Designer.

➤ To open a business rule within a business ruleset:

1 In the System View, expand the application type and the application.

2 Do one of these tasks:

- **Financial Management users only:** Expand the calculation type, **Rulesets**, and the ruleset that contains the rule you want to open.
- **Planning, Essbase, and Oracle General Ledger users only:** Expand **Rulesets** and the ruleset that contains the rule you want to open.

Note: For Financial Management applications, there is a Rulesets node for each calculation type within the application. For Planning, Essbase, and Oracle General Ledger applications, there is only one Rulesets node for each application at the same level as the plan types and databases.

- **Operational Planning users only:** Expand **Rulesets**, expand the calculation type, and expand the ruleset that contains the rule you want to open.

3 Right-click the rule you want to open, and select **Open**.

Tip: You can also open a rule that belongs to a business ruleset from within the Ruleset Designer. To do this, in the Ruleset Designer, right-click the rule, and select **Open**.

Adding a Business Rule to a Business Ruleset (Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only)

You can add a business rule to a business ruleset that belongs to the same application type. The rules in the ruleset launch sequentially in Financial Management, so the order of the rules in the ruleset is important. In rulesets belonging to other application types, the rules in the ruleset can be launched sequentially or simultaneously.

➤ To add a business rule to a business ruleset:

- 1 In the System View, expand the application type and the application.
 - 2 Do one of these tasks:
 - **Financial Management users only:** Expand the calculation type and **Rulesets**, right-click the ruleset you want to open, and select **Open**.
 - **Planning, Essbase, and Oracle General Ledger users only:** Expand **Rulesets**, right-click the ruleset you want to open, and select **Open**.
- Note:** For Financial Management applications, there is a Rulesets node for each calculation type within the application. For Planning, Essbase, and Oracle General Ledger applications, there is only one Rulesets node for each application at the same level as the plan types and databases.
- **Operational Planning users only:** Expand **Rulesets**, and expand the calculation type that contains the ruleset you want to open, right-click the ruleset, and click **Open**.
 - 3 In the **Ruleset Designer**, in **Existing Objects**, expand the application and the plan type, calculation type, or database that contains the rule you want to add.
 - 4 To add the rule, drag and drop it into the **Ruleset Designer**.
 - 5 Repeat [step 4](#) for each rule you want to add to the ruleset.
 - 6 Select **File, Save**.

Removing a Business Rule from a Business Ruleset (Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only)

When you remove a business rule from a business ruleset, the rule is not deleted. The rule exists independently of the ruleset in the database.

➤ To remove a business rule from a business ruleset:

- 1 In the System View, expand the application type and the application.
- 2 Do one of these tasks:

- **Financial Management users only:** Expand the calculation type and **Rulesets**, right-click the ruleset you want to open, and select **Open**.
- **Planning, Essbase, and Oracle General Ledger users only:** Expand **Rulesets**, right-click the ruleset you want to open, and select **Open**.

Note: For Financial Management applications, there is a Rulesets node for each calculation type within the application. For Planning, Essbase, and Oracle General Ledger applications, there is only one Rulesets node for each application at the same level as the plan types and databases.

- **Operational Planning users only:** Expand **Rulesets**, and expand the calculation type that contains the ruleset you want to open, right-click the ruleset, and click **Open**.

3 In **Ruleset Designer**, right-click the rule you want to remove, and select **Remove**.

4 Select **File, Save**.

Editing Business Rulesets (Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only)

See these topics:

- [“Editing a Business Ruleset \(Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only\)” on page 79](#)
- [“Copying a Business Ruleset to Another Application \(Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only\)” on page 82](#)

Editing a Business Ruleset (Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only)

You can edit the following properties of a business ruleset:

- The business rule components
- The business rule name
- The business rule description
- The business rule comments
- For Financial Management applications, whether the business rule has a log file and timer
- For Planning applications, whether the variables should be merged

➤ To edit a business ruleset:

1 In the **System View**, expand the application type and the application.

2 Do one of these tasks:

- **Financial Management users only:** Expand the calculation type and **Rulesets**, right-click the ruleset you want to edit, and select **Open**.

- **Planning, Essbase, and Oracle General Ledger users only:** Expand **Rulesets**, right-click the ruleset you want to edit, and select **Open**.

Note: For Financial Management applications, there is a Rulesets node for each calculation type within the application. For Planning, Essbase, and Oracle General Ledger applications, there is only one Rulesets node for each application at the same level as the plan types and databases.

- **Operational Planning users only:** Expand **Rulesets**, expand the calculation type that contains the ruleset you want to open, right-click the ruleset, and click **Open**.

3 In the **Ruleset Designer**, add, copy, delete and change the order of new rules and rulesets:

- To delete a rule or ruleset from the ruleset, select the rule or ruleset, right-click it, and select **Remove**.
- To add a rule or ruleset to the ruleset, from **Existing Objects**, drag existing rules and rulesets, and drop them into the **Ruleset Designer**.

Note: The rules and rulesets you add to the ruleset must belong to the same application type as the ruleset you are editing. Financial Management rules and rulesets must belong to the same calculation type or belong to the Generic calculation type.

- To open a rule or ruleset in the ruleset, right-click the rule or ruleset, and select **Open**.
- To reorder the rules and rulesets within the ruleset, use the up and down arrow buttons below the Navigate menu. To move a rule or ruleset up or down, select it and click the up or down arrow button until it is in the correct location.

4 On **Properties**, edit properties of the ruleset. (In the **Ruleset Designer**, if you select a rule that you added to this ruleset, the properties of the rule are displayed on the **Properties** tab.)

- **Optional:** Edit the name by entering a new one of up to 50 characters. (The name defaults from the New Ruleset dialog.)
- **Optional:** Edit the description by entering a new one of up to 255 characters.
- **Planning, Operational Planning, and Oracle General Ledger users only:** Edit the **Enable Parallel Execution** selection. If you want the rules and rulesets in the ruleset to launch simultaneously, select this option; if you want them to run sequentially, clear this option. By default, the rules and rulesets in a ruleset run sequentially: each rule or ruleset in the ruleset must run without errors before the next rule or ruleset is launched.

If the ruleset contains nested rulesets, and the nested rulesets have a different Enable Parallel Execution setting than the parent ruleset, the setting of the nested ruleset applies. For example, if you have ruleset1 (that is flagged for *parallel* processing) and it contains rule1, rule2, and ruleset2 (that is flagged for *sequential* processing), the rules and rulesets in ruleset2 are processed sequentially, even though ruleset1 is flagged for parallel processing.

- Edit the comments.
- **Financial Management users only:**

- Select **Enable Logging** so, if the rules in the ruleset have log text, the log text is included in the log file when the ruleset is launched. You can enable logging for rules, rulesets, and components. However, you specify what log text to include, if any, with a business rule's formula statements.

Note: If logging is not enabled for a ruleset, but is enabled for a rule and component that belong to the ruleset, no log file is created because the log setting for the ruleset overrides the settings for the rule and component.

- Select **Enable Timer** so the time taken to process the ruleset is recorded in the log file when the ruleset is launched. You can enable the timer for rules, rulesets, and components. The process time is included in the log file for every object whose timer is enabled. For example, if you have a ruleset whose timer is enabled and the ruleset contains three rules whose timers are enabled, the time taken to process the ruleset, and each rule in the ruleset, is recorded.
- Select **Enable Launch** so the business ruleset can be launched in Financial Management.

Note: You cannot launch business *rules* in Financial Management.

- **Oracle General Ledger users only:** Use the **Start Date** and **End Date** features to specify a date range during which the business ruleset may be launched. You will be unable to launch the business ruleset outside of this date range.
 - Select **Start Date** to access a calendar from which you can select a start date after which the business ruleset may be launched.
 - Select **End Date** to access a calendar from which you can select an end date prior to which the business ruleset may be launched.

5 On Usages, you can see which rulesets are using this ruleset, if any. (You cannot edit any of the information on this tab.) This is the information you can view about the rulesets that use this ruleset:

- The names of the business rulesets that are using the business ruleset
- The calculation or plan type of the business rulesets that are using the business ruleset
- The application name of the business rulesets that are using the business ruleset
- Whether the business rulesets that are using the business ruleset are deployed
- Whether the business rulesets that are using the business ruleset are validated
- A description of the business rulesets that are using the business ruleset

6 Planning, Oracle General Ledger, and Operational Planning users only: On Variables, select Merge Variables to merge all instances of the same *global variable* used in the rules within this ruleset so only the first instance of each variable is displayed when the rule is launched. If you do not select this check box, all instances of each variable are displayed.

Note: If you select Merge Variables, the first value that the user enters for the runtime prompt is used for all subsequent occurrences of that runtime prompt during validation and launch.

Only global variables can be merged.

7 Select **File**, **Save**.

Copying a Business Ruleset to Another Application (Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only)

From the System View, you can copy a business ruleset to another application of the same application type and calculation type (for Financial Management rulesets) plan type (for Planning and Operational Planning rulesets), or database (for Essbase rulesets used in Oracle General Ledger).

Note: Business rulesets are not supported in Essbase Aggregate Storage or Block Storage applications, other than Aggregate Storage applications used in Oracle General Ledger.

➤ To copy a business ruleset to another application:

1 In the System View, expand the application type and the application.

2 Do one of these tasks:

- Financial Management users only: Expand the calculation type and **Rulesets**.
- Planning, Essbase, and Oracle General Ledger users only: Expand **Rulesets**.

Note: For Financial Management applications, there is a Rulesets node for each calculation type within the application. For Planning, Essbase, and Oracle General Ledger applications, there is only one Rulesets node for each application at the same level as the plan types and databases.

- Operational Planning users only: Expand **Rulesets**, and expand the calculation type that contains the ruleset.

3 Right-click the business ruleset you want to copy, and select **Copy To**.

Tip: You can also copy a business ruleset when you are working with it in the Ruleset Designer, and paste it into another business ruleset or business rule. Select the ruleset name, select **Edit, Copy**, open the business rule or ruleset into which you want to copy it, and select Edit, Paste.

4 In **Copy To**, enter a new name for the business ruleset, or accept the default name, and select an application, calculation type, plan type, or database.

Note: You cannot copy the business ruleset to more than one application and calculation or plan type.

- 5 Select whether to copy any shared components and whether to replace existing components with objects that have the same names.

Note: These options are selectable only if there are shared components in the business ruleset you want to copy to the new application.

- 6 Click **OK**.

The new business ruleset is added to the application and calculation or plan type you selected. To see it in the System View, you may need to refresh the application list. To refresh the application list, click the **Refresh** icon on the toolbar. You can also refresh Rulesets or any level above it in the application list to see the new ruleset. See [“Refreshing Business Rules or Business Rulesets” on page 85](#).

Saving a Business Ruleset (Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only)

You must save a business ruleset after you create or edit it. When you save the business ruleset, it is saved to the application and application type for which you created it. After you save it, you can deploy, validate, and launch it.

You can deploy and validate a business ruleset in Calculation Manager; you can launch it from Financial Management (for Financial Management rulesets), Planning (for Planning rulesets), Operational Planning (for Operational Planning rulesets), or Oracle General Ledger (for Essbase rulesets used in Oracle General Ledger only).

- To save a business ruleset after you create or edit it, select **File, Save**, or click the **Save** icon.

Note: To see the business ruleset within the System View after you save it, you may need to refresh the application list. To do this, right-click any node or object in the System View, and select Refresh. You can also click the Refresh icon on the toolbar to refresh the application list in the System View.

Saving a Business Ruleset with a Different Name (Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only)

You can save a business ruleset with a different name using Save As. Saving it with a different name creates a copy of the ruleset.

- To save a business ruleset with a different name:
 - 1 In the System View, expand the application type and the application.
 - 2 Do one of these tasks:

- **Financial Management users only:** Expand the calculation type and **Rulesets**.
- **Planning, Essbase, and Oracle General Ledger users only:** Expand **Rulesets**.

Note: For Financial Management applications, there is a Rulesets node for each calculation type within the application. For Planning, Essbase, and Oracle General Ledger applications, there is only one Rulesets node for each application at the same level as the plan types and databases.

- **Operational Planning users only:** Expand **Rulesets**, and expand the calculation type that contains the ruleset you want to open.

- 3 Right-click the ruleset you want to save with a different name, and select **Open**.
- 4 In the **Ruleset Designer**, select **File, Save As**.
- 5 In **Save As**, enter the ruleset's new name, and select an application and calculation type or plan type. Click **OK**.

Note: You cannot change the application type of a ruleset you save with a different name. The new ruleset must have the same application type as the ruleset from which it is created. Also, if the ruleset is a Financial Management ruleset, you cannot change the calculation type. The calculation type of the new ruleset must be the same as the original ruleset.

The new ruleset is added to the application list in the System View.

Deleting a Business Ruleset (Financial Management, Planning, Operational Planning, and Oracle General Ledger Users Only)

You delete a business ruleset from the System View. You can delete a business ruleset only if it is not being used by other business rulesets. To see if it is being used by other rulesets, you can show its usages. (See [“Showing the Usages of a Business Rule or Business Ruleset” on page 86](#).) If it is being used, you must remove it from the business rulesets that are using it, or make copies of it for the business rulesets that are using it, before you delete it.

► To delete a business ruleset:

- 1 In the **System View**, expand the application type and the application.
- 2 Do one of these tasks:
 - **Financial Management users only:** Expand the calculation type and **Rulesets**.
 - **Planning, Essbase, and Oracle General Ledger users only:** Expand **Rulesets**.

Note: For Financial Management applications, there is a Rulesets node for each calculation type within the application. For Planning, Essbase, and Oracle General Ledger applications, there is only one Rulesets node for each application at the same level as the plan types and databases.

- **Operational Planning users only:** Expand **Rulesets**, and expand the calculation type that contains the ruleset you want to delete.
- 3 To make sure the ruleset is not being used by another ruleset, right-click it, and select **Show Usages**. (See “[Showing the Usages of a Business Rule or Business Ruleset](#)” on page 86.)
 - 4 Right-click the ruleset you want to delete, and select **Delete**.
 - 5 Click **OK** to confirm deletion of the ruleset.

Refreshing Business Rules or Business Rulesets

In the System View, you can refresh any level of the application list. You can refresh an application type (Financial Management, Planning, or Essbase), an application, a calculation type, a plan type, or a database, multiple rulesets or rules, or one ruleset or rule.

By default, when you refresh an application, application type, or calculation type, plan type, or database, all of the rules, rulesets, components, and templates belonging to it are refreshed. However, refreshing the rulesets or rules within an application does not refresh higher levels in the application list or rulesets or rules that belong to other applications. For example, if you refresh a rule within a Planning application and plan type, all rules within that application and plan type are refreshed, but no rules within other plan types or other Planning applications are refreshed.

Note: You can also click the Refresh icon on the toolbar to refresh the entire application list in the System View.

➤ To refresh business rules or rulesets:

- 1 In the System View, expand the application type and the application.
- 2 Do one of these tasks:
 - **Financial Management users only:** To refresh rulesets, expand the calculation type, right-click **Rulesets**, and select **Refresh**.
 - **Planning, Essbase, Oracle General Ledger, and Operational Planning users only:** To refresh rulesets, right-click **Rulesets**, and select **Refresh**.

Note: For Financial Management applications, there is a Rulesets node for each calculation type within the application. For Planning, Essbase, and Oracle General Ledger applications, there is only one Rulesets node for each application at the same level as the plan types.

- To refresh rules, expand the calculation type, plan type, or database, right-click **Rules**, and select **Refresh**.

Tip: You can also right-click the application type, the application, or the calculation type, the plan type, or the database that contains the business rules you want to refresh, and select Refresh.

Showing the Usages of a Rule, Ruleset, Template, or Formula or Script Component

Use this dialog to see what objects are using business rules, business rulesets, custom defined templates, and formula or script components. See these topics:

- [“Showing the Usages of a Business Rule or Business Ruleset” on page 86](#) to see information on the usages of a business rule or business ruleset
- [“Showing the Usages of a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 142](#) to see information on the usages of a custom defined template
- [“Showing the Usages of Formula and Script Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 206](#) to see information on the usages of a formula or script component for Financial Management, Planning, or Essbase block storage applications
- [“Showing a Formula Component's Usages \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)” on page 226](#) to see information on the usages of a formula component for Essbase aggregate storage applications

Showing the Usages of a Business Rule or Business Ruleset

You can display the business rules, templates, and business rulesets that are using a business rule or business ruleset. Viewing the usages of a rule or ruleset is useful when you want to delete the rule or ruleset and need to know what objects are using it.

➤ To show the usages of a business rule or business ruleset:

- 1 In the System View, expand the application type and the application.
- 2 Do one of these tasks:
 - **Financial Management users only:** To show the usages of a ruleset, expand the calculation type and **Rulesets**, right-click the ruleset whose usages you want to see, and select **Show Usages**.
 - **Planning, Essbase, and Oracle General Ledger users only:** To show the usages of a ruleset, expand **Rulesets**, right-click the ruleset whose usages you want to see, and select **Show Usages**.

Note: For Financial Management applications, there is a Rulesets node for each calculation type within the application. For Planning applications, there is only one Rulesets node for each application at the same level as the plan types.

- **Operational Planning users only:** To show the usages of a ruleset, expand **Rulesets**, and expand the calculation type that contains the ruleset whose usages you want to see.
- To show the usages of a rule, expand the calculation type, plan type, or the database, and **Rules**. (For Operational Planning users, after you expand the **Rules** node, you must also expand the **Calculation Type** that contains the rule you want to work with.) Right-click the rule whose usages you want to see, and select **Show Usages**.

3 You can view this information about the business rule or business ruleset:

- The names of the business rules, templates, and business rulesets that are using the business rule or business ruleset
- The calculation type, plan type, or database of the business rules, templates, and business rulesets that are using the business rule or business ruleset
- The application name of the business rules, templates, and business rulesets that are using the business rule or business ruleset
- Whether the business rules, templates, and business rulesets that are using the business rule or business ruleset are deployed
- Whether the business rules, templates, and business rulesets that are using the business rule or business ruleset are validated
- A description of the business rules, templates, and business rulesets that are using the business rule or business ruleset

Note: You can also view a rule or ruleset's usages from within the Rule or Ruleset Designer on the Usages tab.

4 After you review the information, click OK.

Changing the Owner of an Object

You can change the owner of an object (that is, a rule, ruleset, template, or formula or script component) in the System View, if the application to which it belongs is deployed. By default, an object's owner is the user that creates it, unless the user changes the ownership. Users can edit only objects they own, with the exception of administrators who can edit any objects.

► To change the owner of an object:

1 In the System View, expand the application type and the application.

2 Do one of these tasks:

- **Financial Management users only:** To change the ownership of a ruleset, expand the calculation type and **Rulesets**.

- **Planning, Essbase, and Oracle General Ledger users only:** To change the ownership of a ruleset, expand **Rulesets**.

Note: For Financial Management applications, there is a Rulesets node for each calculation type within the application. For Planning, Essbase, and Oracle General Ledger applications, there is only one Rulesets node for each application.

- **Operational Planning users only:** To change the ownership of a ruleset, expand **Rulesets**, and expand the calculation type that contains the ruleset whose owner you want to change.
- To change the ownership of a rule, expand the calculation type, plan type, or database, and then expand **Rules**.
- To change the ownership of a formula component, a script component, or custom-defined template, expand the calculation type, plan type, or database, and then expand **Formulas**, **Scripts**, or **Templates**, depending on the object for which you want to change ownership.

3 Right-click the object, and select **Change Owner**.

4 In **Change Owner**, select the owner to whom you want to transfer ownership of the object.

5 Click **OK**.

The user to whom you assigned ownership can edit the object.

3

Working with Templates (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

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About Templates (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

A template performs a calculation or calculations in a business rule. Calculation Manager includes system templates and custom defined templates. A system template enables you to perform such calculations as allocating data, aggregating data, copying data, and clearing data, among others. A custom defined template is created by you, the administrator, according to the needs of your business.

You can include system and custom defined templates in a business rule by dragging them from the Existing Objects palette and dropping them into a rule's flow chart. As a component of a

business rule, a template contains a series of steps into which you can enter parameters. These parameters, combined with the template logic, generate a calculation within the business rule.

You can create a custom defined template from the Rule Designer by selecting components within a rule's flow chart and saving them as a template. You can also create a custom defined template using the Template Designer by selecting File, New Template in the System View.

Note: Templates are not supported in Essbase aggregate storage applications.

Working with System Templates (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

See these topics:

- [“About Planning, Operational Planning, and Essbase Block Storage System Templates ” on page 90](#)
- [“Using a System Template in a Business Rule \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 92](#)
- [“Saving a System Template as a Custom Defined Template \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 123](#)
- [“Inserting a System Template into a Business Rule's Flow Chart \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 124](#)
- [“Removing a System Template from a Business Rule's Flow Chart \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 125](#)

About Planning, Operational Planning, and Essbase Block Storage System Templates

All system templates are available as wizards in Calculation Manager. Working with system templates in a wizard makes the templates easier to use in a business rule, and reduces potential calculation script syntax errors.

The design time prompts available in system templates are filtered based on the choices you make when following the wizard. For example, the Aggregation system template displays a step for selecting dense dimensions to aggregate, but if there are no dense dimensions available for aggregation, there are no dense dimensions to select from the dropdown list in the step. This can happen when all of the dense dimensions are used in the upper FIX statement.

The template can detect what dimensions are used in the member range of the business rule into which you drop it. For example, if you drop an aggregation template into the member range of a rule, and if this member range includes all dense dimensions, the step for dense dimension aggregation in the template is not displayed. This prevents calculation script errors, since Essbase scripts do not allow aggregation of a dimension within a FIX statement when this dimension is

already used. For example, if, in a business rule, the member range is made of children (YearTotal), the aggregation on period is not allowed.

If you include a system template in an upper member range, the system template can detect this. If a system template is dropped into a member range component (that is, a Fix statement), which implies that the dimensions used in that member range should not be used in a formula, then these dimensions are not displayed in the wizard. This reduces the potential for calculation script syntax errors when you are using system templates. For example, if the Allocate system template is used in a member range component that is made of entities, then the Entity dimension is not displayed as a dimension in which an allocation can be performed.

Calculation Manager includes these system templates for Planning, Operational Planning, and Essbase block storage applications:

- Clear Data template: enables you to delete data from a location in the database. You may want to clear data before you allocate it. See [“Using the Clear Data Template in a Business Rule \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 93.
- Copy Data template: enables you to copy data from one location in the database to another. See [“Using the Copy Data Template in a Business Rule \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 95.
- Amount–Unit–Rate template: enables you to enter any two of three variables and calculate the third variable. For example, if you enter the rate and units of an item sold, Calculation Manager calculates the amount of the item. See [“Using the Amount–Unit–Rate Template in a Business Rule \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 96.
- Allocate Level to Level template: enables you to distribute data that is aggregated from members at multiple levels in the database outline. See [“Using the Allocate Level to Level Template in a Business Rule \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 96.
- Allocate Simple template: enables you to distribute data from members at one level in the database outline. See [“Using the Allocate Simple Template in a Business Rule \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 99.
- Aggregation template: enables you to generate an optimized script for aggregating dimensions according to their density. Dimensions can be aggregated fully or partially and aggregated to descendants, children, or ancestors. See [“Using the Aggregation Template in a Business Rule \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 102.
- Export-Import Data template: enables you to export data from, or import data into, a location in the database to a file or to a table in a relational repository. It also enables you to import data that you exported previously using the binary file option. See [“Using the Export-Import Data Template in a Business Rule \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 106.
- SET Commands template: enables you to enter script commands that optimize the performance of calculation scripts. You can include data volume, data handling, memory usage, and threading and logging script commands. See [“Using the SET Commands](#)

Template in a Business Rule (Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 104.

- Allocate Simple Exclude template: enables you to exclude members from an allocation range when you are allocating data. See “Using the Allocate Simple Exclude Template in a Business Rules (Planning and Essbase Block Storage Application Users Only)” on page 108.
- Currency Conversion template: enables you to convert account values to reporting currencies using system type accounts (or accounts you choose) for Planning and user defined attributes for Essbase. See “Using the Currency Conversion Template (Planning and Essbase Block Storage Application Users Only)” on page 117.

Using a System Template in a Business Rule (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can use system templates to design business rules. After you open a business rule in the Rule Designer, you can find system templates under Existing Objects by expanding an application, dragging a system template from the System Templates node, and dropping it into the business rule flow chart.

► To use a system template in a business rule:

- 1 In the System View, expand the application type, the application, the plan type (for Planning) or the database (for Essbase and Operational Planning), and **Rules**.

Note: There are no system templates for Essbase aggregate storage applications.

- 2 Do one of these tasks:

- Right-click the rule you want to add a system template to, and select **Open**.
- Select the rule you want to add a system template to, and select **File, Open**.
- Select **File, New**, then **Rule** to create a new business rule into which you can drag and drop the system template.

- 3 When the rule opens in the Rule Designer, from **Existing Objects**, expand the **System Templates** node.

- 4 Drag the system template you want to add to the business rule, and drop it into the flow chart.

After you drop the system template into the flow chart, the Summary tab becomes active, and the Template Wizard is displayed.

- 5 Enter information for the template in the Template Wizard.

- To add information for the Clear Data template, see “Using the Clear Data Template in a Business Rule (Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 93.
- To add information for the Copy Data template, see “Using the Copy Data Template in a Business Rule (Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 95.

- To add information for the Amount–Unit–Rate template, see [“Using the Amount–Unit–Rate Template in a Business Rule \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 96.
- To add information for the Allocate Level to Level template, see [“Using the Allocate Level to Level Template in a Business Rule \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 96.
- To add information for the Allocate Simple template, see [“Using the Allocate Simple Template in a Business Rule \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 99.
- To add information for the Aggregation template, see [“Using the Aggregation Template in a Business Rule \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 102.
- To add information for the SET Commands template, see [“Using the SET Commands Template in a Business Rule \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 104.
- To add information for the Export-Import Data template, see [“Using the Export-Import Data Template in a Business Rule \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 106.
- To add information for the Allocate Simple Exclude template, see [“Using the Allocate Simple Exclude Template in a Business Rules \(Planning and Essbase Block Storage Application Users Only\)”](#) on page 108.
- To add information for the Currency Conversion template, see [“Using the Currency Conversion Template \(Planning and Essbase Block Storage Application Users Only\)”](#) on page 117.

6 On Properties, enter a caption for the template.

7 On Summary, the information you enter in the Template Wizard is displayed. You can click **Edit** to edit the information.

8 On Script, you can view the template in its non-graphical format.

Note: You cannot make changes on this tab. If you want to make changes to the template script, save the business rule, then select **Edit, Script** to convert the business rule and its components into a script.

9 Select File, Save.

Using the Clear Data Template in a Business Rule (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You use the Clear Data template in a business rule to delete data from a location in the database. To delete data, you specify the location (that is, the application, dimensions, and members) of the data you want to delete. You can delete data for one member or for a block of members you define.

For example, you may want to use the Clear Data template in a business rule to delete forecast data before you copy data from actual to forecast to make changes to it.

► To use the Clear Data template in a business rule:

1 Complete [step 1 on page 92](#) through [step 4 on page 92](#).

2 In the Clear Data Template Wizard, on **Data Selection**, do one of these tasks:

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.

Predefined selections are populated with variables you create. For each tab, the type of variables shown can differ. You can use predefined selections on any tab where there is member selection. You can also change the members that are populated when you use predefined selections.

- Click the **Member Selector** icon to select members and functions for each of the dimensions listed.

Note: In the Member Selector, the dimensions listed in the current step of the wizard are available for selection from Dimension. This enables you to select members and functions for any of the dimensions listed in the current step of the wizard.

- Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

3 On **Data Selection**, do these tasks:

a. Specify how to clear the data by selecting one of these options:

- **All:** Clear cells only.
- **Upper:** Clear the entire block.
- **Dynamic:** Clear dynamic calc and store blocks.
- **Non-Input:** Clear non input blocks.
- **N/A:** Clear upper level blocks.

b. Specify whether to turn the debug tool on for the wizard.

4 If you have a multi currency application with HSP_Rates set to sparse or a single currency application, the **Settings** step is displayed. This step displays the members you selected on the Data Selection tab. Select a dimension where a single member is selected, preferably a dense dimension.

Note: If you cannot select a dimension where a single member is selected, then you cannot use this template.

5 Click **Finish**.

Using the Copy Data Template in a Business Rule (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You use the Copy Data template to copy data from a location in the database to another location that you specify.

For example, you may want to use the Copy Data template to create a budget for 2008 by copying your accounts and entities from 2007. In this case, you copy 2007 actuals to the forecast for 2008.

You may also want to copy data if you have a budget version (worst case) and you want to copy the budget data to create a best case version to which you can make changes.

➤ To use the Copy Data template in a business rule:

- 1 Complete [step 1 on page 92](#) through [step 4 on page 92](#).
- 2 In the Copy Data Template Wizard, on **Point of View**, select the dimensions and members to which you want to restrict the data copy. Click **Next**.
- 3 On **Copy From**, do these tasks:
 - a. Use the **Actions** icon to select members for the dimensions from which to copy data.
 - b. Click **Next**.
- 4 On **Copy To**, do these tasks:
 - a. Use the **Actions** icon to select members for the dimensions to which to copy data.
 - b. Click **Next**.
- 5 On **Clear**, specify whether to clear data from the destination before new data is copied to it.
- 6 On **Optimizations**, do these tasks:
 - a. If the data you want to copy is not created, select **Yes** to create these blocks during the Copy Data process. If the data is created, select **No**.
 - b. If you selected not to create blocks, specify whether you are sure the block already exists.
 - c. If you select **Yes** to create blocks, proceed to [step 7 on page 96](#). If you select **No**, proceed to [step 6.d on page 95](#).
 - d. On **Copy to Other Info**, select a dimension for which you have selected only one member in the previous step. If you cannot find any dimensions with a single member selected, click **Back**, and select to create blocks instead.
 - e. On **Options**, select one of these options:
 - Are you sure the block already exists? If you select **No**, the missing blocks are created.
 - Enter a condition for copying data. If you enter a condition, proceed to [step 7 on page 96](#). If you do not enter a condition, proceed to [step 6.f on page 95](#) after you complete this step.
 - Enter the percentage to be applied to the copied data (for example, enter 10 for 10%), or enter a member that has the % increase.
 - f. On **Clear**, specify whether you want to clear the destination before you copy the data.

7 Click **Finish**.

Using the Amount–Unit–Rate Template in a Business Rule (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You use the Amount–Unit–Rate template to calculate one of the three variables after you supply two of them.

For example, you may want to use the Amount–Unit–Rate template when you plan for product revenue. For some products, you know what revenue you want to have and what quantity you can have, so you use those two variables to determine the price.

► To use the Amount–Unit–Rate template in a business rule:

- 1 Complete [step 1 on page 92](#) through [step 4 on page 92](#).
- 2 In the Amount–Unit–Rate Template Wizard, on **Enter Variables**, use the **Actions** icon to select a values for two of the three variables:
 - Enter or select a member, variable, or function as the **Amount** value.
 - Enter or select a member, variable, or function as the **Rate** value.
 - Enter a member, variable, or function as the **Unit** value.

See [“Working with Members” on page 230](#), [“Working with Variables” on page 249](#), and [“Working with Functions” on page 269](#).

In the database, the member that shows #missing is calculated based on the other two members' values.

For Amount member input = Product Revenue

For Units member input = Quantity

For Rates member input = Price.

In the database, for Jan

Product Revenue = 500, Quantity = 10 and Price = # missing

This template calculates the Price based on Product Revenue / Quantity

Note: This template does not work unless the value of the member is #missing.

- 3 Click **Finish**.

Using the Allocate Level to Level Template in a Business Rule (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You use the Allocate Level to Level template to distribute data from members at two different levels in the database outline.

➤ To use the Allocate Level to Level template in a business rule:

1 Complete [step 1 on page 92](#) through [step 4 on page 92](#).

2 In the Allocate Level to Level Template Wizard, on **Point of View**, for each dimension listed that you do not want to vary during the allocation, do one of these three tasks, then click **Next**.

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
- Click the **Member Selector** icon to select members and functions for each of the dimensions listed.

Note: In the Member Selector, the dimensions listed in the current step of the wizard are available for selection from Dimension. This enables you to select members and functions for any of the dimensions listed in the current step of the wizard.

- Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

3 On **Source**, for each dimension listed, select a member whose data you want to allocate by doing one of these three tasks.

Note: Leave the dimension that you want to use for the level to level allocating empty. (You select this dimension in the next step.)

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
- Click the **Member Selector** icon to select a member or function for each of the dimensions listed.
- Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

4 On **Allocation Range**:

- a. Select the main dimension to which to allocate the data.
- b. Enter a value, or use the **Actions** icon to select the parent member (of the main dimension) to which to allocate data.
- c. Enter a value, or use the **Actions** icon to select the number of the level in the database outline from which to *start* the allocation.
- d. Enter a value, or use the **Actions** icon to select the number of the level in the database outline at which to *end* the allocation.
- e. Click **Next**.

5 Do one of these tasks:

- If your source has members from dimensions *other than* the dimension used in the allocation range, on **Target**, select the dimension *members* to which to allocate the data

you selected on **Source**. (The members you selected on Source are entered here by default.) Do one of these tasks, then click **Next**.

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
- Click the **Member Selector** icon to select members and functions for each of the dimensions listed.
- Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
- If your source is using the *same* dimension as the dimension used in the allocation range, on **Script**, for optimization, select a dimension that has only one member from the table. (This is the dimension that displays on the Offset tab.)

6 On Target, to optimize performance of the template, select one of the dimensions for which you entered a value in the previous step.

7 On Offset, if you want the *total* amount of allocated values to be written to an offset member, select the allocated members to total from the dimensions listed. Do one of these three tasks, then click **Next**:

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
- Click the **Member Selector** icon to select members and functions for each of the dimensions listed.
- Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
- If you selected only one dimension as the source on the Offset tab, define the offset member on the allocation dimension.

8 On Driver, do one of these tasks to specify the basis to use to calculate the percentage to apply to each member of the allocation range. Click **Next**.

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
- Click the **Member Selector** icon to select members and functions for each of the dimensions listed.
- Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

9 Specify whether to update the driver's aggregations on the allocation dimension.

10 On Other Options:

- a. Specify whether to clear the allocation range *before* the data is allocated.
- b. Specify whether to reaggregate the allocation range *after* the data is allocated.

- c. Select **Define round member** to specify the number of decimal places for allocated data values.
- d. Specify whether to use the debug tool for the wizard.

11 Click **Finish**.

Using the Allocate Simple Template in a Business Rule (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You use the Allocate Simple template to distribute data from a member or members at one level in the database outline to another member.

➤ To use the Allocation Simple template in a business rule:

- 1 Complete [step 1 on page 92](#) through [step 4 on page 92](#).
- 2 In the Allocate Simple Template Wizard, on **Point of View**, for each dimension listed that you do not want to vary during the allocation, do one of these three tasks, then click **Next**.
 - Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
 - Click the **Member Selector** icon to select members and functions for each of the dimensions listed.

Note: In the Member Selector, the dimensions listed in the current step of the wizard are available for selection from Dimension. This enables you to select members and functions for any of the dimensions listed in the current step of the wizard.

 - Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
- 3 In the Allocate Simple Template Wizard, on **Source**, for each dimension listed, select a member whose data you want to allocate by doing one of these three tasks.

Note: You must select a member for each dimension listed.

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.

Note: If the predefined selection does not enter a value for each dimension listed, you must enter a value for any dimensions that are empty.

- Click the **Member Selector** icon to select a member or function for each of the dimensions listed.
- Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

4 Enter the percentage of the source amount you want to allocate, or click the **Actions** icon to select a member, variable, or function that equals this percentage. (See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)) Then click **Next**.

5 **On Allocation Range:**

- a. Select the main dimension to which to allocate the data.
- b. Enter a member, or use the **Actions** icon to select the parent member (of the main dimension) to which to allocate data.

The data is allocated to the level 0 member (that is, the lowest member in the outline, with no members beneath it) below the parent member in the database outline.

- c. Click **Next**.

6 **Perform one of these tasks:**

- If you selected members from multiple dimensions on the **Source** tab, on **Destination Target**, select the dimension *members* to which to allocate the data you selected on **Source**. (The members you selected on Source are entered here by default.) Do one of these tasks, then click **Next**.
 - Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
 - Click the **Member Selector** icon to select members and functions for each of the dimensions listed.
 - Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
 - Select a dimension from which you selected a single member above.
- If you selected a member from only one dimension on the **Source** tab, on **Destination - Option**, for optimization, select a dimension with only one member from this table.

7 **Perform one of these tasks:**

- If you selected members from multiple dimensions on the **Source** tab, on **Destination Offset**, if you want the *total* amount of allocated values to be written to an offset member, select the allocated members to total from the dimensions listed. Do one of these tasks, then click **Next**:
 - Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
 - Click the **Member Selector** icon to select members and functions for each of the dimensions listed.
 - Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
 - Select whether you want to clear the offset data prior to the allocation process.

- If you selected a member from only one dimension on the **Source** tab, on **Destination-Offset2**, define the offset's dimensionality. Do one of these tasks, then click **Next**.
 - Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
 - Click the **Member Selector** icon to select members and functions for each of the dimensions listed.
 - Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
 - Select whether you want to clear the offset data prior to the allocation process.
 - Specify a member from the allocation range to be used for the offset .

8 On Driver:

- a. Select an allocation method to specify how the data should be allocated.
 - Select **Allocate evenly** to allocate data values in the allocation range evenly.
 - Select **Allocate using a driver** to calculate a percentage to be applied to each member in the allocation range.
- b. For each dimension that you did not select on **Point of View**, select a member by doing one of these three tasks:
 - Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
 - Click the **Member Selector** icon to select a member or function for each of the dimensions listed.
 - Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
- c. Click **Next**.

9 On Driver Options, specify whether to reaggregate the driver's data before the data is allocated to ensure that the allocated data is accurate. Click **Next**.

10 On Other Options, complete these steps:

- a. Specify whether to clear data from the allocation range *before* the data is allocated.
- b. Specify whether to reaggregate the allocation range *after* the data is allocated. Reaggregate the values after the data is allocated if you want to see what the new values are.
- c. Specify whether to round the data. Select one of these options:
 - Select **Define round member** to specify the number of decimal places for allocated data values. If you select **Define round member**, do these tasks on **Rounding on Mb**:
 - i. Enter the number of decimals to be used for this allocation. (Three decimal places is the default.)

- ii. Enter a member on which to place the allocation rounding difference by: selecting a predefined selection, selecting a member, or selecting a member, variable, or function for the dimensions listed.
- Select **Use biggest value** to round data values to their largest values. If you select **Use biggest value**, do these tasks on **Round on biggest**:

Note: When you use **Use biggest value**, the offset may be written to both the point of view members and the offset members. This happens when 1) the members in the point of view are different from the members in the offset, and 2) on the tab **Round on biggest**, you choose a dimension for the task “Select the dimension from which you selected a member in the grid above”, where the point of view and offset member are different. If you want the offset to be written only to the offset members, then on the **Use biggest value** tab, select a dimension that uses the same member for both the point of view and the offset.

- i. Enter the number of decimals to use for this allocation. (Three is the default.) Or click **Actions** to select a member, function, or variable.
- ii. Enter a member to use for a temporary calculation. Use a member already selected and select a non-calculated member. Or click **Actions** to select a member, function, or variable.
- iii. Select a dimension from which you selected a single member in the grid above.

Note: If you do not have a sparse member in the point of view, you do not select a dimension.

- Select **No rounding** to use allocated data values as they are.
- d. Specify whether to automatically create missing blocks.
- e. Specify whether you want to run the debug tool for the wizard.

11 Click **Finish**.

Using the Aggregation Template in a Business Rule (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You use the Aggregation template to aggregate data values of members you specify. You can define a restricted list of values so only these values are shown to the user. You can also use settings to specify whether data values should be aggregated into the local currency, whether missing values should be aggregated, among other settings.

For example, you may want to use the Aggregation template to aggregate a dimension, Data, at level 0. To aggregate at level 0, you must run the aggregation template to calculate the total and subtotals of the members in the Data dimension.

- To use the Aggregation template in a business rule:
- 1 Complete [step 1 on page 92](#) through [step 4 on page 92](#).
 - 2 In the Aggregation Template Wizard, on **Point of View**, do one of these three tasks to define the members to which you want to restrict the aggregation. Click **Next**.
 - Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
 - Click the **Member Selector** icon to select a member or function for each of the dimensions listed.
 - Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
 - 3 On **Full dimension aggregation**, select up to five dimensions to aggregate fully. You can select three sparse and two dense dimensions. Click **Next**.
 - 4 On **Partial dimension aggregation (dense)**:
 - a. Select up to two dense dimensions to aggregate.
 - b. For each dense dimension you want to aggregate, use the **Actions** icon to select a member to aggregate.
 - c. For each dense dimension you want to aggregate, select an aggregation level to aggregate. You can aggregate its descendants, children, or ancestors.
 - d. Click **Next**.
 - 5 On **Partial dimension aggregation (sparse)**:
 - a. Select up to three sparse dimensions to aggregate.
 - b. For each sparse dimension you want to aggregate, use the **Actions** icon to select a member to aggregate.
 - c. For each sparse dimension you want to aggregate, select an aggregation level to aggregate. You can aggregate its descendants, children, or ancestors.
 - d. Click **Next**.
 - 6 On **Settings**, specify settings such as whether the data should be aggregated into the local currency, whether missing values should be aggregated, and other settings.
 - a. To aggregate data to the local currency, select **On**. If you select **Off**, data is aggregated to the currency into which it was entered in the database.
 - b. To include any missing values in the aggregation, select **On**. If you select **Off**, missing values are not aggregated.
 - c. To optimize the aggregation on sparsely populated dimensions, select **On**. If you select **Off**, the calculation is not optimized on sparse dimensions.
 - d. Select one of these values for the calculator cache. The calculator cache is a buffer in memory that is used to create and track data blocks during calculation operations. The best size for the calculator cache depends on the number and density of the sparse

dimensions you are aggregating. (See the *Oracle Essbase Database Administrator's Guide*.)

- **High:** A calculator cache with the maximum number of bytes is used.
- **Default:** A calculator cache with the default number of bytes is used.
- **Low:** A calculator cache with the minimum number of bytes is used.
- **Off:** No calculator cache is used.
- **All:** A calculator cache is used even if one full sparse dimension is not calculated.

7 Click Finish.

Using the SET Commands Template in a Business Rule (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You use the SET Commands template to enter script commands that optimize the performance of calculation scripts. You can include data volume, data handling, memory usage, and threading and logging script commands.

► To use the SET Commands template in a business rule:

1 Complete [step 1 on page 92](#) through [step 4 on page 92](#).

2 In the SET Commands Template Wizard, on **Data Volume:**

- Specify whether to calculate all data blocks or only those marked as dirty. Using intelligent calculation, only dirty blocks, such as updated data blocks and their dependent parents, are calculated. Therefore, the calculation is very efficient.
- Specify when to mark data as clean.
- Specify whether to stop the calculation if the FIX command evaluates to an empty member set.
- Specify whether to optimize the calculation of complex formulas on sparse dimensions within large database outlines.

See the *Oracle Essbase Database Administrator's Guide*.

e. Click **Next**.

3 On **Data Handling:**

- Specify whether to consolidate missing data values.
- Specify whether to create new data blocks when a calculation formula assigns anything other than a constant to a member of a sparse dimension.
- Specify whether to create blocks in memory and whether to store missing data blocks.
- Specify whether to turn off calculation of dense dynamic calc members during batch calculation, if runtime dependent functions are included in formulas on stored members.
- Specify whether to turn remote calculation to the source on for applications with transparent partitions.

See the *Oracle Essbase Database Administrator's Guide*.

f. Click **Next**.

4 On Memory Usage:

a. Specify the size of the calculator cache.

- **High:** A calculator cache with the maximum number of bytes is used.
- **Default:** A calculator cache with the default number of bytes is used.
- **Low:** A calculator cache with the minimum number of bytes is used.
- **Off:** No calculator cache is used.
- **All:** A calculator cache is used even if one full sparse dimension is not calculated.
- **No changes (use system default):** Whatever the system uses by default is used.

Note: This option does not display in the script of the rule.

b. Specify the maximum number of blocks that can be locked when calculating a sparse member formula.

- **High:** the maximum number of blocks that can be fixed concurrently when one block is being calculated
- **Default:** the default number of blocks that can be fixed concurrently when one block is being calculated
- **Low:** the minimum number of blocks that can be fixed concurrently when one block is being calculated
- **No changes (use system default):** the number of blocks the system fixes concurrently when one block is being calculated

Note: This option does not display in the script of the rule.

c. Click **Next**.

5 On Threading:

a. Specify whether to enable parallel calculation by selecting the number of threads to be available for parallel calculation. (By default, serial calculation is used, but parallel calculation may optimize the calculations.)

- For block storage on 32-bit platforms, select an integer from 1-4.
- For block storage on 64-bit platforms, select an integer between 1-8.

Note: If you select Off, serial calculation is used; no parallel calculation takes place.

- For aggregate storage, select an integer from 1-8. Two is the default value.

b. Specify how many of the sparse dimensions in the outline should be used to identify potential tasks that can be run in parallel. You can enter a value or use the Actions icon to select a member or variable that holds this value.

- Select the default value, 1, to indicate that only the last sparse dimension in the outline should be used to identify tasks.
- Enter a value of 2, for example, to indicate that the last and second-to-last sparse dimensions in the outline should be used.
- Enter the maximum value, which is the total number of sparse dimensions in the outline to indicate that all sparse dimensions in the outline should be used.

c. Click **Next**.

6 On **Logging**:

- a. Select the level of error reporting for calculations:
- **Summary**: Displays calculation settings and provides statistics on the number of data blocks created, read, and written, and the number of data cells calculated
 - **Detail**: Provides the same information as SUMMARY. In addition, it displays a detailed information message every time a data block is calculated.
 - **Error**: Displays only error messages
 - **Info**: Displays only informational, warning, and error messages
 - **None**: Displays no messages during execution of the calculation script. However, because error messages may contain vital information, they are still displayed.
 - **Only**: Performs a simulated calculation only. You may disregard any error message during validation that indicate that a command is not recognized.
- b. Specify whether to monitor the progress of the calculation by having completion notices generated at intervals during the calculation.
- **High**: Generates the maximum number of completion notices
 - **Default**: Generates the default number of completion notices
 - **Low**: Generates the minimum number of completion notices

7 Click **Finish**.

Using the Export-Import Data Template in a Business Rule (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You use the Export-Import Data template to export data from, or import data into, a location in the database outline. If you export a binary file, you can also import it using the Export Data template.

► To use the Export-Import Data template in a business rule:

- 1 Complete [step 1 on page 92](#) through [step 4 on page 92](#).
- 2 In the Export-Import Data Template Wizard, on **Mode**, specify whether to export or import data. Click **Next**.
- 3 On **Export data range** do one of these three tasks to specify the range of data to export. Click **Next**.

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
- Click the **Member Selector** icon to select a member or function for each of the dimensions listed.
- Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

4 On Export Data Range, select the type of file to which to export the data, then click **Next**.

- Flat file
- Database table
- Binary file

Note: If you want to import the file after you export it, the file must be a binary file.

5 On Output - File, do one of these, depending on the file type to which you are exporting, then click **Next**.

- If you are exporting to a flat file:
 - a. Enter the file name and path surrounded by double quotes.
 - b. Select a column delimiter.
 - c. **Optional:** Enter a text string, surrounded by double quotes, to denote missing data values, or use the **Actions** icon to select one.
- If you are exporting to a database table:
 - a. Enter the data source name surrounded by double quotes.
 - b. Enter the data source table name surrounded by double quotes.
 - c. Enter the data source logon name and password surrounded by double quotes.
- If you are exporting to a binary file, enter the file name and path surrounded by double quotes.

6 On Processing:

- a. Specify whether data should be exported in columnar or non-columnar format.
- b. Specify the number of decimal places to be exported. (Sixteen is the maximum.)
- c. Specify the number of positions the data should have after it is exported. (Sixteen is the default.)
- d. Specify whether to include a header row at the beginning of the exported file.
- e. Select the dimension to be used as the column header around which other data is organized.
- f. Specify whether to format the exported file so it can be imported into a relational database.
- g. Specify whether to overwrite a file with the same location and name as the file to be exported, if one exists.

- h. Specify whether to export the data or perform a test that runs the export commands without exporting the data.

7 Click Finish.

Using the Allocate Simple Exclude Template in a Business Rules (Planning and Essbase Block Storage Application Users Only)

You use the Allocate Simple Exclude template to exclude members from an allocation range when you are allocating data.

► To use the Allocation Simple Exclude template in a business rule:

- 1** Complete [step 1 on page 92](#) through [step 4 on page 92](#).
- 2** In the Allocate Simple Exclude Template Wizard, on **Point of View**, for each dimension listed that you do not want to vary during the allocation, do one of these three tasks, then click **Next**.
 - Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
 - Click the **Member Selector** icon to select members and functions for each of the dimensions listed.

Note: In the Member Selector, the dimensions listed in the current step of the wizard are available for selection from Dimension. This enables you to select members and functions for any of the dimensions listed in the current step of the wizard.

- Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
- 3** In the Allocate Simple Exclude Template Wizard, on **Source**, for each dimension listed, select a member whose data you want to allocate by doing one of these three tasks.

Note: You should select a member for each dimension listed.

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
 - Click the **Member Selector** icon to select a member or function for each of the dimensions listed.
 - Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
- 4** Also on **Source**, enter the percentage of the source amount you want to allocate, or click the **Actions** icon to select a member, variable, or function that equals this percentage. (See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)) Then click **Next**.

5 On Allocation Range:

- a. Select the main dimension to which to allocate the data.
- b. Enter a member, or use the **Actions** icon to select the parent member (of the main dimension) to which to allocate data.

The data is allocated to the level 0 member (that is, the lowest member in the outline, with no members beneath it) below the parent member in the database outline.

- c. Click **Next**.

6 Perform one of these tasks:

- If you selected members from multiple dimensions on the **Source** tab, on **Destination Target**, select the dimension *members* to which to allocate the data you selected on **Source**. (The members you selected on Source are entered here by default.) Do one of these tasks, then click **Next**.
 - Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
 - Click the **Member Selector** icon to select members and functions for each of the dimensions listed.
 - Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
 - Select a dimension from which you selected a single member above.
- If you selected a member from only one dimension on the **Source** tab, on **Destination - Option**, for optimization, select a dimension with only one member from this table.

7 Perform one of these tasks:

- If you selected members from multiple dimensions on the **Source** tab, on **Destination Offset**, if you want the *total* amount of allocated values to be written to an offset member, select the allocated members to total from the dimensions listed. Do one of these tasks, then click **Next**:
 - Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
 - Click the **Member Selector** icon to select members and functions for each of the dimensions listed.
 - Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
 - Select whether you want to clear the offset data prior to the allocation process.
- If you selected a member from only one dimension on the **Source** tab, on **Destination-Offset2**, define the offset's dimensionality. Do one of these tasks, then click **Next**.
 - Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.

- Click the **Member Selector** icon to select members and functions for each of the dimensions listed.
- Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
- Select whether you want to clear the offset data prior to the allocation process.
- Specify a member from the allocation range to be used for the offset .

8 On Exclude, for each dimension listed, select a member whose data you want to exclude from the allocation range by doing one of these three tasks.

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.

Note: You do not have to select members to exclude. You may leave this step empty; if you do, all members of the allocation range will receive an allocation. If the predefined selection does not enter a member for the dimension listed, and you want to exclude member(s) from the allocation, enter the members to be excluded. The members entered must be part of the allocation range.

- Click the **Member Selector** icon to select a member or function for each of the dimensions listed.
- Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

9 The Exclude Single Source tab is displayed next if you used a member from all dimensions, but only one member in the POV. The source and the allocation range are from the same dimension and produce a single source allocation.

10 On Driver:

- a. Select an allocation method to specify how the data should be allocated.
 - Select **Allocate evenly** to allocate data values in the allocation range evenly.
 - Select **Allocate using a driver** to calculate a percentage to be applied to each member in the allocation range.
- b. If you want to use members from the Point of View as the driver, leave those dimensions empty, and, for each dimension not selected on the POV, select a member by doing one of the following tasks. (Or if you want to use different members from the Point of View as the driver, for each dimension, select a member by doing one of the following tasks.)
 - Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
 - Click the **Member Selector** icon to select a member or function for each of the dimensions listed.
 - Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

Note: Select only one member per dimension.

c. Click **Next**.

11 On Driver Options, specify whether to reaggregate the driver's data before the data is allocated to ensure that the allocated data is accurate. Click **Next**.

12 On Other Options, complete these steps:

- a. Specify whether to clear data from the allocation range *before* the data is allocated.
- b. Specify whether to reaggregate the allocation range *after* the data is allocated.
Reaggregate the values after the data is allocated if you want to see what the new values are.
- c. Specify whether to round the data. Select one of these rounding methods:
 - Select **Define round member** to specify the number of decimal places for allocated data values. If you select **Define round member**, go to step [step 15 on page 111](#).
 - Select **Use biggest value** to round data values to their largest values. If you select **Use biggest value**, go to step [step 14 on page 111](#).
 - Select **No rounding** to use allocated data values as they are.
 - Select **Use smallest value** to round data to their smallest values. If you select **Use smallest value**, go to step [step 13 on page 111](#).
- d. Specify whether to automatically create missing blocks.
- e. Specify whether you want to activate the debug mode for the wizard. If you select **Debug Wizard On**, comments are added to the script of the rule showing what you input for the design time prompts within the template. If you select **Debug Wizard Off**, comments are not added to the script of the rule.

13 On Round on Smallest, enter the number of decimal places to use for the allocation, or click **Actions** to select a member, function, or variable. Then go to step [step 16 on page 111](#) to finish the wizard.

14 On Round on Biggest, enter the number of decimal places to use for the allocation, or click **Actions** to select a member, function, or variable. Then go to step [step 16 on page 111](#) to finish the wizard.

15 On Rounding Mb,

- a. Enter the number of decimals to be used for this allocation.
- b. Enter a member on which to place the allocation rounding difference by: selecting a predefined selection, selecting a member, or selecting a member, variable, or function for the dimension listed.

16 Click Finish.

Allocate Simple Exclude Template Example

In this example, we are using a classic, multi-currencyPlanning application. We will allocate Salaries from Actual to Plan, and increase it by 110%. We will use actual for the source and driver/basis. We will allocate to the Plan for the level 0 Entities under the parent Total Entities.

1. Step 1 – Point of View: Enter members that do not vary for this rule:

- Period – Jan
 - Currency – Local
2. Click Next.
 3. Step 2 – Source:
 - Account - Salaries
 - HSP_Rates
 - Year – FY08
 - Scenario – Actual
 - Version – Working
 - Entity – South
 - Product – 000
 - Country – USA

Enter the percentage of the source to be allocated – 110

4. Click Next.
5. Step 3 – Allocation range:
 - a. Select a dimension – Entity.
 - b. Enter the parent member for this dimension – Total Entities.

The rule will allocate to the level 0 members of Total Entities. The Entities are as follows:

```

      California
      Washington
    West
      Connecticut
        South New York
        West New York
      New York
    East
      Florida
      Tennessee
    South
      North Dakota
    North
    Total Entities
      Florida
      North Dakota
      Tennessee
    North_South
      Operations
      Corporate Finance
      Sales & Marketing
      Finance
    Enterprise US
    Enterprise Global
    Transit Entity
    Entities_All_T1
  
```


Since we are using Total Entities for the allocation range, Transit Entity, Operations, Corporate Finance, Sales & Marketing, and Finance will not receive any allocation, because they are not at level 0 of Total Entities.

6. Click Next.

7. Step 4 – Destination Target:

a. Enter the members where you want the allocation to write to for the dimensions shown:

- Account – Alloc_In
- Year – FY10
- Scenario – Plan
- Version – Target
- Product – G100
- Country – USA

b. Select the dimension from which you selected a member above – Account.

8. Click Next.

9. Step 5 – Destination Offset:

- Account – Alloc_Out
- Year – FY10
- Scenario – Plan
- Version – Target
- Entity – Tennessee
- Product – G100
- Country – USA

a. Do you want to clear the offset data before the allocation process begins? Select Yes.

10. Click Next.

11. Step 6 – Exclude:

a. Optional: Select member(s) you want to exclude from the allocation range: Entity – Florida, South New York.

These members will not receive any allocated data. If you do not want to exclude any members of the allocation range from receiving an allocation, leave this step empty.

12. Click Next.

13. Step 7 – Driver:

a. Define the driver to use to calculate the percentage to apply to each member of the allocation range.

b. Select an allocation method – Allocate using a driver.

You can also choose Allocate Evenly to use the driver's data to allocate to the allocation range evenly.

- Account – Headcount
- HSP_Rates
- Period –
- Year – FY08
- Scenario - Actual
- Version – Working
- Currency –
- Product – G100

Dimensions you leave empty are inherited from the Point of View and upper member ranges defined in the business rule.

14. Click Next.

15. Step 8 – Driver Options:

The driver's aggregated data store may need to be recalculated to ensure correct allocation results.

- a. Do you want to re-aggregate the driver? Select to re-aggregate the driver.

16. Click Next.

17. Step 9 – Other Options:

- Do you want to clear the allocation range prior to the allocation process? Select Yes.
- Do you want to re-aggregate the allocation range after the allocation process? Select Yes.
- Select a rounding method: Use biggest value.
- Do you want to create missing blocks automatically? Select Yes.
- Do you want to activate the debug mode for this wizard? Select Debug wizard On.
Selecting Debug wizard On inputs comments in the script showing what you input for the design time prompts.

18. Click Next.

19. Step 10 – Round on biggest:

Enter the number of decimal places to use for the allocation: 4.

20. Click Finish.

21. Save the business rule.

22. Validate the business rule.

23. Deploy the rule to Planning.

24. In Planning or Oracle Hyperion Smart View for Office, create data forms to see the data.
(See the tables below.)

Table 9 Source

Source	Salaries	USA	Local	HSP_InputValue	000	Actual	Working	FY08
	Jan							
South	31800.88							

Table 10 Driver

Driver	Headcount	USA	Local	HSP_InputValue	G100	Actual	Working	FY08
	Jan							
Washington	1200							
California	350							
West	1550							
West New York	2250							
South New York	1375							
New York	3625							
Connecticut	0							
East	3625							
Tennessee	1100.88							
Florida	1345							
South	2445.88							
North Dakota	196							
North	196							
TOTAL ENTITIES	7816.88							
North_South	2641.88							
Tennessee	1100.88							
North Dakota	196							
Florida	1345							
Entities_All_T1	8176.88							
Operations	110							
Corporate Finance	150							
Sales and Marketing	25							

Driver	Headcount	USA	Local	HSP_InputValue	G100	Actual	Working	FY08
Finance	75							
Enterprise US	360							
Enterprise Gloabl	360							
Transit Entity	0							

Table 11 Allocation Range Before and After Rule Launch

Allocation	Alloc_In	USA	Local	HSP_InputValue	G100	Plan	Target	FY10
	Before rule launch			After rule launch				
	Jan			Jan				
Washington	#Missing			8235.8544				
California	#Missing			2402.1242				
West	#Missing			10637.9786				
West New York	#Missing			15442.227				
South New York	#Missing			#Missing				
New York	#Missing			15442.227				
Connecticut	#Missing			0				
East	#Missing			15442.227				
Tennessee	#Missing			7555.5728				
Florida	#Missing			#Missing				
South	#Missing			7555.5728				
North Dakota	#Missing			1345.1896				
North	#Missing			1345.1896				
TOTAL ENTITIES	#Missing			34980.968				
Tennessee	#Missing			7555.5728				
North Dakota	#Missing			1345.1896				
Florida	#Missing			#Missing				
North_South	#Missing			#Missing				
Entities_All_T1	#Missing			#Missing				
Operations	#Missing			#Missing				

Allocation	Alloc_In	USA	Local	HSP_InputValue	G100	Plan	Target	FY10
Corporate Finance	#Missing			#Missing				
Sales and Marketing	#Missing			#Missing				
Finance	#Missing			#Missing				
Enterprise US	#Missing			#Missing				
Enterprise Gloabl	#Missing			#Missing				
Transit Entity	#Missing			#Missing				

Using the Currency Conversion Template (Planning and Essbase Block Storage Application Users Only)

You can use the Currency Conversion template in Planning applications that are created without multi-currencies in the application and in any Essbase block storage application. You use the Currency Conversion template to convert account values to reporting currencies using system type accounts (or accounts you choose) for Planning and user defined attributes for Essbase.

Note: If the Planning application is created with multi-currencies, the Currency Conversion template will not show in the list of System Templates.

► To use the Currency Conversion template in a business rule:

1 Complete [step 1 on page 92](#) through [step 4 on page 92](#).

2 On **Exchange Rate Option**:

- a. From the drop-down list of custom dimensions in the application, select the custom dimension that contains the currency members.
- b. Select the reporting currency member.
- c. Select the parent dimension member that contains the input currencies.
- d. Select the exchange rate used for this reporting currency. (For example, if you select EUR Reporting as the reporting currency member, then EUR is the exchange rate.)
- e. In a Planning application, specify whether to use account types for currency conversion.
 - Select **Yes** if you want to use the *average* exchange rate against all accounts that have the type, Expense or Revenue, and if you want to use the *ending* exchange rate against all accounts that have the type, Asset, Liability, or Equity.
 - Select **No** if you want to choose the accounts to use the average and ending exchange rates.
- f. In an Essbase application, specify whether the application has the required account UDAs for currency conversion:

- Select **Yes** if the UDAs, Average and Ending, are created and assigned to the members in the account dimension.
- Select **No** if you want to choose the accounts to use the average and ending exchange rates.

3 On POV, for each dimension listed, select the members you want to convert to the reporting currency you selected in the previous step by performing one of these tasks:

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.

Note: If the predefined selection does not enter a value for each dimension listed, you should enter a value for any dimensions that are empty. If you leave a dimension empty, all members of that dimension will be used.

- Click the **Member Selector** icon to select a member or function for each of the dimensions listed.
- Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

4 Do one of these tasks:

- If you selected **Yes** in [step 2 on page 117](#), go to [step 5 on page 118](#)
- If you selected **No** in [step 2 on page 117](#), on **Accounts AVG/END**, perform these tasks:

Note: If you selected Yes in step 2 to specify that your accounts use the required UDAs for currency conversion, the Accounts AVG/END tab does not display.

- Use the **Actions** icon to select the accounts to use for the *average* exchange rate.
- Use the **Actions** icon to select the accounts to use for the *ending* exchange rate.

5 On FX_Average, for each dimension listed, select the members that contain the average exchange rates by performing one of these tasks.

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.

Note: If the predefined selection does not enter a value for each dimension listed, you should enter a value for any dimensions that are empty. If a dimension is left empty, it will use the member specified in the POV step.

- Click the **Member Selector** icon to select a member or function for each of the dimensions listed.
- Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

6 On FX_Ending, for each dimension listed, select the members that contain the ending exchange rates by performing one of these tasks.

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.

Note: If the predefined selection does not enter a value for each dimension listed, you should enter a value for any dimensions that are empty. If you leave a dimension empty, it will use the member you specified in the POV step.

- Click the **Member Selector** icon to select a member or function for each of the dimensions listed.
- Select a dimension in the list, and click the **Actions** icon to select a member, variable, or function. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

7 Click Finish.

Currency Conversion Template Example

1. In a Planning application that was created with no, one, or multiple currencies, in addition to the existing dimensions, create a custom dimension named Currencies and add these members:

- Currencies
 - Input Currencies
 - USD
 - CAD
 - EUR
 - GBP
 - INR
 - Reporting Currencies
 - EUR Reporting
 - US Reporting
 - Can Reporting

2. In the Account dimension, add these members:

- FX_Rates
 - FX_Average
 - FX_Ending

3. In the Entity dimension, add the entity “Company Assumptions”.

4. Using Oracle Hyperion Smart View for Office or a Planning form, enter exchange rates in these cells:

- Account – FX_Average and FX_Ending

- Period – enter rates for each month
- Year – FY12
- Scenario – Current
- Version – BU Version_1
- Entity – Company Assumptions
- Products – 000
- Currencies – for each currency enter that currency's exchange rate

5. In Variables:

- Create an application level runtime prompt, a member variable named: "Reporting_Currency" for the Currencies dimension, and enter a default value of "EUR Reporting."
- Create an application level runtime prompt, a member variable named: "Input Currencies" for the Currencies dimension, and enter a default value of "EUR."
- Create a business rule in this Planning application, and drag and drop the Currency Conversion system template into the business rule's flow chart.

The Currency Conversion Wizard is displayed.

6. In the Currency Conversion Wizard, perform the following steps:

a. Step1 – Exchange Rate Option:

- In what dimension is your currency? Click the dropdown, and select the Currencies dimension you created above.
- Select the reporting currency: click the Actions icon, select Variable, and select the Reporting_Currency variable.

In this example, we are using a variable for the reporting currency so that the rule can be launched in Planning for each reporting currency.

- Select the parent member that contains your currency members: Click the Actions icon, and select the Input Currencies parent member.

The reason the currency members need to have a parent selected here, is so that if a currency is added in the future, then this business rule only needs to be redeployed and launched again in Planning. The script of the template will add the new currency to the script, and calculate the reporting currency correctly.

- What exchange rate (currency) is used for this reporting currency? Click the Actions icon, and select the Input Currencies variable.

In this example, we are using a variable for the reporting currency so that the rule can be launched in Planning for each reporting currency.

- Do you want to use the account types for currency conversion? Using the dropdown, select Yes.

If you select No, you will be prompted later in the steps to specify which accounts use Average/Ending.

- Do you want to activate the debug mode for this wizard? Select Debug Wizard On.
To see the details of the prompts as selected in the wizard steps as comments in the script of the business rule, select Debug Wizard On, otherwise select Debug Wizard Off.
- b. Click Next.
- c. Step 2 – POV enter the following for each dimension:
 - Period – leave period empty so that it will write to all periods
 - Year – “FY12”
 - Scenario – “Current”
 - Version – “BU Version_1”
 - Entity – @Relative(“South”,0)
 - Products – @Relative(“Tennis”,0),@Relative(“Golf”,0)
- d. Click Next.
- e. Step 3 – FX_Average:
 - Select members containing the average exchange rates:
 - Account – “FX_Average”
 - Period
 - Year
 - Scenario
 - Version
 - Entity – “Company Assumptions”
 - Products - “000”
 - Leave the Period dimension empty, so that it will use the exchange rate for each period.
 - Leave Year, Scenario, and Version empty, so that they will use the members from the POV input for these dimensions.
- f. Step 4 – FX_Ending:
 - Select members containing the average exchange rates:
 - Account – “FX_Average”
 - Period
 - Year
 - Scenario
 - Version
 - Entity – “Company Assumptions”
 - Products – “000”

- Leave the Period dimension empty, so that it will use the exchange rate for each period.
- Leave Year, Scenario, and Version empty, so that they will use the members from the POV input for these dimensions.

7. Save, validate, and deploy the business rule to Planning.

The application in this example contains the following data:

Table 12 Example Data Part 1

			FY12	Current	BU Version_1
		Tennessee	Tennessee	Florida	Florida
		Jan	Jan	Jan	Jan
		G400	G100	G400	G100
Gross Sales	USD	10750	13450	9500	9699
Gross Sales	CAD	10450	10000	14450	13000
Gross Sales	EUR	40000	41450	42450	65000
Gross Sales	GBP	13250	16750	172000	16300
Gross Sales	INR	750000	750000	750000	750000
Gross Sales	US Reporting	#Missing	#Missing	#Missing	#Missing
Gross Sales	CAN Reporting	#Missing	#Missing	#Missing	#Missing
Gross Sales	EUR Reporting	#Missing	#Missing	#Missing	#Missing
Salaries	USD	5000	5000	5000	5000
Salaries	CAD	4500	4500	4500	4500
Salaries	EUR	5500	5500	5500	5705
Salaries	GBP	1200	1200	1200	1200
Salaries	INR	100000	100,000	100,000	100,000
Salaries	US Reporting	#Missing	#Missing	#Missing	#Missing
Salaries	CAN Reporting	#Missing	#Missing	#Missing	#Missing
Salaries	EUR Reporting	#Missing	#Missing	#Missing	#Missing

Notice that none of the reporting currencies in this table have values.

8. Launch the rule in Planning. For the Reporting Currency variable, enter EUR Reporting, and for the input currency enter EUR. Click Launch.
9. For each account in Planning, verify that the Eur Reporting now shows the total account in the Euro:

Table 13 Example Data Part 2

			FY12	Current	BU Version_1
		Tennessee	Tennessee	Florida	Florida
		Jan	Jan	Jan	Jan
		G400	G100	G400	G100
Gross Sales	USD	10750	13450	9500	9699
Gross Sales	CAD	10450	10000	14450	13000
Gross Sales	EUR	40000	41450	42450	65000
Gross Sales	GBP	13250	16750	172000	16300
Gross Sales	INR	750000	750000	750000	750000
Gross Sales	US Reporting	#Missing	#Missing	#Missing	#Missing
Gross Sales	CAN Reporting	#Missing	#Missing	#Missing	#Missing
Gross Sales	EUR Reporting	52161391	52168683	52170600	52190796.69
Salaries	USD	5000	5000	5000	5000
Salaries	CAD	4500	4500	4500	4500
Salaries	EUR	5500	5500	5500	5705
Salaries	GBP	1200	1200	1200	1200
Salaries	INR	100000	100000	100000	100000
Salaries	US Reporting	#Missing	#Missing	#Missing	#Missing
Salaries	CAN Reporting	#Missing	#Missing	#Missing	#Missing
Salaries	EUR Reporting	6963318	6963318	6963318	6965471.887

10. You can launch the business rule again in Planning. You can change the variable inputs for US Reporting and USD currency and for each reporting currency available in the application.

Saving a System Template as a Custom Defined Template (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You may want to customize the content of a system template. Although you cannot edit system templates, you can use Save As to save a system template with a new name. When you save it with a new name, it becomes a custom defined template that you can customize. The original system template is unchanged.

Note: When you perform a Save As on an Essbase system template to save it as a custom defined template, you see a design time prompt called Application in the new custom defined template. However, if you create a new custom defined template for Essbase, you do not see an Application design time prompt in the template. Please ignore the Application design time prompt in the system template you save as a custom defined template.

► To save a system template as a custom defined template:

- 1 In the System View, expand the Planning or Essbase application type, the application, the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Rules**.
- 2 Right-click the business rule that contains the system template you want to save as a custom defined template, and select **Open**.
- 3 In the **Rule Designer** flow chart, right-click the system template, and select **Open**.
- 4 When the system template opens, select **File, Save As**.
- 5 In **Save As**, the template's information (the template name and the application name) is displayed by default. Enter a new name for the template. Then enter an application and a plan type or database.
- 6 Click **OK**.

The new custom defined template is displayed in the Templates node of the application and plan type or database that you select during save as. You can open it and customize it.

Note: You may need to refresh the application list in the System View to see the new template. Right-click the Templates node (or the calculation or plan type, the application, or application type), and select Refresh.

Inserting a System Template into a Business Rule's Flow Chart (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can insert a system template into a business rule from within the Rule Designer.

Note: You cannot insert a system template into a custom defined template.

► To insert a system template into a business rule:

- 1 In the System View, expand the Planning or Essbase application type, the application, the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Rules**.
- 2 Right-click the business rule into which you want to insert the template, and select **Open**.
- 3 In the **Rule Designer**, under **Existing Objects**, expand the **System Templates** node.
- 4 Drag the system template you want to insert in the rule, and drop it into the rule's flow chart in the location in which you want it to display.

Note: If you want to undo the changes you made, select Edit and then Undo Add.

- 5 Select **File, Save**.

Removing a System Template from a Business Rule's Flow Chart (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You remove a system template from a business rule's flow chart by right-clicking it in the flow chart, and selecting Remove. When you remove it from the flow chart, it is not deleted from the database. It exists in the database as a separate object.

► To remove a system template from a flow chart:

- 1 In the System View, expand the Planning or Essbase application type, the application, the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Rules**.
- 2 Right-click the business rule from which you want to remove the system template, and select **Open**.
- 3 In the flow chart of the **Rule Designer**, right-click the system template you want to remove, and select **Remove**.

Note: If you want to undo the changes you made, select Edit and then Undo Remove.

- 4 Select **File, Save**.

Working with Custom Defined Templates (Financial Management, Planning, Operational Planning and Essbase Block Storage Application Users Only)

See these topics:

- [“About Custom Defined Templates \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 126](#)
- [“Creating a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 126](#)
- [“Creating a Custom Defined Template from a Template's or Business Rule's Components \(Financial Management, Planning, or Operational Planning, and Essbase Block Storage Application Users Only\)” on page 139](#)
- [“Editing a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 140](#)
- [“Saving a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 140](#)
- [“Deleting a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 142](#)

- “Copying and Pasting a Custom Defined Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 143
- “Inserting a Custom Defined Template into Business Rule's Flow Chart (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 144
- “Removing a Custom Defined Template from a Business Rule's Flow Chart (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 144
- “Searching for a Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 148

About Custom Defined Templates (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

A custom defined template is designed by an administrator for use in business rules and other templates. You can access custom defined templates from the Templates node within a calculation type, a plan type, or a database in the System View and within the Rule Designer, under Existing Objects. Custom defined templates can be used in Financial Management, Planning, Operational Planning, and Essbase Block Storage application business rules.

Note: Custom defined templates are not supported in Essbase aggregate storage applications, including those used in Oracle General Ledger.

Creating a Custom Defined Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can create a custom defined template from the System View or from within the Rule, Component, or Template Designer.

You can include a custom-defined template within another custom-defined template. You can also include business rules and shared objects in custom-defined templates.

► To create a custom defined template:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase and Operational Planning), and **Templates**.
- 2 Right-click **Templates**, and select **New**.
- 3 Enter the template's name.
- 4 Enter the **Application Type** (Financial Management, Planning, or Essbase).

5 Select an **Application**. The application must be a valid Performance Management Architect application, an application created with Financial Management or Planning application administration, an Essbase block storage application, or an Operational Planning application.

6 Do one of these tasks:

- If you selected Financial Management, select the **Calculation Type**.
- If you selected Planning, select the **Plan Type**.
- If you selected Essbase or Operational Planning, select the **Database**.

Note: If you right-click Templates and select New to create a new template, the New Template dialog is populated with the application type, the application, and the calculation type, plan type, or database you are working in within the System View.

7 Click **OK**.

The template is displayed in the Template Designer. To design the template, see “[Designing a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)](#)” on page 127.

Designing a Custom Defined Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You create a custom defined template from the System View. A custom defined template can include scripts, formulas, business rules, and other custom defined templates.

➤ To create a custom defined template:

1 In the System View, do one of these tasks:

- Select **File, New, Custom Defined Template**.
- Expand the Financial Management, Planning, or Essbase application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning). Right-click **Templates**, and select **New**.

2 Enter a name, application type, and application to which the custom defined template belongs. Then do one of the following:

- **Financial Management users only:** If you are creating a template for a Financial Management application, enter the calculation type.
- **Planning users only:** If you are creating a template for a Planning application, enter the plan type.
- **Essbase and Operational Planning users only:** If you are creating a template for an Essbase or Operational Planning application, enter the database.

3 Click **OK**.

The new template is displayed in the Template Designer.

- 4 To design the template, from the **Template Palette**, drag new and existing objects and drop them into the template's flow chart within the **Template Designer**.

Note: You can also create new objects like formulas and scripts independently of the template, and add them to the template later.

From **New Objects**, drag and drop these components to insert a *new* component into the template's flow chart:

- Formulas: See [“Working with Formula Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 150.
- Scripts: See [“Working with Script Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 163.
- Conditions: See [“Working with Condition Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 169.
- Member Blocks: See [“Working with Member Block Components \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 174.
- Member Ranges: See [“Working with Member Range Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 178.
- **Financial Management users only:** Data Ranges: See [“Working with Data Range Components \(Financial Management Users Only\)”](#) on page 183.
- Fixed Loops: See [“Working with Fixed Loop Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 188.
- Metadata Loops: See [“Working with Metadata Loop Components \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 193.
- DTP Assignments: See [“Working with DTP Assignment Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 197.

From **Existing Objects**, drag existing rules, formulas, scripts, and templates from Financial Management, Planning, Essbase, or Operational Planning applications, and drop them into the template's flow chart.

If you drag and drop a formula or script component into the flow chart, by default it becomes a shared object, if it was not already shared. If you do not want the object to be shared, clear the Shared check box on the formula or script component's Properties tab. See [“Sharing](#)

Script and Formula Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 201.

Note: You cannot use system templates in a custom defined template. If you want to use the properties of a system template in a custom defined template, save the system template as a custom defined template using Save As. See [“Saving a System Template as a Custom Defined Template \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 123.

Tip: As you add components to a template, you may want to increase or decrease the size of the component icons and the amount of detail that is displayed in the flow chart. You can use the zoom bar to zoom in and out within the flow chart. You can select a component to view its properties, and edit a component, on the Properties tab.

- 5 If you insert a component into the template, and you want to disable the component, select the component in the template flow chart, and select **Disabled** on the component's Properties tab. (For a Member Range component, the **Disabled** check box is on the Member Range tab.)

After you disable a component, and save the template, the component icon becomes gray in the template flow chart.

You may want to disable a component to exclude it from validation when you want to analyze which components are causing validation errors in the template.

Note: You cannot disable a Condition component.

If you disable a component that is shared, it is disabled only for the template in which you disable it.

- 6 **Optional:** To enter a design time prompt that prompts users to enter information when they are using the template, use the table below the **Template Designer** flow chart. See [“Creating Design Time Prompts for a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 131.

Planning users only: When you open a custom-defined template, by default it contains two system design time prompts:

- Application: an application design time prompt determines whether the application is a multi-currency application.
- Upper POV: a member range design time prompt retrieves a list of the members from the upper member ranges used in the business rule.

Essbase users only: When you open a custom-defined template, by default it contains a password design time prompt. Some Essbase functions require a parameter of the type password.

- 7 **On Properties,** enter properties for the template. As you move amongst components in the template's flow chart, the number and contents of the tabs change. To enter properties and other information for the template's components, select the component in the flow chart. See [Chapter 4, “Using Components](#)

to Design Business Rules and Templates (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)."

- **Optional:** Edit the template name by entering a new one of up to 50 characters. (The name defaults from the New Template dialog.)
- **Optional:** Enter a description of up to 255 characters for the template.
- **Optional:** Enter a caption for the template. The caption is displayed beneath the template in flow charts.
- **Optional:** Enter comments for the template. For example, you may want to describe what the template is used for.
- **Financial Management users only:**
 - Select **Enable Logging** so if any rules used in the template have log text, the log text is included in the log file when the template is launched. You can enable logging for rules, rulesets, and components. However, you specify what log text to include, if any, with a business rule's formula statements.

Note: If logging is not enabled for a template, but is enabled for a rule and component that belong to the template, no log file is created because the log setting for the template overrides the settings for the rule and component.

- Select **Enable Timer** so the time taken to process the template is recorded in the log file. You can enable the timer for rules, rulesets, and components. The process time is included in the log file for every object whose timer is enabled. For example, if you have a template whose timer is enabled and the template contains three rules whose timers are enabled, the time taken to process the template, and each rule in the template, is recorded.

8 On **Usages**, you can view the following information about the template:

- The names of the business rules and templates that are using the template
- The calculation type, plan type, or database of the business rules and templates that are using the template
- The application name of the business rules and templates that are using the template
- Whether the business rules and templates that are using the template are deployed
- Whether the business rules and templates that are using the template are validated
- A description of the business rules and templates that are using the template

9 On **Script**, you can view the template in its non-graphical format.

Note: You cannot make changes on this tab. To make changes to the template script, save the business rule, then select Edit, Script to convert the business rule, its templates, and its components into a script.

10 Select **File, Save**.

Creating Design Time Prompts for a Custom Defined Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can enter design time prompts for custom defined templates so when users are using the template to design business rules, they are prompted to enter the correct information.

➤ To create design time prompts for a custom defined template:

- 1 Complete [step 1 on page 127](#) through [step 4 on page 128](#).
- 2 In the design time prompt table, under **Name**, enter a name for the design time prompt.
- 3 Under **Type**, click on the arrow, and select the design time prompt type from the dropdown list:

Note: Different design time prompt types are available for different application types.

- Attribute—prompts the user to enter an attribute from the application to which the template belongs. If you select Attribute, do these tasks:
 - a. Click **User Input** to select an attribute for the design time prompt.
 - b. **Optional:** Click **Choose Dimension Limits** to select limits for the dimensions. See [“Defining Dimension Limits for Cross Dimension, Dimension, Dimensions, Member, and Member Range Design Time Prompts \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 136](#).
- Boolean—prompts the user to enter Boolean values.
- Cross Dimension—prompts the user to enter a range of dimensions from the application to which the template belongs. If you select Cross Dimension, do these tasks:
 - **Optional:** Click **Dependency** to define dependencies. See [“Defining Dependencies for Design Time Prompts \(Financial Management, Planning, or Operational Planning, and Essbase Block Storage Application Users Only\)” on page 138](#).
 - **Optional:** Click **Choose dimension limits** to select limits for the dimension. See [“Defining Dimension Limits for Cross Dimension, Dimension, Dimensions, Member, and Member Range Design Time Prompts \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 136](#).
- Condition—prompts the user to enter a condition. See [“Using the Condition Builder to Create Conditional Statements \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 156](#).
- Dimension—prompts the user to enter a dimension from the application to which the template belongs. If you select Dimension, do these tasks:
 - **Optional:** Click **Dependency** to define dependencies. See [“Defining Dependencies for Design Time Prompts \(Financial Management, Planning, or Operational Planning, and Essbase Block Storage Application Users Only\)” on page 138](#).

- **Optional:** Click **Choose dimension limits** to select limits for the dimension. See [“Defining Dimension Limits for Cross Dimension, Dimension, Dimensions, Member, and Member Range Design Time Prompts \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 136.
- Dimensions—prompts the user to enter dimensions from the application to which the template belongs. If you select Dimensions, do these tasks:
 - **Optional:** Click **Dependency** to define dependencies. See [“Defining Dependencies for Design Time Prompts \(Financial Management, Planning, or Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 138.
 - **Optional:** Click **Choose dimension limits** to select limits for the dimensions. See [“Defining Dimension Limits for Cross Dimension, Dimension, Dimensions, Member, and Member Range Design Time Prompts \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 136.
- Member—prompts the user to enter a member from a selected dimension in the application. If you select Member, do these tasks:
 - **Optional:** Click **Dependency** to define dependencies. See [“Defining Dependencies for Design Time Prompts \(Financial Management, Planning, or Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 138.
 - **Optional:** Click **Choose dimension limits** to select limits for the dimension to which the member belongs. See [“Defining Dimension Limits for Cross Dimension, Dimension, Dimensions, Member, and Member Range Design Time Prompts \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 136.
- Members—prompts the user to enter multiple members from a selected dimension in the application. If you select Members, do these tasks:
 - **Optional:** Click **Dependency** to define dependencies. See [“Defining Dependencies for Design Time Prompts \(Financial Management, Planning, or Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 138.
 - **Optional:** Click **Choose dimension limits** to select limits for the dimension to which the members belong. See [“Defining Dimension Limits for Cross Dimension, Dimension, Dimensions, Member, and Member Range Design Time Prompts \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 136.
- Member range—prompts the user to enter a range of members from a selected dimension in the application. If you select Member Range, do these tasks:
 - **Optional:** Click **Dependency** to define dependencies. See [“Defining Dependencies for Design Time Prompts \(Financial Management, Planning, or Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 138.
 - **Optional:** Click **Choose dimension limits** to select limits for the dimension to which the member range belongs. See [“Defining Dimension Limits for Cross Dimension,](#)

[Dimension, Dimensions, Member, and Member Range Design Time Prompts \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 136.](#)

- Numeric—prompts the user to enter a number from a selected dimension in the application.
- Restricted list—prompts the user to enter a member from a restricted list of members. If you select Restricted List, do this task:
 - Click **User Input** to define a restricted list of members. See [“Defining a Default Value for Cross Dimension, Member Range, and Restricted List Design Time Prompts \(Financial Management, Planning, or Operational Planning, and Essbase Block Storage Application Users Only\)” on page 137.](#)
- Separator—prompts the user to enter a separator.
- String—prompts the user to enter a text string.
- Password—prompts the user to enter a password.

4 Select **Prompt It?** if you want the design time prompt to display for users when they use the template.

5 Select **Mandatory** if it is mandatory for users to enter information for the design time prompt.

6 Select **Read Only** if users should read the prompt only and not enter information for it.

7 In **DTP Text**, enter the text of the design time prompt. If the design time prompt is a password, enter the password.

8 In **Default Value**, enter or select a default value for the design time prompt.

If the design time prompt is a cross dimension design time prompt, do these tasks:

- Click **User Input** to define the cross dimension selection. See [“Defining a Default Value for Cross Dimension, Member Range, and Restricted List Design Time Prompts \(Financial Management, Planning, or Operational Planning, and Essbase Block Storage Application Users Only\)” on page 137.](#)
- Click **Choose DTP as source** to select an existing design time prompt. See [“Selecting Design Time Prompts for a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 136.](#)

If the design time prompt is a member range design time prompt, do these tasks:

- Click **User Input** to define the member range for dimensions. See [“Defining a Default Value for Cross Dimension, Member Range, and Restricted List Design Time Prompts \(Financial Management, Planning, or Operational Planning, and Essbase Block Storage Application Users Only\)” on page 137.](#)
- Click **Choose DTP as source** to select an existing design time prompt. See [“Selecting Design Time Prompts for a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 136.](#)

9 Repeat [step 1 on page 131](#) through [step 8 on page 133](#) for each design time prompt you want to create for the template. As the number of design time prompts you create increases, you may need to organize the design time prompts into steps, or add, copy, or reorder the rows in the table.

- To reorder a table row, select the row, and use the up arrow or the down arrow to move the row to the correct position in the table.
- To insert or delete rows, use the **Insert Row** and **Delete Row** icons.
- To organize the design time prompts in the table, click **Create/Edit Wizard**. See [“Organizing Design Time Prompts with the Template Wizard \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 134](#).
- To insert a new row into the design time prompt table, right-click the last row, and select **Insert Row**.
- To delete a row from the design time prompt table, right-click the row, and select **Delete Row**.
- To copy a row in the table, right-click the row, and select **Copy**.
- To copy the entire table, right-click a row, and select **Copy Grid**.
- To paste a copied row or rows, right-click the row beneath which you want the copied row or rows to display, and select **Paste**.

Note: If you copy a design time prompt and paste it into the table, it is pasted in the row below the active row (that is, the row below the cursor).

10 Select **File, Save**.

Organizing Design Time Prompts with the Template Wizard (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can use the Template Wizard Designer to organize design time prompts for custom-defined templates. The wizard enables you to organize the display of design time prompts in a template: you can decide what design time prompts you display in each step and choose to display or hide a step based on conditions that you define.

The conditions you create can be based on a member or dimension selection that is made in earlier steps in the wizard, or made in an upper FIX statement in the rule where the template is used. For example, you can use the UpperPOV design time prompt to test whether all dense dimensions are part of the Upper level design time prompt. If they are, the step for dense dimension aggregation is not displayed; if they are not, the step for dense dimension aggregation is displayed.

➤ To organize design time prompts:

- 1 Complete [step 1 on page 127](#) through [step 6 on page 129](#).
- 2 In the design time prompt table, click **Create/Edit Wizard**.

Note: Before you can organize design time prompts into steps, you must create the design time prompts in the design time prompt grid below the template flow chart.

3 In the Template Wizard Designer, click Add Step (+) to create a step in the wizard. Do these tasks:

- a. Give the step a name. For example, Step 1.
- b. Select **Before** or **After**, then the step number, if you want the step to display before or after a step that already exists.
- c. Enter any comments for the step. For example, you may want to state what design time prompts display in the step.
- d. Click **OK**.

The step is displayed in the Step dropdown list in the Template Wizard Designer. As you select different steps from the Step dropdown, you can see which design time prompts display for the step in the Selected DTPs list.

4 For the step you created, select the design time prompts you want to display in the step from Available DTPs, and use the right arrow to move them to Selected DTPs.

Tip: In Available DTPs, use Shift + click and Ctrl + click to select multiple contiguous, and multiple non-contiguous, design time prompts. In Selected DTPs, use the up and down arrow keys to reorder the design time prompts.

5 Optional: Select the lines of the design time prompt to which you want to add comments, and click the Comments icon to add any comments for the design time prompt.

6 If you want to create a condition for the design time prompt, perform these tasks:

- a. In the condition grid, under **DTP**, select a design time prompt. The system design time prompts, **Upper POV** and **Application**, display in the **DTP** dropdown by default. Their default values are:
 - Upper POV: Is Empty and Is Not Empty, which test whether the design time prompt is empty
 - Application: Is Multi-Currency and Is Single Currency, which test whether the application is a multi-currency or a single currency application
- b. In **Operator**, select = (equals) or < > (greater than or less than).
- c. In **Value**, select a value for the design time prompt condition.
- d. Repeat these steps until you define all of the statements in the condition. To add rows, click the plus (+) in last row.

The first row in the condition is the IF statement; each additional row is an AND statement. For example, the condition you define might read, “If the application is a multi-currency application AND the member range is not empty, then display this step.”

7 Repeat these steps until you create steps for all of the design time prompts you want to display in the wizard.

- To add more steps, click **Add Step (+)**.
- To edit a step, click **Edit Step**.

- To delete a step, click **Delete Step**.

8 Click **OK**.

Selecting Design Time Prompts for a Custom Defined Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can select an existing design time prompt and insert it into a custom defined template.

➤ To select a design time prompt:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
- 2 Right-click the custom defined template for which you want to insert a design time prompt, and select **Open**.
- 3 In the design time prompt table, select a prompt type.
- 4 In **Default Value**, click the **Choose DTP as Source** icon.
- 5 In **DTP Selector**, select a design time prompt, and click **OK**.
- 6 Select **File, Save**.

Defining Dimension Limits for Cross Dimension, Dimension, Dimensions, Member, and Member Range Design Time Prompts (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

When you create a cross dimension, dimension, dimensions, member, or member range design time prompt for a custom defined template, you must specify whether you want the prompt to display for dense and sparse dimensions, dense dimensions only, or sparse dimensions only.

➤ To select the type of dimensions for which cross dimension, dimension, dimensions, member, or member range design time prompts should display:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
- 2 Right-click the custom defined template for which you want to create limits, and select **Open**.
- 3 In the design time prompt table, select one of these design time prompt types:
 - **Cross Dimension**
 - **Dimension**
 - **Dimensions**
 - **Member**

- **Member Range**
- 4 In the column to the right of the **Type** column, click the **Choose Dimension Limits** icon.
 - 5 In **Define Dimension Type**, select one of these options:
 - **Show Sparse**: to display only sparse dimensions
 - **Show Dense**: to display only dense dimensions
 - **Both**: to display both dense and sparse dimensions
 - 6 Click **OK**.
 - 7 Select **File, Save**.

Defining a Default Value for Cross Dimension, Member Range, and Restricted List Design Time Prompts (Financial Management, Planning, or Operational Planning, and Essbase Block Storage Application Users Only)

You can define a default value for cross dimension, member range, and restricted list design time prompt types by selecting members as the default value.

- To define a default value for cross dimension, member range, and restricted list design time prompt types:
 - 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
 - 2 Right-click the custom defined template for which you want to define default design time prompt values, and select **Open**.
 - 3 In the design time prompt table, select one of these design time prompt types:
 - **Cross Dimension**
 - **Member Range**
 - **Restricted List**
 - 4 Click the **User Input** icon.
 - 5 Do one of these tasks:
 - If you are defining default values for a cross dimension or member range design time prompt, click the **Actions** icon to select values for each of the dimensions listed.
 - To enter variables, see [“Working with Variables” on page 249](#).
 - To enter members, see [“Working with Members” on page 230](#).
 - To enter functions, see [“Working with Functions” on page 269](#).
 - If you are defining default values for a restricted list, enter a **Rule Builder Value** and a **Substituted Value**.
 - 6 Click **OK**.
 - 7 Select **File, Save**.

Defining Dependencies for Design Time Prompts (Financial Management, Planning, or Operational Planning, and Essbase Block Storage Application Users Only)

You can define inclusive and exclusive dependencies for design time prompts. If you designate a prompt as inclusive, the selections a user can make for prompts displayed are dependent on the selection the user makes for the inclusive prompt. For example, if you designate prompt 1 as inclusive, and the user selects the Account dimension for prompt 1, the selections for prompts after prompt 1 display only the Account dimension.

If you designate a prompt as exclusive, the selections a user can make for prompts displayed are not dependent on the selection the user makes for the exclusive prompt. For example, if you designate prompt 1 as exclusive, and the user selects the Entities dimension for prompt 1, the selections for prompts after prompt 1 display all dimensions except the Entities dimension.

- To define dependencies for cross dimension, dimensions, dimension, member, members, and member range design time prompt types:
 - 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
 - 2 Right-click the custom defined template for which you want to define dependencies, and select **Open**.
 - 3 In the design time prompt table, select one of these design time prompt types:
 - **Cross Dimension**
 - **Dimension**
 - **Dimensions**
 - **Member**
 - **Members**
 - **Member Range**
 - 4 Click the **Dependency** icon.
 - 5 Select the design time prompt for which you want to define a dependency.
 - 6 Do one of these tasks:
 - Select **Exclusive** to make users' selections for prompts after this prompt *exclude* what is selected for this prompt.
 - Select **Inclusive** to make users' selections for prompts after this prompt *include* what is selected for this prompt.
 - Select **None** if you do not want a dependency for this prompt. (This is the default selection.)
 - 7 Click **OK**.
 - 8 Select **File, Save**.

Creating a Custom Defined Template from a Template's or Business Rule's Components (Financial Management, Planning, or Operational Planning, and Essbase Block Storage Application Users Only)

You can create a custom defined template by selecting components in a business rule or template's flow chart.

- To create a custom defined template from a business rule or template's components:
 - 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase and or Operational Planning), and **Rules or Templates**.
 - 2 Open the rule or template that contains the components you want to save as a template.
 - 3 In the flow chart of the Rule Designer or Template Designer, select the components you want to save as a template, right-click, and select **Save As Template**.
 - 4 In **Save As**, click **OK**.

Tip: To see the new template, you may need to refresh the System View. Click the Refresh toolbar icon to refresh the entire application list. You can also refresh the Templates node or any level above it in the application list to see the new template. See [“Refreshing Custom Defined Templates \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 141.

Opening a Custom Defined Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can open a custom defined template from the System View or from the Rule Designer by double clicking it in a business rule's flow chart.

- To open a custom defined template:
 - 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
 - 2 Right-click the custom defined template you want to open, and select **Open**.

The custom defined template is displayed in the Template Designer.

Editing a Custom Defined Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can edit the following properties of a custom defined template:

- The template's name, description, caption, and comments
- The components that comprise the template
- The steps for the template
- The design time prompts for the template
- **Financial Management users only:** Whether logging and timer options are enabled

Saving a Custom Defined Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You save a custom defined template after you create it or make changes to it.

- To save a custom defined template after you create or edit it, select **File, Save**.

Note: You may need to refresh the application list in the System View to see a custom defined template after you save it. To do this, you can right-click any node or object in the application list of the System View: and select Refresh.

Saving a Custom Defined Template with a Different Name (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can save a custom defined template with a different name using Save As. You can also copy a custom defined template from one rule to another within the same application type using Save As. Save As creates a copy of the original template's content with a different name to distinguish it from the original.

- To save a custom defined template with a different name:
- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
 - 2 Right-click the custom defined template you want to save with a different name, and select **Open**.
 - 3 In the **Template Designer**, select **File, Save As**.
 - 4 In **New Custom Defined Template**, do these tasks:

- a. Enter the template's new name and the **Application**. The application must be a valid Performance Management Architect application, an application created with Financial Management or Planning application administration, an Essbase block storage application or an Operational Planning application.
- b. If the custom defined template is a Financial Management custom defined template, select the **Calculation Type**; if the custom defined template is a Planning custom defined template, select the **Plan Type**; if the custom defined template is an Essbase or Operational Planning custom defined template, select the **Database**.

Note: You cannot change the application type or the calculation type of a custom defined template you save with a different name. You can change the application and plan type to which a custom defined template belongs when you save the custom defined template with a different name.

- c. Click **OK**.

The new custom defined template is added to the application list in the System View. You may need to refresh the application list to see the new template. See [“Refreshing Custom Defined Templates \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 141.

Refreshing Custom Defined Templates (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

After you create a custom defined template, you may need to refresh the application list in the System View to see the new template in the Templates node. When you refresh the application type, application, or calculation or plan type to which a custom defined template belongs, you refresh the Templates node by default. Refreshing the Templates node, however, does not refresh higher levels (that is, calculation or plan types, applications, or application types) in the application list.

➤ To refresh custom defined templates:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning) that contains the custom defined templates you want to refresh.
- 2 Right-click **Templates**, and select **Refresh**.

Note: You can also refresh custom defined templates by refreshing any higher level in the database outline (for example, the calculation type for Financial Management templates, the plan type for Planning templates, or the database for Essbase or Operational Planning templates).

Showing the Usages of a Custom Defined Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can display the business rules that are using a custom defined template. Viewing the usages of a custom defined template is useful when you want to delete the custom defined template and need to know what objects, if any, are using it. You must remove the template from any objects that are using it before you can delete the template. See [“Removing a Custom Defined Template from a Business Rule's Flow Chart \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 144.

► To show the usages of a custom defined template:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning) and **Templates**.
- 2 Right-click the custom defined template whose usages you want to see, and select **Show Usages**.
- 3 You can view this information about the custom defined template:
 - The names of the business rules that are using the custom defined template
 - The calculation type, plan type, or database of the business rules that are using the custom defined template
 - The application name of the business rules that are using the custom defined template
 - Whether the business rules that are using the custom defined template are deployed
 - Whether the business rules that are using the custom defined template are validated
 - A description of the business rules that are using the custom defined template
 - The folders in the Custom View that contain this template
- 4 After you review the information, click **OK**.

Deleting a Custom Defined Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can delete a custom defined template from the System View. Before you delete a custom defined template, make sure it is not being used in any business rules or any custom folders. To see if a custom defined template is being used by any business rules or custom folders, you can show its usages from the System View. See [“Showing the Usages of a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 142. If the template is being used by business rules, you must remove it from them before you can delete it. See [“Removing a Custom Defined Template from a Business Rule's Flow Chart \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 144.

- To delete a custom defined template:
 - 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
 - 2 Right-click the template you want to delete, and select **Show Usages** to make sure the template is not being used by any business rules or templates.
 - 3 Right-click the template you want to delete, and select **Delete**.
 - 4 Click **OK** to confirm deletion of the template.

Copying and Pasting a Custom Defined Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can copy a custom defined template and paste it into another business rule. The rule into which you copy it must belong to the same application type and calculation or plan type. For example, you can copy a custom defined template from a rule in a Plan1 plan type in a Planning application to another rule in a Plan1 plan type in a Planning application, but not to a rule in a Capital Asset plan type.

- To copy and paste a custom defined template:
 - 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
 - 2 Right-click the template you want to copy, and select **Open**.
 - 3 In the **Template Designer**, select **Edit, Copy**.
 - 4 From the System View, open the rule or template into which you want to paste the copied template.
 - 5 In the **Template Designer** or **Rule Designer** flow chart of the template or rule into which you want to paste the custom defined template, select **Edit, Paste**.

Note: If you want to undo the changes you made, select Edit and then Undo Paste.

- 6 Select **File, Save**.

Inserting a Custom Defined Template into Business Rule's Flow Chart (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can insert a copy of a custom defined template into a business rule by dragging and dropping the custom defined template into the flow chart of the business rule into which you want to insert it.

➤ To insert a custom defined template into a business rule:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning).

Note: If you are working with an Operational Planning application, you must also expand the Calculation Type that contains the rule you want to work with.

- 2 Expand the **Rules** node.
- 3 Right-click the business rule into which you want to insert the template, and select **Open**.
- 4 In the **Rule Designer**, under **Existing Objects**, expand the **Templates** node.
- 5 Drag the template you want to insert in the rule, and drop it into the rule's flow chart in the location in which you want it to display.

Note: If you want to undo the changes you made, select Edit and then Undo Add.

- 6 Select **File, Save**.

Removing a Custom Defined Template from a Business Rule's Flow Chart (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You remove a custom defined template from a business rule's flow chart by right-clicking it in the flow chart, and selecting Remove. When you remove it from the flow chart, it is not deleted from the database. It exists in the database as a separate object.

➤ To remove a template from a flow chart:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Rules**.
- 2 Right-click the business rule, and select **Open**.

- 3 In the flow chart of the **Rule Designer**, right-click the template you want to remove, and select **Remove**.

Note: If you want to undo the changes you made, select **Edit** and then **Undo Remove**.

- 4 Select **Yes** to confirm that you want to remove the component.
- 5 Select **File, Save**.

Searching for and Replacing Text in a Custom Defined Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can search for text strings within a custom defined template. When you search for a string, Calculation Manager starts the search with the first component after the component selected in the template's flow chart, continues to the end of the flow chart, and starts at the beginning of the flow chart until it reaches the component selected in the flow chart. After one occurrence of the text string is found, if you want to search for another, you need to start the search again to find the next occurrence.

You can also replace all instances of a text string in a custom defined template.

➤ To search for and replace text in a custom defined template:

- 1 In the **System View**, expand the **Financial Management, Planning, or Essbase application type**, the **application**, the **calculation type**, **plan type**, or **database**, and **Templates**.
- 2 Do one of these tasks:
 - Right-click the template that contains the text string for which you want to search, and select **Open**.
 - Select the template that contains the text string for which you want to search, and select **File, Open**.The template is displayed in the **Template Designer**.
- 3 You can perform any of these tasks:
 - To search for the first or subsequent occurrences of a text string, select **Edit, Find** or **Edit, Find Next**, respectively, and perform these tasks:
 - a. In **Find What**, enter the text string for which you want to search.
 - b. Select **Match case** if you want the case of the text you are searching for to match the case of the text you enter in the dialog.
 - c. Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.

- d. Select **Include Basic Properties**, if you want to include the template name, description, comments, and caption in the search.
- e. Click **Find**.
- To replace all occurrences of a text string, select **Edit, Replace All**, and perform these tasks:

Note: Replace All does not replace text strings in embedded business rules or templates. For a template reference, Replace All replaces text strings in the template design time prompts (with the exception of the design time prompt names) and not the template flow.

- a. In **Find what**, enter the text string for which you want to search.
- b. In **Replace with**, enter the text string with which to replace all occurrences of the text string in **Find What**.
- c. Select **Match case** if you want the case of the text you are searching for to match the case of the text you enter in the dialog.
- d. Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.
- e. Select **Include Basic Properties**, if you want to include the template name, description, comments, and caption in the search.
- f. Click **Replace All** to replace all instances of the text string.

Note: The Find, Find Next, and replace All features function only within the flow chart of the custom defined template. These features do not enable you to search for and replace text in the template's design time prompts or steps. To replace text in design time prompts, see [“Searching for and Replacing Text in Design Time Prompts” on page 146](#).

4 Select **File, Save**.

Searching for and Replacing Text in Design Time Prompts

You can search for, and replace, text strings in the design time prompts of custom-defined templates.

Caution! The order and location in which you replace design time prompts is very import. If you want to find and replace a design time prompt name in both the design time prompt tab and the template flow tab, you must first search in the design time prompt tab, save the template, and then find and replace in the template flow tab. If you do not perform the search in this order, the design time prompt name is not replaced in the template flow tab.

- To search for and replace text within a design time prompt:
- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type, plan type, or database, and **Templates**.
 - 2 Do one of these tasks:
 - Right-click the template with the design times prompts that contain the text string for which you want to search, and select **Open**.
 - Select the template with the design times prompts that contain the text string for which you want to search, and select **File, Open**.

The template is displayed in the Template Designer.

- 3 Select **Design Time Promptt** to see a list of the design time prompts in the template.
- 4 Click the **Find** icon.
 - a. In **Find what**, enter the text string for which you want to search.
 - b. Select **Match case** if you want the case of the text you are searching for to match the case of the text you enter in the dialog.
 - c. Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.
 - d. In **Wrap search** if you want the search to start from the row you select in the grid and finish at the same row, so that all rows are searched. If no row is selected, the search starts from the first row.
 - e. Click **Find**.
- 5 Click the **Replace** icon.
 - a. In **Find what**, enter the text string for which you want to search.
 - b. In **Replace with** enter the text string with which to replace all occurrences of the text string in **Find What**
 - c. Select **Match case** if you want the case of the text you are searching for to match the case of the text you enter in the dialog.
 - d. Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.
 - e. In **Wrap search** if you want the search to start from the row you select in the grid and finish at the same row, so that all rows are searched.
 - f. Click **Find** to find each occurrence of the text string.
 - g. Click **Replace** to replace one instance of the text string at a time.
 - h. Click **Replace All** to replace all instances of the text string.

- 6 Save the custom-defined template.

Searching for a Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can use the Advanced Search feature of Oracle Hyperion Enterprise Performance Management Workspace to search for a template (or any objects) in Calculation Manager. See the *Oracle Enterprise Performance Management Workspace Users Guide*.

4

Using Components to Design Business Rules and Templates (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

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About Components

Business rules and custom defined templates can be composed of components, including formulas, scripts, conditions, member blocks, member ranges, data ranges (Financial Management users only), and loops. In addition, you can use metadata loop components and DTP assignment components to compose custom defined templates. Following is a description of these components.

- Formula components contain calculation statements that users can write or design using members and functions, and optionally, conditional statements.
- Script components contain only Visual Basic (for Financial Management) or Essbase (for Planning, Operational Planning, and Essbase) calc script statements.
- Condition components contain conditional statements (that is, If...Then statements) that are either true or false.
- Member block components contain one member that you specify (Planning, Operational Planning, and Essbase Block Storage Application Users Only).
- Member range components, or metadata loops, contain lists of metadata members (for example, lists of accounts).
- Data range components (Financial Management users only), or data loops, contain lists of data records (for example, lists of account values).
- Fixed loop components contain metadata loops that, for example, loop through a list of metadata members like accounts. Financial Management fixed loops can also contain data loops that, for example, loop through Financial Management data a fixed number of times.
- Metadata loop components (custom defined templates users only) contain a parameter or parameters that you can apply to the children of a parent dimension.
- DTP assignment components (custom-defined templates users only) contain design time prompts and conditions you define for them.

You can create formula and script components independently of the rules and templates in which they are used. Because they are independent objects, you can open, save, edit, delete, and export them (among other actions) from within the System View. Unlike formulas and scripts, you must create the other component types from within rules and templates. You cannot open, save, delete, or export them independently of the rules and templates to which they belong.

Working with Formula Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

See these topics:

- [“About Formula Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 151](#)

- “Creating a Formula Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 151
- “Designing a Formula Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 152
- “Using the Condition Builder to Create Conditional Statements (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 156
- “Entering Logging Information for Formula Statements (Financial Management Users Only)” on page 158
- “Entering Comments for Formula Statements (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 159
- “Using Quick Edit to Enter a Caption for a Component (Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 160
- “Opening a Formula Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 160
- “Editing a Formula Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 161
- “Deleting a Formula Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 162
- “Copying and Pasting a Formula Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 162

About Formula Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

A formula component is comprised of formula calculation statements. To create the calculation statements of a formula, you enter or select members, functions, and conditions. As you create the formula, each of its calculation statements is listed in a row within a grid in the Component Designer.

Creating a Formula Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can create a formula component from the System View. Formula components can be used in business rules and templates.

► To create a formula component:

- 1 Enter the formula's name.

- 2 Enter the **Application Type**.
- 3 Select an **Application**. The application must be a valid Performance Management Architect application, an application created with Financial Management or Planning, application administration, an Essbase block storage application, or an Operational Planning application.
- 4 Do one of these tasks:
 - a. If you selected Financial Management, select the **Calculation Type**.
 - b. If you selected Planning, select the **Plan Type**.
 - c. If you selected Essbase or Operational Planning, select the **Database**.

Note: From the System View, if you right-click Formulas and select New to create a new formula, the New Formula dialog is populated with the application type name, the application name, and the calculation type, the plan type, or the database name in which you are working.

- 5 Click **OK**.

The formula is displayed in the Component Designer. To design the formula component, see [“Designing a Formula Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 152.

Designing a Formula Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can create a formula component from the System View. You can also create a formula component from within the Rule or Template Designer as you are designing a business rule or template. Formula components can be used in business rules and templates.

► To create a formula component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Formulas**.
- 2 Do one of these tasks:
 - Select **File, New, Formula Component**.
 - Right-click **Formulas**, and select **New**.

Note: You can also create a formula component from within a business rule or template by dragging a new formula component into the business rule or template flow chart.

- 3 Enter a name, application type, and application to which the formula component belongs. Then do one of the following:

- **Financial Management users only:** If you are creating a Financial Management formula component, enter the calculation type.
- **Planning users only:** If you are creating a Planning formula component, enter the plan type.
- **Essbase and Operational Planning users only:** If you are creating an Essbase or an Operational Planning formula component, enter the database.

4 Click **OK**.

5 On **Properties**, complete these steps:

- a. **Users creating a formula component for a business rule only:** When you create a formula component, **Shared** is not selectable. When you drag the formula component and drop it into the flow chart of a rule or template, **Shared** is selected by default. To create a copy of the formula component within the rule or template instead, clear **Shared**.
- b. **Optional:** Edit the formula's name by entering a new one of up to 50 characters. (The name defaults from the New Formula dialog.)
- c. **Optional:** Enter a description of up to 255 characters for the formula.
- d. Enter a caption for the formula. The caption is displayed below the formula in the **Rule Designer** and **Template Designer** flow charts.

Note: If you do not enter a caption, the component's name is displayed in the flow chart.

- e. Enter comments for the formula. For example, you may want to tell users what the formula should be used for.

6 **Financial Management users only:** Select **Enable Logging** so, if the formula has log text, it is included in the log file when the rule is launched. You can enable logging for rules, rulesets, and components. However, you specify what log text to include, if any, in the business rule's formula statements.

Note: If logging is not enabled for a ruleset, but is enabled for a rule and component that belong to the ruleset, no log file is created because the log setting for the ruleset overrides the settings for the rule and component.

7 **Financial Management users:** Select **Enable Timer** so the time taken to process the formula is recorded in the log file when the rule is launched. You can enable the timer for rules, rulesets, and components. The process time is included in the log file for every object whose timer is enabled. For example, if you have a rule whose timer is enabled and the rule contains three formulas whose timers are enabled, the time taken to process the rule, and each formula in the rule, is recorded.

8 **Financial Management users creating a formula component for a business rule only:** Select **Disabled** to temporarily disable the formula component within any business rules using it while the script is generated.

9 **Optional:** On **Formula**, you can perform any of these tasks:

- Click **Add Grid**, and select **Insert Grid Before**, **Insert Grid After**, or **Insert Grid At End** to add another grid. By default, the Formula tab displays one grid.
- Click **Delete Grid** to delete a selected grid.

- Click the **Find** icon to find text in the formula grid in which you are working. Perform these tasks:
 - a. In **Find what**, enter the text to search for in the formula grid.
 - b. Select **Match case** if you want the text to match the case of the text in **Find what**.
 - c. Select **Match whole word** if you want the text to match the whole word you enter in **Find what**.
 - d. Select **Wrap search** if you want the search to start from the row you select in the grid and finish at the same row. For example, assume you select **Wrap search** in a grid with five rows, and you start the search at row three. If nothing is found in rows four and five, the search continues through rows one and two and stops at row three where it began. If you do not select **Wrap search** in the same scenario, only rows three, four, and five are searched.
 - e. Click **Find**.
- Click the **Find and Replace** icon to find and replace text within the script.
 - a. In **Find what**, enter the text you want to find in the script.
 - b. In **Replace with**, enter the text with which you want to replace it.
 - c. Select **Match case** if you want the text you are searching for to match the case of the text you enter in the dialog.
 - d. Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the dialog.
 - e. Select **Wrap search** if you want the search to start from the row you select in the grid and finish at the same row.
 - f. Click **Replace** to find and replace one instance of the text string at a time.
 - g. Click **Replace All** to find and replace all instances of the text string simultaneously.

10 On Formula, enter a caption for the formula.

11 Users creating a formula component for a template only: Select **Use Design Prompt** if you want to use a design time prompt in the formula component. Then in the condition grid, define a condition for the design time prompt by performing these tasks:

- a. In **DTP**, select a design time prompt.
- b. In **Operator**, select an operator: = or <>.
- c. In **Value**, enter or select a value for the design time prompt.
- d. Repeat these steps to create as many statements in the condition as you need.

Tip: Click the plus (+) and minus (-) icons to add and delete rows from the

12 Planning, Operational Planning, and Essbase users only: By default, processing of a formula component calculation starts with the first member you enter in the grid. If you want to start processing the formula component calculation with another member, enter the member or function name in **Member Block**, or click the **Ellipsis** icon to pick one from the Member Selector. See [“About Adding Members and Functions to a Component” on page 230](#).

- 13 In **Comment**, enter comments for the conditional and formula statements you want to create.
- 14 **Optional:** To create a conditional statement (that is, an IF statement) for the formula component, click **Add Condition**. See [“Using the Condition Builder to Create Conditional Statements \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 156](#).
- 15 **Optional:** In the IF row that is displayed, enter the text of the condition statement, or click the **Add/Edit** condition icon in the right column of the row to access the Condition Builder. The Condition Builder enables you to design a condition statement graphically.

Note: Though you can select IF, ELSE IF, and ELSE from the down arrow, by default, the first statement must be an IF statement.

- 16 **Optional:** Use the Condition Builder to design the IF conditional statement. See [“Using the Condition Builder to Create Conditional Statements \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 156](#).
- 17 In the **Formula** row, to create a formula statement, click in the row to the *left* of the equal sign. Select the **Actions** icon, and select:

Note: If you created a conditional statement (that is, an IF statement) in [step 14](#) through [step 16](#), the formula statement you create in this step is the THEN statement of the condition.

- Variable (See [“Working with Variables” on page 249](#).)
 - Member (See [“Working with Members” on page 230](#).)
 - Function (See [“Working with Functions” on page 269](#).)
 - Smart List (See [“Working with Smart Lists \(Planning Users Only\)” on page 272](#).)
- 18 In the **Formula** row, to complete the formula statement, click in the row to the *right* of the equal sign. Click the **Actions** icon, and select:
- Variable (See [“Working with Variables” on page 249](#).)
 - Member (See [“Working with Members” on page 230](#).)
 - Function (See [“Working with Functions” on page 269](#).)
 - Smart List (See [“Working with Smart Lists \(Planning Users Only\)” on page 272](#).)
- 19 **Financial Management users only:** For each statement, click the **Logging Information** icon to enter an optional condition statement for the log; the log information is written to the log file only if the condition is met. After you save the logging information, the Comments icon is displayed with horizontal lines to indicate that there is log text. See [“Entering Logging Information for Formula Statements \(Financial Management Users Only\)” on page 158](#).

Note: You need to select Enable Logging to include the log text in the log file.

- 20 Click the **Comments** icon to enter comments about the calculation statement row. Click **OK**.

21 Optional: If you want to create another IF statement, or an ELSE IF or ELSE statement, complete these steps:

- a. Click **Add Condition**.
- b. Click the **down arrow**, and select one of these options:
 - **IF:** select this to create an IF conditional statement. If the IF statement is TRUE, then actions are performed; if the IF statement is FALSE, then other actions are performed.
 - **ELSE IF:** select this to create an ELSE IF conditional statement. The actions in this statement are performed if there is an associated IF statement and the IF statement is FALSE.
 - **ELSE:** select this to create an ELSE conditional statement. The actions in this statement are performed if there is an associated ELSE IF statement and the ELSE IF statement is FALSE.

Note: If you remove the condition statement from an IF or ELSE IF block, and if the next block contains an ELSE IF statement, then the next block is changed to an IF block. However, if the next block contains an ELSE statement, then the condition statement in this block is removed.

- c. Repeat [step 14 on page 155](#) through [step 20 on page 155](#) to design additional statements for the formula component. A formula grid can consist of one or more formula blocks that contain a collection of formula statements. You can also enter a comment and a condition for the block, though this is optional.

Tip: If necessary, click the **+** icon to add more formula rows.

22 Users creating a formula component for a business rule only: On **Usages**, you can view the rules that use the formula component.

Note: None of the information on this tab can be edited.

23 Select **File, Save**.

Using the Condition Builder to Create Conditional Statements (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

The Condition Builder enables you to create conditional statements for formula and condition components. Conditional statements are also known as If...Then statements. If the first part (the If part) of a conditional statement is true, then the second part of the statement (the Then part) is also true. If the first part of a conditional statement is false, then the second part may or may not be true.

➤ To create a conditional statement:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Formulas**. Do one of these tasks:
 - Right-click the formula for which you want to create a conditional statement, and select **Open**.
 - Select the formula for which you want to create a conditional statement, and select **File, Open**.
- 2 In the **Component Designer**, click the **Add Condition** icon.
- 3 In the IF row that is displayed, enter the text of the conditional statement, or click the **Add/Edit Condition** icon to the right of the row to access the Condition Builder. The Condition Builder enables you to design a condition statement graphically.

Note: Though you can select IF, ELSE IF, and ELSE from the down arrow, by default, the first statement must be an IF statement.

- 4 In the Condition Builder, select **Metadata Condition** or **Data Condition**.
- 5 Do one of these tasks:
 - Enter a value in **Function** (for a metadata condition) or **Formula** (for a data condition).
 - Click in the **Function** or **Formula** row to display the **Actions** icon. Click the **Actions** icon, and select an option to create a formula or function:
 - Variable (See [“Working with Variables” on page 249.](#))
 - Member (See [“Working with Members” on page 230.](#))
 - Function (See [“Working with Functions” on page 269.](#))
- 6 Enter one of these operators:
 - = (equal to)
 - < (greater than)
 - > (less than)
 - <> (greater than or less than)
 - >= (less than or equal to)
 - <= (greater than or equal to)
- 7 Do one of these tasks:
 - Enter a value in **Value**.
 - Click in the **Value** row to display the **Actions** icon. Click **Actions**, and select an option to create a value for the formula or function:
 - Variable (See [“Working with Variables” on page 249.](#))
 - Member (See [“Working with Members” on page 230.](#))
 - Function (See [“Working with Functions” on page 269.](#))

- 8 Enter any comments for the condition.
- 9 Click the + icon to add the condition to the Condition grid. (You can also use the + icon to create a copy of a selected row, and add it to the Condition grid.) Use the — icon to replace a selected row in the Condition grid with a metadata or data condition.

Tip: Use the up arrow and down arrow icons to reorder the condition statements in the grid.

- 10 Click **OK**.

The condition is inserted into the IF statement.

- 11 **Optional:** Repeat [step 2](#) through [step 10](#) for each condition statement you want to create.
- 12 **Optional:** For each additional condition statement, double-click in the first column to display a dropdown list from which you can select an operator to start each condition statement:
 - IF: You can start *only* the first condition statement with IF. (This is the default that displays only for the first condition statement you create.)
 - NOT IF: You can start *only* the first condition statement with NOT IF.
 - AND: You can start any condition statement (except the first) with AND when you want to create a compound of at least two condition statements.
 - OR: You can start any condition statement (except the first) with OR when you want to create a compound of at least two condition statements.
 - AND NOT: You can start any condition statement (except the first) with AND NOT when you want to include the condition statement that follows it with the formula component.
 - OR NOT: You can start any condition statement (except the first) with OR NOT when you want to exclude the condition statement that follows it from the formula component.

Tip: Use the Group and Ungroup icons to add and remove parentheses from condition statements. To group or ungroup multiple condition statements, use Ctrl + Click or Shift + Click to select the condition statements you want to group or ungroup.

- 13 Click **OK**.

The condition statements are inserted into the Condition row.

Entering Logging Information for Formula Statements (Financial Management Users Only)

You can enter logging information for Financial Management formula statements.

► To enter logging information:

- 1 In the System View, expand the Financial Management application type, the application, the calculation type, and **Formulas**. Right-click the formula for which you want to add logging information, and select **Open**.

- 2 In the **Component Designer**, for each statement, click the **Logging Information** icon to enter an optional condition statement for the log. The log information is written to the log file only if the condition is met. After you save the logging information, the Comments icon is displayed with horizontal lines to indicate that there is log text.

Note: Select Enable Logging to include the log text in the log file.

- 3 Select **Use Variable** if you want to use a variable. Then select a variable from **Variable**.
- 4 Select **Use standard display format** if you want the log text to display in a standard format.
- 5 In **Log Text**, enter the condition statement for the log, or click the **Add/Edit Condition** icon to use the Condition Builder to create a condition statement. See [“Using the Condition Builder to Create Conditional Statements \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 156.
- 6 In **Log Expression**, enter an expression.
- 7 Click **OK**.

Entering Comments for Formula Statements (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can enter comments for formula statements.

➤ To enter comments for formula statements:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning, or the database (for Essbase or Operational Planning), and **Formulas**.
- 2 Right-click the formula for which you want to add comments, and select **Open**.
- 3 Do one of these tasks:
 - If the formula for which you want to add comments is in a business rule, expand **Rules**, right-click the rule containing the formula component, and select **Open**.
 - If the formula for which you want to add comments is in a template, expand the **Templates** node, right-click the rule containing the formula component, and select **Open**.
 - If you want to open the formula by itself, expand the **Formulas** node, right-click the formula, and select **Open**.
- 4 Do one of these tasks:
 - If you are adding comments for a formula in a business rule, in the **Rule Designer** flow chart, select the formula component, the **Formula** tab, and the **Comments** icon.
 - If you are adding comments for a formula in a template, in the **Template Designer** flow chart, select the formula component, the **Formula** tab, and the **Comments** icon.

- If you are adding comments for a formula component by itself, in the **Component Designer**, for each formula statement, click the **Comments** icon.
- 5 In the Comments dialog, enter comments for the formula statement.
 - 6 Click **OK**.

Using Quick Edit to Enter a Caption for a Component (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

If you drag and drop a component into a business rule or template flow chart, you can use Quick Edit to enter a caption for the component rather than entering the caption on the Properties tab.

➤ To enter the caption for a component:

- 1 In the System View, expand the Planning or Essbase application type, the application, the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Rules** or **Templates**, depending on whether you want to enter a caption for a component in a business rule or a template.
- 2 Right-click the rule or template containing the component you want to add a caption to, and select **Open**.
- 3 From the Rule or Template designer, select **Tools, Quick Edit** to turn on Quick Edit, if it is not already selected.
- 4 From **New Objects**, drag a component icon and drop it into the flow chart.
- 5 In the field that is displayed below the component in the flow chart, enter the caption.
- 6 Select **File, Save**.

Opening a Formula Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can open a formula component from the System View or from within the Rule or Template Designer flow chart.

➤ To open a formula component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning).
- 2 Expand **Formulas**, then do one of these tasks:
 - Right-click the formula you want to open, and select **Open**.
 - Select the formula you want to open, and select **File, Open**.
 - Double-click the formula you want to open.

Note: If the formula component is used in a business rule, you can also open it from within the rule's flow chart in the Rule Designer by right-clicking the formula component and selecting Open, or by double-clicking it.

Editing a Formula Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can edit the statements that comprise a formula component, whether the results of calculating the formula component should be included in the log file (for Financial Management applications only), and the formula component's comments, caption, name, and description.

➤ To edit a formula component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Formulas**.
- 2 Select the formula component you want to edit.
- 3 Do one of these tasks:
 - Select **File, Open**.
 - Right-click the formula, and select **Open**.
- 4 In the **Component Designer**, you can edit any of these properties of a formula component. See [“Designing a Formula Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 152](#) and [“Using the Condition Builder to Create Conditional Statements \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 156](#).
 - The caption
 - The condition statements
 - The formula statements
 - The name
 - The description
 - The comments
 - **Financial Management users only:** the log and timer options
 - **Templates users only:** the design time prompts you use to create conditions in the formula component
- 5 Select **File, Save**.

Deleting a Formula Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can delete a formula component only if it is not being used in any rules or templates. To see if any rules or templates are using the formula component, you can show its usages. (See [“Showing the Usages of Formula and Script Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 206.) If a formula component is used in a rule or template, and you no longer need to use it in that rule or template, you can remove it from the rule or template, and then delete the formula component. You can also delete the rule or template, which deletes the formula component within it.

► To delete a formula component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Formulas**.
- 2 Right-click the formula you want to delete and select **Show Usages** to make sure no rules or templates are using the formula component. If any are, you must remove the formula component from them. See [“Removing a Component from a Flow Chart”](#) on page 207.
- 3 Right-click the formula you want to delete, and select **Delete**.
- 4 Confirm deletion of the formula.

Copying and Pasting a Formula Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can copy a formula component from a rule or template and paste it into the same, or a different, rule or template. You can also copy the contents of the grid within a formula component and paste it into the same, or a different, formula component. You cannot copy a formula component and paste it into another formula component or another component type.

► To copy and paste a formula component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Rules or Templates**.
- 2 Right-click the rule or template that contains the formula component you want to copy, and select **Open**.
- 3 In the **Rule Designer** or **Template Designer** flow chart, right-click the formula component you want to copy, and select **Copy**.

Note: If the component you want to copy is shared, you can use Edit, Copy Reference to copy the reference to the shared component instead of copying the component itself. (See [“Copying and Pasting the Reference to a Business Rule Formula or Script Component”](#) on page 66.)

If the component you want to copy contains other components (that is, children), you can copy all of the components in the group by selecting Copy Group. (See [“Copying and Pasting a Component Group in a Flow Chart”](#) on page 209.)

4 Do one of these tasks:

- If you want to paste the formula component into the *same* business rule or template flow chart, right-click in the location of the flow chart into which you want to paste the formula component, and select **Paste**.)
- If you want to paste the formula component into a *different* business rule or template flow chart, open the business rule or template into which you want to paste the component, right-click in the location of the flow chart into which you want to paste the formula component, and select **Paste**.

Note: If you want to undo the changes you made, select Edit and then Undo Paste.

5 Select File, Save.

Working with Script Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

See these topics:

- [“Creating a Script Component”](#) on page 163
- [“Designing a Script Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 164
- [“Opening a Script Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 167
- [“Editing a Script Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 167
- [“Copying and Pasting a Script Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 169
- [“Deleting a Script Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 168

Creating a Script Component

You can create a script component from the System View. Script components can be used in business rules and templates.

► To create a script component:

- 1 Enter the script's name.
- 2 Enter the **Application Type** (Financial Management, Planning, or Essbase).
- 3 Select an **Application Name**. The application name must be a valid Performance Management Architect application, an application created with Financial Management or Planning application administration, an Essbase block storage application, or an Operational Planning application.
- 4 Do one of these tasks:
 - a. If you selected Financial Management, select the **Calculation Type**.
 - b. If you selected Planning, select the **Plan Type**.
 - c. If you selected Essbase or Operational Planning, select the **Database**.

Note: From the System View, if you right-click Scripts, and select New, the New Script dialog is populated with the application type, the application, and the calculation type (for Financial Management scripts), the plan type (for Planning scripts), or the database (for Essbase or Operational Planning scripts) with which you are working.

- 5 Click **OK**.

The script is displayed in the Component Designer. To design the script, see [“Designing a Script Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 164.

Designing a Script Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

Script components can be used in business rules and templates. You create a script component from the System View. You can also create a script component from within the Rule or Template Designer while you are designing a business rule or template.

► To design a script component:

- 1 Do one of these tasks:
 - Select **File, New, Script Component**.
 - Expand the Financial Management, Planning, or Essbase application type, the application, and the calculation type, plan type, or database.
- 2 Right-click **Scripts**, and select **New**.

Note: You can also create a script component from within a business rule or template.

- 3 Enter a name, application type, and application for the script. Then do one of the following tasks:
 - **Financial Management users only:** If you are creating a Financial Management script, enter the calculation type.

- **Planning users only:** If you are creating a Planning script, enter the plan type.
- **Essbase and Operational Planning users only:** If you are creating an Essbase or an Operational Planning script, enter the database.

4 Click **OK**.

5 In the **Component Designer**, use the icons to design the script component. Financial Management scripts must be in Visual Basic; Planning, Operational Planning, and Essbase scripts must be in Essbase.

Note: Unlike rules, templates, and other components, when you open a script, you cannot view it in a graphical format (as a flow chart). You can view it only in script format.

You can do any of these tasks with the script:

- Click the **Insert a function and its parameters** icon to insert a function into the script. See [“Working with Functions” on page 269](#).
- Click the **Insert members selected from a dimension** icon to insert a member into the script. See [“Working with Members” on page 230](#).
- Click the **Insert a variable** icon to insert a variable into the script. See [“Working with Variables” on page 249](#).

Note: Visual Basic scripts must be self-contained. You cannot reference replacement or execution variables defined for a ruleset in the script. If you need to use a variable in a script, you must declare it within the script component.

- **Planning users only:** Click **Insert smartlists** to insert a Smart List into the script. See [“Working with Smart Lists \(Planning Users Only\)” on page 272](#).
- Click the **Find** icon to *find* a text string in the script. See [“Searching for and Replacing a Text String in a Business Rule Script \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 62](#).
- Click the **Find and Replace** icon to *find and replace* a text string in the script. See [“Searching for and Replacing a Text String in a Business Rule Script \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 62](#).
- Click the **Hide Line Number** icon to hide (or display) the script line numbers. Line numbers are displayed by default.
- Click the **Comment** and **Uncomment** icons to add and remove comment lines from the script.
- Click the **Set Code Completion Off** icon to suppress suggestions for completing the code. (This icon functions as a toggle. To turn code completion back on, click the icon again. By default, code completion is set to On.)
- Click the **Format Code** icon to format the lines of the script.
- Click the **Verify Syntax** icon to check the syntax of the script for errors.

Note: If there is a syntax error, the code containing the error changes to red text, there are no error messages displayed. If there is not a syntax error, the message, “No syntax error(s) found,” is displayed.

- Select the lines of the script you want to copy, and click the **Copy to Clipboard** icon.
- Select the lines of the script you want to cut, and click the **Cut to Clipboard** icon.
- Place the cursor in the location of the script where you want to paste, and click the **Paste from Clipboard** icon.

6 On Properties, complete these steps:

- a. When you create a script component, **Shared** is not selectable. When you drag the script component and drop it into the flow chart of a rule or template, **Shared** is selected by default. To create a copy of the script component within the rule or template instead, clear **Shared**.
- b. **Optional:** Edit the script's name by entering a new one of up to 50 characters. (The name defaults from the New Script dialog.)
- c. Enter a description of up to 255 characters for the script.
- d. Enter a caption for the script. The caption is displayed below the script in the **Rule Designer** and **Template Designer** flow charts.
- e. Enter comments for the script. For example, you may want to tell users what the script should be used for.

7 Financial Management users only: Select **Enable Timer** so the time taken to process the script is recorded in the log file when the rule is launched. You can enable the timer for rules, rulesets, and components. The process time is included in the log file for every object whose timer is enabled. For example, if you have a rule whose timer is enabled and the rule contains three scripts whose timers are enabled, the time taken to process the rule, and each script in the rule, is recorded.

8 Financial Management users only: Select **Embedded** to embed the contents of the script component inside any rules using it when generating the Visual Basic script.

9 Financial Management users only: In **Parameters**, enter script parameters.

10 Financial Management, Planning, Operational Planning, and Essbase block storage users only: On **Script**, enter a caption for the script component.

11 Users creating a script component for a template only: Select **Use Design Prompt** if you want to use a design time prompt in the script component. Then in the condition grid, define a condition for the design time prompt by performing these tasks:

- a. In **DTP**, select a design time prompt.
- b. In **Operator**, select an operator: = or <>.
- c. In **Value**, enter or select a value for the design time prompt.
- d. Repeat these steps to create as many statements in the condition as you need.

Tip: Click the plus (+) and minus (-) icons to add and delete rows from the

- 12 Users creating a script component for a business rule only:** On **Usages**, you can view the rules that use the script component.

Note: You cannot edit any of the information on this tab.

- 13** Select **File, Save**.

Opening a Script Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can open a script component from the System View. You can also open a script component from within a flow chart of the Rule or Template Designer as you are designing a business rule or template.

➤ To open a script component:

- 1** In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning).
- 2** Expand **Scripts**, then do one of these tasks:
 - Right-click the script you want to open, and select **Open**.
 - Select the script you want to open, and select **File, Open**.

Note: If the script component is used in a business rule, you can also open it from within the rule's flow chart in the Rule Designer by right-clicking the script component and selecting **Open**, or by double-clicking it.

Editing a Script Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can edit the functions, variables, and members you use to write the script component, whether the results of calculating any formula statements in the script component are included in the log file (for Financial Management applications only), and the script component's comments, caption, name, and description.

➤ To edit a script component:

- 1** In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Scripts**.
- 2** Select the script component you want to edit.

3 Do one of these tasks:

- Select **File, Open**.
- Right-click the script, and select **Open**.

4 In the **Component Designer, you can edit any of these properties of a script component. See “[Designing a Script Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)](#)” on page 164.**

Note: Unlike rules, templates, and other components, when you open a script, you cannot view it in a graphical format (as a flow chart). You can only view it in script format.

- The functions, members, and variables that you include in the script
- The name
- The description
- The caption
- The comments
- **Financial Management users only:** The timer options

5 Select **File, Save.**

Deleting a Script Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can delete a script component only if it is not being used in any rules or templates. To see if any rules or templates are using the script component, you can show its usages. (See “[Showing the Usages of Formula and Script Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)](#)” on page 206.) If a script component is used in a rule or template, and you no longer need to use it in that rule or template, you can remove it from the rule or template, and then delete the script component. You can also delete the rule or template, which deletes the script component within it.

► To delete a script component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Scripts**.**
- 2 Right-click the script, and select **Show Usages** to make sure no rules or templates are using the script component. If any are, you must remove the script component from them. See “[Removing a Component from a Flow Chart](#)” on page 207.**
- 3 Right-click the script you want to delete, and select **Delete**.**
- 4 Confirm deletion of the script component.**

Copying and Pasting a Script Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can copy a script component from a rule or template and paste it into the same, or a different, rule or template. You can also copy the script within a script component and paste it into the same, or a different, script component. You cannot copy a script component and paste it into another script component or another component type.

➤ To copy and paste a script component from the System View:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Rules or Templates**.
- 2 Select the rule or template that contains the script component you want to copy.
- 3 In the **Rule Designer** or **Template Designer** flow chart, right-click the script component, and select **Copy**.

Note: If the component you want to copy is shared, you can use Edit, Copy Reference to copy the reference to the shared component instead of copying the component itself. (See [“Copying and Pasting the Reference to a Business Rule Formula or Script Component”](#) on page 66.)

If the component you want to copy contains other components (that is, children), you can copy the components in the group by right-clicking the component and selecting Copy Group.

- 4 Do one of these tasks:
 - If you want to paste the script component into the *same* business rule or template, right-click the location in the flow chart where you want to paste it, and select **Paste**.
 - If you want to paste the script component into a *different* business rule or template, open the business rule or template into which you want to paste the script component, right-click the location in the flow chart where you want to paste it, and select **Paste**.

Note: If you want to undo the changes you made, select Edit and then Undo Paste.

- 5 Select **File, Save**.

Working with Condition Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

See these topics:

- “About Condition Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 170
- “Creating a Condition Component” on page 170
- “Opening a Condition Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 171
- “Editing a Condition Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 172
- “Deleting a Condition Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 173
- “Copying and Pasting a Condition Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 173

About Condition Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

A condition component is comprised of conditional statements (that is, IF...THEN statements) that are either true or false. If the condition is true, the system performs the actions you specify; if the condition is false, the system performs other actions you specify. The condition can be a metadata condition or a data condition. Condition components cannot be shared.

Creating a Condition Component

You create condition components from within business rules or templates. Unlike script and formula components, condition components cannot be created as independent objects. They are linked to the business rule or template for which they are created. They cannot be shared.

► To create a condition component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning). Then do one of these tasks, depending on whether you want to create the condition in a rule or template:
 - If you want to create it in a rule, expand **Rules**, right click the rule you want to open, and select **Open**.
 - If you want to create it in a template, expand **Templates**, right click the template you want to open, and select **Open**.
- 2 After you determine where in the flow chart you want to create the condition, from the **New Objects Palette**, drag the **Condition** component and drop it into that location in the flow chart.

The Condition object is displayed as a diamond with a question mark in the flow chart.

- 3 On **Condition**, enter a caption to identify the condition component. The caption is displayed above the component in the flow chart of any rule or template that uses the condition.

- 4 **Users creating a condition component for a template only:** Select **Use Design Prompt** if you want to use a design time prompt in the condition component. Then in the condition grid, define a condition for the design time prompt by performing these tasks:
 - a. In **DTP**, select a design time prompt.
 - b. In **Operator**, select an operator: = or <>.
 - c. In **Value**, enter or select a value for the design time prompt.
 - d. Repeat these steps to create as many statements in the condition as you need.

Tip: Click the plus (+) and minus (-) icons to add and delete rows from the

Note: If you use a design time prompt to define the condition, you cannot enter a condition in, or use the Condition Builder to build a condition for, the Condition box.

- 5 **Financial Management users only:** Select **Enable Timer** so the time taken to process the condition component is recorded in the log file when the business rule is launched. You can enable the timer for rules, rulesets, and components. The process time is included in the log file for every object whose timer is enabled. For example, if you have a rule whose timer is enabled and the rule contains three condition components whose timers are enabled, the time taken to process the rule, and each condition component in the rule, is recorded.
- 6 **Planning, Operational Planning, and Essbase users only:** If you want to create a member block, click the **Ellipsis** icon, and select a member or function. By default, processing of a condition component calculation starts with the first member you enter in the grid. If you want to start processing with another member, enter the member or function name in **Member Block**, or click the **Ellipsis** icon to pick one from the Member Selector. See [“About Adding Members and Functions to a Component” on page 230](#).
- 7 Do one of these tasks:
 - Enter the condition statements in the Condition field.
 - Click **Add/Edit Condition** to use the Condition Builder to create the condition statements. See [“Using the Condition Builder to Create Conditional Statements \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 156](#) and complete [step 4](#) through [step 13](#) on page 158.
- 8 Enter comments for the condition component.
- 9 Select **File, Save**.

Opening a Condition Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You open a condition component from within the flow chart of the business rule or template to which it belongs. Unlike formula and script components, you cannot open it from the System View.

➤ To open a condition component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning). Then do one of these tasks, depending on whether the condition is in a rule or template:
 - If the condition is in a rule, expand **Rules**, right click the rule you want to open, and select **Open**.
 - If the condition is in a template, expand **Templates**, right click the template you want to open, and select **Open**.
- 2 When the rule or template opens, select the condition component in the flow chart to see the condition properties.

Editing a Condition Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can edit what functions, variables, and members you use to create the condition component, whether the time taken to process the condition component is recorded in the log file (for Financial Management applications only), and the condition component's comments and caption.

➤ To edit a condition component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning). Then do one of these tasks, depending on whether the condition is in a rule or template:
 - If the condition is in a rule, expand **Rules**, right click the rule you want to open, and select **Open**.
 - If the condition is in a template, expand **Templates**, right click the template you want to open, and select **Open**.
- 2 In the **Rule Designer** or **Template Designer**, select the condition to edit its properties in **Condition**. You can edit any of these properties. (See [“Creating a Condition Component” on page 170.](#))
 - The caption
 - The condition statements
 - The design time prompts (if the condition is a component of a template)
 - The comments
 - **Financial Management users only:** The log and timer options
- 3 Select **File, Save**.

Deleting a Condition Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You delete a condition component by removing it from the business rule or template to which it belongs. Since a condition component can be used in only one business rule or template, you delete it simply by removing it from the business rule or template.

➤ To delete a condition component:

- 1 In the **System View**, expand the **Financial Management**, **Planning**, or **Essbase** application type, the application, and the calculation type (for **Financial Management**), the plan type (for **Planning**), or the database (for **Essbase** or **Operational Planning**). Then do one of these tasks, depending on whether the condition is a component of a rule or template:
 - If the condition is in a rule, expand **Rules**, right-click the rule you want to open, and select **Open**.
 - If the condition is in a template, expand **Templates**, right-click the template you want to open, and select **Open**.
- 2 In the **Rule Designer** or **Template Designer**, select the condition component you want to delete in the flow chart.
- 3 Right-click the condition, and select **Remove**.
- 4 Confirm deletion of the component.
- 5 Select **File, Save**.

Copying and Pasting a Condition Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can copy a condition component from a rule or template and paste it into the same, or a different, rule or template. You cannot copy a condition component and paste it into another condition component or another component type.

➤ To copy and paste a condition component from the Rule Designer or Template Designer:

- 1 In the **System View**, expand the **Financial Management**, **Planning**, or **Essbase** application type, the application, and the calculation type (for **Financial Management**), the plan type (for **Planning**), or the database (for **Essbase** or **Operational Planning**). Then do one of these tasks, depending on whether the condition is a component of a rule or template:
 - If the condition is in a rule, expand **Rules**, right-click the rule you want to open, and select **Open**.
 - If the condition is in a template, expand **Templates**, right-click the template you want to open, and select **Open**.

- 2 In the **Rule Designer** or **Template Designer** flow chart, right-click the condition component you want to copy, and select **Copy**.

Note: You can also copy a component by selecting Edit, Copy.

- 3 Do one of these tasks:

- If you want to paste the condition component into the *same* business rule or template, right-click the location in the flow chart where you want to paste the condition component, and select **Paste**.
- If you want to paste the condition component into a *different* business rule or template, open the business rule or template into which you want to paste the component, right-click the location in the flow chart where you want to paste the condition component, and select **Paste**.

Note: If you want to undo the changes you made, select Edit and then Undo Paste.

- 4 Select **File, Save**.

Working with Member Block Components (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

See these topics:

- [“About Member Block Components \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 174](#)
- [“Creating a Member Block Component \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 175](#)
- [“Opening a Member Block Component \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 175](#)
- [“Editing a Member Block Component \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 176](#)
- [“Deleting a Member Block Component \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 176](#)
- [“Copying and Pasting a Member Block Component \(Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 177](#)

About Member Block Components (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

A member block component defines the member in a condition statement that should be calculated. Member blocks can be used in business rules and custom-defined templates.

Member block components do not exist as database objects that are independent of the business rule or template in which they are created; they exist only as part of the template or business rule to which they belong. Member blocks cannot be shared among rules and templates.

Creating a Member Block Component (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You create a member block component from within the Rule or Template designer as you are designing a rule or template. You cannot create a member block component from within the System View.

► To create a member block component:

1 In the System View, expand the Planning or Essbase application type, the application, and the plan type (for Planning), or the database (for Essbase or Operational Planning). Then do one of these, depending on whether you want to create a member block in a rule or a template:

- To create it in a rule, expand **Rules**, right-click the rule that you want to create it in, and select **Open**.
- To create it in a template, expand **Templates**, right-click the template that you want to create it in, and select **Open**.

2 After you determine where in the flow chart you want to create the member block, from **New Objects**, drag the **Member Block** object, and drop it into the flow chart.

Like a member range, the Member Block object is displayed as two circles with a connecting line in the flow chart.

3 **Optional:** If you are creating a member block component for a template, you can also create design time prompts for it. See [“Creating Design Time Prompts for a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 131.

4 In **Member Block** click the **Actions** icon, and do one of the following:

- Select **Variable** to search for or create a variable, and then click **OK**. See [“Working with Variables”](#) on page 249.
- Select **Member** to search for a member, and then click **OK**. See [“About Adding Members and Functions to a Component”](#) on page 230.

5 Select **File, Save**.

Opening a Member Block Component (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You open a member block component from within the flow chart of the business rule or template in which it is used. You cannot open it from the System View.

➤ To open a member block component:

- 1 In the System View, expand the Planning or Essbase application type, the application, and the plan type (for Planning), or the database (for Essbase or Operational Planning). Then do one of these, depending on whether the member block is in a rule or a template:
 - If the member block is in a rule, expand **Rules**, right-click the rule that you want to open, and select **Open**.
 - If the member block is in a template, expand **Templates**, right-click the template that you want to open, and select **Open**.
- 2 When the rule or template opens, select the member block component in the flow chart to see the member block properties.

Editing a Member Block Component (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can change the member in the member block, whether the time taken to process the member block component is recorded in the log file (for Financial Management applications users only), and the member block component's design time prompts (for custom-defined template users only).

➤ To edit a member block component:

- 1 In the System View, expand the Planning or Essbase application type, the application, and the plan type (for Planning), or the database (for Essbase or Operational Planning). Then do one of these, depending on whether the member block is in a rule or a template:
 - If the member block is in a rule, expand **Rules**, right-click the rule that you want to open, and select **Open**.
 - If the member block is in a template, expand **Templates**, right-click the template that you want to open, and select **Open**.
- 2 In the **Rule Designer** or **Template Designer**, select the member block in the flow chart to edit its properties on **Member Block**.

You can change the member that you selected for the member block.

- 3 Select **File, Save**.

Deleting a Member Block Component (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You delete a member block component by removing it from the business rule or template to which it belongs. You can use a member block component in only one business rule or template; it cannot be shared among other business rules or templates.

- To delete a member block component:
- 1 In the System View, expand the Planning or Essbase application type, the application, and the plan type (for Planning), or the database (for Essbase or Operational Planning). Then do one of these, depending on whether the member block is in a rule or a template:
 - If the member block is in a rule, expand **Rules**, right-click the rule that you want to open, and select **Open**.
 - If the member block is in a template, expand **Templates**, right-click the template that you want to open, and select **Open**.
 - 2 In the **Rule Designer** or **Template Designer**, select the member block component that you want to delete in the flow chart.
 - 3 Right-click the member block, and select **Remove**.
 - 4 Confirm deletion of the component.

Copying and Pasting a Member Block Component (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can copy a member block component from a rule or template and paste it into the same, or a different, rule or template. You cannot copy a member block component and paste it into another member block component or another component type.

- To copy a member block component from the Rule Designer or Template Designer:
- 1 In the System View, expand the Planning or Essbase application type, the application, and the plan type (for Planning), or the database (for Essbase or Operational Planning). Then do one of these, depending on whether the member block is in a rule or a template:
 - If the member block is in a rule, expand **Rules**, right-click the rule that you want to open, and select **Open**.
 - If the member block is in a template, expand **Templates**, right-click the template that you want to open, and select **Open**.
 - 2 In the **Rule Designer** or **Template Designer**, select the member block component that you want to copy in the flow chart.
 - 3 Select **Edit, Copy**.
 - 4 Do one of these tasks:
 - To paste the member block component into the *same* business rule or template, right-click the location in the flow chart where you want to paste it, and select **Paste**.
 - To paste the member block component into a *different* business rule or template, open the business rule or template into which you want to paste the component, right-click the location in the flow chart where you want to paste it, and select **Paste**.

Note: If you want to undo the changes you made, select Edit and then Undo Paste.

Working with Member Range Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

See these topics:

- [“About Member Range Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 178](#)
- [“Creating a Member Range Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 178](#)
- [“Opening a Member Range Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 180](#)
- [“Editing a Member Range Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 181](#)
- [“Deleting a Member Range Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 181](#)
- [“Copying and Pasting a Member Range Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 182](#)

About Member Range Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

A member range component is a type of loop comprised of a range of members from Financial Management, Planning, Operational Planning, or Essbase dimensions. Member range components cannot be shared, so you need to create a new member range component each time you add one to a business rule or template.

Creating a Member Range Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You create a member range component from within the Rule or Template designer as you are designing a rule or template. Unlike script and formula components that exist independently of the business rules and templates they are used in, you cannot create a member range component from the System View. Member range components are linked to the business rules and templates to which they belong; they cannot be shared.

➤ To create a member range component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning). Then do one of these, depending on whether you want to create a member range in a rule or a template:
 - If you want to create it in a rule, expand **Rules**, right-click the rule you want to create it in, and select **Open**.
 - If you want to create it in a template, expand **Templates**, right-click the template you want to create it in, and select **Open**.
- 2 After you determine where in the flow chart you want to create the member range, from **New Objects**, drag the Member Range object, and drop it into the flow chart.

The Member Range object is displayed as two circles with a connecting line in the flow chart.

- 3 **Optional:** If you are creating a member range component for a template, create design time prompts for it. See [“Creating Design Time Prompts for a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 131.
- 4 **Optional:** Enter a caption to identify the member range component. The caption is displayed below the component in the flow chart of the rule or template to which it belongs.
- 5 **Financial Management users only:** Select **Enable Timer** to record the time it takes to process the member range component in the log file when the business rule is launched. You can enable the timer for rules, rulesets, and components. The process time is included in the log file for every object whose timer is enabled. For example, if you have a rule whose timer is enabled and the rule contains three member range components whose timers are enabled, the time taken to process the rule, and each member range component in the rule, is recorded.
- 6 If you are creating a member range component for a business rule, perform one of these actions:
 - Select **Variable Selector** if you want to use a variable, instead of members, to define the member range. Then enter or select a variable. See [“Working with Variables”](#) on page 249.

Note: If you select this option, you cannot define a member range for any dimensions.

if you select this option, select Link Variable Dynamically so whenever changes are made to the variable. the variable in the rule or template is updated with these changes.

- **Planning, Operational Planning, and Essbase users only:**
 - a. Enter members in the **Value** column for each dimension you want to define a member range for, or click in each row to display the **Actions** icon.

Tip: Rather than selecting members for each dimension, one row at a time, you can click the Member Selector icon to select members for all dimensions in the grid. When you click OK in the Member Selector, the members you selected are displayed for each dimension in the grid for which you selected members.
 - b. Click the **Actions** icon, and select one of these options to define the member range:

- Variable (See [“Working with Variables” on page 249.](#))
- Member (See [“Working with Members” on page 230.](#))
- Function (See [“Working with Functions” on page 269.](#))
- **Financial Management users only:**
 - a. Click in the first row under the **Dimension** column, and select a dimension.
 - b. Enter members in the **Value** column, or click in the row to display the **Actions** icon. Click the **Actions** icon, and select one of these options to define the member range:
 - Variable (See [“Working with Variables” on page 249.](#))
 - Member (See [“Working with Members” on page 230.](#))
 - Function (See [“Working with Functions” on page 269.](#))
 - c. Enter a launch variable in the **Variable** column, or click in the row to display the **Actions** icon. Click **Actions**, and select a launch variable. See [“Working with Variables” on page 249.](#)
 - d. Click the **Comments** icon to enter comments for the member range.
 - e. Repeat these steps for each dimension for which you want to define a member range.
- 7 Planning, Operational Planning, and Essbase users only:** Select **Exclude Grid Values** to exclude the members you select from calculation.
- 8** Click **Reset Grid** to clear any members, variables, and functions you entered in the grid.
- 9** Select **File, Save.**

Opening a Member Range Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You open a member range component from within the flow chart of the business rule or template in which it is used. Unlike formula and script components, you cannot open it from the System View.

► To open a member range component:

- 1** In the System View, expand the Financial Management, Planning, or Essbase application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning). Then do one of these tasks, depending on whether the member range is in a rule or template:
 - If the member range is in a rule, expand **Rules**, right-click the rule you want to open, and select **Open**.
 - If the member range is in a template, expand **Templates**, right-click the template you want to open, and select **Open**.
- 2** When the rule or template opens, select the member range component in the flow chart to see the member range properties.

Editing a Member Range Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can edit the dimensions and members, or the variables, you use to define the member range component, whether the time taken to process the member range component is recorded in the log file (for Financial Management applications only), and the member range component's comments and caption.

➤ To edit a member range component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning). Then do one of these, depending on whether the member range is in a rule or template:
 - If the member range is in a rule, expand **Rules**, right-click the rule you want to open, and select **Open**.
 - If the member range is in a template, expand **Templates**, right-click the template you want to open, and select **Open**.
- 2 In the **Rule Designer** or **Template Designer**, select the member range to edit its properties on **Member Range**. You can edit these properties of a member range. (See [“Creating a Member Range Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 178.)
 - The caption
 - The variables you select to define the member range
 - The dimensions you include in the member range
 - The members that define the member range for each dimension
 - **Financial Management users only:** Whether the time it takes to process the component is included in the log file
 - The comments for any dimensions for which you define a member range
- 3 Select **File, Save**.

Deleting a Member Range Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You delete a member range component by removing it from the business rule or template to which it belongs. A member range component can be used in only one business rule or template, so you delete it simply by removing it from the business rule or template.

- To delete a member range component:
- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning). Then do one of these tasks, depending on whether the member range is in a rule or template:
 - If the member range is in a rule, expand **Rules**, right-click the rule you want to open, and select **Open**.
 - If the member range is in a template, expand **Templates**, right-click the template you want to open, and select **Open**.
 - 2 In the **Rule Designer** or **Template Designer**, select the member range component you want to delete in the flow chart.
 - 3 Right-click the member range, and select **Remove**.
 - 4 Confirm deletion of the component.

Copying and Pasting a Member Range Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can copy a member range component from a rule or template and paste it into the same, or a different, rule or template. You cannot copy a member range component and paste it into another member range component or another component type.

- To copy a member range component from the Rule Designer or Template Designer:
- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning). Then do one of these tasks, depending on whether the member range is in a rule or template:
 - If the member range is in a rule, expand **Rules**, right-click the rule you want to open, and select **Open**.
 - If the member range is in a template, expand **Templates**, right-click the template you want to open, and select **Open**.
 - 2 In the **Rule Designer** or **Template Designer**, select the member range component you want to copy in the flow chart.
 - 3 Select **Edit, Copy**.
 - 4 Do one of these tasks:
 - If you want to paste the member range component into the *same* business rule or template, right-click the location in the flow chart where you want to paste it, and select **Paste**.
 - If you want to paste the member range component into a *different* business rule or template, open the business rule or template into which you want to paste the

component, right-click the location in the flow chart where you want to paste it, and select **Paste**.

Note: If you want to undo the changes you made, select Edit and then Undo Paste.

5 Select **File, Save**.

Working with Data Range Components (Financial Management Users Only)

See these topics:

- [“About Data Range Components \(Financial Management Users Only\)” on page 183](#)
- [“Creating a Data Range Component \(Financial Management Users Only\)” on page 183](#)
- [“Opening a Data Range Component \(Financial Management Users Only\)” on page 186](#)
- [“Editing a Data Range Component \(Financial Management Users Only\)” on page 186](#)
- [“Deleting a Data Range Component \(Financial Management Users Only\)” on page 187](#)
- [“Copying and Pasting a Data Range Component \(Financial Management Users Only\)” on page 187](#)

About Data Range Components (Financial Management Users Only)

A data range component is a type of loop comprised of a range of data values from Financial Management applications. Data range components cannot be shared, so you need to create a new one each time you want to add one to a business rule or template.

Creating a Data Range Component (Financial Management Users Only)

You create a data range component from within the Rule or Template designer as you are designing a Financial Management business rule or template. Unlike a script or formula component, a data range component exists only as a component of the business rule or template to which it belongs. A data range component cannot be shared.

Note: You can create a data range within a Financial Management business rule or template only.

➤ To create a data range component:

- 1 In the System View, expand the Financial Management application type, the application, and the calculation type. Then do one of these tasks, depending on whether you want to create a data range for a rule or a template:
 - If you want to create a data range in a rule, expand **Rules**, right-click the rule you want to open, and select **Open**.
 - If you want to create a data range in a template, expand **Templates**, right-click the template you want to open, and select **Open**.
- 2 After you determine where in the flow chart you want to create the data range, from **New Objects**, drag the Data Range object, and drop it into the flow chart.
- 3 **Optional:** If you are creating a data range component for a template, enter design time prompts for it. See [“Creating Design Time Prompts for a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 131.
- 4 **Optional:** Select Disabled if you want to exclude the data range component from the business rule or template calculation.
- 5 **Optional:** On the **Properties** tab, enter a caption to identify the data range component. The caption is displayed below the component in the flow chart of the rule or template to which it belongs.
- 6 **Optional:** Enter a description and comments for the data range component.
- 7 On the **Data Range** tab, do one of these tasks:
 - If you are creating the data range for a **business rule** and want to use a variable to define the data range (See [“Working with Variables”](#) on page 249):
 - a. Click **Variable Selector**, and enter or create a variable.

Note: If you select this option, you cannot define a data range for the dimensions in the grid.

- b. Select whether or not to link the variable dynamically to the data range component. If you link it dynamically, the variable is updated in the data range component whenever changes are made to it elsewhere in Calculation Manager.
- c. For **Value Variable**, select a replacement string variable that contains a POV. (If you use this button to select variables, it is the same as entering members in the Value column of the grid.)
- d. **Optional:** From **Sort Dimension**, select the dimension you want to use for sorting.
- e. **Optional** If you selected a dimension to use for sorting in the previous step, from **Sort Method**, select the method by which you want to sort the dimension:
 - **Ascending**, to sort the dimension members from A to Z. (This is the default setting.)
 - **Descending**, to sort the dimension members from Z to A.

- If you are creating the data range for a **template** and want to use a design time prompt to define the data range:
 - a. Click **Variable Selector**, and enter or create a variable.
 - b. Select whether or not to link the variable dynamically to the data range component. If you link it dynamically, the variable is updated in the data range component whenever changes are made to it elsewhere in Calculation Manager.
 - c. For **Value Variable**, select a replacement variable of the type Data Range. (Data range variables contain complete data range definitions.)
 - d. **Optional:** From **Sort Dimension**, select the dimension you want to use for sorting.
 - e. **Optional** If you selected a dimension to use for sorting in the previous step, from **Sort Method**, select the method by which you want to sort the dimension:
 - **Ascending**, to sort the dimension members from A to Z. (This is the default setting.)
 - **Descending**, to sort the dimension members from Z to A.
- If you are creating the data range for either a business rule or a template and want to use variables, members, and functions to define the data range:
 - a. For the first dimension for which you want to define a data range, enter members in the **Value** column, or click in the row to display the **Actions** icon.
 - b. Click the **Actions** icon, and select one of these options to define the data range:
 - Variable (See [“Working with Variables” on page 249.](#))
 - Member (See [“Working with Members” on page 230.](#))
 - Function (See [“Working with Functions” on page 269.](#))
 - c. Enter a launch variable in the **Variable** column, or click in the row to display the **Actions** icon. Click the **Actions** icon, and select **Variable** to select a launch variable. See [“Working with Variables” on page 249.](#)

Note: You cannot include a launch variable for the Scenario, Year, Period, Entity, or Value dimensions.

- d. Click the **Comments** icon to enter comments for the data range.
 - e. Repeat these steps for each dimension for which you want to define a data range.
- 8** Select **Enable Timer** if you want the time it takes to process the data range to be included in the log file when the business rule or template is calculated. The process time is included in the log file for every object whose timer is enabled. For example, if you have a rule whose timer is enabled and the rule contains three fixed loops whose timers are enabled, the time taken to process the rule, and each fixed loop in the ruleset, is recorded.
- 9** Click **Reset Grid** to display the grid with its default settings.
- 10** Select **File, Save**.

Opening a Data Range Component (Financial Management Users Only)

You open a data range component by opening it from the flow chart of the business rule or template in which it is used. Unlike formula and script components, you cannot open it from the System View.

➤ To open a data range component:

- 1 In the System View, expand the Financial Management application type, the application, and the calculation type. Then do one of these tasks, depending on whether the data range is in a rule or template:
 - If the data range is in a rule, expand **Rules**, right-click the rule you want to open, and select **Open**.
 - If the data range is in a template, expand **Templates**, right-click the template you want to open, and select **Open**.
- 2 When the rule or template opens, select the data range component in the flow chart to see the data range properties.

Editing a Data Range Component (Financial Management Users Only)

You can edit the dimensions and members, the variables, or the design time prompts you use to define the data range component, whether the time taken to process the data range component is recorded in the log file, and the data range component's comments and caption.

➤ To edit a data range component:

- 1 In the System View, expand the Financial Management application type, the application, and the calculation type. Then do one of these tasks, depending on whether you want to edit a data range for a rule or a template:
 - If you want to edit a data range in a rule, expand **Rules**, right-click the rule you want to open, and select **Open**.
 - If you want to edit a data range in a template, expand **Templates**, right-click the template you want to open, and select **Open**.
- 2 In the **Rule Designer** or **Template Designer**, select the data range in the flow chart to edit its properties on **Data Range**. You can edit any of these properties. (See [“Creating a Data Range Component \(Financial Management Users Only\)”](#) on page 183.)
 - The caption
 - The design prompt you select to define the data range (if you are creating the data range for a template)
 - The variables you select to define the data range (if you are creating the data range for a business rule)

- The dimensions you include in the data range
- The members that define the data range for each dimension
- Whether the time it takes to process the data range is included in the log file
- The comments for any dimensions for which you define a data range

3 Select **File, Save**.

Deleting a Data Range Component (Financial Management Users Only)

You delete a data range component by removing it from the business rule or template to which it belongs. A data range component can be used in only one business rule or template, so you delete it simply by removing it from the business rule or template.

► To delete a data range component:

- 1 In the **System View**, expand the **Financial Management** application type, the application, and the calculation type. Then do one of these tasks, depending on whether you want to delete a data range for a rule or a template:
 - If you want to delete a data range in a rule, expand **Rules**, right-click the rule you want to open, and select **Open**.
 - If you want to delete a data range in a template, expand **Templates**, right-click the template you want to open, and select **Open**.
- 2 In the **Rule Designer** or **Template Designer**, select the data range component in the flow chart.
- 3 Right-click the data range, and select **Remove**.
- 4 Confirm deletion of the component.
- 5 Select **File, Save**.

Copying and Pasting a Data Range Component (Financial Management Users Only)

You can copy a data range component from a rule or template and paste it into the same, or a different, rule or template. You cannot copy a data range component and paste it into another data range component or another component type.

► To copy and paste a data range component from the Rule Designer or Template Designer:

- 1 In the **System View**, expand the **Financial Management** application type, the application, and the calculation type. Then do one of these tasks, depending on whether you want to copy a data range in a rule or a template:
 - If you want to copy a data range in a rule, expand **Rules**, right-click the rule you want to open, and select **Open**.

- If you want to copy a data range in a template, expand **Templates**, right-click the template you want to open, and select **Open**.
- 2 In the **Rule Designer** or **Template Designer**, right-click the data range component you want to copy in the flow chart, and select **Copy**.
 - 3 Do one of these tasks:
 - If you want to paste the data range component into the *same* business rule or template, right-click the location in the flow chart where you want to paste it, and select **Paste**.
 - If you want to paste the data range component into a *different* business rule or template, open the business rule or template into which you want to paste the data-range component, right-click the location in the flow chart where you want to paste the data range component, and select **Paste**.
- Note:** If you want to undo the changes you made, select Edit and then Undo Paste.
- 4 Select **File, Save**.

Working with Fixed Loop Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

See these topics:

- [“About Fixed Loop Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 189](#)
- [“Creating a Fixed Loop Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 189](#)
- [“Opening a Fixed Loop Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 190](#)
- [“Editing a Fixed Loop Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 191](#)
- [“Deleting a Fixed Loop Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 191](#)
- [“Copying and Pasting a Fixed Loop Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 192](#)

About Fixed Loop Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

A fixed loop component is an object that cycles through a list of metadata members or (for Financial Management applications only) data records a fixed number of times. For example, you can create a fixed loop that loops through a list of accounts ten times.

Creating a Fixed Loop Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You create a fixed loop component in a business rule or template by dragging its icon and dropping it into the Rule Designer or Template Designer flow chart. A fixed loop component exists only within the business rule or template for which you create it. Fixed loop components cannot be shared across business rules or templates.

➤ To create a fixed loop component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Rules or Templates**, depending on whether you want to create the component for a business rule or template.
- 2 Open the rule or template into which you want to insert a fixed loop component.
- 3 After you determine where in the flow chart you want to create the fixed loop, from **New Objects**, drag the **Fixed Loop** object, and drop it into the flow chart.

The fixed loop is displayed as two circles connected by a dotted line.

- 4 **Optional:** If you are creating a fixed loop component for a template, enter design time prompts for it. See [“Creating Design Time Prompts for a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 131.
- 5 **Optional:** Enter a caption to identify the fixed loop component. The caption is displayed below the fixed loop component in the flow chart of the rule or template to which it belongs.
- 6 **Financial Management Users Only:** Select **Enable Timer** if you want the time it takes to process the fixed loop to be included in the log file when the business rule is launched. You can enable the timer for rules, rulesets, and components. The process time is included in the log file for every object whose timer is enabled. For example, if you have a rule whose timer is enabled and the rule contains three fixed loops whose timers are enabled, the time taken to process the rule, and each fixed loop in the ruleset, is recorded.
- 7 **Planning, Operational Planning, and Essbase users only:** Do these tasks:
 - a. In **Value**, enter the number of times you want the loop to cycle through the metadata or data.

- b. In **Break Variable**, enter a variable, or click in the **Break Variable** field to display the **Insert a variable** icon.
- c. Click **Insert a variable** to choose or create a numeric variable for exiting the fixed loop. The value of the break variable must be one. See [“Working with Variables” on page 249](#).

8 Financial Management Users Only: Do these tasks:

- a. In **Value**, enter the number of times you want the loop to cycle through the metadata or data, or click in the field to display the **Actions** icon.
- b. Click the **Actions** icon, and select **Variable** or **Function** to access dialogs from which you can select variables or functions. See [“Working with Variables” on page 249](#) and [“Working with Functions” on page 269](#).
- c. In **Variable**, enter a variable, or click in the field to display the **Insert a Variable** icon.
- d. Click the **Insert a Variable** icon to access a dialog from which you can select or create a new variable. See [“Working with Variables” on page 249](#).

9 Select File, Save.

Opening a Fixed Loop Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You open a fixed loop component from the flow chart of the business rule or template to which it belongs. Unlike formula and script components, you cannot open it from the System View.

► To open a fixed loop component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning). Then do one of these tasks, depending on whether the fixed loop is in a rule or template:
 - If the fixed loop is in a rule, expand **Rules**, right-click the rule you want to open, and select **Open**.
 - If the fixed loop is in a template, expand **Templates**, right-click the template you want to open, and select **Open**.
- 2 When the rule or template opens, select the fixed loop component in the flow chart to see the fixed loop properties.

Editing a Fixed Loop Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can edit the value you assign to a fixed loop component and the variable you select for it. If you are creating a fixed loop for a business rule, you can also edit the caption. If you are creating a fixed loop for a Financial Management business rule, you can edit whether the time taken to process the fixed loop is recorded in the log file. If you are creating a fixed loop for a Planning, Operational Planning, or Essbase business rule, you can edit the break variable. A break variable specifies when to exit the fixed loop.

► To edit a fixed loop component:

- 1 In the **System View**, expand the **Financial Management**, **Planning**, or **Essbase** application type, the application, the calculation type (for **Financial Management**), the plan type (for **Planning**), or the database (for **Essbase** or **Operational Planning**), and **Rules** or **Templates**, depending on whether the component is part of a business rule or template.
- 2 Open the rule or template that contains the fixed loop component you want to edit.
- 3 In the **Rule Designer** or **Template Designer**, select the fixed loop in the flow chart to edit its properties in **Fixed Loop**. You can edit any of these properties. See [“Creating a Fixed Loop Component \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 189](#).
 - For fixed loop components in *Financial Management*, *Planning*, *Operational Planning*, and *Essbase* business rules and templates: the value you give to the fixed loop and the variable you select for it
 - For fixed loop components in *Financial Management*, *Planning*, *Operational Planning*, and *Essbase* business rules: the caption
 - For fixed loop components in *Planning*, *Operational Planning*, and *Essbase* business rules: the break variable
 - For fixed loop components in *Financial Management* business rules: whether the time taken to process the fixed loop is recorded in the log file
- 4 Select **File**, **Save**.

Deleting a Fixed Loop Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You delete a fixed loop component by removing it from the business rule or template to which it belongs. A fixed loop component can be used in only one business rule or template, so you delete it simply by removing it from the business rule or template.

- To delete a fixed loop component:
 - 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Rules** or **Templates**, depending on whether the fixed loop component is in a business rule or template.
 - 2 Open the rule or template that contains the fixed loop component you want to delete.
 - 3 In the **Rule Designer** or **Template Designer**, select the fixed loop component you want to delete in the flow chart.
 - 4 Right-click the fixed loop component, and select **Remove**.
 - 5 Confirm deletion of the component.

Copying and Pasting a Fixed Loop Component (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can copy a fixed loop component from a rule or template and paste it into the same, or a different, rule or template. You cannot copy a fixed loop component and paste it into another fixed loop component or another component type.

- To copy and paste a fixed loop component from the Rule Designer or Template Designer:
 - 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Rules** or **Templates**, depending on whether the fixed loop component is in a business rule or template.
 - 2 Open the rule or template that contains the fixed loop component you want to copy.
 - 3 In the **Rule Designer** or **Template Designer**, right-click the fixed loop component you want to copy in the flow chart, and select **Copy**.
 - 4 Do one of these tasks:
 - If you want to paste the fixed loop component into the *same* business rule or template, right-click the location where you want to paste it in the flow chart, and select **Paste**.
 - If you want to paste the fixed loop component into a *different* business rule, open the business rule into which you want to paste the component, right-click the location in the flow chart where you want to paste the fixed loop component, and select **Paste**.

Note: If you want to undo the changes you made, select Edit and then Undo Paste.

- 5 Select **File, Save**.

Working with Metadata Loop Components (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

See these topics:

- “Creating Metadata Loop Components (Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 193
- “Opening Metadata Loop Components (Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 194
- “Editing Metadata Loop Components (Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 195
- “Deleting Metadata Loop Components (Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 196
- “Copying and Pasting Metadata Loop Components (Planning, Operational Planning, and Essbase Block Storage Application Users Only)” on page 196

About Metadata Loop Components (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

Metadata loop components enable you to assign a parameter repeatedly to the children of a parent dimension. For example, you may want to assign the property #missing to all of the accounts (the children) of a company (the parent dimension).

Creating Metadata Loop Components (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You create a metadata loop component by dragging its icon and dropping it into the flow chart of a custom defined template. A metadata loop component exists only within the template for which you create it. Metadata loop components cannot be shared across templates.

➤ To create a metadata loop component:

- 1 In the System View, expand the Planning or Essbase application type, the application, the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.

Note: You can only create a metadata loop for a custom defined template.

- 2 Right-click the template into which you want to insert a metadata loop component, and select **Open**.

Note: Metadata loop components exist only within the custom defined templates for which you create them.

- 3 After you determine where in the flow chart you want to create the metadata loop, from **New Objects**, drag the **Metadata Loop** object, and drop it into the flow chart.
- 4 **Optional:** To enter a design time prompt that prompts users to enter information when they are using the template that contains the metadata loop, use the table below the **Template Designer** flow chart.
- 5 On **Metadata Loop**, do any or all of these tasks.
 - **Optional:** Select **Disabled** to exclude the metadata loop component from the template for validation and calculation purposes. You may want to disable a component when a business rule does not validate and you need to find the source of the validation error. When you disable a component, it is displayed in gray in the flow chart.
 - **Optional:** Enter a caption for the metadata loop. The caption displays below the metadata loop component's icon in the flow chart.
 - **Optional:** Select **Index DTP** to select an existing step design time prompt that functions as an index for the metadata loop. The value of the design time prompt that you choose is reset to zero before the start of the metadata loop and increments by one for each loop.
- 6 For each dimension listed in the table, do these tasks:
 - For the **Member** column, use the Member Selector to select the parent members to which you want to apply the metadata loop. See [“Working with Members” on page 230](#).

Note: You cannot select multiple members from the same dimension.
 - For the **Function** column, select one of these functions to specify how the variable is applied to the members of the dimension:
 - **Idescendants:** the function is applied to the specified member and all descendants of the specified member.
 - **Descendants:** the function is applied to the descendants of the specified member.
 - **lchildren:** the function is applied to the specified member and its children.
 - **Children:** the function is applied to the children of the specified member.
 - For the **Variable** column, select a design time prompt of the member type that functions as the variable to be replaced for each member specified by the function.
- 7 Select **File, Save**.

Opening Metadata Loop Components (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You open a metadata loop component from the flow chart of the custom-defined template to which it belongs. Unlike formula and script components, you cannot open it from the System View.

- To open a metadata loop component:
 - 1 In the System View, expand the Planning or Essbase application type, the application, the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
 - 2 Right-click the custom-defined template that contains the metadata loop component you want to open, and select **Open**.
 - 3 When the template opens, select the metadata loop component in the flow chart to see its properties.

Editing Metadata Loop Components (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can edit a metadata loop component from within the custom-defined template to which it belongs. You can edit its caption, the dimensions and children to which the loop variable is applied, and the variable used in the loop.

- To edit a metadata loop component:
 - 1 In the System View, expand the Planning or Essbase application type, the application, the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
 - 2 Open the custom-defined template that contains the metadata loop component.
 - 3 **Optional:** To enter a design time prompt that prompts users to enter information when they are using the template that contains the metadata loop, use the table below the **Template Designer** flow chart.
 - 4 On **Metadata Loop**, do any or all of these tasks.
 - **Optional:** Select or clear **Disabled** to exclude or include the metadata loop component from the template for validation and calculation purposes. You may want to disable a component when a business rule does not validate and you need to find the source of the validation error. When you disable a component, it is displayed in gray in the flow chart. (The component is included by default.)
 - **Optional:** Edit the caption for the metadata loop. The caption displays below the metadata loop component's icon in the flow chart.
 - **Optional:** Select Index DTP to select an existing design time prompt.
 - 5 For each dimension listed in the table, do these tasks:
 - For the **Member** column, use the Member Selector to select the members to which you want to apply the metadata loop. See [“Working with Members” on page 230](#).
 - For the **Function** column, select one of these functions to specify how the variable is applied to the children of the dimension:
 - **Idescendants:** the variable is applied to each member and its descendants or to those descendants down to a specified level.
 - **Descendants:** the variable is applied to the descendants of each member or to the descendants down to a specified level.
 - **Ichildren:** the variable is applied to each member and its children.

- **Children:** the variable is applied to the children of each member.
- For the **Variable** column, select a design time prompt of the member type that functions as the variable to be replaced each time it is applied to the members of the dimension.

6 Select **File, Save**.

Deleting Metadata Loop Components (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can delete a metadata loop component from within the custom-defined template to which it belongs.

➤ To delete a metadata loop component:

- 1 In the System View, expand the Planning or Essbase application type, the application, the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
- 2 Right-click the template that contains the metadata loop component you want to delete, and select **Open**.
- 3 In the **Template Designer**, select the metadata loop component you want to delete in the flow chart.
- 4 Right-click the metadata loop component, and select **Remove**.
- 5 Confirm deletion of the component.

Copying and Pasting Metadata Loop Components (Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can copy a metadata loop component from a custom-defined template and paste it into the same, or a different, custom-defined template. You cannot copy a metadata loop component and paste it into another metadata loop component or into another component type.

➤ To copy and paste a metadata loop component from within the Template Designer:

- 1 In the System View, expand the Planning or Essbase application type, the application, the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
- 2 Right-click the template that contains the metadata loop component you want to copy, and select **Open**.
- 3 In the **Template Designer**, right-click the metadata loop component you want to copy in the flow chart, and select **Copy**.
- 4 Do one of these tasks:
 - If you want to paste the metadata loop component into the *same* template, right-click the location where you want to paste it in the flow chart, and select **Paste**.

- If you want to paste the metadata loop component into a *different* template, open the template into which you want to paste the metadata loop component, right-click the location in the flow chart where you want to paste the metadata loop component, and select **Paste**.

Note: If you want to undo the changes you made, select Edit and then Undo Paste.

5 Select **File, Save**.

Working with DTP Assignment Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

See these topics:

- [“About DTP Assignment Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 197](#)
- [“Creating DTP Assignment Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 198](#)
- [“Opening DTP Assignment Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 199](#)
- [“Editing DTP Assignment Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 199](#)
- [“Deleting DTP Assignment Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 200](#)
- [“Copying and Pasting DTP Assignment Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 201](#)

About DTP Assignment Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can assign a value to a design time prompt in a custom-defined template using a DTP assignment component. By placing this component inside a condition component in the template flow chart, you can assign a value to a design time prompt based on conditions that you define. Using the DTP assignment component reduces the complexity of the template's flow chart and makes the logic of the template easier to develop and maintain.

Note: You can use the DTP assignment component only in a custom-defined template; you cannot use it in a system template or business rule.

Creating DTP Assignment Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You create a DTP assignment component in a template by dragging its icon and dropping it into the Template Designer flow chart. A DTP assignment component exists only within the template for which you create it. DTP assignment components cannot be shared across templates.

► To create a DTP Assignment component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
- 2 Open the template into which you want to insert a DTP assignment component.
- 3 After you determine where in the flow chart you want to create the DTP assignment component, from **New Objects**, drag the **DTP Assignment** object, and drop it into the flow chart.

The DTP assignment component is displayed as a square with a fraction in it.

- 4 **Optional:** Enter design time prompts for the component. See [“Creating Design Time Prompts for a Custom Defined Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 131](#).
- 5 On **Properties**, do any or all of these tasks.
 - **Optional:** Enter a name of up to 50 characters.
 - **Optional:** Enter a description of up to 255 characters.
 - **Optional:** Enter a caption. The caption displays below the DTP assignment component's icon in the flow chart.
 - **Optional:** Enter comments.
- 6 **Financial Management Users Only:** Select **Enable Timer** if you want the time it takes to process the DTP assignment to be included in the log file when the business rule containing the template is launched. The process time is included in the log file for every object whose timer is enabled. For example, if you have a rule whose timer is enabled, the rule contains a custom-defined template whose timer is enabled, and the template contains three DTP assignment components whose timers are enabled, the time taken to process the rule, the custom-defined template, and each DTP assignment in the template, is recorded.
- 7 **Financial Management Users Only:** Select **Enable Logging** so, if the business rule containing the template has log text, it is included in the log file when the rule is launched. You can enable logging for rules, rulesets, and components. However, you specify what log text to include, if any, with a template's formula statements.
- 8 On **Formula**, define conditions for the template's design time prompts.
 - a. From the dropdown to the left of the equal sign, select the design time prompt for which you want to define a value.

Note: If there are no design time prompts in the dropdown, none were created for the template with which you are working.

- b. In the text box to the right of the equal sign, enter a value, or click in the box to display the **Actions** icon.
 - To enter variables, select **Variable**. See “Working with Variables” on page 249.
 - To enter members, select **Member**. See “Working with Members” on page 230.
 - To enter functions, select **Function**. See “Working with Functions” on page 269.
 - To enter Smart Lists, select **Smart List**. See “Working with Smart Lists (Planning Users Only)” on page 272.
- c. Repeat these steps until you assign values for as many of the design time prompts as you want.

Tip: To add rows so you can define values for more design time prompts, click the plus (+) icon. To delete a row, click the minus (-) icon.

9 Select **File, Save**.

Opening DTP Assignment Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You open a DTP assignment component from the flow chart of the template to which it belongs. Unlike formula and script components, you cannot open it from the System View.

➤ To open a DTP assignment component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
- 2 Right-click the template you want to open, and select **Open**.
- 3 When the template opens, select the DTP assignment component in the flow chart to see the DTP assignment properties.

Editing DTP Assignment Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can edit a DTP assignment component's name, description, caption, and comments. You can also edit the values you assign to the design time prompts in a template using the DTP assignment component.

- To edit a DTP assignment component:
- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
 - 2 Right-click the template that contains the DTP assignment component you want to edit, and select **Open**.
 - 3 In the **Template Designer**, select the DTP assignment in the flow chart to edit its properties on **Properties** or **Formula**. You can edit any of these properties:
 - The name
 - The description
 - The caption
 - The comments
 - **Financial Management Users Only**: whether the timer is enabled
 - **Financial Management Users Only**: whether logging is enabled
 - 4 Select **File, Save**.

Deleting DTP Assignment Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You delete a DTP assignment component by removing it from the template to which it belongs. A DTP assignment component can be used in only one template, so you delete it simply by removing it from the template.

- To delete a DTP assignment component:
- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Templates**.
 - 2 Right-click the template that contains the DTP assignment component you want to delete, and select **Open**.
 - 3 In the **Template Designer**, select the DTP assignment component you want to delete in the flow chart.
 - 4 Right-click the DTP assignment component, and select **Remove**.
 - 5 Confirm deletion of the component.

Copying and Pasting DTP Assignment Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can copy a DTP assignment component from a template and paste it into the same, or a different, template. You cannot copy a DTP assignment component and paste it into another DTP assignment component or into another component type.

- To copy and paste a DTP assignment component from within the Template Designer:
 - 1 In the **System View**, expand the **Financial Management, Planning, Essbase** application type, the application, the calculation type (for **Financial Management**), the plan type (for **Planning**), or the database (for **Essbase** or **Operational Planning**), and **Templates**.
 - 2 Right-click the template that contains the DTP assignment component you want to copy, and select **Open**.
 - 3 In the **Template Designer**, right-click the DTP assignment component you want to copy in the flow chart, and select **Copy**.
 - 4 Do one of these tasks:
 - If you want to paste the DTP assignment component into the *same* template, right-click the location where you want to paste it in the flow chart, and select **Paste**.
 - If you want to paste the DTP assignment component into a *different* template, open the template into which you want to paste the DTP assignment component, right-click the location in the flow chart where you want to paste the DTP assignment component, and select **Paste**.
- Note:** If you want to undo the changes you made, select **Edit** and then **Undo Paste**.
- 5 Select **File, Save**.

Sharing Script and Formula Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can share formula and script components across business rules and templates that belong to same application type (Financial Management, Planning, or Essbase).

Note: You cannot share range, condition, loop, block, or DTP Assignment components.

A shared formula or script component exists only in the original rule or template in which you create the component. When you share a component, the system creates a cross reference to the original component. By creating a cross reference to, instead of a copy of, the original component, less space is used in the database and processing time may be decreased.

Changing Formula and Script Components from Shared to Not Shared (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

Before you change a shared formula or script component to not shared, you must ensure that it is not used in more than one business rule or template. You can use the Show Usages feature to see which business rules and templates use the formula or script component. (See [“Showing the Usages of Formula and Script Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 206.) Then you can create copies of the shared component for each business rule and template in which it is used by clearing the Shared check box for the component from within the rules and templates.

- To change a formula or script component from shared to not shared:
 - 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Rules or Templates**, depending on whether the shared formula or script component is in a rule or a template.
 - 2 Right-click the rule or template, and select **Open**.
 - 3 In the **Rule Designer** or **Template Designer**, do one of these tasks:
 - If you do not want to share a formula or script component you are adding to a flow chart, after you drag the formula or script component into the flow chart, clear **Shared** on **Properties**.
 - If you do not want to share a formula or script component that is already in the flow chart, select the component in the flow chart, and clear **Shared** on **Properties**.

This creates a copy of the component in the rule or template.

- 4 Select **File, Save**.

Changing Formula and Script Components from Not Shared to Shared (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

If you want to change a formula or script component from not shared to shared, you must ensure there is not another shared or unshared formula or script component that has the same name *within the same application type* (Financial Management, Planning, or Essbase). Shared objects must have unique names across applications, so you cannot create a shared object with a name that is already used.

To share a formula or script component, ensure that the Shared check box is selected on the component's Properties tab when you drag and drop an existing component into a rule or template's flow chart. (The Shared check box is selected by default.)

- To change a formula or script component from not shared to shared:
- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Rules or Templates**, depending on whether you want to create a shared formula or script component for a rule or a template.
- 2 Right-click the rule or template, and select **Open**.
- 3 When the **Rule Designer** or **Template Designer** opens, do one of these tasks:
 - If you want to share an existing formula or script component as you drag and drop it into the flow chart:
 - a. In **Existing Objects**, expand the application, calculation or plan type, and the **Formulas** or **Scripts** node that contains the formula or script you want to share.
 - b. Drag the formula or script, and drop it into the desired location in the flow chart. By default **Shared** is selected on the component's **Properties** tab.
 - If you want to share a formula or script component that is already in the flow chart:
 - a. Select the component in the flow chart.
 - b. On the component's **Properties** tab, select **Shared**.
- 4 Select **File, Save**.

Saving Components

You can save a component from within all of the designers. If you are working with a Financial Management, Planning, Operational Planning, or Essbase Block Storage component, you can save it as a custom defined template. If you are working with a formula or script component, you can save it with a different name.

See these topics:

- [“Saving a Component” on page 203](#)
- [“Saving Components as a Template \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 204](#)
- [“Saving Formula and Script Components with a Different Name \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 204](#)

Saving a Component

You save formula and script components after you design them in the Component Designer. You save condition, range, and fixed loop components when you save the business rule or template to which they belong in the Rule Designer or Template Designer.

- To save a component, after you are finished designing it in the Component Designer, the Template Designer, or the Rule Designer, select **File, Save**, or click the **Save** icon.

Saving Components as a Template (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

If you want to reuse a business rule's components in other business rules, you may want to save one or more of the components as templates. You save a component as a template from within the Rule Designer or Template Designer flow chart.

- To save a component as a template:
 - 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Rules or Templates**.
 - 2 Open the rule or template that contains the components you want to save as a template.
 - 3 In the flow chart of the **Rule Designer** or **Template Designer**, select the components you want to save as a template, and select **File**, and then **Save As Template**.

Note: You can save only components or a component group as a template. When you save components as a template, any children of the components are saved to the template; any business rules or templates in the flow chart are not saved to the template.

- 4 In the **New Custom Defined template** dialog, enter the application, the calculation type, the plan type, or the database, and click **OK**.

Tip: To see the new template, you may need to refresh the System View. Right-click the **Templates** node, and select **Refresh**.

Saving Formula and Script Components with a Different Name (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can save script and formula components with a different name using Save As. Save As creates a copy of the formula or script component. You may want to create a copy of a component if it is a shared component, and you do not want it to be shared. See [“Sharing Script and Formula Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)”](#) on page 201.

- To save a script or formula component with a different name:
- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Scripts or Formulas**. Do one of these tasks:
 - If you want to save a formula with a different name, right-click the formula, and select **Open**.
 - If you want to save a script with a different name, right-click the script, and select **Open**.
 - 2 When the formula or script opens in the Component Designer, select **File**, and then **Save As**
 - 3 In **Save As**, enter the formula or script's new name, and select an application. Then do one of the following:
 - If the formula or script is for Financial Management, select a **Calculation Type**
 - If the formula or script is for Planning, select a **Plan Type**
 - If the formula or script is for Essbase or Operational Planning, select a **Database**.

Note: You cannot change the application type of a formula or script you save with a different name. The new formula or script must have the same application type as the old formula or script. Also, if the formula or script is for Financial Management, you cannot change the calculation type. The calculation type of the new formula or script must be the same as the original formula or script.

- 4 Click **OK**.

After you save it, you may need to refresh the application list in the System View to see the formula or script component. See [“Refreshing Formula and Script Components \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 205](#).

Refreshing Formula and Script Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

After you create a formula or script component, you may need to refresh the application list in the System View to see it in the Formulas or Scripts node. When you refresh the application type, application, or calculation or plan type to which a formula or script component belongs, you refresh the formula and script components by default. Refreshing formula or script components, however, does not refresh higher levels (that is, calculation or plan types, applications, or application types) in the application list.

► To refresh formula or script components:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase and Operational Planning) that contains the script or formula component.
- 2 Right-click **Scripts** or **Formulas**, and select **Refresh**.

Note: You can also refresh higher levels in the database outline to refresh the objects within them. For example, to refresh scripts and formulas for an application, right-click the application name, and select Refresh.

Showing the Usages of Formula and Script Components (Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only)

You can display the business rules and templates that use script and formula components. When you show the usages of a script or formula, this information is displayed:

- The names of the business rules and templates that are using the script or formula
- The calculation type, plan type, or database of the business rules and templates that are using the script or formula
- The application name of the business rules and templates that are using the script or formula
- Whether the business rules and templates that are using the script or formula are deployed
- Whether the business rules and templates that are using the script or formula are validated
- A description of the business rules and templates that are using the script or formula

► To show the usages of a script or formula component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase or Operational Planning), and **Scripts** or **Formulas**.
- 2 Do one of these tasks:
 - Right-click the script whose usages you want to see, and select **Show Usages**.
 - Right-click the formula whose usages you want to see, and select **Show Usages**.

Information about the objects in which the formula or script is used is displayed in the Usages window.

- 3 After you review the information in **Usages**, click **OK**.

Working with Components in a Flow Chart

You can perform actions on the components in a flow chart, including expanding and collapsing components to show or hide detail, removing components, saving components as a template, copying and pasting components, and copying and pasting component groups and component references. You can also undo many of the changes you make to components while working with them in the Template Designer and Rule Designer flow charts.

See these topics:

- [“Collapsing and Expanding a Component in a Flow Chart” on page 207](#)
- [“Removing a Component from a Flow Chart” on page 207](#)
- [“Copying and Pasting a Component in a Flow Chart” on page 208](#)
- [“Copying and Pasting a Reference to a Component in a Flow Chart” on page 209](#)
- [“Copying and Pasting a Component Group in a Flow Chart” on page 209](#)

Collapsing and Expanding a Component in a Flow Chart

If you have a business rule or template that has many complex components, you may want to collapse or expand some of them in the flow chart. By collapsing and expanding components in a flow chart, you can maximize space for the display of components you want to work with while minimizing space for the display of those with which you do not want to work.

➤ To collapse a component in a flow chart:

- 1 In the System View, expand the application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase, Oracle General Ledger, and Operational Planning), and **Rules** or **Templates**, depending on whether you want to open a business rule or template.
- 2 Right-click the business rule or template, and select **Open**.
- 3 In the **Rule Designer** or **Template Designer** flow chart, perform one of these actions on the components:
 - If you want to expand a component, right-click it, and select **Expand**.
 - If you want to collapse a component, right-click it, and select **Collapse**.
- 4 Select **File, Save**.

Removing a Component from a Flow Chart

Removing a condition, member range, data range, or fixed loop component from a business rule or template's flow chart deletes the component. These components cannot be shared, so they exist in only one business rule or template.

Removing formula or script components from a flow chart may or may not delete the component. If the formula or script component is *not shared*, when you remove the component, it is deleted. If the formula or script component is *shared*, it is only deleted from the business rule or template from which you remove it.

➤ To remove a component from a flow chart:

- 1 In the System View, expand the application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase, Oracle General Ledger, and Operational Planning), and **Rules** or **Templates**, depending on whether you want to open a business rule or template.
- 2 Right-click the business rule or template, and select **Open**.
- 3 In the flow chart of the **Rule Designer** or **Template Designer**, right-click the component you want to remove, and select **Remove**.

Note: If you want to undo the changes you made, select Edit and then Undo Remove.

- 4 Select **File, Save**.

Copying and Pasting a Component in a Flow Chart

When you copy a component in a business rule or template's flow chart, you can paste it into a different location within the same business rule or template's flow chart, or paste it into the flow chart of a different business rule or template, if the business rule or template belongs to the same application type.

➤ To copy and paste a component:

- 1 In the System View, expand the application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase, Oracle General Ledger, and Operational Planning), and **Rules** or **Templates**, depending on whether you want to open a business rule or template.
- 2 Right-click the business rule or template, and select **Open**.
- 3 In the flow chart of the **Rule Designer** or **Template Designer**, right-click the component you want to copy, and select **Copy**.

Tip: You can also use Edit, Copy.

- 4 Do one of these tasks:

- If you want to paste the component into the *same* business rule or template, right-click the location in the flow chart where you want to paste the component, and select **Paste**.
- If you want to paste the component into a *different* business rule or template, open the business rule or template, right-click the location in the flow chart where you want to paste the component, and select **Paste**.

Tip: You can also use Edit, Paste.

Note: If you want to undo the changes you made, select Edit and then Undo Paste.

- 5 Select **File, Save**.

Copying and Pasting a Reference to a Component in a Flow Chart

Unlike copying a component itself, copying a reference to a component copies only the pointer to the component. After you copy the reference to the component, the component itself exists only in the original location in which you created it.

When you copy a reference to a component, you can paste it into the same business rule or template, or you can paste it into a different business rule or template that belongs to the same application type.

➤ To copy and paste a reference to a component in a flow chart:

- 1 In the **System View**, expand the application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase, Oracle General Ledger, and Operational Planning), and **Rules** or **Templates**, depending on whether you want to open a business rule or template.
- 2 Right-click the business rule or template, and select **Open**.
- 3 In the **Rule Designer** or **Template Designer**, right-click the component whose reference you want to copy in the flow chart, and select **Copy Reference**.

Tip: You can also use Edit, Copy Reference.

- 4 Do one of these tasks:

- If you want to paste the component's reference into the *same* business rule or template, right-click the location in the flow chart where you want to paste the reference, and select **Paste**.
- If you want to paste the component's reference into a *different* business rule or template, open the business rule or template, and right-click the location in the flow chart where you want to paste the reference, and select **Paste**.

Tip: You can also use Edit, Paste.

Note: If you want to undo the changes you made, select Edit and then Undo Paste.

- 5 Select **File, Save**.

Copying and Pasting a Component Group in a Flow Chart

If a component contains other components (that is, if there are components within the component), you can copy the group of components and paste it into another location within the same flow chart, or paste it into another flow chart.

➤ To copy and paste a component group in a flow chart:

- 1 In the **System View**, expand the application type, the application, and the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase, Oracle General Ledger, and

Operational Planning), and **Rules** or **Templates**, depending on whether you want to open a business rule or template.

- 2 Right-click the business rule or template, and select **Open**.
- 3 In the **Rule Designer** or **Template Designer**, right-click the component group you want to copy in the flow chart, and select **Copy Group**.

Tip: You can also use Edit, Copy Group.

- 4 Do one of these tasks:
 - If you want to paste the component group into the *same* business rule or template, right-click in the flow chart where you want to paste the group, and select **Paste**.
 - If you want to paste the component group into a *different* business rule or template, open the business rule or template, right-click in the flow chart where you want to paste the group, and select **Paste**.

Note: If you want to undo the changes you made, select Edit and then Undo Paste.

- 5 Select **File, Save**.

Searching for a Component

You can use the Advanced Search feature to search for a component or any other object. See the *Oracle Enterprise Performance Management Workspace Users Guide*.

5

Using Essbase Aggregate Storage Components to Design Business Rules (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

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Business rules in Essbase aggregate storage applications (including those used in Oracle General Ledger) are composed of different components than business rules in Financial Management, Planning, Operational Planning, and Essbase block storage applications. These are the components you use to design business rules in Essbase aggregate storage applications:

- Point of View components contain lists of metadata members (for example, lists of accounts).

Note: You can nest a Point of View component within another Point of View component.

- Allocation components contain calculations for distributing data from members at one level in the database outline to other members in the outline.
- Formula components contain calculation statements that you design using members, functions, and variables.

Working with Point of View Components (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

See these topics:

- “Creating a Point of View Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)” on page 212
- “Editing a Point of View Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)” on page 213
- “Opening a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)” on page 219
- “Deleting a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)” on page 219
- “Copying and Pasting a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)” on page 220
- “Saving a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)” on page 221

Creating a Point of View Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

You create Point of View component from within a business rule.

► To create a Point of View component:

1 From the **System View**, expand the Essbase application type, the aggregate storage application, the database, and **Rules**.

2 Right-click the rule you want to open, and select **Open**.

The business rule is displayed in the Rule Designer.

3 After you determine where in the business rule's flow chart you want to create the Point of View component, from the **New Objects Palette**, drag the **Point of View** component and drop it into that location in the flow chart.

The Point of View object is displayed as two circles with arrows inside them.

4 On **Point of View**, enter a caption to identify the Point of View component. The caption is displayed above the component in the flow chart of any rule that uses it.

5 **Optional:** Do one of these tasks to define the Point of View's global range:

Note: If a global range is defined for the business rule for which you are creating the Point of View component, the Point of View tab displays the business rule's member selections by default. To see if a global range is defined for the business rule, select the Begin or End tab in the flow chart. Then click on the Global Range tab to see if any members, functions, or variables are defined.

- Click **Variable Selector** to select or create variables to define the point of view. If you select a variable, you can select **Link Variable Dynamically** to ensure the variable is updated dynamically when changes are made to it.
- Click **Member Selector** to select members to define the point of view.
- Click in the row of a dimension in the **Value** column to type the names of members that define the point of view.
- Click in the row of a dimension, click the **Actions** icon, and select one of these options to enter members:
 - Members (See [“Working with Members” on page 230.](#))
 - Variables (See [“Working with Variables” on page 249.](#))

You can use a variable to fill the Point of View component. The variable must be defined at the database level and must be of the Member Range type.

- Functions (See [“Working with Functions” on page 269.](#))

The functions you enter should return level 0 members only and should include an @ symbol before the function name. You can enter these functions:

- @Level0Descendant
- @Sibling
- @UDA
- @Attribute

The Level0Descendant and Sibling functions require a member name as a parameter.

- 6 If you want to enter a comment for the members you select for a dimension, click **Comment**.
- 7 Click **Reset Grid** to clear any entries you made to the grid.
- 8 Select **File, Save**.

Editing a Point of View Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

You can edit the members, variables, and functions that comprise the global range of the Point of View component. You can also edit the caption that displays above the component in a flow

chart and the comments that are entered for the values selected for each of the dimensions in the Point of View.

► To edit a Point of View component:

- 1 In the System View, expand the Essbase application type, the Essbase aggregate storage application, the database, and **Rules**.
- 2 Select the business rule that contains the Point of View component you want to edit.
- 3 Right-click the business rule, and select **Open**.
- 4 In the Rule Designer, select the Point of View component you want to edit in the flow chart to display its properties. You can edit any of these properties of a Point of View component. (See [“Creating a Point of View Component \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)”](#) on page 212.)
 - The caption that displays above the Point of View component in the business rule's flow chart
 - The members, variables, and functions that define the Point of View
 - Whether any variables used in the Point of View component are updated dynamically when changes are made to the variables
 - Whether comments are entered for the dimensions and members that define the global range of the Point of View
 - Whether the values of the members in the Point of View component are calculated when the business rule to which it belongs is validated or launched
- 5 Select **File, Save**.

Working with Allocation Components (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

See these topics:

- [“Creating an Allocation Component \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)”](#) on page 215
- [“Editing an Allocation Component \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)”](#) on page 218
- [“Opening a Point of View or Allocation Component \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)”](#) on page 219
- [“Deleting a Point of View or Allocation Component \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)”](#) on page 219
- [“Copying and Pasting a Point of View or Allocation Component \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)”](#) on page 220

- [“Saving a Point of View or Allocation Component \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)”](#) on page 221

Creating an Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

An allocation component enables you to distribute data from a member to level 0 descendants of that member. You create an allocation component from within a business rule; it exists only in that business rule and cannot be shared amongst business rules.

► To create an allocation component:

- 1 From the System View, expand the Essbase application type, the aggregate storage application, the database, and **Rules**.
- 2 Right-click the rule you want to open, and select **Open**.
The business rule is displayed in the Rule Designer.
- 3 After you determine where in the business rule's flow chart you want to create the allocation component, from the **New Objects Palette**, drag the **Allocation** component and drop it into that location in the flow chart.

Note: If you drop a point of view component within another point of view component, the second point of view inherits the members, variables, and functions from the first (that is, upper) point of view.

- 4 In the Allocate Wizard, on **Point of View**, for each dimension listed that you do not want to vary during the allocation, do one of these tasks, then click **Next**.
 - Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
 - Click the **Member Selector** icon to select members and variables for each of the dimensions listed.

Note: In the Member Selector, the dimensions listed in the current step of the wizard are available for selection from Dimension. This enables you to select members and functions for any of the dimensions listed in the current step of the wizard.

Make sure that all members you select are valid level 0 members.

- Select a dimension in the list, and click **Actions** to select a member or variable. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
- 5 In the Allocate Wizard, on **Source**, for each dimension listed, select a member whose data you want to allocate by doing one of these tasks.

Note: You must select a member for each dimension listed.

The source members can be non-level 0 members.

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.

Note: If the predefined selection does not enter a value for each dimension listed, you must enter a value for any dimensions that are empty.

- Click the **Member Selector** icon to select a member for each of the dimensions listed.
- Select a dimension in the list, and click **Actions** to select a member or variable. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

Note: You cannot use functions in this step of the Allocation component.

- In **Optional**, if you want to allocate a specific value, enter an amount to be allocated instead of the selections above.

6 If the source amount you want to allocate is zero, select one of these options from the drop-down.

- Select the next pool record.
- Stop processing the allocation.

Then click **Next**.

7 On **Allocation Range**, enter the parent member for the dimensions you want to use for the allocation. To enter the parent member, do one of these tasks, then click **Next**.

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
- Click the **Member Selector** icon to select the parent member for the dimension to which to allocate the data.
- Enter a parent member, or select a dimension in the list, and click the **Actions** icon to select the parent member (of the main dimension) to which to allocate the data. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

The data is allocated to the level 0 member (that is, the lowest member in the outline, with no members beneath it) below the parent member in the database outline.

8 On **Target**, for the remaining dimensions, select a level 0 member to which to allocate the data. Do one of these tasks, then click **Next**.

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
- Click the **Member Selector** icon to select members for each of the dimensions listed.

- Select a dimension in the list, and click the **Actions** icon to select a member or variable. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

9 On Offset, do one of these tasks, then click Next:

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
- Click the **Member Selector** icon to select members for each of the dimensions listed.
- Select a dimension in the list, and click the **Actions** icon to select a member or variable. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

Note: You must specify members for the offset; you cannot leave it empty.

10 Optional: On Exclude, select any members you want to exclude from the allocation. Do one of these tasks, then click Next.

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
- Click the **Member Selector** icon to select members for each of the dimensions listed.
- Select a dimension in the list, and click the **Actions** icon to select a member or variable. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

11 On Basis do these tasks:

- Select an allocation method to specify how the data should be allocated.
 - Select **Allocate evenly** to allocate data values in the allocation range evenly. Then on **Basis Options for evenly method**, specify what you want to be done if the basis is negative, zero, has missing values, or if all members are excluded.
 - Select **Allocate using a driver** to calculate a percentage to be applied to each member in the allocation range. Then on **Basis Options**, specify what you want to be done if the basis is negative or equal to zero.
- Any dimension members you do not specify are inherited from the POV you defined previously, but you can override those POV selections by doing one of these tasks:
 - Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
 - Click the **Member Selector** icon to select a member for each of the dimensions listed.
 - Select a dimension in the list, and click the **Actions** icon to select a member or variable. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)
- Click **Next**.

12 On Rounding, complete these steps:

- a. Enter the number of decimal places to use for this allocation, or click the **Actions** icon to select a member or variable that represents this value.
- b. Select where to place the rounding difference.
 - Select **Define location** to specify a member or members on which to place the rounding difference. Proceed to [step 13 on page 218](#).
 - Select **Use biggest value** to round data values to their largest values. Proceed to [step 14 on page 218](#).
 - Select **Use smallest value** to round data values to their smallest values. Proceed to [step 14 on page 218](#).
 - Select **Discard rounding error** to use allocated data values as they are. Proceed to [step 14 on page 218](#).

13 If you selected **Define location** in the previous step, on **Rounding member**, do one of these tasks:

- Select a predefined selection from **Use Predefined Selection** to populate the dimensions listed with values.
- Click the **Member Selector** icon to select a member for each of the dimensions listed.
- Select a dimension in the list, and click the **Actions** icon to select a member or variable. See [Chapter 6, “Using Member Selection, Variables, Functions, and \(for Planning Users Only\) Smart Lists to Design Components.”](#)

Note: The members you select in this step must be a part of the allocation range.

14 Click **Finish**.

Editing an Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

You can edit an allocation component by opening the business rule to which it belongs. When the business rule is displayed in the Rule Designer, you can view the allocation component's properties by selecting it in the business rule's flow chart.

► To edit an allocation component:

- 1** In the System View, expand the Essbase application type, the Essbase aggregate storage application, the database, and **Rules**.
- 2** Select the business rule that contains the allocation component you want to edit.
- 3** Right-click the business rule, and select **Open**.
- 4** In the Rule Designer, select the allocation component you want to edit in the flow chart to display its properties. You can edit any of these properties of an allocation component. (See [“Creating an Allocation Component \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)” on page 215](#).)

- The member whose data you want to allocate
- The level 0 members to which you want to allocate data
- The data and the amount of the data you want to allocate
- Whether you want the total amount of the data allocated to be written to an offset member
- Whether you want the data to be allocated evenly or to be allocated in different amounts using a driver
- Whether the allocated data should be rounded, and if so, how it should be rounded

5 Select **File, Save**.

Opening a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

You open a point of view or allocation component from within the flow chart of the business rule to which it belongs; you cannot open it from the System View.

➤ To open a point of view or allocation component:

- 1 From the System View, expand the Essbase application type, the aggregate storage application, the database, and **Rules**.
- 2 Right-click the rule that contains the component you want to open, and select **Open**.
The business rule is displayed in the Rule Designer.
- 3 When the rule opens, click the point of view component or double-click the allocation component in the rule's flow chart to open the component.

Deleting a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

You delete a point of view or allocation component by removing it from the business rule to which it belongs. Since point of view or allocation components can be used in only one business rule, you delete these components by removing them from the business rule to which they belong.

➤ To delete a point of view or allocation component:

- 1 From the System View, expand the Essbase application type, the aggregate storage application, the database, and **Rules**.

- 2 Right-click the rule that contains the point of view or allocation component you want to delete, and select **Open**.

The business rule is displayed in the Rule Designer.

- 3 In the **Rule Designer**, select the point of view or allocation component you want to delete in the flow chart.
- 4 Right-click the point of view or allocation component, and select **Remove**.
- 5 Confirm removal of the component.

Note: If the allocation component is within the point of view component, removing the point of view component removes the allocation component.

- 6 Select **File, Save**.

Copying and Pasting a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

You can copy a point of view or allocation component from within the business rule in which it is used. Then you can paste the component into the same or a different business rule.

➤ To copy and paste a point of view or allocation component in a business rule flow chart:

- 1 From the **System View**, expand the Essbase application type, the aggregate storage application, the database, and **Rules**.
- 2 Right-click the rule that contains the point of view or allocation component you want to copy and paste, and select **Open**.

The business rule is displayed in the Rule Designer.

- 3 In the **Rule Designer**, right-click the point of view or allocation component you want to copy in the business rule's flow chart, and select **Copy** to copy the component only or **Copy Group** to copy the component and any components within it.
- 4 Do one of these tasks:
 - If you want to paste the component into the *same* business rule, right-click the location in the flow chart where you want to paste the component, and select **Paste**.
 - If you want to paste the component into a *different* business rule, open the business rule, right-click the location in the flow chart where you want to paste the component, and select **Paste**.

Tip: You can also use Edit, Paste.

Note: If you want to undo the changes you made, select Edit and then Undo Paste.

Saving a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

You save point of view or allocation component when you save the business rule to which it belongs in the Rule Designer. Unlike formula components, point of view and allocation components cannot exist independently of the business rule to which they belong.

- To save a point of view or allocation component, after you are finished designing it, select **File, Save**, or click the **Save** icon.

Working with Formula Components (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

See these topics:

- [“Creating a Formula Component \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)” on page 221](#)
- [“Opening a Formula Component \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)” on page 223](#)
- [“Editing a Formula Component \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)” on page 224](#)
- [“Deleting a Formula Component \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)” on page 224](#)
- [“Copying and Pasting a Formula Component \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)” on page 225](#)
- [“Copying a Formula Component to Another Application or Database \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)” on page 226](#)
- [“Showing a Formula Component's Usages \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)” on page 226](#)

Creating a Formula Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

A formula component is comprised of formula calculation statements. To create the calculation statements of a formula, you enter or select members and variables. As you create the formula, each of its calculation statements is listed in a row within a grid in the Component Designer.

You can create a formula component from the System View or from within the Rule Designer. A formula component exists as an independent object in the database, so it can be shared amongst business rules.

► To create a formula component for an Essbase aggregate storage application:

- 1 From the System View, expand the Essbase application type, the aggregate storage application, and the database. Then right-click **Formulas**, and select **New**.
- 2 Enter the formula's name.
- 3 Enter the **Application Type** (Essbase).
- 4 Select an **Application**. The application name must be a valid Essbase aggregate storage or Oracle General Ledger application.
- 5 Select the **Database**.

Note: If you right-click Formulas, and select New to create a new formula, the New Formula dialog is populated with the application type, the application, and the database you are working in within the System View.

- 6 Click **OK**.

The formula is displayed in the Component Designer.

- 7 In the Component Designer, on **Properties**, complete these steps:

- a. **Optional:** By default a formula is shared when you create it; you cannot select or clear the Shared check box.

Tip: To create a formula that is *not* shared, open a business rule, then drag a new formula component into the business rule's flow chart. The shared check box is not selected. If you decide to make the formula shared, select the Shared check box.

- b. **Optional:** Edit the formula's name by entering a new one of up to 50 characters. (The name defaults from the New Formula dialog.)

Note: Names of members in Essbase aggregate storage and Oracle General Ledger applications need not be unique. If there is a name that is not unique, it is flagged when the object in which the member is used is validated. If this occurs, you must enter the full path for the member. The full path syntax is [Dimension name]. [Parent name]. [Member name.]

- c. **Optional:** Enter a description of up to 255 characters for the formula.
- d. **Optional:** Enter a caption for the formula. The caption is displayed below the formula in the **Rule Designer** flow chart.

Note: If you do not enter a caption, the component's name is displayed in the flow chart.

- e. **Optional:** Enter comments for the formula. For example, you may want to tell users how the formula component should be used.

- 8 On **Formula**, enter a caption for the formula.
- 9 **Optional:** From **Offset Member**, if you want the *total* amount of all of the formulas in the formula component to be written to an offset member, or a cross dimension member, click the **Ellipsis** icon to select a member.

Note: You can define an offset member manually within the formulas you create below.
The offset defined in the formula component is calculated as the sum of all calculated amounts.

- 10 To create a formula statement, click in the first formula statement row to the *left* of the equal sign. Then enter a member or cross dimension member selection, or click **Actions** to select a:
 - Variable (See [“Working with Variables” on page 249.](#))
 - Member (See [“Working with Members” on page 230.](#))

Note: To type a cross dimension selection of members, enter each member name, separated by a right arrow. For example, mem1->mem2->mem3.

- 11 To complete the formula statement, click in the row to the *right* of the equal sign. Then enter a member or cross dimension member selection, or click **Actions** to select a:
 - Variable (See [“Working with Variables” on page 249.](#))
 - Member (See [“Working with Members” on page 230.](#))
- 12 **Optional:** For each formula statement row, click the **Comments** icon to enter comments about the formula statement. Click **OK**.
- 13 On **Usages**, you can view the rules that use the formula component.

Note: None of the information on this tab can be edited.

- 14 Select **File**, **Save**.

Opening a Formula Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

You can open a formula component from the System View or from within the Rule Designer flow chart of a business rule that uses the formula component.

➤ To open a formula component:

- 1 In the System View, expand the Essbase application type, the Essbase aggregate storage or Oracle General Ledger application, and the database.
- 2 Expand **Formulas**, then do one of these tasks:
 - Right-click the formula you want to open, and select **Open**.
 - Double-click the formula you want to open.

The formula component opens in the Component Designer.

Note: To open a formula component within a business rule, open it from within the rule's flow chart by right-clicking the formula component and selecting Open, or by double-clicking the component.

Editing a Formula Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

You can edit the formula statements that comprise a formula component and the formula component's comments, caption, name, and description.

- To edit a formula component:
 - 1 In the System View, expand the Essbase application type, the Essbase aggregate storage or Oracle General Ledger application, the database, and **Formulas**.
 - 2 Select the formula component you want to edit.
 - 3 Right-click the formula component, and select **Open**.
 - 4 In the Component Designer, you can edit any of these properties of a formula component. See [“Creating a Formula Component \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)” on page 221](#).
 - The caption
 - The formula statements
 - The name
 - The description
 - The comments
 - 5 Select **File, Save**.

Deleting a Formula Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

You can delete a formula component only if it is not being used in any business rules. To see if any business rules are using the formula component, you can show the formula component's usages. See [“Showing a Formula Component's Usages \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)” on page 226](#).

If the formula component is being used by a business rule, and you no longer need to use the formula component in that rule, remove it from the rule, then delete the formula component. If the formula component is being used in a business rule, and you no longer need the business rule, you can delete the business rule.

If no business rules use the formula component, you can delete the component.

- To delete a formula component:
 - 1 In the System View, expand the Essbase application type, the Essbase aggregate storage or Oracle General Ledger application, the database, and **Formulas**.
 - 2 Right-click the formula you want to delete, and select **Show Usages** to make sure no business rules are using the formula component. See [“Showing a Formula Component's Usages \(Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only\)”](#) on page 226.
 - 3 Remove the formula component from any business rules that are using it. See [“Removing a Component from a Flow Chart”](#) on page 207.
 - 4 In the System View, right-click the formula you want to delete, and select **Delete**.
 - 5 Confirm deletion of the formula.

Copying and Pasting a Formula Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

You can copy a formula component from a rule and paste it into the same, or a different, rule. You can also copy the contents of the grid within a formula component and paste the contents into the same, or a different, formula component. You cannot copy a formula component and paste it into another formula component or another component type.

- To copy and paste a formula component:
 - 1 In the System View, expand the Essbase application type, the Essbase aggregate storage or Oracle General Ledger application, the database, and **Rules**.
 - 2 Right-click the rule that contains the formula component you want to copy, and select **Open**.
 - 3 In the Rule Designer flow chart, right-click the formula component you want to copy, and select **Copy**.

Note: If the component you want to copy is shared, you can use Edit, Copy Reference to copy the reference to the shared component instead of copying the component itself. (See [“Copying and Pasting the Reference to a Business Rule Formula or Script Component”](#) on page 66.)

- 4 Do one of these tasks:
 - If you want to paste the formula component into the *same* business rule flow chart, right-click in the location of the flow chart, and select **Paste**.
 - If you want to paste the formula component into a *different* business rule flow chart, open the business rule into which you want to paste the component, right-click in the location, and select **Paste**.

Note: If you want to undo the changes you made, select Edit and then Undo Paste.

- 5 Select **File, Save**.

Copying a Formula Component to Another Application or Database (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

You can copy a formula component from one application to another application and database or from one database to another database in the same application.

► To copy a formula component:

- 1 In the **System View**, expand the Essbase application type, the Essbase aggregate storage or Oracle General Ledger application, the database, and **Formulas**.
- 2 Right-click the formula component you want to copy, and select **Copy To**.
- 3 In **Save As**, perform one of these tasks:
 - If you want to copy the formula component to another application, enter the name in **Application**.
 - If you want to copy the formula component to another application and database, enter the names in **Application** and **Database**.
 - If you want to copy the formula component to another database within the same application, enter the name in **Database**.
- 4 Click **OK**.

The formula component is displayed in the Formulas node of the application and database to which you copied it.

Note: You may need to refresh the application or database node to which you copy the formula component. Right-click the application or database node, and select **Refresh**.

Showing a Formula Component's Usages (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)

You can see which business rules are using a formula component, and other information about the business rules, by displaying the formula component's usages from the System View.

► To show a formula component's usages:

- 1 In the **System View**, expand the Essbase application type, the Essbase aggregate storage or Oracle General Ledger application, the database, and **Formulas**.
- 2 Right-click the formula whose usages you want to see, and select **Show Usages**.
- 3 You can view this information about the formula component:
 - The names of the business rules that are using the formula component
 - The application names of the business rules that are using the formula component

- The database names of the business rules that are using the formula component
- The owner of the formula component
- Whether the business rules that are using the formula component are deployed
- Whether the business rules that are using the formula component are validated
- A description of the business rules that are using the formula component

Note: You can also view a formula component's usages from within the Component Designer on the Usages tab.

6

Using Member Selection, Variables, Functions, and (for Planning Users Only) Smart Lists to Design Components

In This Chapter

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About Member Selection, Variables, Functions, and (for Planning Users Only) Smart Lists

Like you use components to design business rules, you use members, variables, and functions to design components.

You use member selection in formula, script, condition, member and data range, and member block components to select members and functions that return a list of members (for Planning and Essbase applications) or members and member lists (for Financial Management applications). See [“Working with Members” on page 230](#).

You use variables to build formulas for formula, loop, and condition components. There are two types of variables: execution variables, which are calculated when the business rule is launched, and replacement variables, which are substituted for more complex formulas or functions. (See [“Working with Variables” on page 249](#).) You can create these types of variables:

- Global variables for use in all applications belonging to an application type (You can create global variables in Financial Management and Planning.)
- Application variables, for use in one application only (You can create application variables in Financial Management, Planning, and Essbase.)
- Plan type or database variables, for use in one plan type or database (You can create plan type or database variables in Planning and Essbase.)
- Rule variables, for use in one business rule only (You can create rule variables in Planning and Essbase.)

Functions are predefined formulas that you can use in loop, condition, and formula components. The functions you can use in components differ for Financial Management, Planning, and Essbase applications. (See [“Working with Functions” on page 269](#) for descriptions of the function types available for Financial Management, Planning, and Essbase applications. See the *Oracle Hyperion Financial Management Administrator’s Guide* for a complete list, and descriptions of, the functions you can use in Financial Management components. See the *Oracle Essbase Technical Reference* for a complete list, and descriptions of, the functions you can use in Planning and Essbase applications.) You can use functions to perform calculations like these:

- Converting date strings to numbers
- Calculating the averages value of a member across a range
- Calculating the depreciation of an asset for a time period
- Calculating the period-to-date values of members in the Time dimension

Planning users only: You use a Smart List to select predefined options instead of typing an option in data form cells.

Working with Members

See these topics:

- [“About Adding Members and Functions to a Component” on page 230](#)
- [“Adding One Member or Function from One or More Dimensions to a Component ” on page 231](#)
- [“Adding Multiple Members or Functions from One or More Dimensions to a Component ” on page 238](#)
- [“Removing Members and Functions from a Component” on page 246](#)
- [“Searching for Members” on page 247](#)
- [“Searching for Members by Name, Alias, or Property” on page 248](#)

About Adding Members and Functions to a Component

You can add members to formula components, script components, condition components, and member and data range components. You can also add functions that return lists of members to formula, script, and condition components. You can select members and functions from the dimensions in the application to which the component belongs.

Depending on which component you are working with, you can select one or more members or functions from one dimension, or you can select one or more members or functions from multiple dimensions.

- These are the contexts in which you can select a single member for multiple dimensions:
 - In the formula grid of a formula component
 - In a function, where the required parameter is a single member

- These are the contexts in which you can select multiple members for multiple dimensions:
 - In defining a variable value whose type is members
- These are the contexts in which you can select multiple members for a single dimension:
 - In the global range of a Planning or Essbase business rule
 - In a template where the design time prompt type is a slice
 - In defining a variable value whose type is members
 - In defining a variable limit whose type is member
 - In a loop component
 - In any function where the parameter is members
- These are the contexts in which you can select a single member for a single dimension:
 - In defining a variable value whose type is member
 - In any function where the parameter is member

Adding One Member or Function from One or More Dimensions to a Component

The Member Selector enables you to select members and functions within a dimension. Expand and collapse members within a dimension using the [+] and [-].

The Member Selector dialog box has three tabs—all members and functions in the selected dimension are on the Members tab and the Functions tab. There is a third tab, Search, that you use to search for members or member descriptions. The members and functions you select are listed under Selections on the right.

- To add a member from one dimension or more dimensions to a component:
 - 1 In the System View, expand the application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase, Oracle General Ledger, or Operational Planning), and **Rules or Templates**, depending on whether the component is in a business rule or template. In addition, if you want to work with an Operational Planning business rule, you need to select the Calculation Type node that contains the business rule after you select the **Rules** node.
 - 2 Do one of these tasks:
 - Right-click the template that contains the component you want to add a member to, and select **Open**.
 - Right-click the business rule that contains the component you want to add a member to, and select **Open**.
 - 3 When the business rule or template opens, in its flow chart, select the component to which you want to add a member.

Note: You cannot add a member to a loop component.

- 4 Click the **Member Selector** icon.

5 In the **Member Selector**, from **Dimensions**, select a dimension.

The members for the dimension you select are displayed on **Members**, and the functions for the application you are working in are displayed on **Functions**.

6 Do one of these tasks:

- On **Members**, select a member, and click the **right arrow** button to move it to the **Selections** list. You can also use the options in this table to further define the selection.

Table 14 Member Selector Buttons

Button	Description
Add Special	<p>(Financial Management, Planning, Operational Planning, and Essbase block storage applications users only) Select one of these to add additional members or functions related to the member or function you selected on the tab:</p> <ul style="list-style-type: none">○ Member○ Children○ iChildren○ Descendents○ iDescendents○ Siblings○ iSiblings○ Parent○ iParent○ Ancestors○ iAncestors○ Relative○ Level 0 (Base)○ Inclusive <p>(Essbase aggregate storage application users only) Select one of these to add additional members or functions related to the member or function you selected on the tab:</p> <ul style="list-style-type: none">○ Siblings○ Level 0 Descendants
Select	Select to move the member or function to the Selections list.
Deselect	Select to remove the member or function from the Selections list.
Deselect All	Select to remove all members and functions from the Selections list.

- Planning and Essbase block storage application users only:** On **Functions**, do these tasks:
 - Select a function.
 - Enter the required values for the function, according to this table:

Table 15 Planning, Operational Planning, and Essbase Block Storage Functions and Values

Function	Values to Enter	Description
@ALLANCESTORS	Member Name	Enter the member name or click Member to select a member.
@ANCEST	<ul style="list-style-type: none"> ○ Dimension Name ○ Generation Level Number ○ Member Name 	<ul style="list-style-type: none"> i. Enter the dimension name you selected in Dimensions. ii. Enter an integer value that defines the generation or level number from which the ancestor value is returned. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number. iii. Enter any member name or member combination.
@ANCESTORS	<ul style="list-style-type: none"> ○ Member Name ○ Generation Level Number ○ Generation Level Name 	<ul style="list-style-type: none"> i. Enter a member name or member combination. ii. Enter an integer value that defines the absolute generation or level number up to which to include members. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number. iii. Enter a level name or generation name up to which to include members in the selection.
@ATTRIBUTE	Attribute Member Name	For the dimension you entered, enter the attribute member name or member combination you want to include in the selection.
@CHILDREN	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@CURRMBR	Dimension Name	Enter the dimension name.
@DESCENDANTS	<ul style="list-style-type: none"> ○ Member Name ○ Generation Level Number ○ Generation Level Name 	<ul style="list-style-type: none"> i. Enter a member name or member combination. ii. Enter an integer value that defines the absolute generation or level number up to which to include members. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number. iii. Enter a level name or generation name up to which to include members in the selection.
@GENMBRS	<ul style="list-style-type: none"> ○ Dimension Name ○ genName 	<ul style="list-style-type: none"> i. Enter a dimension name. ii. Enter a generation name from dimName. A positive integer defines a generation number.
@IALANCESTORS	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@IANCESTORS	<ul style="list-style-type: none"> ○ Member Name ○ Generation Level Number 	<ul style="list-style-type: none"> i. Enter a member name or member combination, or a function that returns a member or member combination. ii. Enter an integer value that defines the absolute generation or level number up to which to include members in the selection. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number.
@ICHILDREN	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.

Function	Values to Enter	Description
@IDESCENDANTS	<ul style="list-style-type: none"> ○ Member Name ○ Generation Level Number 	<ul style="list-style-type: none"> i. Enter a member name or member combination, or a function that returns a member or member combination. ii. Enter an integer value that defines the absolute generation or level number up to which to include members in the selection. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number.
@LSIBLINGS	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@IRDESCENDANTS	<ul style="list-style-type: none"> ○ Member Name ○ Generation Level Number 	<ul style="list-style-type: none"> i. Enter a member name or member combination, or a function that returns a member or member combination. ii. Enter an integer value that defines the absolute generation or level number up to which to include members in the selection. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number.
@IRSIBLINGS	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@ISIBLINGS	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@LEVMBRS	<ul style="list-style-type: none"> ○ Dimension Name ○ Level Name 	<ul style="list-style-type: none"> i. Enter a dimension name. ii. Enter a level name or an integer value that defines the number of a level. The integer value must be 0 or a positive integer.
@LIST	Argument	Enter a list of arguments that will be collected and treated as one argument so they can be processed by the parent function. Arguments can be member names, member combinations, member set functions, range functions, and numeric expressions.
@LSIBLINGS	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@MATCH	<ul style="list-style-type: none"> ○ Member, Generation ○ genName ○ Pattern to Match 	<ul style="list-style-type: none"> i. Enter the default or user-defined name of the member on which to base the selection. The system searches the member names and alias names of the specified member and its descendants. ii. Enter the default or user-defined name of the generation on which to base the selection. The system searches all member names and member alias names in the generation. iii. Enter the character pattern to search for, including a wildcard character (or ?). ? substitutes one occurrence of any character. You can use ? anywhere in the pattern. * substitutes any number of characters. You can use * only at the end of the pattern. To include spaces in the character pattern, enclose the pattern in double quotation marks ("").
@MEMBER	String	Enter a string (enclosed in double quotation marks) or a function that returns a string.
@MERGE	<ul style="list-style-type: none"> ○ List 1 ○ List 2 	<ul style="list-style-type: none"> i. Enter the first list of members to be merged. ii. Enter the second list of members to be merged.

Function	Values to Enter	Description
@PARENT	<ul style="list-style-type: none"> ○ Dimension Name ○ Member Name 	<ul style="list-style-type: none"> i. Enter the dimension name. ii. Enter a member name or member combination, or a function that returns a member or member combination, to be combined with the parent returned.
@RANGE	<ul style="list-style-type: none"> ○ Member Name ○ Range List 	<ul style="list-style-type: none"> i. Enter a member name or member combination, or a function that returns a member or member combination, to be combined with the parent returned. ii. Enter a member name, a comma-delimited list of member names, member set functions, or range functions. If rangeList is not specified, the system uses the level 0 members from the dimension tagged as Time.
@RDESCENDANTS	<ul style="list-style-type: none"> ○ Member Name ○ Generation Level Number 	<ul style="list-style-type: none"> i. Enter a member name or member combination, or a function that returns a member or member combination, to be combined with the parent returned. ii. Enter an integer value that defines the absolute generation or level number down to which to select the members. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number.
@RELATIVE	<ul style="list-style-type: none"> ○ Member Name ○ Generation Level Number 	<ul style="list-style-type: none"> i. Enter a member name or member combination, or a function that returns a member or member combination, to be combined with the parent returned. ii. Enter an integer value that defines the absolute generation or level number down to which to select the members. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number.
@REMOVE	<ul style="list-style-type: none"> ○ List 1 ○ List 2 	<ul style="list-style-type: none"> i. Enter the first list of members to be merged. ii. Enter the second list of members to be merged.
@RSIBLINGS	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@SHARE	Range List	Enter a comma-delimited list of members, functions that return members, or ranges of members. All the members in rangeList must be from the same dimension.
@SIBLINGS	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@UDA	<ul style="list-style-type: none"> ○ Dimension Name ○ User Defined Attribute 	<ul style="list-style-type: none"> i. Enter the name of the dimension with which the user-defined attribute is associated. ii. Enter the name of the user-defined attribute as it appears in the database outline.
@WITHATTR	<ul style="list-style-type: none"> ○ Dimension Name ○ Operator ○ Value 	<ul style="list-style-type: none"> i. Enter the name of the attribute dimension. ii. Enter the operator specification, enclosed in quotation marks (""). iii. Enter a value that, in combination with the operator, defines the condition that must be met. The value can be an attribute member specification, a constant, or a date-format function (that is, @TODATE).

Function	Values to Enter	Description
@XRANGE	<ul style="list-style-type: none"> ○ Member Name 1 ○ Member Name 2 	<ul style="list-style-type: none"> i. Enter a member name, member combination, or function that returns a single member. ii. Enter a member name, member combination, or function that returns a single member. If mbrName1 is a cross-dimensional member (such as Actual->Jan), then mbrName2 must be also, and the dimension order must match the order used in mbrName1.

See [“Working with Functions” on page 269](#) for a list of supported functions types for Financial Management, Planning, Operational Planning, and Essbase block storage applications.

- c. Click the **right arrow** button to move the function to the **Selections** list. You can also use the options in [Table 14](#) to further define the selection.
- On **Search**, do these tasks to search for a member or members:
 - a. From **Dimensions**, select a dimension in which you want to search for a member.
 - b. Under **Find**, select a type of member to search for, a member name or its description.
 - c. Enter the name of the member, or its description, to search for, or to display all members in the dimension, accept the default wildcard (*).
 - d. Select **Search** to search for a member you enter in the field. (See [“Searching for Members” on page 247.](#))
 - e. Select **Advanced Search** to access advanced search options. (See [“Searching for Members” on page 247.](#))
 - f. Select the member or members, and click the **right arrow** to move them to the **Selections** list. You can also use the options in [Table 14](#) to further define the selection.
- Financial Management Users Only: On **Lists**, do these tasks:
 - a. Select a member list for the dimension you selected, and enter the parameters for the list according to this table:

Table 16 Financial Management Member Lists and Parameters

Dimension	Member Lists and Parameters
Account	<ul style="list-style-type: none"> ○ For Hierarchy, Descendants, Ancestors, Parents, Children, and Base, enter values for these parameters: <ul style="list-style-type: none"> □ Top Member □ Active Entities □ Scenario □ Year □ Period ○ For System, enter no parameters.

Dimension	Member Lists and Parameters
Entity	<ul style="list-style-type: none"> ○ For Hierarchy, Descendants, Ancestors, Parents, Children, and Base, enter values for these parameters: <ul style="list-style-type: none"> <input type="checkbox"/> Top Member <input type="checkbox"/> Active Entities <input type="checkbox"/> Scenario <input type="checkbox"/> Year <input type="checkbox"/> Period ○ For Adjustment Entities, and Parent Adjustment Entities, enter no values.
ICP	<ul style="list-style-type: none"> ○ For Hierarchy, Descendants, Ancestors, Parents, Children, and Base, enter values for these parameters: <ul style="list-style-type: none"> <input type="checkbox"/> Top Member <input type="checkbox"/> Active Entities <input type="checkbox"/> Scenario <input type="checkbox"/> Year <input type="checkbox"/> Period ○ For System, enter no values.
Period	<ul style="list-style-type: none"> ○ For Hierarchy, Descendants, Ancestors, Parents, and Children, enter values for these parameters: <ul style="list-style-type: none"> <input type="checkbox"/> Top Member <input type="checkbox"/> Active Entities <input type="checkbox"/> Scenario <input type="checkbox"/> Year <input type="checkbox"/> Period ○ For First Generation, Second Generation, Third Generation, Fourth Generation, Fifth Generation, and Sixth Generation, enter no values.
Scenario	<ul style="list-style-type: none"> ○ For Hierarchy, Descendants, Ancestors, and Parents, enter values for these parameters: <ul style="list-style-type: none"> <input type="checkbox"/> Top Member <input type="checkbox"/> Active Entities <input type="checkbox"/> Scenario <input type="checkbox"/> Year <input type="checkbox"/> Period ○ For Support Process Management, enter no values.
Value	<ul style="list-style-type: none"> ○ For Hierarchy, and Descendants, enter values for these parameters: <ul style="list-style-type: none"> <input type="checkbox"/> Top Member <input type="checkbox"/> Active Entities <input type="checkbox"/> Scenario <input type="checkbox"/> Year <input type="checkbox"/> Period ○ For Input, Adjustments, Totals, and Default Currencies, enter no values.

Dimension	Member Lists and Parameters
View	<ul style="list-style-type: none"> ○ For Hierarchy, and Descendants, enter values for these parameters: <ul style="list-style-type: none"> ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period
Year	<ul style="list-style-type: none"> ○ For Hierarchy, and Descendants, enter values for these parameters: <ul style="list-style-type: none"> ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period

- b. Click the **right arrow** to move the member list to the **Selections** list. You can also use the options in [Table 14](#) to further define your selection.

7 Do one of these tasks:

- If you are selecting a member, function, or member list for either of the following, proceed to [step 8](#).
 - A variable value whose type is member
 - A function where the parameter is member
- If you are selecting a member, function, or member list for any of the following, repeat [step 5](#) and [step 6](#) until you select a member, function, or member list for each dimension. Then proceed to [step 8](#).
 - The global range of a Planning or Essbase business rule
 - A template where the design time prompt type is a slice
 - A variable value whose type is members
 - A variable limit whose type is member
 - A loop component
 - A function where the parameter is members

8 Click **OK**.

Adding Multiple Members or Functions from One or More Dimensions to a Component

The Member Selector enables you to select members within a dimension. Expand and collapse members within a dimension using the [+] and [-].

The Member Selector dialog box has three tabs—all members and functions in the selected dimension are on the Members tab and the Functions tab. There is a third tab, Search, that you

use to search for members or member descriptions. The members and functions you select are listed under Selections on the right.

When you are in a component that enables you to select multiple members, you can use Shift + Click and Ctrl + Click to select contiguous or non-contiguous members.

➤ To add multiple members from one or more dimensions to a component:

- 1 In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase, Oracle General Ledger, or Operational Planning), and **Rules** or **Templates**, depending on whether the component is in a business rule or template. In addition, if you want to work with an Operational Planning business rule, you need to select the Calculation Type node that contains the business rule after you select the **Rules** node.
- 2 Do one of these tasks:
 - Right-click the template that contains the component you want to add a member to, and select **Open**.
 - Right-click the business rule that contains the component you want to add a member to, and select **Open**.
- 3 When the business rule or template opens, in its flow chart, select the component to which you want to add a member.

Note: You cannot add a member to a loop component.

- 4 Click the **Member Selector** icon.
- 5 In the **Member Selector**, from **Dimensions**, select a dimension.

The members for the dimension you select are displayed on **Members**, and the functions for the application you are working in are displayed on **Functions**.

- 6 Do one of these tasks:
 - On **Members**, use **Ctrl + Click** or **Shift + Click** to select members, and click the **right arrow** to move them to the **Selections** list. You can also use the options in this table to further define your selections.

Table 17 Member Selector Buttons

Button	Description
Add Special	<p>(Financial Management, Planning, Operational Planning, and Essbase block storage applications users only) Select one of these to add additional members or functions related to the member or function you selected on the tab:</p> <ul style="list-style-type: none"> <input type="radio"/> Member <input type="radio"/> Children <input type="radio"/> iChildren <input type="radio"/> Descendents <input type="radio"/> iDescendents <input type="radio"/> Siblings <input type="radio"/> iSiblings <input type="radio"/> Parent <input type="radio"/> iParent <input type="radio"/> Ancestors <input type="radio"/> iAncestors <input type="radio"/> Relative <input type="radio"/> Level 0 (Base) <input type="radio"/> Inclusive <p>(Essbase aggregate storage application users only) Select one of these to add additional members or functions related to the member or function you selected on the tab:</p> <ul style="list-style-type: none"> <input type="radio"/> Siblings <input type="radio"/> Level 0 Descendants
Select	Select to move the member or function to the Selections list.
Deselect	Select to remove the member or function from the Selections list.
Deselect All	Select to remove all members and functions from the Selections list.

- **Planning and Essbase block storage application users only:** On **Functions**, do these tasks:
 - a. Use **Ctrl + Click** or **Shift + Click** to select functions.
 - b. Enter the required values for the functions, according to this table:

Table 18 Planning, Operational Planning, and Essbase Block Storage Functions and Values

Function	Values to Enter	Description
@ALLANCESTORS	Member Name	Enter the member name or click Member to select a member.
@ANCEST	<ul style="list-style-type: none"> <input type="radio"/> Dimension Name <input type="radio"/> Generation Level Number <input type="radio"/> Member Name 	<ol style="list-style-type: none"> i. Enter the dimension name you selected in Dimensions. ii. Enter an integer value that defines the generation or level number from which the ancestor value is returned. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number. iii. Enter any member name or member combination.

Function	Values to Enter	Description
@ANCESTORS	<ul style="list-style-type: none"> ○ Member Name ○ Generation Level Number ○ Generation Level Name 	<ul style="list-style-type: none"> i. Enter a member name or member combination. ii. Enter an integer value that defines the absolute generation or level number up to which to include members. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number. iii. Enter a level name or generation name up to which to include members in the selection.
@ATTRIBUTE	Attribute Member Name	For the dimension you entered, enter the attribute member name or member combination you want to include in the selection.
@CHILDREN	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@CURRMBR	Dimension Name	Enter the dimension name.
@DESCENDANTS	<ul style="list-style-type: none"> ○ Member Name ○ Generation Level Number ○ Generation Level Name 	<ul style="list-style-type: none"> i. Enter a member name or member combination. ii. Enter an integer value that defines the absolute generation or level number up to which to include members. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number. iii. Enter a level name or generation name up to which to include members in the selection.
@GENMBRS	<ul style="list-style-type: none"> ○ Dimension Name ○ genName 	<ul style="list-style-type: none"> i. Enter a dimension name. ii. Enter a generation name from dimName. A positive integer defines a generation number.
@IALLANCESTORS	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@IANCESTORS	<ul style="list-style-type: none"> ○ Member Name ○ Generation Level Number 	<ul style="list-style-type: none"> i. Enter a member name or member combination, or a function that returns a member or member combination. ii. Enter an integer value that defines the absolute generation or level number up to which to include members in the selection. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number.
@ICHILDREN	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@IDESCENDANTS	<ul style="list-style-type: none"> ○ Member Name ○ Generation Level Number 	<ul style="list-style-type: none"> i. Enter a member name or member combination, or a function that returns a member or member combination. ii. Enter an integer value that defines the absolute generation or level number up to which to include members in the selection. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number.
@ILSIBLINGS	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.

Function	Values to Enter	Description
@IRDESCENDANTS	<ul style="list-style-type: none"> ○ Member Name ○ Generation Level Number 	<ul style="list-style-type: none"> i. Enter a member name or member combination, or a function that returns a member or member combination. ii. Enter an integer value that defines the absolute generation or level number up to which to include members in the selection. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number.
@IRSIBLINGS	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@ISIBLINGS	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@LEVMBS	<ul style="list-style-type: none"> ○ Dimension Name ○ Level Name 	<ul style="list-style-type: none"> i. Enter a dimension name. ii. Enter a level name or an integer value that defines the number of a level. The integer value must be 0 or a positive integer.
@LIST	Argument	Enter a list of arguments that will be collected and treated as one argument so they can be processed by the parent function. Arguments can be member names, member combinations, member set functions, range functions, and numeric expressions.
@LSIBLINGS	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@MATCH	<ul style="list-style-type: none"> ○ Member, Generation ○ genName ○ Pattern to Match 	<ul style="list-style-type: none"> i. Enter the default or user-defined name of the member on which to base the selection. The system searches the member names and alias names of the specified member and its descendants. ii. Enter the default or user-defined name of the generation on which to base the selection. The system searches all member names and member alias names in the generation. iii. Enter the character pattern to search for, including a wildcard character (or ?). ? substitutes one occurrence of any character. You can use ? anywhere in the pattern. * substitutes any number of characters. You can use * only at the end of the pattern. To include spaces in the character pattern, enclose the pattern in double quotation marks ("").
@MEMBER	String	Enter a string (enclosed in double quotation marks) or a function that returns a string.
@MERGE	<ul style="list-style-type: none"> ○ List 1 ○ List 2 	<ul style="list-style-type: none"> i. Enter the first list of members to be merged. ii. Enter the second list of members to be merged.
@PARENT	<ul style="list-style-type: none"> ○ Dimension Name ○ Member Name 	<ul style="list-style-type: none"> i. Enter the dimension name. ii. Enter a member name or member combination, or a function that returns a member or member combination, to be combined with the parent returned.

Function	Values to Enter	Description
@RANGE	<ul style="list-style-type: none"> ○ Member Name ○ Range List 	<ul style="list-style-type: none"> i. Enter a member name or member combination, or a function that returns a member or member combination, to be combined with the parent returned. ii. Enter a member name, a comma-delimited list of member names, member set functions, or range functions. If rangeList is not specified, the system uses the level 0 members from the dimension tagged as Time.
@RDESCENDANTS	<ul style="list-style-type: none"> ○ Member Name ○ Generation Level Number 	<ul style="list-style-type: none"> i. Enter a member name or member combination, or a function that returns a member or member combination, to be combined with the parent returned. ii. Enter an integer value that defines the absolute generation or level number down to which to select the members. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number.
@RELATIVE	<ul style="list-style-type: none"> ○ Member Name ○ Generation Level Number 	<ul style="list-style-type: none"> i. Enter a member name or member combination, or a function that returns a member or member combination, to be combined with the parent returned. ii. Enter an integer value that defines the absolute generation or level number down to which to select the members. A positive integer defines a generation number. A value of 0 or a negative integer defines a level number.
@REMOVE	<ul style="list-style-type: none"> ○ List 1 ○ List 2 	<ul style="list-style-type: none"> i. Enter the first list of members to be merged. ii. Enter the second list of members to be merged.
@RSIBLINGS	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@SHARE	Range List	Enter a comma-delimited list of members, functions that return members, or ranges of members. All the members in rangeList must be from the same dimension.
@SIBLINGS	Member Name	Enter a member name or member combination, or a function that returns a member or member combination.
@UDA	<ul style="list-style-type: none"> ○ Dimension Name ○ User Defined Attribute 	<ul style="list-style-type: none"> i. Enter the name of the dimension with which the user-defined attribute is associated. ii. Enter the name of the user-defined attribute as it appears in the database outline.
@WITHATTR	<ul style="list-style-type: none"> ○ Dimension Name ○ Operator ○ Value 	<ul style="list-style-type: none"> i. Enter the name of the attribute dimension. ii. Enter the operator specification, enclosed in quotation marks (""). iii. Enter a value that, in combination with the operator, defines the condition that must be met. The value can be an attribute member specification, a constant, or a date-format function (that is, @TODATE).

Function	Values to Enter	Description
@XRANGE	<ul style="list-style-type: none"> ○ Member Name 1 ○ Member Name 2 	<ul style="list-style-type: none"> i. Enter a member name, member combination, or function that returns a single member. ii. Enter a member name, member combination, or function that returns a single member. If mbrName1 is a cross-dimensional member (such as Actual->Jan), then mbrName2 must be also, and the dimension order must match the order used in mbrName1.

- c. Click the **right arrow** to move them to the **Selections** list. You can also use the options in [Table 17](#) to further define your selections.
- On **Search**, do these tasks to search for a member or members:
 - a. From **Dimensions**, select a dimension in which you want to search for a member.
 - b. Under **Find**, select a type of member to search for, a member name or its description.
 - c. Enter the name of the member, or its description, to search for, or to display all members in the dimension, accept the default wildcard (*).
 - d. Select **Search** to search for a member you enter in the field. (See [“Searching for Members” on page 247.](#))
 - e. Select **Advanced Search** to access advanced search options. (See [“Searching for Members” on page 247.](#))
 - f. Select the member or members, and click the **right arrow** to move them to the **Selections** list. You can also use the options in [Table 17](#) to further define the selection.
- **Financial Management Users Only:** On **Lists**, do these tasks:
 - a. Select a member list for the dimension you selected, and enter the parameters for the list according to this table:

Table 19 Financial Management Member Lists and Parameters

Dimension	Member Lists and Parameters
Account	<ul style="list-style-type: none"> ○ For Hierarchy, Descendants, Ancestors, Parents, Children, and Base, enter values for these parameters: <ul style="list-style-type: none"> □ Top Member □ Active Entities □ Scenario □ Year □ Period ○ For System, enter no parameters.

Dimension	Member Lists and Parameters
Entity	<ul style="list-style-type: none"> ○ For Hierarchy, Descendants, Ancestors, Parents, Children, and Base, enter values for these parameters: <ul style="list-style-type: none"> <input type="checkbox"/> Top Member <input type="checkbox"/> Active Entities <input type="checkbox"/> Scenario <input type="checkbox"/> Year <input type="checkbox"/> Period ○ For Adjustment Entities, and Parent Adjustment Entities, enter no values.
ICP	<ul style="list-style-type: none"> ○ For Hierarchy, Descendants, Ancestors, Parents, Children, and Base, enter values for these parameters: <ul style="list-style-type: none"> <input type="checkbox"/> Top Member <input type="checkbox"/> Active Entities <input type="checkbox"/> Scenario <input type="checkbox"/> Year <input type="checkbox"/> Period ○ For System, enter no values.
Period	<ul style="list-style-type: none"> ○ For Hierarchy, Descendants, Ancestors, Parents, and Children, enter values for these parameters: <ul style="list-style-type: none"> <input type="checkbox"/> Top Member <input type="checkbox"/> Active Entities <input type="checkbox"/> Scenario <input type="checkbox"/> Year <input type="checkbox"/> Period ○ For First Generation, Second Generation, Third Generation, Fourth Generation, Fifth Generation, and Sixth Generation, enter no values.
Scenario	<ul style="list-style-type: none"> ○ For Hierarchy, Descendants, Ancestors, and Parents, enter values for these parameters: <ul style="list-style-type: none"> <input type="checkbox"/> Top Member <input type="checkbox"/> Active Entities <input type="checkbox"/> Scenario <input type="checkbox"/> Year <input type="checkbox"/> Period ○ For Support Process Management, enter no values.
Value	<ul style="list-style-type: none"> ○ For Hierarchy, and Descendants, enter values for these parameters: <ul style="list-style-type: none"> <input type="checkbox"/> Top Member <input type="checkbox"/> Active Entities <input type="checkbox"/> Scenario <input type="checkbox"/> Year <input type="checkbox"/> Period ○ For Input, Adjustments, Totals, and Default Currencies, enter no values.

Dimension	Member Lists and Parameters
View	<ul style="list-style-type: none"> ○ For Hierarchy, and Descendants, enter values for these parameters: <ul style="list-style-type: none"> □ Top Member □ Active Entities □ Scenario □ Year □ Period
Year	<ul style="list-style-type: none"> ○ For Hierarchy, and Descendants, enter values for these parameters: <ul style="list-style-type: none"> □ Top Member □ Active Entities □ Scenario □ Year □ Period

- b. Click the right arrow button to move the member list to the **Selections** list. You can also use the options in [Table 17 on page 240](#) to further define the selection.

7 Do one of these tasks:

- If you are selecting members, functions, or member lists to define a variable value whose type is members, repeat [step 5](#) and [step 6](#) until you select members, functions, or member lists for each dimension. Then proceed to [step 8](#).
- If you are selecting members, functions, or member lists for any of these, proceed to [step 8](#).
 - The global range of a Planning or Essbase business rule
 - A template where the design time prompt type is an intersection of members
 - A variable value whose type is members
 - A variable limit whose type is member
 - A loop component
 - A function where the parameter is members

8 Click **OK**.

Removing Members and Functions from a Component

You can remove members from formula, script, condition, and member and data range components. You can remove functions from formula, script, and condition components.

When you remove members and functions from a component, they are not deleted from the database. If you want to remove members and functions from a shared component, you must make the component not shared first.

- To remove members or functions from a component:
- 1 In the System View, expand the application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase, Oracle General Ledger, or Operational Planning), and **Rules or Templates**, depending on whether the component is in a business rule or template. In addition, if you want to work with an Operational Planning business rule, you must expand the Calculation Type that contains the rule you want to work with after you expand the **Rules** node.
 - 2 Do one of these tasks:
 - Right-click the template that contains the component you want to add a member to, and select **Open**.
 - Right-click the business rule that contains the component you want to add a member to, and select **Open**.
 - 3 When the business rule or template opens, in its flow chart, select the component that contains the member or function you want to remove.
 - 4 Click the **Actions** icon, and select **Member**.
 - 5 In **Member Selector**, from **Dimensions**, select the dimension that contains the member or function you want to remove.
 - 6 Use the left arrow to move the member or function from **Selections** to **Members** or **Functions**. See [Table 14 on page 232](#).
 - 7 If you want to remove members from multiple dimensions, click **Next**, and repeat step [step 5](#) and [step 6](#).
 - 8 Click **OK**.
 - 9 Select **File, Save**.

Searching for Members

You can search for members within the Member Selector.

- To search for members:
- 1 In the System View, expand the application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase, Oracle General Ledger, or Operational Planning), and **Rules or Templates**, depending on whether the component is in a business rule or template. In addition, if you want to work with an Operational Planning business rule, you must expand the Calculation Type that contains the rule you want to work with after you expand the **Rules** node.
 - 2 Do one of these tasks:
 - Right-click the template that contains the component for which you want to search for members, and select **Open**.
 - Right-click the business rule that contains the component for which you want to search for members, and select **Open**.

- 3 When the business rule or template opens, in its flow chart, select the component for which you want to search for members.
- 4 Click the **Actions** icon, and select **Member**.
- 5 In **Member Selector**, from **Dimensions**, select the dimension that contains the member for which you want to search.
- 6 **Optional:** From the **Menu** icon you can customize the display of members in the dialog by doing these tasks:
 - Select or clear the options in **Show** to display or hide the member's name, alias, description, and count. (By default, the name and alias of the member is displayed.)
 - Select **Collapse All** to hide the members in the dimension you selected. (By default, the outline is collapsed when you select a dimension.)
- 7 Select the **Search** tab.
 - a. Under **Find**, select a type of member to search for, a member name or its description.
 - b. Enter the name of the member, or its description, to search for, or to display all members in the dimension, accept the default wildcard (*).
 - c. Click **Search** to search for a member or its description.

If the member is found, it is highlighted in the outline on **Results**. If more than one member matches your search criteria, use the left and right arrows to move up and down the outline to locate all members that match your search criteria.
 - d. **Optional:** Click **Advanced Search** to search for the member by its name, alias, or one of its properties. See [“Searching for Members by Name, Alias, or Property” on page 248](#).
 - e. Select the member or members, and click the **right arrow** to move them to the **Selections** list. You can also use the options in [Table 17](#) to further define the selection.
- 8 Click **OK**.

Searching for Members by Name, Alias, or Property

You can use Advanced Search within the Member Selector to search for a member by its name, its alias, or one of its properties.

➤ To search for a member by name, alias, or property:

- 1 From the **Member Selector**, select the **Search** tab, and click **Advanced Search**.
- 2 In **Find Members**, from **Search By**, select one of these options:
 - **Name**, if you want to search for the member by its name. Then go to [step 4](#).
 - **Alias**, if you want to search for the member by its alias. Then go to [step 4](#).
 - **Property**, if you want to search for the member by one of its properties. Then go to [step 3](#).
- 3 If you selected **Property**, enter or select a **Property Name**. See the *Oracle Hyperion Planning Administrator's Guide* and the *Oracle Hyperion Financial Management Administrator's Guide* for

information on Planning and Financial Management member properties. See the *Oracle Essbase Database Administrator's Guide* for information on Essbase member properties, including those used in Oracle General Ledger and Operational Planning applications.

4 Enter a value for the name, alias, or property.

5 Click **OK**.

If the alias, name or property is found, it is highlighted in the outline on Members.

Note: When you search for members by alias, all members that have aliases matching the search criteria are highlighted in the outline, including members with aliases in other languages. However, only aliases for members in the language being used are displayed in the Member Selector.

6 **Optional:** If more than one member matches your search criteria, use the left and right arrows to move up and down the outline to locate all members that match your search criteria.

Working with Variables

Variables assume values that you define for them. You use them in components as you are designing business rules and templates.

You can create new variables from the System View and from within the Component Designer by launching the Variable Designer. When you create a variable from within the Component Designer, the variable is associated with the business rule that contains the component for which you created the variable. You can also create variables directly from the System View, and associate them with business rules, calculation or plan types, databases, or applications that you select.

There are two types of variables:

- **Execution:** When the business rule is launched, the calculation defined for the variable is performed. You can use execution variables in formula, condition, or loop components.

Note: Execution variables are not supported in Essbase aggregate storage applications, including those used in Oracle General Ledger.

- **Replacement:** When you are designing or launching the business rule, the variable is substituted with a calculation. You can use replacement variables in formula components.

There are several types of execution and replacement variables you can create.

Note: The variables you can create differ depending on the application type you are working with and whether you are creating an execution or a replacement variable.

- **All users:** Numeric—a number
- **All users:** String—a text string

- **Planning, Operational Planning, Oracle General Ledger, and Essbase application users only:** Essbase—an Essbase substitution variable.
- **Planning, Operational Planning, Oracle General Ledger, and Essbase application users only:** Cross Dimension—a selection of dimensions
- **Planning, Operational Planning, Oracle General Ledger, and Essbase application users only:** Dimension—a dimension
- **Planning, Operational Planning, Oracle General Ledger, and Essbase application users only:** Member—a member
- **Planning, Operational Planning, Oracle General Ledger, and Essbase application users only:** Members—two or more members
- **Planning, Operational Planning, Oracle General Ledger, and Essbase application users only:** Percent—a percentage
- **Planning, Operational Planning, Oracle General Ledger, and Essbase application users only:** Integer—an integer
- **Planning, Operational Planning, Oracle General Ledger, and Essbase application users only:** Member Range—a range of members from one or more dimensions
- **Planning users only:** String as number—a text string
- **Planning users only:** Date as number—a date
- Member Range—a range of members from one or more dimensions
- **Financial Management users only:** Data Range—a range of data values
- **Financial Management users only:** Log Information—information from the log file
- **Financial Management users only:** Boolean—a condition that returns a true or false value
- **Financial Management, Planning, and Essbase block storage application users only:** Array—a list of values

You can create variables that prompt users to enter information when they launch a business rule. These runtime prompt variables prompt users for such information as members, text, dates, or numbers. The prompts tell users what type of data is expected.

For example:

- Select a month.
- Enter the expected number of customer visits per quarter.
- What percentage change in earnings do you expect next month?

There are up to four database objects with which you can associate a variable, depending on which application type you are creating a variable for. A variable can exist in multiple objects simultaneously and can have the same name in each object.

- **(Financial Management and Planning users only)** Global: If you select global, the variable can be used in any application within the same application type.

- (All users) Application: If you select application, the variable can be used within the application with which you are working when you create the variable.
- (Planning, Operational Planning, Oracle General Ledger, and Essbase users only) Plan or Database: If you select plan or database, the variable can be used within the plan type or database with which you are working when you create the variable.
- (Planning, Operational Planning, Oracle General Ledger, and Essbase users only) Rule: If you select rule, the variable can be used within the business rule with which you are working when you create the variable.

Note: Runtime prompt variables of all levels (that is global, application, plan, and rule) can be hidden when they are used in business rules.

Creating a Variable from the System View

You can create a variable from the System View or from within the Component Designer by launching the Variable Designer from the Tools menu.

➤ To create a variable from the System View:

- 1 In the System View, select **Tools, Variables**.
- 2 In the Variable Navigator, expand the Financial Management, Planning, or Essbase application type.
- 3 Do any of these tasks:
 - Financial Management and Planning users: Right-click **<Global>**, and select **New** to create a variable that can be used in any application of the same application type. (This is the default selection.)
 - All users: Right-click an application, and select **New** to create a variable that can be used in that application only.
 - Planning, Operational Planning, Oracle General Ledger, and Essbase users only: Right-click a plan type or database, and select **New** to create a variable that can be used in that plan type or database only.
 - Planning, Operational Planning, Oracle General Ledger, and Essbase users only: Right-click a business rule, and select **New** to create a variable that can be used in that rule only.
- 4 If you want to create a replacement variable, select **Replacement**, and do one of these tasks:
 - Proceed to [step 5](#) to create a replacement variable for Financial Management.
 - Proceed to [step 6](#) to create a replacement variable for Planning, Operational Planning, Oracle General Ledger, or Essbase.
- 5 **Financial Management users only:** If you want to create a replacement variable for Financial Management, on **Replacement**, do these tasks:
 - a. Enter a name for the variable.
 - b. Select a type for the variable:
 - Numeric—a number

- String—a text string
- Member Range—a range of members from one or more dimensions
- **Financial Management users only:** Data Range—a range of data values
- **Financial Management users only:** Log Information—information from the log file

Note: The options on the tab change depending on what type of variable you select.

- Enter a description for the variable.
- If you want to include this variable in a group, enter the group name. The group name is displayed under the Group column after you save and refresh the variables.
- In the **Value** table, enter values for the variable.
 - For entering values for numeric variables, see [“Entering Variable Values for a Numeric Variable” on page 254](#)
 - For entering values for string variables, see [“Entering Variable Values for a String Variable” on page 256](#)
 - For entering values for member range variables, see [“Entering Variable Values for a Member or Members Variable \(Planning, Operational Planning, Oracle General Ledger, and Essbase Users Only\)” on page 259](#)
 - For entering values for data range variables, see [“Entering Values for a Data Range Variable \(Financial Management Users Only\)” on page 261](#)
 - For entering values for log information variables, see [“Entering Values for a Log Information Variable \(Financial Management Users Only\)” on page 262](#)

6 Planning, Operational Planning, Oracle General Ledger, and Essbase users only: If you want to create a replacement variable, on **Replacement**, do these tasks:

- Enter a name for the variable.
- Select a type for the variable:
 - Numeric—a number
 - String—a text string
 - Essbase—an Essbase substitution variable

Note: You cannot use an Essbase substitution variable in a component of a business rule in an Essbase aggregate storage application, including those used in Oracle General Ledger.

- Cross Dimension—a selection of multiple dimensions
- Dimension—a dimension
- Member—a member
- Members—two or more members
- Percent—a percentage

- Integer—an integer
- **Planning users only:** String as number—a text string
- **Planning users only:** Date as number—a date
- Member Range—a range of members from one or more dimensions

Note: The options on the tab change depending on what type of variable you select.

- Enter a description for the variable.
- If you want to include this variable in a group, enter the group name. The group name is displayed under the **Group** column after you save and refresh the variables.
- Planning users only:** If the variable is a runtime prompt variable, select **Use Last Entered Value** if you want the value that a user last entered for the prompt to be displayed as the default value the next time the prompt occurs.

Note: This option is selectable only if the variable has runtime prompts.

- In the **Value** table, enter values for the variable. The values you enter change depending on the variable type you select above. See these topics:
 - For entering values for numeric variables, [“Entering Variable Values for a Numeric Variable” on page 254.](#)
 - For entering values for string variables, [“Entering Variable Values for a String Variable” on page 256.](#)
 - For entering values for cross dimension variables, [“Entering Variable Values for a Cross Dimension Variable \(Planning, Operational Planning, Oracle General Ledger, and Essbase Users Only\)” on page 258.](#)
 - For entering values for dimension variables, [“Entering Variable Values for a Dimension Variable \(Planning, Operational Planning, Oracle General Ledger, and Essbase Users Only\)” on page 258.](#)
 - For entering values for member, members, or member range variables, [“Entering Variable Values for a Member or Members Variable \(Planning, Operational Planning, Oracle General Ledger, and Essbase Users Only\)” on page 259.](#)
 - For entering values for percent, string as number, and date as number variables, [“Entering Variable Values for Percent Variables \(Planning, Operational Planning, Oracle General Ledger, and Essbase Users Only\)” on page 260.](#)
 - For entering values for integer variables, [“Entering Values for Integer Variables \(Planning, Operational Planning, Oracle General Ledger, and Essbase Users Only\)” on page 260.](#)
 - For entering values for member range variables, [“Entering Values for a Member Range Variable” on page 257](#)
 - **Planning users only:** For entering values for string as number variables, [“Entering Variable Values for String as Number and Date as Number Variables \(Planning Users Only\)” on page 261](#)

- **Planning users only:** For entering values for date as number variables, “[Entering Variable Values for String as Number and Date as Number Variables \(Planning Users Only\)](#)” on page 261

7 If you want to create an execution variable, select **Execution**, and do one of these tasks:

- Proceed to [step 8](#) to create an execution variable for Financial Management.
- Proceed to [step 9](#) to create an execution variable for Planning, Operational Planning, or Essbase block storage applications. (Execution variables are not supported in Essbase aggregate storage applications, including those used in Oracle General Ledger.)

8 Financial Management users only: If you want to create an execution variable for Financial Management, on **Execution**, do these tasks:

- Enter a name for the variable.
- Select the variable type: numeric, string, Boolean, or array.
- Enter a description of up to 255 characters for the variable.
- Enter a value for the variable.
- If you want to put the variable in a group, enter its name. The group name is displayed under the **Group** column after you save and refresh the variables.
- Enter the scope of the variable. It can be used in rules or rulesets.
- If the variable type is an array:
 - Enter the size of the array.
 - Select the string or numeric data type.

9 Planning, Operational Planning, and Essbase block storage application users only: If you want to create an execution variable, on **Execution**, do these tasks:

- Enter a name for the variable.
- Specify whether the variable is an array. If you select this check box, you must select a dimension, too.
- Enter a value for the variable.
- If you want to put the variable in a group, enter its name. The group name is displayed under the **Group** column after you save and refresh the variables.
- If you selected **Array** as the variable type, select a Planning, Operational Planning, or Essbase dimension.

10 Repeat steps [step 5](#) through [step 9](#) for each variable you want to create.

11 Select **File, Save**.

Entering Variable Values for a Numeric Variable

A numeric variable can be a Planning, Operational Planning, Essbase, Oracle General Ledger, or Financial Management replacement variable. A numeric variable can also be a Financial Management execution variable.

- To enter values for a Planning, Operational Planning, Oracle General Ledger, or Essbase numeric variable:

- 1 Complete [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 From **Type**, select **Numeric**.
- 3 **(Planning users only)** In the **Value** table, select a Smart List.

Select the **Smart List** check box if you want to use a Smart List as the variable type. (See the *Oracle Hyperion Planning Administrator's Guide* for this release.) For example, you can set up an integer Smart List for a reporting cycle that has values 1-5, for Yearly (1), Quarterly (2), Monthly (3), Daily (4), and Hourly (5). A user can select "Monthly" and the number three is stored in the database. This prevents users from having to remember the numbers.

You can also set up a string of text or a date as the value for the Smart List.

Note: You must select a Planning application that supports the use of Smart Lists to enable this check box.

- 4 **(Planning users only)** In **Limits**, select a limit for the Smart List.

Note: If you are using an Essbase substitution variable as the runtime prompt value and the value of that substitution variable is outside of variable limits, launching a rule does not give any error and launches successfully.

- 5 Enter a default value for the variable.
- 6 **(Planning users only)** By default, **RTP** is selected. If you do not want to create a runtime prompt for this variable, clear **RTP**.

Note: If you do not select RTP, you must enter a value for the variable.

- 7 **(Planning and Essbase users only)** If you selected **RTP**, enter the runtime prompt text you want to display for users.
- 8 **(Planning users only)** Specify whether missing data values are allowed.
- 9 Select **File, Save**.

- To enter values for a Financial Management replacement or execution numeric variable:

- 1 Complete steps [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 Enter a value, or click in the **Value** field to display the **Actions** icon.
- 3 Do one of these tasks:
 - To enter members, select **Member**. See ["Working with Members" on page 230](#).
 - To enter functions, select **Function**. See ["Working with Functions" on page 269](#).
- 4 Select **File, Save**.

Entering Variable Values for a String Variable

A string variable can be a Financial Management, Planning, Operational Planning, Oracle General Ledger, or Essbase replacement variable. A string variable can also be a Financial Management execution variable. A string variable must be alphanumeric and be no more than 255 characters. It can contain a null value, but cannot contain a leading & (ampersand) character in the value.

► To enter values for a Planning, Operational Planning, or Essbase replacement string variable:

- 1 Complete [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 From **Type**, select **String**.
- 3 In the **Value** table, enter a value for the variable.
- 4 **(Planning users only)** By default, **RTP** is selected. If you do not want to create a runtime prompt for this variable, clear **RTP**.

Note: If you do not select RTP, you must enter a value for the variable.

- 5 **(Planning and Essbase users only)** If you selected **RTP**, enter the runtime prompt text you want to display for users.
- 6 Select **File, Save**.

► To enter values for a Financial Management replacement or execution string variable:

- 1 Complete [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 From **Type**, select **String**.
- 3 Enter a value, or click in the **Value** field to display the **Actions** icon.
- 4 Do one of these tasks:
 - To enter members, select **Member**. See [“Working with Members” on page 230](#).
 - To enter functions, select **Function**. See [“Working with Functions” on page 269](#).
- 5 Select **File, Save**.

Entering Values for an Array Variable

An array variable can be a Financial Management, Planning, Operational Planning, Oracle General Ledger, or Essbase execution variable. Arrays contain a list of values that can be multidimensional.

Typically, arrays are used to store variables as part of a member formula. The size of the array variable is determined by the number of members in the corresponding dimension. For example, if the Scenario dimension has four members, the following command creates an array called Discount with four entries. You can use more than one array at a time.

```
ARRAY Discount[Scenario];
```


- To enter values for an array variable:
- 1 Complete [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 From **Type**, select **Array**.
- 3 In the **Value** field, enter a value for the variable.
- 4 Select **File**, **Save**.

Entering Values for a Member Range Variable

A member range variable can be a Financial Management, Planning, Operational Planning, Oracle General Ledger, or Essbase replacement variable. The member range variable should contain a range of members inclusive of, and between, two specified members.

- To enter values for a member range variable:
- 1 Complete [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 From **Type**, select **Member Range**.
- 3 In the **Value** table, do one of these, depending on whether you are creating a member range for Financial Management, Planning, Operational Planning, Oracle General Ledger, or Essbase.
 - a. If you are creating a member range variable for Financial Management:
 - i. Select a dimension to limit the member selection. If you select a dimension, the Member Selector displays members only for that dimension. If you do not select a dimension, the Member Selector displays all dimensions.
 - ii. In **Value**, enter a value for the variable, or select the **Actions** icon to enter members, variables, or functions for the variable value.
 - To enter variables, see [“Working with Variables” on page 249](#).
 - To enter members, see [“Working with Members” on page 230](#).
 - To enter functions, [“Working with Functions” on page 269](#).
 - iii. In **Variable**, select the **Variable** icon to select a variable for the member range.
 - iv. Click the **Comments** icon to enter comments for the variable.
 - v. Repeat these steps for each dimension for which you want to define a member range.
 - b. If you are creating a member range variable for Planning, Operational Planning, Oracle General Ledger, or Essbase:
 - i. For each dimension in the table for which you want to define a member range, enter or use the Member Selector to select limits for the member range. (The dimensions that display are the dimensions that belong to the application for which you are creating the variable.)

Note: (Planning and Essbase users only) You must select RTP before you enter text in the Limits field.

- ii. Enter or use the Member Selector to select values for the member range. You can select multiple members and functions for each dimension listed.
- iii. **(Planning and Essbase users only)** Select **RTP** for each dimension listed if you want the variable to prompt users for information when it is launched.

Note: If you do not select RTP, you must enter a value for the variable.

- iv. **(Planning and Essbase users only)** For each dimension for which you selected **RTP**, enter the runtime prompt text you want to display for users each time the variable is launched for that dimension.

4 Select **File**, **Save**.

Entering Variable Values for a Cross Dimension Variable (Planning, Operational Planning, Oracle General Ledger, and Essbase Users Only)

A cross dimension variable is a Planning, Operational Planning, Oracle General Ledger, or Essbase replacement variable. It contains a range of members from multiple dimensions that enable you to launch business rules across dimensions.

➤ To enter values for a cross dimension variable:

- 1 Complete [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 From **Type**, select **Cross Dimension**.
- 3 For each dimension listed, in the **Value** table, enter or use the Member Selector to select limits for the variable.

Note: You must select RTP before you enter text in the Limits field.

- 4 Enter or use the Member Selector to select a value for the variable. You can select a member or a function.
- 5 **(Planning and Essbase users only)** Select **RTP** if the variable has a runtime prompt.

Note: If you do not select RTP, you must enter a value for the variable.

- 6 **(Planning and Essbase users only)** Enter the runtime prompt text you want to display for users.
- 7 Repeat [step 3](#) through [step 6](#) to select values for the all of the dimensions.
- 8 Select **File**, **Save**.

Entering Variable Values for a Dimension Variable (Planning, Operational Planning, Oracle General Ledger, and Essbase Users Only)

A dimension variable is a Planning, Operational Planning, Oracle General Ledger, or Essbase replacement variable. This variables contains a dimension that you select.

➤ To enter values for a dimension variable:

- 1 Complete [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 From **Type**, select **Dimension**.
- 3 In the **Value** table, select a dimension. The dimensions that display are the dimensions that belong to the application for which you are creating the variable.
- 4 **(Planning users only)** By default, **RTP** is selected. Clear **RTP** if you do not want the variable to have a runtime prompt.

Note: If you do not select RTP, you must enter a value for the variable.

- 5 **(Planning and Essbase users only)** If you selected **RTP**, enter the runtime prompt text you want to display for users.
- 6 Select **File, Save**.

Entering Variable Values for a Member or Members Variable (Planning, Operational Planning, Oracle General Ledger, and Essbase Users Only)

The member and members variables are Planning, Operational Planning, Oracle General Ledger, and Essbase replacement variables. These variables contain a member or multiple members from a dimension that you select.

➤ To enter values for a member or members variable:

- 1 Complete [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 From **Type**, select **Member** or **Members**.
- 3 In the **Value** table, select a dimension. The dimensions that display are the dimensions that belong to the application for which you are creating the variable.
- 4 Enter or use the Member Selector to select limits for the variable. You can select members only from the dimension you select in [step 3](#). You can also select functions. See [“Working with Functions” on page 269](#).
- 5 Enter or use the Member Selector to select a default value for the variable. You can select one member or function for a *member* variable and multiple members and functions for a *members* variable.
- 6 **(Planning users only)** By default, **RTP** is selected. If you do not want to create a runtime prompt variable, clear **RTP**.

Note: If you do not select RTP, you must enter a value for the variable.

- 7 **(Planning and Essbase users only)** If you selected **RTP**, enter the runtime prompt text you want to display for users.
- 8 **Planning users of Workforce Planning, Capital Asset Planning, Public Sector Budgeting, and Project Financial Planning plan types:** If you are using the member type variable in a business rule that has **Create dynamic member** and/or **Delete dynamic member** settings enabled, enter a default dynamic parent member in the **Dynamic Member Parent** column. When you use both of these options, Planning

creates members dynamically for this parent before the rule is launched and/or *deletes* members for this parent after the rule is launched.

Note: You should enable the dynamic member parent for dynamic children in the Planning database outline. After you enable this setting, you should refresh the database.

- 9 Select **File, Save**.

Entering Variable Values for Percent Variables (Planning, Operational Planning, Oracle General Ledger, and Essbase Users Only)

The Percent variable is a Planning, Operational Planning, Oracle General Ledger, and Essbase replacement variable. The Percent variable is also a Planning and Essbase block storage execution variable. This variable contains a percentage that you specify.

► To enter values for a percent variable:

- 1 Complete [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 From **Type**, select **Percent**.
- 3 In the **Value** table, click in **Limits** to define minimum and maximum values for the variable.
- 4 Enter a numeric value for the variable.
- 5 **(Planning users only)** By default, **RTP** is selected. If you do not want to create a runtime prompt, clear **RTP**.

Note: If you do not select **RTP**, you must enter a value for the variable.

- 6 **(Planning and Essbase users only)** If you selected **RTP**, enter the runtime prompt text you want to display for users.
- 7 Select whether to allow missing data values.
- 8 Select **File, Save**.

Entering Values for Integer Variables (Planning, Operational Planning, Oracle General Ledger, and Essbase Users Only)

The Integer variable is a Planning, Operational Planning, Oracle General Ledger, and Essbase replacement variable.

► To enter values for an integer variable:

- 1 Complete [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 From **Type**, select **Integer**.
- 3 **Optional:** In the **Value** table, click in **Limits** to define minimum and maximum integers values for the variable.
- 4 Click in the default value and enter an integer for the variable.

- 5 **(Planning users only)** By default, **RTP** is selected. If you do not want to create a runtime prompt for this variable, clear **RTP**.

Note: If you do not select **RTP**, you must enter a default value for the variable.

- 6 **(Planning and Essbase users only)** If you selected **RTP**, enter the runtime prompt text you want to display for users.
- 7 Select whether to allow missing data values.
- 8 Select **File, Save**.

Entering Variable Values for String as Number and Date as Number Variables (Planning Users Only)

The String as Number and Date as Number variables are Planning replacement or execution variables.

➤ To enter values for a string as number or date as number variable:

- 1 Complete [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 From **Type**, select **Date as Number**, **Percent**, or **String as Number**.
- 3 In the **Value** table, click in **Limits** to define minimum and maximum values for the variable.
- 4 Enter a numeric value for the variable.
- 5 By default, **RTP** is selected. If you do not want to create a runtime prompt, clear **RTP**.

Note: If you do not select **RTP**, you must enter a value for the variable.

- 6 If you selected **RTP**, enter the runtime prompt text you want to display for users.
- 7 Select whether to allow missing data values.
- 8 Select **File, Save**.

Entering Values for a Data Range Variable (Financial Management Users Only)

The data range variable is a Financial Management replacement variable. It contains a range of data values from dimensions you select.

➤ To enter values for a data range variable:

- 1 Complete [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 From **Type**, select **Data Range**.
- 3 In the **Value** table, for each dimension listed, select the **Actions** icon to enter a value for the variable.
 - To enter a variable, see [“Working with Variables” on page 249](#).
 - To enter a member, see [“Working with Members” on page 230](#).

- To enter a function, see [“Working with Functions” on page 269](#).
- 4 In **Variable**, click the **Variable** icon to select a variable for the data range.
 - 5 Click the **Comments** icon to enter comments for the variable.
 - 6 Repeat these steps for each dimension for which you want to define a data range.
 - 7 Select **File, Save**.

Entering Values for a Boolean Variable (Financial Management Users Only)

A Boolean variable is a Financial Management execution variables. A Boolean variable is one that has a true or false value.

► To enter values for a Boolean variable:

- 1 Complete [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 From **Type**, select **Boolean**.
- 3 In the **Value** field, enter a value for the variable.
- 4 Select **File, Save**.

Entering Values for a Log Information Variable (Financial Management Users Only)

The Log Information variable is a Financial Management replacement variable.

► To enter values for a log information variable:

- 1 Complete [step 1 on page 251](#) through [step 4 on page 251](#).
- 2 From **Type**, select **Log Information**.
- 3 In the **Value** table, enter the log text and the log expression, or click **Add/Edit Condition** to use the Condition Builder. See [“Using the Condition Builder to Create Conditional Statements \(Financial Management, Planning, Operational Planning, and Essbase Block Storage Application Users Only\)” on page 156](#).
- 4 Select **File, Save**.

Entering Runtime Prompt Variables (Planning and Essbase Users Only)

You can enter or edit values for runtime prompt variables when you are validating, debugging, deploying, analyzing, and (for Essbase users only) launching business rules. You can also enter or edit runtime prompt variables when you are validating and deploying business rulesets.

➤ To enter values for runtime prompt variables:

- 1 When you validate, debug, deploy, analyze, or (for Essbase users only) launch a business rule, or validate or deploy a business ruleset, if there are no errors, the **Enter RTP Values** dialog box is displayed.

Note: When you validate, debug, deploy, or analyze a business rule, or validate or deploy a business ruleset, the Enter RTP Values dialog is displayed only if there are missing values for one or more of the runtime prompt variables the business rule (or business ruleset) is using. If all runtime prompt variables have values, then Enter RTP Values dialog is not displayed.

When you launch an Essbase business rule, the Enter RTP Values dialog is displayed each time, regardless of whether the runtime prompt variables have values. If there are values, those values are displayed by default in the Enter RTP Values dialog.

- 2 For each of the runtime prompts listed, enter a value or select one .
- 3 **Optional:** if you are working with a business rule, select the **Apply values to the rule** check box so the values you provide are dynamically updated in the variable's value and visible in the **Value** column of the **Variables** tab within the Rule Designer.

Note: This check box is not available if you are launching a business rule from the System View.

- 4 Click **OK** or (for Essbase users only) **Launch**.
- 5 If there are validation errors, fix them, and repeat the task for which you want to enter runtime prompt variable values.

Selecting a Variable

You can select a variable from various locations. You can select variables as you create components from within the Component Designer, as you create design time prompts from within the Template Designer, and other locations.

➤ To select a variable:

- 1 In the System View, expand the application type, the application, the calculation type, plan type, or the database, and **Rules** or **Templates**, depending on whether you want to select a variable for a component in a business rule or template. In addition, if you want to work with an Operational Planning rule, you must expand the Calculation Type that contains the rule you want to work with after you expand the **Rules** node.
- 2 Do one of these tasks:
 - Right-click the template that contains the component you want to add a variable to, and select **Open**.
 - Right-click the business rule that contains the component you want to add a variable to, and select **Open**.

- 3 When the business rule or template opens, in its flow chart, select the component for which you want to insert a variable.
- 4 In the tabs below the flow chart, do one of these tasks:
 - For member range, data range, and fixed loop components, in the **Variable** field, select the **Variable** icon.
 - For formula components, click the **Actions** icon, and select **Variable**.
 - For script components, click the **Insert a Variable** icon.
 - For condition components, launch the Condition Builder, click the **Actions** icon, and select **Variable**.
- 5 In **Select Variable**, do one of these tasks:
 - If you want to create a new variable, click **Create** to access the Variable Designer. See [“Creating a Variable from the System View” on page 251](#).
 - If you want to select an existing variable, from **Category**, select the object with which you want to associate the variable. By default, the variable is associated with the application for which you create it. You can select:
 - (Financial Management and Planning users only) Global: The variable applies to all of the applications within an application type.
 - (All users) Application: The variable applies to the application for which it is created.
 - (Planning, Operational Planning, General Ledger, and Essbase users only) Plan Type or Database: The variable applies to the plan type or database for which it is created.
 - (Planning, Operational Planning, General Ledger, and Essbase users only) Rule: The variable applies to the rule for which it is created.

Note: Planning and Essbase users only: For formula and condition components, all of the available variables for the selected scope are not shown by default. If you want to see all of the available variables in the selected scope, select the Show all variables check box.
- 6 On **Replacement** or **Execution**, select one or more variables to insert into the component.

Tip: Use Ctrl + Click or Shift + Click to select multiple variables.
- 7 Click **OK**.

The variables are inserted into the component.
- 8 Select **File > Save**.

Editing a Variable

You can edit any property of a variable from the Variable Designer. When you make changes to a variable that was previously validated, any component that uses the variable is no longer

validated. You must validate each component again. See [Chapter 7, “Validating and Deploying Rules, Rulesets, and Formula and Script Components.”](#)

Deleting a Variable

You can delete a variable or variables from within the Variable Designer if they are not used in any components or member formulas. If a variable is used in a component, you must remove the variable from the component before you delete the variable.

➤ To delete a variable:

- 1 In the System View, select **Tools, Variables**.
- 2 In the Variable Navigator, expand the Financial Management, Planning, or Essbase application type and the application.
- 3 Do one of these tasks:
 - **Financial Management and Planning users only:** If the variable is a global variable, select **<Global>**.
 - **(All users)** If the variable is an application variable, select the application with which the variable is associated.
 - **Planning, Operational Planning, General Ledger, and Essbase users only:** If the variable is a plan type or database variable, select the plan type or database with which the variable is associated.
 - **Planning, Operational Planning, General Ledger, and Essbase users only:** If the variable is a business rule variable, select the business rule with which the variable is associated.

Any variables associated with the application type, the application, the calculation type, plan type, or database, and the business rule are displayed on **Replacement** or **Execution**.

- 4 On **Replacement** or **Execution**, right click the variable you want to delete, and select **Delete**.
- 5 In **Delete Confirmation**, select **Yes** to confirm deletion of the variable.

Refreshing Variables

You can refresh the list of variables in the Variable Navigator to see the most current list after you add, delete, or make changes to variables.

➤ To refresh the list of variables in the Variable Navigator:

- 1 In the System View, select **Tools, Variables**.
- 2 In the Variable Navigator, create, edit, or delete a variable. See these topics:
 - [“Creating a Variable from the System View” on page 251](#)
 - [“Editing a Variable” on page 264](#)
 - [“Deleting a Variable” on page 265](#)

3 On **Replacement** or **Execution**, right-click, and select **Refresh**.

Copying a Variable

You can copy a variable to the same or a different variable scope (that is, global level, application level, consolidation, plan, or database level, or rule level) using copy and paste. If the variable you are copying has the same name as a variable in the location into which you are copying it, you can give the variable you are copying a new name, skip copying the variable, or overwrite the contents of the variable.

► To copy and paste a variable:

1 In the **System View**, select **Tools, Variables**.

2 In the **Variable Navigator**, do one of these tasks:

- **Financial Management users only:** Expand **Consolidation**, and select an application or **Global**, depending on which contains the variable you want to copy.
- **Planning users only:** Expand **Planning**, and select **Global** or the application, plan type, or business rule associated with the variable you want to copy.
- **Essbase, General Ledger, and Operational Planning users only:** Expand **Essbase**, and select the application, database, or business rule associated with the variable you want to copy.

The variables associated with the object you select are displayed on the **Replacement** and/or **Execution** tabs.

3 Right-click the variable you want to copy, and select **Copy**.

4 Right-click the location or variable into which you want to paste the copied variable, and select **Paste**. (For example, if you are copying a **Planning global** variable, you may copy it as another **Planning global** variable or as a **plan type** variable)

- If you are trying to copy a variable and paste it into a location that contains a variable with the same name, the **Resolve Conflicts** dialog is displayed. Perform one of these tasks:
 - Give the variable a new name. (You cannot have two variables with the same name in the same location.)
 - Specify to skip copying the variable. (The contents of the copied variable are not pasted to the new location.)
 - Specify to overwrite the variable. (The contents of the copied variable are pasted to the new location and overwrite the contents of the copied to variable.)
- If you are trying to copy a variable and paste it into a location that does not contain a variable with the same name, the variable is pasted to the new location.

Searching in the Variable Designer

You can search for a variable by entering its name in the Search feature of the Variable Designer. You can also search for a text string in a variable. (For example, you can search for a string variable with a default value if you include basic properties in the search.)

By default, Calculation Manager searches using the variable's default value. If you include the basic properties of the variable in the search, Calculation Manager searches using both the default value and the name, type, description, and group of the variable.

► To search for a variable in the Variable Designer:

- 1 In the System View, select **Tools, Variables**.
- 2 In the **Search** field, enter the name of the variable for which to search.

Note: Calculation Manager searches for the variable only within the type (that is, global, application, calculation, plan, or database, or business rule) you select in the Variable Navigator. To search for a variable within all variable types, you must perform the search within each type separately. If you do not select a type, the Search facility is disabled.

3 Perform one of these actions:

- a. Click **Search** to search for the variable.
- b. **Optional:** Select any of these **Advanced Search** options:
 - Select **Match case** if you want the case of the text you are searching for to match the case of the text you enter in the Search field.
 - Select **Wrap search** if you want the search to start from the row you select in the grid and finish at the same row.
 - Select **Match whole word** if you want the text you are searching for to match the whole word (versus a part of the word) you enter in the Search field.
 - Select **Include Basic Properties**, if you want to include the variable name and description in the search.

4 Repeat the search to find all instances of the variable.

Showing the Usages of a Variable

You can display the business rules and templates that use variables. When you show the usages of a variable, this information is displayed:

- The names of the business rules and templates that are using the variable
- The application names of the business rules and templates that are using the variable
- The calculation types, plan types, or databases of the business rules and templates that are using the variable
- The owners of the business rules and templates that are using the variable

- Whether the business rules and templates that are using the variable are deployed
- Whether the business rules and templates that are using the variable are validated
- A description of the business rules and templates that are using the variable

➤ To show the usages of a variable:

- 1 In the **System View**, select **Tools**, then **Variables**.
- 2 In the **Variable Navigator**, select the database object that contains the variable whose usages you want to see. The variables defined for that object are displayed on the tabs in the **Variable Designer**.
- 3 Right-click the variable whose usages you want to see, and select **Show Usages**.
- 4 After you review the information, click **OK**.

Loading Predefined System Variables into Financial Management Applications (Financial Management Users Only)

To work with Financial Management system templates, first you must load predefined system variables into the applications in which you want to use the system templates. These system variables are execution and replacement variables that enable the system templates to work.

Note: Do not modify or delete these system variables. If you do, the system templates do not work as designed. If you modify or delete a system variable accidentally, you can reload the system variables into the application.

After you load the predefined system variables into an application, you can copy them to another application and use them as application variables. You can modify and delete these copied versions, because they are not linked to the system variables.

➤ To load predefined system variables into a Financial Management application:

- 1 In the **System View**, select **Tools**, **Variables**.
- 2 In the **Variable Navigator**, expand **Consolidation** to display its applications.
- 3 Right-click the application in which you want to use the system templates, and select **Load System Variables**.

A message is displayed that lets you know the system variables loaded successfully into the application. The predefined system variables display with application variables on the **Execution** and **Replacement** tabs when you select the application into which you loaded them.

Note: You must perform this procedure for each application in which you want to use system templates.

Working with Functions

If you are working with Financial Management, Planning, Operational Planning, and Essbase block storage applications, you use functions in formula, script, condition, and member range components; if you are working with Essbase aggregate storage applications, including those used in Oracle General Ledger, you use functions in Point of View components only.

You use functions to define member formulas that return data values or members. For example, you can use functions (and mathematical and logical operators) to return a list of siblings, parents, or children of a member you specify, to return a list of data values that are greater than or less than a value you specify, or to allocate data values from a member you specify. When you select a function, you are prompted to enter the correct parameters.

The functions you can use in calculations are different for Financial Management, Planning, Operational Planning, Oracle General Ledger, and Essbase applications.

Following is a list of the types of functions you can use in Financial Management components. Financial Management functions are categorized according to the types of rules in which they can be used. (See the *Oracle Hyperion Financial Management Administrator's Guide* for a complete list, and descriptions, of the functions you can use in components in Financial Management applications.)

- Calculation
- Translation
- Consolidation
- Allocation
- Dynamic Calculation
- Transactions

Following is a list of the types of functions you can use in Planning, Operational Planning, and Essbase block storage components. (See the *Oracle Essbase Technical Reference* for a complete list, and descriptions, of the functions.)

- Boolean
- Relationship
- Calculation Operators
- Control Flow
- Data declarations
- Functional
- Mathematical
- Member Set
- Range (Financial)
- Allocation
- Forecasting

- Statistical
- Date & Time
- Miscellaneous
- Custom-defined

Note: Functions are available in the Member Selector and the Function Selector.

You use only Member Set functions in Essbase aggregate storage applications and components, including those used in Oracle General Ledger. (See the *Oracle Essbase Technical Reference* for a complete list, and descriptions, of the Member Set functions.)

Inserting Functions into Components

You can insert functions into formula, script, condition, and member range components, if you are working with a Financial Management, Planning, Operational Planning, or Essbase block storage application. The function types you can select from differ depending on the application type and component type with which you are working. (See the first procedure in this topic.)

You can insert functions only into Point of View components if you are working with an Essbase aggregate storage application, including those Essbase aggregate storage applications used in Oracle General Ledger. In Essbase aggregate storage applications, there is only one function type to select from: the member set function type. (See the second procedure in this topic.)

► To insert a function into formula, script, condition, or member range component:

- 1 From the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type, the plan type, or the database, and **Rules, Templates, Formulas, or Scripts**, depending on the object into which you want to insert a function. In addition, if you want to work with an Operational Planning business rule, you must expand the Calculation Type that contains the rule you want to work with after you expand the **Rules** node.
- 2 Do one of these tasks:
 - Open the business rule that contains the component into which you want to insert a function. Then select the component for which you want to insert a function in the business rule's flow chart.
 - Open the template that contains the component into which you want to insert a function. Then select the component for which you want to insert a function in the template's flow chart.
 - Open the formula component into which you want to insert a function.
 - Open the script component into which you want to insert a function.
- 3 Do one of these tasks:
 - If you want to insert a function into a formula component, on the **Formula** tab, click in the **Formula** row, select the **Actions** icon, and select **Functions**.

- If you want to insert a function into a script component, on the **Script** tab, click the **Insert a function and its parameters** icon.
- If you want to insert a function into a member range component, on the **Member Range** tab, click in the **Value** column for a dimension, select the **Actions** icon, and select **Functions**.
- If you want to insert a function into a condition component, on the **Condition** tab, click the **Condition Builder** icon. In the Condition Builder, from **Formula**, **Function**, or **Value**, select the **Actions** icon, and select **Functions**.

4 In the Function Selector, do one of these tasks:

Note: Depending on the context in which you open the Function Selector, the available function types may be more limited than the function types described in [“Working with Functions” on page 269](#).

- If you can select function types from **Category**, select one, or select **All Functions** to display functions for all function types. The functions for the category, or all functions, are displayed in a list below the Category selection.
- If you cannot select among function types in **Category**, proceed to [step 5](#).

5 Select a function from the list of functions.

6 Enter parameters for the function. (See the *Oracle Essbase Technical Reference* for a description of the functions and parameters you can use for Planning and Essbase components, including those used in Operational Planning and Oracle Fusion General Ledger applications. See the *Oracle Hyperion Financial Management Administrator's Guide* for a description of the functions and parameters you can use in Financial Management components.)

7 Click OK.

➤ To insert a function into a Point of View component:

- 1 From the System View, expand the Essbase application type, the application, the database, and Rules.**
- 2 Open the business rule that contains the Point of View component into which you want to insert a function. Then select the Point of View component for which you want to insert a function in the business rule's flow chart.**
- 3 To insert a function into a Point of View component, on the **Point of View** tab, click in the **Value** column for a dimension, select the **Actions** icon, and select **Functions**.**
- 4 In the Function Selector, select a function from the list of functions:**
 - @Attribute
 - @Level0Descendants
 - @Siblings
 - @UDA

Note: Only Member Set functions are available when you are working in Essbase aggregate storage applications, including those used in Oracle General Ledger.

- 5 Enter parameters for the function. (See the *Oracle Essbase Technical Reference* for a description of the functions and parameters.)
- 6 Click **OK**.

Working with Smart Lists (Planning Users Only)

Smart Lists are custom drop-down lists that users access from Planning data form cells in Planning applications. When clicking into data form cells to enter data, users can select items from drop-down lists instead of typing in the cell. Users cannot type in cells that contain Smart Lists.

In Calculation Manager, you can insert a Smart List into formula, script, condition, and member range components.

Inserting Smart Lists (Planning Users Only)

You can use a Smart List in a Planning business rule, a formula component, or a script component. Smart Lists are available on Planning data forms, within certain data cells that a Planning administrator specifies. Smart Lists are customized drop-down lists containing options amongst which users can select.

► To insert a Smart List:

- 1 From the System View, expand the , Planning application type, the application, the plan type, and **Rules, Templates, Formulas, or Scripts**, depending on whether you want to insert a Smart List into a business rule, template, formula, or script component.
- 2 Do one of these tasks:
 - Open the business rule that contains the component into which you want to insert a Smart List. Then select the formula or script component into which you want to insert a Smart List in the business rule's flow chart.
 - Open the formula component into which you want to insert a Smart List.
 - Open the script component into which you want to insert a Smart List.
- 3 Do one of these tasks:
 - If you want to insert a Smart List into a business rule, on the **Script** tab, click the **Insert a smart list** icon.
 - If you want to insert a Smart List into a formula component, on the **Formula** tab, click in the **Formula** row, select the **Actions** icon, and select **Smart List**.
 - If you want to insert a Smart List into a script component, on the **Script** tab, click the **Insert a smart list** icon.
- 4 Click **Save**.

7

Validating and Deploying Rules, Rulesets, and Formula and Script Components

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Validating Business Rules, Business Rulesets, and Formula and Script Components from the System View

You validate business rules, rulesets, formula and script components to make sure they are syntactically correct before you deploy them to an application. The validation process ensures that:

- All dimension members are valid for the dimension within the application.
- All functions exist, have the correct number of parameters, and are valid for the application type.
- All variable references in business rules are valid. For replacement variables, the variables are replaced with the correct strings first and then validated. For execution variables, the validation process ensures the variables are defined for the application, the applications within an application type, the calculation type (for Financial Management users), the plan type (Planning users) or the database (Essbase, Oracle General Ledger, and Operational Planning users), and/or the business rule (Planning and Essbase users only).
- There are no syntactic errors in the script generation.

Planning users only: If you are validating business rules that have runtime prompts with default values, the validation process ensures that all members in the runtime prompt are valid for the selected plan type and application and that there are no syntactic or semantic errors. If you are validating business rules that have runtime prompts *without* default values, no validation is performed.

Note: If you do not validate rules and rulesets prior to deployment, they are validated as part of the deployment process to ensure that they are syntactically correct.

► To validate a business rule, a ruleset, or a formula or script component:

1 In the System View, expand the application type and the application.

2 Do one of these tasks:

- **Financial Management users:** To validate a ruleset, expand the calculation type and **Rulesets**.
- **Planning, Operational Planning, and Essbase users:** To validate a ruleset, expand **Rulesets**.

Note: For Financial Management applications, there is a Rulesets node for each calculation type within the application. For Planning and Operational Planning applications, there is only one Rulesets node for each application at the same level as the plan types and databases.

- To validate a rule, formula, script, or template, expand the calculation type, plan type, or the database, and **Rules, Formulas, Scripts, or Templates**, depending on the object you want to validate.

3 Do one of these tasks:

- Right-click the object you want to validate, and select **Validate**.
- Select the object you want to validate, and select **Actions, Validate**.

4 **Planning and Essbase users only:** In **Validate Options**, select whether you want to validate against Planning (for Planning rules) or Essbase (for Essbase rules), Performance Management Architect, or both. Then click **OK**.

Note: If you are validating an object from an application created with Financial Management or Planning application administration, you can validate against only Financial Management or Planning. You cannot validate an object from a Financial Management or Planning application against a Performance Management Architect application.

5 Do one of these tasks:

- a. If the object is validated successfully, click **OK**.
- b. If there are errors, they are displayed. Fix the errors and validate the object again.

Validating a Business Rule from the Rule Designer

When you are creating a business rule or debugging a business rule, you can validate it quickly from within the Rule Designer.

- You can validate a Financial Management business rule from a Performance Management Architect application against Financial Management, Performance Management Architect, or both.
- You can validate a Financial Management business rule created with Financial Management application administration against Financial Management only.

- You can validate a Planning business rule from a Performance Management Architect application against Planning, Performance Management Architect, or both.
- You can validate a Planning business rule created with Planning application administration against Planning only.
- You can validate an Essbase rule from an Essbase application against Essbase only.
- You can validate an Oracle General Ledger rule from an Oracle General Ledger application against Essbase only.
- You can validate an Operational Planning rule from an Operational Planning application against Essbase only.

➤ To validate a business rule from within the Rule Designer:

- 1 In the System View, expand the application type, the application, the calculation type, plan type, or database, and **Rules**.
- 2 Right-click the rule you want to validate, and select **Open**.
- 3 In the Rule Designer, select **Actions**, then **Validate**, and do one of these tasks:
 - If you are working with an application created with Financial Management or Planning application administration:
 - If you are working with a Financial Management rule, select **Consolidation**.
 - If you are working with a Planning rule, select **Planning**.

Note: If you are working with business rules in an application created with Financial Management or Planning application administration, you can validate against only the application in which the rule is created.

- If you are working with a Performance Management Architect application:
 - If you are working with a Financial Management rule, select **EPMA, Consolidation, or Both**. Then click **OK**.
 - If you are working with a Planning rule, select **EPMA, Planning, or Both**. Then click **OK**.
- If you are working with an Essbase application and rule (including those created for Oracle General Ledger and Operational Planning applications), select **Essbase**.

If the rule validates successfully a message is displayed. If the rule does not validate, the errors are displayed.

Deploying Business Rules and Business Rulesets

You can deploy business rules to Planning, Operational Planning, Oracle General Ledger, and Essbase. You can deploy business rulesets to Financial Management, Planning, Oracle General Ledger, and Operational Planning. You can deploy one or more business rules or business

rulesets (known as a partial deployment), or you can deploy all of the business rules and rulesets in an application (known as a full deployment).

Note: If you have a Planning business rule with a variable that exists at multiple levels (that is, a variable that exists at more than one of these levels: global, application, plan type, or rule), and you delete the variable at the lowest level, you must perform a full redeployment of the Planning application so this deletion is made in any rules that use this variable in Planning. If you perform a partial redeployment only, the deletion of the variable may not be made, and it may still be in use in Planning.

You can deploy only business rulesets to Financial Management. You can deploy one ruleset from each calculation type in the application; you cannot deploy individual rules.

If you are working with a Performance Management Architect application, you can also deploy rules and applications from within the Application Library of Performance Management Architect. See the *Oracle Hyperion Enterprise Performance Management Architect Administrator's Guide*.

After you deploy business rulesets to Financial Management, you can run calculations or consolidations from within data forms or data grids. After you deploy business rules and business rulesets to Planning, you can launch them from within data forms or independently from the Launch menu. After you deploy business rules and business rulesets to Essbase, you can launch them from Administration Services or directly from Calculation Manager. After you deploy business rules and business rulesets to Oracle General Ledger, you can launch them from within Oracle General Ledger using the Generate Allocations link. After you deploy business rules and business rulesets to Operational Planning, you can launch them from Operational Planning.

See these resources for more information on launching business rules and business rulesets:

- *Oracle Hyperion Financial Management User's Guide*
- *Oracle Hyperion Planning User's Guide*
- *Oracle Essbase Administration Services Online Help*
- [Chapter 8, "Launching Essbase Business Rules \(for Essbase Aggregate Storage and Essbase Block Storage Application Users Only\)"](#) in this guide.

Making Business Rules and Business Rulesets Deployable and Not Deployable

If you want to deploy a subset of business rules and business rulesets in an application, you must make them deployable in the Deployment View. To make the rules and rulesets deployable, you select the check boxes next to their names in the Deployment View.

Note: If you want to deploy only one business rule or business ruleset, or all of the rules and rulesets in an application, you do not need to make them deployable in the Deployment View.

To remove a business rule or ruleset from an application after you deploy the business rule or ruleset, make it ineligible for deployment by clearing the check box next to its name in the Deployment View. Then you can perform a full deployment of the application by right-clicking it and selecting Deploy.

➤ To make business rules and business rulesets deployable:

- 1 From the System View, select **View, Deployment View**.
- 2 In the Deployment View, expand the application type and the application that contains the rule or ruleset you want to deploy.
- 3 Expand the **To Be Deployed** node to see a list of the rules and rulesets that can be deployed.
- 4 Select the check boxes next to the rules and rulesets you want to make eligible for deployment.

Note: Before a rule or ruleset is deployed, it must be validated for syntactic accuracy. You can validate rules and rulesets manually using the Validate feature. (See [“Validating Business Rules, Business Rulesets, and Formula and Script Components from the System View”](#) on page 273. If you do not validate before you deploy, however, the rules and rulesets are validated automatically as part of the deployment process.

Deploying Business Rules and Business Rulesets from the Deployment View

You can deploy business rules and business rulesets from the Deployment View. You can also deploy one business rule or one business ruleset to Planning, Operational Planning, Essbase, or Oracle General Ledger from the Rule Designer (for business rules) or the Ruleset Designer (for business rulesets). See [“Deploying a Business Rule or Business Ruleset from the Rule or Ruleset Designer ”](#) on page 279.

If you are deploying to Financial Management, you can deploy one business ruleset for each calculation type in an application; you cannot deploy business rules to Financial Management.

➤ To deploy business rules and business rulesets from the Deployment View:

- 1 From the System View, select **View, Deployment View**.

Note: You can also deploy business rules and business rulesets from the System View by right-clicking them and selecting Deploy.

- 2 In the Deployment View, expand the application type.
- 3 Do one of these tasks:
 - **Planning, Operational Planning, and Essbase users:** To deploy *all* of the rules and rulesets within an application (known as a full deployment), right-click the application, and select **Deploy All**.

Note: When you deploy all of the rules and rulesets in an application (known as a full deployment), the folders containing the rules and rulesets are deleted from the Deployment View.

- **Planning, Operational Planning, and Essbase users:** To deploy *a subset* of the business rules and business rulesets (known as partial deployment), expand the application and the **To Be Deployed** node. Then perform these steps:
 - a. If they are not selected, select the rulesets you want to deploy.
 - b. Expand the plan types that contain rules you want to deploy.
 - c. If they are not selected, select the rules you want to deploy.
 - d. Right-click, and select **Deploy**.

Tip: To deploy multiple rules or rulesets, use Ctrl + Click and Shift + Click to select them, right-click, and select Deploy.

Note: If you deploy a business rule with shortcuts to other applications, the business rule is deployed to each of the applications for which there is a shortcut. If you are working with a Performance Management Architect application, and you want to ensure that rules with shortcuts are successfully deployed to each application, in Performance Management Architect, use the Library Job Console to see the results of the deployment.

- **Financial Management users only:** To deploy business rulesets:
 - a. Expand the application, the **To Be Deployed** node, and the calculation types that contain rulesets you want to deploy.
 - b. If they are not selected, select the rulesets you want to deploy. You can deploy one ruleset per calculation type.

Note: Be sure to include the Generic_Ruleset for deployment.

- c. Right-click the application, and select **Deploy**. When you deploy, the objects in .xml format are converted into .rle format and loaded into the Financial Management application.

Tip: To deploy multiple rulesets, use Ctrl + Click and Shift + Click to select them, right-click, and select Deploy.

If the deployment is successful, a “Deployment was successful” message is displayed. If there are issues, and you are working with a Performance Management Architect application, the Performance Management Architect Job Task dialog is displayed with a link to the Library Job Console.

Deploying a Business Rule or Business Ruleset from the Rule or Ruleset Designer

After you design a business rule or ruleset, you can validate and deploy it directly from within the Rule Designer or Ruleset Designer.

➤ To deploy a business rule or business ruleset from the Rule Designer or Ruleset Designer:

- 1 From the System View, expand the application type and the application that contains the rule or ruleset you want to deploy.

Note: You can also deploy rules and rulesets from the System View. Right-click the rule or ruleset, and select **Deploy**.

- 2 Do one of these tasks:

- If you want to deploy a business rule, expand the plan type or the database that contains the rule, then expand **Rules**.
- If you want to deploy a business ruleset, expand **Rulesets**.

Note: If you are working with an Operational Planning application, you must expand the Calculation Type node that contains the rule or ruleset you want to work with after you expand the Rules or Rulesets node.

- 3 Right-click the rule or ruleset you want to deploy, and select **Open**.

- 4 From the **Rule Designer** or **Ruleset Designer**, select **Actions, Deploy**.

If the deployment is successful, a “Deployment was successful” message is displayed. If there are issues, and you are working with a Performance Management Architect application, the Performance Management Architect Job Task dialog is displayed with a link to the Library Job Console.

Deploying Business Rules with Shortcuts

If you have business rules with shortcuts, when you deploy the business rules to applications, a copy of the rule is deployed to each of the applications for which you created a shortcut.

➤ To deploy a business rule with shortcuts:

- 1 From the System View, select **View, Deployment View**.
- 2 In the Deployment View, expand the application type, the application, the **To Be Deployed** node, and the plan type or the database.
- 3 Right-click the rule you want to deploy, and select **Deploy All**.

Deploying a Business Rule from the Rule Designer

If you are working with a business rule within the Rule Designer, you may want to deploy it immediately to an application. You can do this from within the Rule Designer.

► To deploy a business rule from within the Rule Designer:

- 1 In the **System View**, expand the **application type**, the **application**, the **calculation type**, **plan type**, or **database**, and **Rules**.
- 2 Right-click the rule you want to deploy, and select **Open**.

Note: You can also right-click and select **Deploy** to deploy a business rule from the **System View**.

- 3 In the **Rule Designer**, select **Actions**, then **Deploy**, and do one of these tasks:

- If you are working with an application created with Financial Management or Planning application administration:
 - If you are working with a Financial Management rule, select **Consolidation**.
 - If you are working with a Planning rule, select **Planning**.

Note: If you are working with business rules in applications created with Financial Management or Planning application administration, you can validate against only the application in which the rule is created.

- If you are working with a Performance Management Architect application:
 - If you are working with a Financial Management rule, select **EPMA**, **Consolidation**, or **Both**. Then click **OK**.
 - If you are working with a Planning rule, select **EPMA**, **Planning**, or **Both**. Then click **OK**.
- If you are working with an Essbase application and rule, select **Essbase**.

If the rule validates successfully, a message is displayed. If the rule does not validate, the errors are displayed.



Launching Essbase Business Rules (for Essbase Aggregate Storage and Essbase Block Storage Application Users Only)

You can launch Essbase aggregate storage and block storage business rules from within the System View or the Rule Designer of Calculation Manager, unlike Financial Management and Planning business rulesets and business rules, that you must launch in Financial Management and Planning, respectively.

Note: You launch Essbase aggregate storage business rules used in Oracle General Ledger applications from within Oracle General Ledger.

► To launch an Essbase business rule:

- 1 In the System View, expand the Essbase application type, the application, the database, and **Rules**.
- 2 In the System View, do one of these tasks:
 - Right-click the business rule you want to execute, and select **Execute**.
 - Double-click the rule you want to execute. When the rule opens in the Rule Designer, select **Actions**, then **Execute**.

9

Migrating Business Rules (Financial Management and Planning Users only)

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About Migrating Business Rules

After you upgrade applications from previous releases to this release, you need to migrate (Planning) or import (Financial Management) business rules from prior releases into this release. When the business rules are migrated, you can use Calculation Manager to work with and maintain them.

Note: You cannot migrate business rules from applications created with Financial Management or Planning application administration into Calculation Manager. Business rules can only be migrated to Calculation Manager from Performance Management Architect applications.

Migrating Business Rules from Business Rules (Planning Users Only)

To migrate Planning business rules and other objects from a previous release of Oracle Hyperion Business Rules to Calculation Manager, you use the Migrate feature. When you migrate Business Rules objects to Calculation Manager, business rules are migrated as business rules, sequences are migrated as business rulesets, variables are migrated as variables, and macros are migrated as templates.

Note: If you have Business Rules projects, they are migrated directly to Planning when you migrate security.

Following are some considerations for migrating business rules from Business Rules to Calculation Manager:

- You migrate business rules from Business Rules to Calculation Manager by migrating the application to which they belong. You can migrate one application at a time.
- You can migrate a business rule only once, even if you modify it after you migrate it. However, you can use the migration feature iteratively to migrate new business rules from Business Rules to Calculation Manager.
- To migrate business rules, they must meet these criteria:
 - They must not have been migrated.
 - They must have an outline that belongs to the application you are migrating.
 - They must be able to be launched for all locations in the application in Business Rules or be able to be launched for at least one of the plan types in the application in Calculation Manager.
- When you migrate business rules that are able to be launched for all locations in the application being migrated, this is what happens:
 - If an outline is selected in Business Rules, and the outline belongs to the application you are migrating, the business rules are migrated to the application and plan type specified in the outline. If no outline is selected in Business Rules, the business rules are migrated to a default application and plan type, which is specified by the user who is performing the migration in the Calculation Manager Migrate dialog.
 - The deployment status of the business rules is not migrated.
 - If business rules are migrated to the default application and plan type, no shortcuts are created in the migrated application.
- When you migrate business rules that are able to be launched for one or more locations in the application being migrated, this is what happens:
 - If an outline is selected in Business Rules, but it does not belong to the application you are migrating, the business rules are migrated to a default application and plan type, which is specified by the user performing the migration in the Calculation Manager Migrate dialog.
 - If an outline is selected in Business Rules, and it belongs to the application you are migrating, the business rules are migrated to the application and plan type specified in the outline. If no outline is specified, the business rules are migrated to the first plan type in the Calculation Manager application.
 - The deployment status of the business rule is set to “Deployed” in the Deployment View of Calculation Manager.
 - If a business rule has more than one launch location defined for the application in Business Rules, a shortcut is created only for one plan type in the Calculation Manager application, because rule names must be unique across all plan types in Calculation Manager.

Following are some considerations for migrating Capital Asset Planning, Workforce Planning, and Human Capital Planning business rules to Calculation Manager:

- Oracle Hyperion Capital Asset Planning, Oracle Hyperion Workforce Planning, and Human Capital Planning business rules are migrated to the Capital Asset, Workforce, and Human

Capital plan types respectively, if the application you are migrating has Capital Asset, Workforce, and Human Capital plan types enabled.

- The deployment status is set to “Deployed” in the Deployment View of Calculation Manager.
- A shortcut is created in the Capital Asset, Workforce, and Human Capital plan types in the application in Calculation Manager only if the business rule was migrated previously.

Following are some considerations for migrating Business Rules sequences to Calculation Manager:

- You can migrate a sequence only once, even if you modify it after you migrate it.
- In Business Rules, a sequence can contain rules that can be launched across different applications. Calculation Manager also supports launching rulesets across different applications.
- In Business Rules, a business rule within a sequence can have multiple launch locations for the same application. In Calculation Manager, a business rule within a business ruleset can have only one launch location for the same application.
- In Business Rules, sequences do not have an outline.
- A sequence can be migrated if the following conditions are met:
 - All rules within the sequence (and within each of the nested sequences) have been migrated successfully.
 - For all rules in the sequence, if there is a launch location defined for the rule when it is launched as part of the sequence, the launch location should be one of the launch locations defined for the rule when it is launched by itself, and the rule should have been migrated to that location successfully. If both of these conditions are met, the sequence can be migrated.
 - Each rule within the sequence should have at least one launch location defined in Business Rules to which the rule has been migrated in Calculation Manager. If the launch location for a rule in the sequence is not one of the launch locations defined for the rule itself, the sequence cannot be migrated, because the launch location for the rule is unknown. Also, if a business rule in a sequence has All Locations set as its launch location in Business Rules, the sequence cannot be migrated.
 - If a sequence is eligible for migration, it is migrated to the application and is displayed in the System View of Calculation Manager, in the Rulesets node at the application level.
 - When you migrate a sequence, its status in the Deployment View is set to “Deployed.”
 - If one or more of its rules fails to migrate, the sequence is migrated partially.

Following are some considerations for migrating variables from Business Rules to Calculation Manager:

- When you migrate a business rule with variables, the variables are automatically migrated. In Business Rules, variables are either global or local. In Calculation Manager, variables are global (for use in any application), application specific (for use in one application only), plan type specific (Planning users only; for use in one plan type only), or rule specific (Planning users only; for use in one business rule only). When global variables are migrated,

they are global variables in Calculation Manager; when local variables are migrated, they are business rule variables in Calculation Manager.

Note: When you migrate a Business Rules global variable that already exists in Calculation Manager, you can change it from a global to an application variable.

- You can migrate a variable only once, even if you modify it after you migrate it.
- Variable information that is set at rule level is also migrated.
- Launch values assigned to variables at the sequence level are migrated to their equivalents in Calculation Manager.

Following are some considerations for migrating macros from Business Rules to Calculation Manager:

- You can migrate a macro only once, even if you modify it after you migrate it.
- A macro is migrated to a template in Calculation Manager.
- Parameters are migrated to design time prompts in Calculation Manager. Design time prompts are named parm1, parm2, parm3, and so on, and are of the String type.
- The macro core is migrated to a graphical script component.
- When macros are migrated to templates, the templates are placed in the first plan type of the migrated application.
- Macros with nested macros are not migrated.

Following are some considerations for migrating Essbase substitution variables:

- Essbase substitution variables at the application and plan type level are migrated the first time an application containing them is migrated. If the application is migrated again, the Essbase substitution variables are not migrated.
- Essbase substitution variables at the global level are not migrated.

Note: The Calculation Manager migration functionality migrates business rules and other objects; it does not migrate projects or launch security for any objects. To migrate projects and launch security to Planning, you must use a utility installed with Planning. (See the *Oracle Hyperion Planning Administrator's Guide*.)

➤ To migrate business rules from Business Rules to Calculation Manager:

1 In the System View, select **Actions, Migrate**.

Note: You can also migrate business rules from the List View and the Custom View. To open one of these views, select View, List View or View, Custom View.

2 In the Migrate dialog, select an application to migrate from Business Rules.

Note: The application must be deployed.

- 3 In **Application**, select the default application to which to migrate business rules. You must specify a default application for business rules that are able to be launched for the application being migrated, but for which no outline was selected in Business Rules or the selected outline does not belong to the current application.
- 4 In **Plan Type**, select the default plan type.
- 5 In **Migrate Options**, select **Migrate global variables into an application** if you want Business Rules global variables that have the same name as global variables in Calculation Manager to be migrated as application variables.
- 6 Select **Overwrite existing objects** if you want the objects you migrate to overwrite the objects that already exist in the application and plan type.
- 7 Select **Skip existing objects** if you want the objects you migrate to be added to the objects that already exist in the application and plan type.
- 8 Select **Error out for duplicates** if you want to stop the migration process if the objects you migrate duplicate objects that already exist in the application and plan type.
- 9 Click **OK**.

Migration Use Cases

The following two tables describe the various application and plan type combinations during migration of rules to the locations Performance Management Architect App1 and Performance Management Architect App2. For purposes of this example, App1 and App2 are existing Performance Management Architect applications; App3 does not exist yet.

Table 20 Migration of App1

Business Rules artifact	Design location in Business Rules	Launch location in Business Rules	System View location in Calculation Manager	Deployment View location in Calculation Manager	Migrated To	Shortcut In
R1	App1/pt1	App1/pt2, App2/pt1	App1/pt1	None since the launch location does not match the design app	App1	None
R2	Empty	All Locations	Default application/ Default plan type	None	Default application	None
R3	App2/pt1	App2/pt1	Skipped	None	None	None
R4	App1/pt2	App2/pt1	App1/pt2	None	App1	None
R5	App3/pt1	All locations	Default application/ Default plan type	None	Default application	None
R6	App1/pt1	App3/pt1	App1/pt1	None	App1	None
R7	<empty>	App3/pt1	Skipped	None	None	None

Business Rules artifact	Design location in Business Rules	Launch location in Business Rules	System View location in Calculation Manager	Deployment View location in Calculation Manager	Migrated To	Shortcut In
R8	App1/pt1	App1/pt2, App1/pt1	App1/pt1	App1/pt1	App1	None
R9	<empty>	App1/pt2, App1/pt1	App1/pt1	App1/pt1	App1	None
R10	App3/pt1	App1/pt2, App1/pt1	Default application/ Default plan type	App1/pt2	Default application	App1/pt2

Table 21 Migration of App2

Business Rules artifact	Design location in Business Rules	Launch location in Business Rules	System View location in Calculation Manager	Deployment View location in Calculation Manager	Migrated To	Shortcut In
R1	App1/pt1	App1/pt2, App2/pt1	Already migrated	App2/pt1	App1	App2/pt1
R2	<empty>	All locations	Already migrated	None	Default application from previous run	None
R3	App2/pt1	App2/Pt1	App2/pt1	App2/Pt1	App2	None
R4	App1/pt2	App2/pt1	Already migrated	App2/pt1	App1	App2/pt1
R5	App3/pt1	All locations	Already migrated	None	Default application from previous run	None
R6	App1/pt1	App3/pt1	Skipped	None	App1	None
R7	<empty>	App3/pt1	Skipped	None	None	None

The following two tables describe the various application and plan type combinations during migration of sequences to the locations Performance Management Architect App1 and Performance Management Architect App2. For purposes of this example, App1 and App2 are existing Performance Management Architect applications; App3 does not exist yet.

Table 22 Migration of App1

Business Rules Artifact	Sequence Migrated to	Launch Locations	Overridden Launch location	System View location in Calculation Manager	Deployment View location in Calculation Manager	Migrated to
RS1, R1	App1/pt1	App1/pt2, App2/pt1	<empty>	Skipped since not all rules are migrated	None	None

Business Rules Artifact	Sequence Migrated to	Launch Locations	Overridden Launch location	System View location in Calculation Manager	Deployment View location in Calculation Manager	Migrated to
RS1, R2	Default app (for example, App1/pt1)	All locations	<empty>	Skipped since not all rules are migrated	None	None
RS1, R3	None	App2/Pt1	<empty>	Skipped since not all rules are migrated	None	None
RS2, R4	App1/pt2	App2/pt1	App2/pt1	Skipped since the over loaded launch location for R4 is not where R4 was migrated to	None	None
RS2, R6	App1/pt1	App3/pt1	<empty>	Skipped since the over loaded launch location for R4 is not where R4 was migrated to	None	None
RS2, R8	App1/pt1	App1/pt2, App1/pt1	<empty>	Skipped since the over loaded launch location for R4 is not where R4 was migrated to	None	None
RS3, R4	App1/pt2	App2/pt1	App1/pt2	Skipped since the over loaded launch location for R4 is not one of the launch locations	App1	App1
RS3, R6	App1/pt1	App3/pt1	<empty>	Skipped since the over loaded launch location for R4 is not one of the launch locations	App1	App1
RS3, R8	App1/pt1	App1/pt2, App1/pt1	<empty>	Skipped since the over loaded launch location for R4 is not one of the launch locations	App1	App1
RS4, R4	App1/pt2	App2/pt1	<empty>	Skipped since R4 launch location is not the same as where R4 was migrated to	None	None

Business Rules Artifact	Sequence Migrated to	Launch Locations	Overridden Launch location	System View location in Calculation Manager	Deployment View location in Calculation Manager	Migrated to
RS4, R6	App1/pt1	App3/pt1	<empty>	Skipped since R4 launch location is not the same as where R4 was migrated to	None	None
RS4, R8	App1/pt1	App1/pt2, App1/pt1	<empty>	Skipped since R4 launch location is not the same as where R4 was migrated to	None	None
RS5, R1	App1/pt1	App1/pt2, App2/pt1	<empty>	Skipped since not all rules are migrated	None	None
RS5, R2	Default app (for example, App1/pt1)	All Locations	<empty>	Skipped since not all rules are migrated	None	None
RS5a, R3	None	App2/Pt1	<empty>	Skipped since not all rules are migrated	None	None
RS5a, R4	App1/pt2	App2/pt1	<empty>	Skipped since not all rules are migrated	None	None

Table 23 Migration of App2

Business Rules Artifact	Sequence Migrated to	Launch Locations	Overridden Launch location	System View location in Calculation Manager	Deployment View location in Calculation Manager	Migrated to
RS1, R1	App1/pt1	App1/pt2, App2/pt1	<empty>	Skipped since the launch location for R2 is not known	None	None
RS1, R2	Default app from previous run (for example, App1/pt1)	All locations	<empty>	Skipped since the launch location for R2 is not known	None	None
RS1, R3	App2/pt1	App2/Pt1	<empty>	Skipped since the launch location for R2 is not known	None	None

Business Rules Artifact	Sequence Migrated to	Launch Locations	Overridden Launch location	System View location in Calculation Manager	Deployment View location in Calculation Manager	Migrated to
RS2, R4	App1/pt2	App2/pt1	App2/pt1	Skipped since the over loaded launch location for the R4 and R6 launch location is not where rules were migrated to	None	None
RS2, R6	App1/pt1	App3/pt1	<empty>	Skipped since the over loaded launch location for the R4 and R6 launch location is not where rules were migrated to	None	None
RS2, R8	App1/pt1	App1/pt2, App1/pt1	<empty>	Skipped since the over loaded launch location for the R4 and R6 launch location is not where rules were migrated to	None	None
RS3, R4	App1/pt2	App2/pt1	<empty>	Skipped since the launch location for R4 was not where it was migrated to	App1	None
RS3, R6	App1/pt1	App3/pt1	<empty>	Skipped since the launch location for R4 was not where it was migrated to	App1	None
RS3, R8	App1/pt1	App1/pt2, App1/pt1	<empty>	Skipped since the launch location for R4 was not where it was migrated to	App1	None
RS5, R1	App1/pt1	App1/pt2, App2/pt1	<empty>	Skipped since not all rules are migrated	None	None
RS5, R1	App1/pt1	App1/pt2, App2/pt1	<empty>	Skipped since the launch location for R2 is not known	None	None
RS5, R2	Default app from previous run (for example, App1/pt1)	All Locations	<empty>	Skipped since the launch location for R2 is not known	None	None

Business Rules Artifact	Sequence Migrated to	Launch Locations	Overridden Launch location	System View location in Calculation Manager	Deployment View location in Calculation Manager	Migrated to
RS5a, R3	App2/pt1	App2/Pt1	<empty>	Skipped since the launch location for R2 is not known	None	None
RS5a, R4	App1/pt2	App2/pt1	<empty>	Skipped since the launch location for R2 is not known	None	None

Migrating Business Rules from Financial Management (Financial Management Users Only)

To migrate Financial Management business rules from a previous release of Financial Management to Calculation Manager, you use the Import feature of Calculation Manager.

When you import Financial Management business rules, they are imported as Visual Basic script rule files (.rle files) with SUB statements. Each SUB statement in the rule file is converted into a Calculation Manager script component for the rule and rule set of the SUB statement's calculation type.

Following is a list of the valid SUB statement types:

- SUB Calculate
- SUB Consolidate
- SUB Translate
- SUB Allocate
- SUB Input
- SUB NoInput
- SUB Dynamic
- SUB Transactions
- SUB EquityPickUp
- SUB Global

For each SUB statement of a valid calculation type, a ruleset containing one business rule with one script component is created. If there is a SUB statement in the rule file that is not one of the valid calculation types, or if there are functions, they are converted into the Generic calculation type. For example, if there is a SUB statement, Write_To_File(), in the rule file, it is converted to the Generic calculation type, because it is not one of the defined calculation types.

Following are the possible rulesets, rules, and script components that may be created during migration from Financial Management to Calculation Manager:

Sub Calculate

- Ruleset
 - Name: Calculate_Ruleset
 - Calc type: Calculate
 - Contains a rule named Calculate_Rule
- Rule
 - Name: Calculate_Rule
 - Calc type: Calculate
 - Contains a script component named Calculate_Component
- Script component
 - Name: Calculate_Component
 - Calc type: Calculate
 - Contains the corresponding Visual Basic script statement in the script component

Sub Translate

- Ruleset
 - Name: Translate_Ruleset
 - Calc type: Translate
 - Contains a rule named Translate_Rule
- Rule
 - Name: Translate_Rule
 - Calc type: Translate
 - Contains a script component named Translate_Component
- Script component
 - Name: Translate_Component
 - Calc type: Translate
 - Contains the corresponding Visual Basic script statement in the script component

Sub Consolidate

- Ruleset
 - Name: Consolidate_Ruleset
 - Calc type: Consolidate
 - Contains a rule called Consolidate_Rule
- Rule
 - Name: Consolidate_Rule
 - Calc Type: Consolidate
 - Contains a script component called Consolidate_Component

- Script component
 - Name: Consolidate_Component
 - Calc Type: Consolidate
 - Contains the corresponding Visual Basic script statement in the script component

Sub Dynamic

- Ruleset
 - Name: Dynamic_Ruleset
 - Calc type: Dynamic
 - Contains a rule called Dynamic_Rule
- Rule
 - Name: Dynamic_Rule
 - Calc Type: Dynamic
 - Contains a script component called Dynamic_Component
- Script Component
 - Name: Dynamic_Component
 - Calc Type: Dynamic
 - Contains the corresponding Visual Basic script statement in the script component

Sub Input

- Ruleset
 - Name: Input_Ruleset
 - Calc type: Input
 - Contains a rule called Input_Rule
- Rule
 - Name: Input_Rule
 - Calc Type: Input
 - Contains a script component called Input_Component
- Script Component
 - Name: Input_Component
 - Calc Type: Input
 - Contains the corresponding Visual Basic script statement in the script component

Sub NoInput

- Ruleset
 - Name: NoInput_Ruleset

- Calc type: NoInput
- Contains a rule called NoInput_Rule
- Rule
 - Name: NoInput_Rule
 - Calc Type: NoInput
 - Contains a script component called NoInput_Component
- Script Component
 - Name: NoInput_Component
 - Calc Type: NoInput
 - Contains the corresponding Visual Basic script statement in the script component

Sub Transactions

- Ruleset
 - Name: Transactions_Ruleset
 - Calc type: Transactions
 - Contains a rule called Transactions_Rule
- Rule
 - Name: Transactions_Rule
 - Calc Type: Transactions
 - Contains a script component called Transactions_Component
- Script Component
 - Name: Transactions_Component
 - Calc Type: Transactions
 - Contains the corresponding Visual Basic script statement in the script component

Sub EquityPickUp

- Ruleset
 - Name: EquityPickUp_Ruleset
 - Calc type: EquityPickUp
 - Contains a rule called EquityPickUp_Rule
- Rule
 - Name: EquityPickUp_Rule
 - Calc Type: EquityPickUp
 - Contains a script component called EquityPickUp_Component
- Script Component
 - Name: EquityPickUp_Component

- Calc Type: EquityPickUp
- Contains the corresponding Visual Basic script statement in the script component

Sub Allocate

- Ruleset
 - Name: Allocate_Ruleset
 - Calc type: Allocate
 - Contains a rule called Allocate_Rule
- Rule
 - Name: Allocate_Rule
 - Calc Type: Allocate
 - Contains a script component called Allocate_Component
- Script Component
 - Name: Allocate_Component
 - Calc Type: Allocate
 - Contains the corresponding Visual Basic script statement in the script component

Sub Generic

- Ruleset
 - Name: Generic_Ruleset
 - Calc type: Generic
 - Contains one or more rules named <name of non-major sub>_Rule
- Rule
 - Name: <name of non-major sub>_Rule
 - Calc type: Generic
 - Contains a script component named <name of non-major sub>_Component
- Script component
 - Name: <name of non-major sub>_Component
 - Calc type: Generic
 - Contains the corresponding Visual Basic script statement in the script component

SUB Global

- Ruleset
 - Name: Global_Ruleset
 - Calc type: Global
 - Contains one or more rules named Global_Rule

- Rule
 - Name: Global_Rule
 - Calc Type: Global
 - Contains a script component called Global_Component
 - Script component
 - Name: Global_Component
 - Calc Type: Global
 - Contains the corresponding Visual Basic script statement in the script component
- To migrate business rules from Financial Management to Calculation Manager:
- 1 In the System View, select **File, Import**.
 - 2 To migrate Financial Management objects from a prior release into Calculation Manager, you must import them in a file. See [“Importing Business Rules, Business Rulesets, Templates, and Formula and Script Components” on page 301](#).

After all of the SUB statements in the file are converted to rulesets, rules, and script components, and migrated, you can view the calculation objects in Calculation Manager.

If you want to convert the script components to graphical objects, you can create new business rules and formula components in the Rule Designer. You can have a combination of graphical rules and script components. If you do not convert the script components to graphical objects, you can deploy them after you migrate them.

10

Exporting and Importing Business Rules, Business Rulesets, Templates, and Formula and Script Components

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About Exporting and Importing

You can export all of the objects in a Financial Management, Planning, Essbase, Oracle General Ledger, or Operational Planning application; you can also export individual business rules, business rulesets, templates, and formula and script components within an application.

You can also export business rules, sequences, macros, and variables from Business Rules, and import them into Calculation Manager. Sequences are converted to business rulesets, and macros are converted to templates in Calculation Manager.

After you export applications and objects, you can import them into other Financial Management, Planning, Essbase, Oracle General Ledger, or Operational Planning applications. For example, you may want to export business rules and business rulesets from an application on a production computer and import them into another application on a test computer.

You can also import Essbase calc scripts into Calculation Manager as graphical business rules.

Exporting Business Rules, Business Rulesets, Templates, and Formula and Script Components

You can export objects from any view: the System View, the Custom View, and the Deployment View. When you export an application, an object, or multiple objects, they are exported to an xml file that can be imported into other Calculation Manager applications.

Note: You can export one object or multiple objects.

► To export objects:

- 1 From the **System View**, expand the application type and the application that contains the objects you want to export.
- 2 Do one of these tasks:
 - **Financial Management users only:** To export Financial Management rulesets, expand the calculation type and the **Rulesets** node that contains the ruleset you want to export.
 - **Planning, Essbase, Oracle General Ledger, and Operational Planning applications only:** To export rulesets, expand **Rulesets**.
 - To export rules, formulas, scripts, or templates, expand the calculation type, the plan type, or the database, and expand **Rules**, **Formulas**, **Scripts**, or **Templates**.
- 3 Do one of these tasks:
 - If you want to export one object only, right-click it, and select **Export**.
 - If you want to export multiple objects, select the objects you want to export, right-click, and select **Export**. Use **Shift + Click** and **Ctrl + Click** to select contiguous or non-contiguous objects within different calculation, plan types, or databases, different object types (for example, business rules and formulas), and different applications within an application type.

After you select **Export**, you are prompted to open or save the generated .xml file.
- 4 In **File Download**, do one of these tasks:
 - If you want to view the contents of the generated .xml file, select **Open**.
 - If you want to save the generated .xml file without first viewing it, select **Save**, enter a name for the file (or accept the default), and click **Save** again.

Exporting Applications

You can export one or more applications. When you export applications, the application content is saved to an xml file.

► To export applications:

- 1 From the **System View**, expand the application type.
- 2 Do one of these tasks:
 - If you want to export one application, right-click it, and select **Export**.
 - If you want to export multiple applications, select the applications you want to export, right-click, and select **Export**. Use **Shift + Click** and **Ctrl + Click** to select contiguous or non-contiguous applications within the same application type.

After you select **Export**, you are prompted to open or save the generated .xml file.

3 In File Download, do one of these tasks:

- If you want to view the contents of the generated xml file, select **Open**.
- If you want to save the generated xml file without viewing its contents first, select **Save**, enter a name for the file (or accept the default), and click **Save** again.

Importing Business Rules, Business Rulesets, Templates, and Formula and Script Components

After you export objects from Business Rules (see the *Hyperion Business Rules Administrator's Guide*) and export objects and applications from Calculation Manager, you can import them into other applications within Calculation Manager. To import objects, they must be in one of these file types:

- **.All users:** `.xml`, a file that contains objects in xml format
- **Planning, Essbase, Oracle General Ledger, and Oracle Operational Planning users only:** `.csc`, a file that contains objects in Essbase calc script format
- **Financial Management users only:** `.cmo`, a file that contains objects in ASCII text format
- **Financial Management users only:** `.rle`, a file that contains objects in Visual Basic format

► To import objects:

- 1 From the System View, expand the application type.**
- 2 Select the application into which you want to import the objects.**
- 3 Select File, Import.**
- 4 In Import, for File, enter or browse for a file to import.**
- 5 Click Update Location Details to enter an application and calculation, plan type, or database into which to import the file.**
 - If the file is a `.csc` file, you must enter location details.
 - If the file is an `.xml` file, you do not have to enter location details, because the location details are in the import file itself.
 - If the file is an `.rle` file, and you enter location details, the key word, 'app_name=<name of the application>' must be on the first line of the `.rle` file. For example, 'app_name=Statutory.
 - If the file is a `.cmo` file, the application information is included in the key word.

Note: If you use Update Details to enter an application and a calculation type, plan type, or database into which to import the file, this location overrides the location in the import file itself. If no location information is contained in the import file, you must use Update Details to enter location information; without location information, the import fails.

- 6 Under Import Options, select one of these options:**

- **Overwrite existing objects:** The objects you import replace the objects in the application and calculation, plan type, or database.
- **Skip existing objects:** The objects you import are added to the objects in the application and calculation, plan type, or database.
- **Error out for duplicates:** If the objects you import duplicate objects that already exist in the application and calculation, plan type, or database, the names of the duplicate objects are written to the log file, no objects are imported, and the import process stops.

7 Financial Management users only: If you select an `rle` file in [step 4](#), the **Conversion options** are enabled:

- Select **Script components** if you want to convert the `rle` file into script components in Calculation Manager.
- Select **Graphical components** if you want to convert the `rle` file into graphical components in Calculation Manager, and perform these tasks:
 - a. To include conditions as part of formula components in flow charts, select **Use component level conditional block**. (The default is to include conditions as separate condition components, not as part of formula components, in flow charts.)
 - b. Select one of these component splitting options to specify how statements should be separated into component objects on the basis of comments in the script:
 - **Separate component:** A separate component is generated for each comment line in the script.
 - **Multi-block component:** One component is generated with one block for *each* of the comment lines in the script.
 - **Single-block component:** One component is generated with one block for *all* of the comment lines in the script. (That is, there are no separate blocks for comment lines.)

8 Click Import.

Note: You can save the results of the import to a local file.

Importing Essbase Calc Scripts as Graphical Business Rules

You can import Essbase calc scripts into Calculation Manager as graphical business rules.

► To import an Essbase calc script as a graphical business rule:

- 1 From the System View, expand the Essbase application type and the application that contains the database with calc scripts you want to import.**
- 2 Right-click the database, and select **Import Essbase Calc Script**.**

Note: This menu option is only available if there are Essbase calc scripts to import.

- 3 For each calc script, select whether it already exists in Calculation Manager and whether you want to import it. (To import all calc scripts, click **Select All**.)
- 4 Select one of these options: .
 - Select **Override Existing Objects** to replace existing objects with new objects of the same name.
 - Select **Skip Existing Objects** to keep existing objects when new objects have the same name.
- 5 Click **Import**.

Note: If the imported calc script is imported as a script component, there may be a parsing error. Validate the rule, and if there is a parsing error, do either of the following to fix it. 1) Fix the parsing error in Calculation Manager, validate the rule, right-click the script component and select Convert to Graphical, and save the rule. (If you want to undo the conversion to graphical, select Edit and then Undo Convert.) 2) Open the original calc script, fix the parsing error, save the calc script, and import the calc script into Calculation Manager again. The calc script has a check under Already Exists. Select the Import check box and Overwrite Existing Objects.

After you import calc scripts, if the imported calc script is in a script component, and you want to view it in graphical format, right-click the script component in the rule flow chart, and select Convert to Graphical.

You can also save the results of the import to a local file.

11

Administering Essbase Servers, Applications, and Databases for Planning Applications

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You may need to perform certain administrative tasks on the Essbase server, application, and/or database on which your Planning applications reside. You can use the Database Properties tool within Calculation Manager to view and edit such properties as whether missing values should be aggregated, whether checks should be performed on dimensions and members, what the size and potential number of blocks are, what cache sizes are, and what the Currency-related information for the database is.

Working with Database Properties

► To view and edit database properties for Planning applications:

- 1 From the System View, select **Tools**, and then **Database Properties**.
- 2 In the Enterprise View, expand the application type and the application that contains the database whose properties you want to view and/or edit.
- 3 Select the database whose properties you want to view and/or edit.

The properties of the database are displayed in the pane to the right of the Enterprise View, with the **General** tab selected.

- 4 On the **General** tab, under **General**, view or edit the description of the database.

Note: If there is no description, none was entered for it when the database was created.

In Database Type, either Normal (the default) or Currency is displayed.

- 5 Under **Calculation**, do any of the following tasks:

- Select **Aggregate missing values** to aggregate missing values during calculation of the database.

By default, during full database calculations, Essbase does not aggregate missing (#MISSING) values. When data is not loaded at parent levels, aggregating missing values may improve calculation performance. For databases for which you have Database Manager permissions, you can choose whether to aggregate missing values.

If you never load data at parent levels, selecting the option may improve calculation performance. If the option is selected and you load data at the parent level, the parent-level values are replaced by the results of the database consolidation, even if the results are #MISSING values. The option is not selected by default.

- Select **Create blocks on equations** to create a data block for certain member combinations.

If you select the option, when you assign a non-constant value to a member combination for which no data block exists, Essbase creates a data block. The option is not selected by default because its selection can produce a very large database.

When you assign a constant to a member on a sparse dimension, Essbase creates a data block. Therefore, when assigning constants to sparse members (for example, “West = 5”), you need not select “Create blocks on equation.” However, when assigning anything other than a constant to a sparse member, if you want blocks created, you must select “Create blocks on equation.” For example, if no data exists for Actuals, a member of the sparse Scenario dimension, you must select “Create blocks on equation” to perform the following allocation: $2002Forecast = Actuals * 1.05$;

- Specify whether to recalculate certain members by selecting **Two Pass Calculation**. (The option is selected by default.)

If you select the option, after a default calculation, members that are tagged as two-pass are recalculated. The option is selected by default. The two-pass tag is effective on members of the dimension tagged as accounts and on Dynamic Calc and Dynamic Calc and Store members of any dimension.

6 Under **Data Retrieval Buffers**, view or edit any of the following:

In the Data retrieval buffers group, you specify, in kilobytes, the sizes of the retrieval buffers. Increasing the sizes of the buffers may improve retrieval performance. See the *Oracle Essbase Database Administrator's Guide* for default, minimum, and recommended values.

- In **Buffer Size**, the size of the retrieval buffer is displayed. You can edit this number.

This is the setting for the retrieval buffer, which is used to process and optimize retrievals from Spreadsheet Add-in and from report scripts. Increasing the size of the buffer may improve retrieval performance. See the *Oracle Essbase Database Administrator's Guide* for default, minimum, and recommended values.

- In **Sort Buffer Size**, the size of the retrieval sort buffer is displayed. You can edit this number.

This is the setting for the retrieval sort buffer, which is used during retrievals. Increasing the size of the buffer may improve retrieval performance. See the *Oracle Essbase Database Administrator's Guide* for default, minimum, and recommended values.

7 Under **Storage**, perform any of the following tasks to set data storage options for block storage databases:

- In **Current I/O Access mode**, the current access mode is displayed.
 - In **Pending I/O Access mode**, select one of these options:
 - **Buffered I/O**—Uses the file system buffer cache. If direct I/O was not specified for the DIRECTIO setting in the essbase.cfg file when the database was created, buffered I/O is the default. (See the *Oracle Essbase Technical Reference*.)
 - **Direct I/O**—Bypasses the file system buffer cache and performs asynchronous, overlapped I/Os, providing faster response time and greater potential to optimize cache sizes. If direct I/O is selected, Essbase attempts to use direct I/O each time that the database is started. If direct I/O is not available, Essbase uses buffered I/O. To enable use of the cache memory locking feature or the no-wait (asynchronous) I/O provided by the operating system, you must select direct I/O.
 - In **Data Compression**, select one of these options:
 - **Bitmap encoding**—A bitmap is used to represent data cells and only the bitmap, the block header, and other control information are stored on disk. This setting is the default and, usually, the most efficient method of compressing data. Essbase stores only non-missing values and does not compress repetitive or zero values. When Essbase brings a data block into the data cache, it uses the bitmap to recreate missing values and, thus, fully expands the block.
 - **RLE (Run-Length Encoding)**—Consecutive, repetitive values, including zeros, are compressed, and a record is kept of each repeating value and the number of times that it is repeated consecutively. RLE may be preferable if average block density is not greater than three percent or if the database includes many consecutive zero values or any consecutive, repeating value other than zero.
 - **ZLIB**—A data dictionary that is based on the data being compressed is created. Usually, when data is extremely dense, ZLIB compression provides the best compression ratio. However, under some circumstances, other compression methods may yield better results. With ZLIB compression, the storage space that is saved has little or no relationship to the number of missing cells or the number of contiguous cells of equal value.
 - **No Compression**—no compression of data is performed.
- 8 On the **Dimension** tab, you can view dimension information for the database, including the number of dimensions in the database and a tabular display of each dimension's name, type (that is, dense or sparse), and members.
- 9 On the **Statistics** tab, you can view the database start time, the elapsed time, the number of connections, and statistics about the data blocks. The **General** node displays:

Note: You cannot make changes to any of the information on this tab.

- **Database start time**—According to the time zone of Essbase Server
- **Database elapsed time**—In hours:minutes:seconds
- **Number of connections**—Number of connected users

The **Blocks** node displays statistics about the data blocks of a block storage database:

- **Number of existing blocks**—Total number of blocks that exist (contain data)
- **Block size**—Size, in bytes, of each expanded (decompressed) data block (number of cells * 8; ideally, between 8 and 100 kilobytes). To alter block size, you must change the dense-sparse configuration of the database.
- **Potential number of blocks**—Maximum number of blocks (derived by multiplying the number of members of one sparse dimension by the number of members of another sparse dimension and so on). For example, the Sample Basic database contains 19 Product members and 25 Market members (not counting shared or label-only members). Because Product and Market are sparse dimensions that store data, there are $19 \times 25 = 475$ potential data blocks.
- **Existing level 0 blocks**—Total number of level 0 blocks (blocks whose sparse dimension members have no children) that exist (contain data). Because data can be loaded at upper levels, level 0 blocks and blocks that are created by data input are not necessarily the same.
- **Existing upper-level blocks**—Total number of non-level 0 blocks that exist (contain data). Upper-level blocks include all combinations of upper-level sparse members plus upper-level combinations that include level 0 sparse members.
- **Block density (%)**—Average percentage fill of data points within each data block, based on a sample of existing data blocks. Dense-sparse configuration should maximize block density. Maximizing block density, however, may result in proliferation of data blocks. Block size and block proliferation considerations may overshadow the attempt to maximize block density.
- **Percentage of maximum blocks existing**—Percentage that compares the number of blocks that exist and the number of potential blocks. The percentage is a measure of the sparsity of the database. It is not uncommon for the percentage to be very small; for example, less than 1 percent.
- **Compression ratio**—Measure of the compression efficiency of blocks stored on disk. The compression ratio usually indicates block density.
- **Average clustering ratio**—Fragmentation level of data (.pag) files. The maximum value, 1, indicates no fragmentation. If you are experiencing degraded retrieval, calculation, or data load performance and the clustering ratio value is significantly less than 1, consider forcing a rewrite of data files by exporting and reloading data. Rewriting files defragments the files, resulting in a clustering ratio closer to 1.

10 On the **Caches** tab, you can view and edit cache sizes and cache locks, and you can lock the cache memory.

- Select **Cache memory locking** to enable cache memory locking for databases for which you have Database Manager permissions. By default, cache memory locking is turned off.

Memory locking may improve database performance, because the system memory manager does not have to swap and reserve memory for Essbase caches.

Note: Memory-locking changes become effective after the database is stopped and restarted.

- The **Index page setting (KB)** displays the size of the index page (8 KB and unchangeable).
- The **Index page current value (KB)** displays the value that is displayed for the index page setting, if the database contains data. If the database does not contain data, the **Index page current value (KB)** displays 0.

Under **Cache Sizes**, you specify the sizes of various buffers and, thereby, determine how much memory is allocated for the index, data file, and data caches. For default, minimum, and recommended values, see the *Oracle Essbase Database Administrator's Guide*.

- **Index cache setting (KB)**—Enter a value in kilobytes to specify the amount of memory to use for the index.
- **Index cache current value (KB)**—Displays the amount of memory being used for the index. If the database contains no data, the value is 0.
- **Data file cache setting (KB)**—Enter a value in kilobytes to hold compressed data (.pag) files. (This cannot be used if Essbase is using buffered I/O.)
- **Data file cache current value (KB)**—Displays the amount of memory being used for the data file. If the database contains no data, the value is 0.
- **Data cache setting (KB)**—Enter a value in kilobytes to specify the amount of memory to use for holding uncompressed data blocks.
- **Data cache current value (KB)**—Displays the amount of memory being used for the data cache. If the database contains no data, the value is 0.

11 On the Transactions tab, you can view and edit the access to the database. Perform one of the following tasks:

- Select **Committed access** to enable transactions to hold read/write locks on all data blocks involved with a transaction until the transaction completes and commits. Then specify concurrency options:
 - **Wait (seconds)**—You specify the number of seconds that a transaction waits for access to locked data blocks. You accept the default (20 seconds); enter a value; or, from the list, you select **Indefinitely** or **No wait**.
 - **Pre-image access**—You provide users read-only access to data blocks that are locked for the duration of another concurrent transaction.
- Select **Uncommitted access** to enable transactions to hold read/write locks on a block-by-block basis (the default setting). Then specify when Essbase performs a commit operation:
 - **Commit blocks**—The number of data blocks updated before Essbase performs a commit. (The default is 3000.)
 - **Commit rows**—The number of rows of a data file processed during a data load before Essbase performs a commit. (The default is 0.)

12 On the **Currency** tab, you can view and edit the currency databases in the application, the currency conversion methods, and the default currency type members. You can also view the names of the Country, Time, Category, and Currency Partition dimensions.

- **Currency database**—Select the currency database whose properties you want to view and edit. (All of the currency databases available in the application are in the list.)
- **Conversion method**—Select **Divide** or **Multiply** to specify how currencies should be converted.
- **Default currency type member**—Select the currency type member to use as a default in currency conversions. You can specify any valid member of the CurType dimension in the currency database.

A Currency database always consists of the following four dimensions, which are listed on this tab:

- A country dimension, which simply stores rates for each actual local currency (e.g., U.S. dollars, Canadian dollars, Germany Euro, and so forth).
- A time dimension, which is typically the same as the time dimension in the main database. This allows the currency database to track currency fluctuations over time, and to accurately convert different time slices of the main database.
- A category dimension, which enables you to apply different rates to members of the dimension tagged as accounts in the main database. The categories defined for the accounts dimension are used to form the members in the currency category dimension of the currency database. For example, it may be necessary to convert Gross Profit and Net Profit using one category of rates, while other accounts use a different set of rates.
- A currency partition dimension, which enables different scenarios for currency conversion. For example, companies may wish to store Actual Rates and Plan Rates. To convert data between scenarios, select which type of rate to use.

13 Click the **Save** icon to save your changes.

Writing and Launching MaxL Scripts

You use MaxL Script editor to automate Essbase administration tasks within Calculation Manager. You can use the editor to define a database outline and metadata.

MaxL Script Editor features a text editing window that enables you to enter MaxL scripts.

Within MaxL Script Editor, you can perform the following MaxL-related tasks:

- Create and launch MaxL scripts to automate Essbase administration tasks.
- Type and launch MaxL statements interactively to perform one or more Essbase operations at a time.
- View the results of launching a script.

➤ To create a MaxL script:

- 1 From the System View, select **Tools**, and then **Database Properties**.
- 2 In the Enterprise View, expand the application type and the application for which you want to create a MaxL script.
- 3 Right-click the application, and select **MaxL Script Editor**.

The MaxL Script Editor is displayed.

- 4 In the MaxL Script Editor, enter the contents of the script.
- 5 Click the **Launch** button.

The contents of the script may simply be individual statements that you interactively type, execute, and clear from within the editor. You do not have to save a script in order to execute statements within it.

- 6 **Optional:** Perform any of the following tasks to complete the script:
- 7 Save or launch, or save and launch, the script.

Removing Locks from Database Objects

Essbase uses a check out facility for database objects (such as calculation scripts, report scripts, and business rules files) to ensure that objects are modified by only one user at one time. By default, objects are locked when you open them to modify them, and then unlocked when you close the object.

You can view and unlock objects, according to your security permissions. Users with Administrator permissions can unlock any object. Users without Administrator permissions can unlock only objects that they locked.

Note: Locks may be placed only on database objects within a block storage database.

➤ To remove a lock from a database:

- 1 From the System View, select **Tools**, and then **Database Properties**.
- 2 In the Enterprise View, expand the application type and the application that contains the database for which you want to remove a lock.
- 3 Right-click the database, and select **Remove Lock(s)**.
- 4 Click **Yes** to confirm that you want to remove all locks on all objects within the database, or click **No** to cancel the lock operation.

Starting and Stopping Applications

You can start applications for which you have at least Read permission. Essbase loads newly started applications into memory on the Essbase Server.

You can specify that databases start when their parent applications start. In this case, if you start an application before users connect to the databases within the application, users may experience better initial performance (upon database connection) because the application and all associated databases are in memory.

When you stop applications, Essbase unloads the applications and all databases within the applications from memory on the Essbase Server. Thus, available memory is increased. To ensure that databases within applications are not corrupted, you must stop applications properly.

➤ To start or stop an application:

- 1 From the System View, select **Tools**, and then **Database Properties**.
- 2 In the Enterprise View, expand the application type and the application you want to start or stop
- 3 Right-click the application, and select:
 - **Start Application**
 - **Stop Application**

Starting and Stopping Databases

When you start databases, Essbase loads the databases into memory on the Essbase Server. Index caches are allocated automatically, and data-file and data caches are allocated when blocks are requested. If you start databases before users access them, users may experience better initial performance (upon connection) because the databases are in memory.

When you start databases from applications that are not started, the applications and all databases within the applications are loaded. You can start one database or all databases for an application.

When you stop databases, Essbase unloads the databases from memory on the Essbase Server and commits updated data to disk. Thus, on the server computer, you increase available memory.

You can stop one database or all databases for an application.

➤ To start or stop a database:

- 1 From the System View, select **Tools**, and then **Database Properties**.
- 2 In the Enterprise View, expand the application type and the application that contains the database you want to start or stop
- 3 Right-click the database, and select:
 - **Start Database**
 - **Stop Database**

➤ To start or stop all databases for an application:

- 1 From the System View, select **Tools**, and then **Database Properties**.

- 2 In the Enterprise View, expand the application type and the application that contains the databases you want to start or stop
- 3 Right-click the application, and select:
 - **Start All Databases**
 - **Stop All Databases**



Using Administrator Features

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Transitioning to Calculation Manager

In this release, Financial Management and Planning users working with applications created in Financial Management, Planning, or Performance Management Architect, and Essbase block storage and aggregate storage application users, can create and manage their business rules in Calculation Manager.

This table compares business rules features in Calculation Manager, in Business Rules (for Planning and Essbase users) and in Financial Management (for Financial Management users).

Table 24 Comparison of business rules features in Calculation Manager, Financial Management, and Business Rules

Feature/ Action	In Calculation Manager	In Business Rules (for Planning and Essbase users)	In Financial Management (for Financial Management users)
Creating business rules	<p>You can create a business rule graphically in a flow chart within the Rule Designer.</p> <p>There are five components for Planning and Essbase block storage applications, and six components for Financial Management applications that you use to design business rules</p> <ol style="list-style-type: none"> 1. Formula component: contains calculation statements written or designed with members, functions, and optionally, conditional statements 2. Script component: contains only Visual Basic (Financial Management) or Essbase (Planning) calc script statements. 3. Condition component: contains conditional statements (that is, If...Then statements) that are either true or false. 4. Loop component: contains lists of metadata members (for example, lists of accounts) 5. Member range component: contains lists of metadata members (for example, lists of accounts) 6. (Financial Management users only) Data range component: contains lists of data records (for example, lists of account values) <p>For Essbase aggregate storage applications, there are three components:</p> <ol style="list-style-type: none"> 1. Point of View component: like a member range component, contains lists of metadata members 2. Allocation component: contains calculations for distributing data from members at one level in the database outline to other members in the outline 3. Formula component: contains calculation statements that you design using members, functions, and variables <p>You can use members, variables, and functions in the components.</p>	<p>You can create a business rule in the Business Rules Graphical Designer and in the Business Rules node of the Administration Console of Administration Services.</p> <p>There are four actions and eight formulas you can use to design graphical business rules:</p> <ol style="list-style-type: none"> 1. Aggregate Data action 2. Copy Data action 3. Clear Data action 4. Create Blocks action 5. Pro-Rata Ration formula 6. Distribution Factor formula 7. Evenly-Split formula 8. Increase-Decrease formula 9. Units- Rates formula 10. Combined formula 11. Custom formula 12. Variable formula 	<p>You can create a business rule in the Rules Editor or in a text editor. You can use Visual Basic and Financial Management functions and members in Financial Management business rules.</p>

Feature/ Action	In Calculation Manager	In Business Rules (for Planning and Essbase users)	In Financial Management (for Financial Management users)
Using system templates (in Calculation Manager) and actions and formulas (in Business Rules) to design business rules	<p>There are eight Planning and Essbase block storage system templates in Calculation Manager:</p> <p>Note: System templates are not supported for Essbase aggregate storage applications.</p> <ol style="list-style-type: none"> 1. The Aggregation template aggregates data. 2. The Copy Data template copies data. 3. The Clear Data template deletes data. 4. The Allocation Simple template allocates data from one location to another. 5. The Allocation Level to Level template allocates data from multiple levels. 6. The Amount-Rate-Unit template calculates one variable when you supply values for the other two. 7. The Export Data template exports data to a database or file. 8. The SET Commands template enables you to enter script commands that optimize the performance of calculation scripts. <p>There are eight Financial Management system templates in Calculation Manager:</p> <ol style="list-style-type: none"> 1. The Financial Round template rounds data using financial rounding instead of statistical rounding. The Financial Round function rounds data to the specified number of decimals using the 4 down/5 up method. 2. The Get Days In Month template generates the number of days in a month based on a specified year and month number. The month can be entered as a number outside of the usual range of 1 to 12, and the function offsets. For example, if you enter the year 2008 and the period number 0, the number of days for December 2007 is returned. If you enter the year 2008 and the period number 14, the number of days for February 2009 is returned. This function also accounts for Leap years. 3. The Is In List template tests whether a specified dimension member is a member of a specified member list. 4. The Average Balance Sheet template calculates average balance sheet ratios for MTD, QTD, HYTD, and YTD frequencies. Data can be entered as MTD< QTD, HYTD< YTD, or the cumulative daily balance. 5. The Opening Balance template calculates the opening balance of an account based on a specified retrieval method. The retrieval of the opening balance can be from the same value currency or from the Entity Currency Total. 	<p>There are four actions in Business Rules that function like several of the system templates in Calculation Manager:</p> <ol style="list-style-type: none"> 1. The Aggregate Data action functions like the Aggregation template in Calculation Manager. 2. The Copy Data action functions like the Copy Data template in Calculation Manager. 3. The Clear Data action, together with the Create Blocks action, functions like the Clear Data template in Calculation Manager. 4. The Create Blocks action, together with the Clear Data action, functions like the Clear Data template in Calculation Manager. <p>Business Rules also provides formulas that function like Calculation Manager system templates:</p> <ol style="list-style-type: none"> 1. The Pro-Rata Ratio formula functions like the Allocation Simple template in Calculation Manager. 2. The three Units-Rates formulas function like the Amount-Rate-Unit template in Calculation Manager. 	Not applicable

Feature/ Action	In Calculation Manager	In Business Rules (for Planning and Essbase users)	In Financial Management (for Financial Management users)
	<p>6. The Complex Consolidation template is a pre-built consolidation rule that consolidates and eliminates for each entity in the consolidation group based on the consolidation method (Holding, Global, Proportional, or Equity) assigned to each entity. It calculates for Capital, Investment, Net Income, and standard elimination. Audit transactions are generated based on the audit flag set by the user. The consolidation rule in this template provides most of the calculations for typical Statutory requirements.</p> <p>7. The Standard Consolidation template is a pre-built consolidation rule that consolidates and eliminates for each entity in the consolidation group using the default consolidation process.</p> <p>8. The Entity Allocation template allocates the source account from the group parent entity to the destination account for each entity in the list based on the allocation weight specified.</p>		
Creating custom-defined templates (in Calculation Manager) and macros (in Business Rules) to design business rules	You can use a wizard to design reusable custom-defined templates to perform calculations unique to your business. You can copy a system template and save it with a new name to use as a starting point for a custom-defined template.	You can design reusable macros to perform calculations unique to your business.	Not applicable
Creating design time prompts	You can use a wizard to create design time prompts for custom-defined templates in Calculation Manager.	You can use variables in macros to prompt for information.	Not applicable
Sharing components	You can share script and formula components across plan (for Planning), calculation (for Financial Management), and database (for Essbase) types and applications.	Not applicable	Not applicable
Dragging and dropping components	You can drag and drop components into a business rule's flow chart within the Rule Designer.	You can drag and drop actions and formulas into the business rule's process bar in the Graphical Designer.	Not applicable
Showing and hiding detail	You can zoom in or out within a flow chart to display more (or less) detail.	Not applicable	Not applicable
Editing a business rule in calc script format	You can edit a business rule in calc script format, and return to editing it graphically in the Rule Designer.	You can edit a business rule in calc script format, but you cannot return to editing it graphically.	You can edit a business rule in text mode only.

Feature/ Action	In Calculation Manager	In Business Rules (for Planning and Essbase users)	In Financial Management (for Financial Management users)
Validating business rules	<p><i>If you are working with a Performance Management Architect application:</i> you can validate a Planning business rule against Performance Management Architect, Financial Management, and/or Planning. You can validate a Financial Management business rule against Performance Management Architect only. You may want to validate against Performance Management Architect, for example, when the application you are validating against is not deployed, or when the application in Oracle Hyperion EPM Architect is not synchronized with the applications that are deployed to Financial Management and Planning.</p> <p>Note: You can validate an Essbase business rule against Essbase only.</p> <p><i>If you are working with an application created with Financial Management or Planning application administration:</i> you can validate business rules against only Financial Management or Planning, respectively.</p>	You can validate a business rule against Essbase or Planning.	You can use the Scan function to scan the Visual Basic script file to ensure the functions are valid with the correct number of parameters and the dimension members are valid for the application.
Deploying business rules	You can deploy one business ruleset per calculation type to Financial Management; you can deploy one or more business rules and business rulesets to Planning and Essbase. You must deploy business rules and business rulesets to launch them from within Financial Management, Planning, or Administration Services (for Essbase). The applications and calculation types, plan types, or databases you deploy them to determine their launch locations.	Not applicable	Not applicable
Launching business rules	After you deploy them from Calculation Manager, you launch Financial Management business rulesets and Planning business rules from within Financial Management and Planning. After you deploy Essbase business rules you can launch them from within Calculation Manager or from within Administration Services. Launch locations are determined by the locations to which you deploy business rules and business rulesets. You can define multiple launch locations for a business rule by creating shortcuts for it in Calculation Manager.	You can launch business rules from one or all locations by selecting the locations from which they can be launched. You can launch business rules from the Rules node of the Administration Services Administration Console, the Business Rules Graphical Designer, the Business Rules Web Launcher, a command line prompt, or from Planning Web.	You execute business rules when you perform calculations, translations, consolidations, and allocations.
Working with views	<p>Calculation Manager contains four views of the objects to which you have access:</p> <ol style="list-style-type: none"> 1. The System View 2. The Custom View 3. The Deployment View 4. The List View 	Business Rules does not contain views. You view business rules and other objects in a flat list, by object type, from within the Administration Console.	Not applicable

Feature/ Action	In Calculation Manager	In Business Rules (for Planning and Essbase users)	In Financial Management (for Financial Management users)
Using the System View	The System View displays a hierarchical list of the Financial Management, Planning, and/or Essbase applications, their calculation types, plan types, and/or databases, and the objects to which you have access. This view enables you to see which application and calculation type, plan type, or database a business rule is designed against. (This is the default view in Calculation Manager.)	Not applicable	Not applicable
Using the Custom View	The Custom View displays a list of folders you create and objects you drag and drop into them. This view enables you to organize objects in a way that is meaningful to you.	¹ Not applicable	Not applicable
Using the Deployment View	The Deployment View displays a list, by application type and application, of the rules and rulesets that are deployed and not deployed, and their deployment and validation status.	Not applicable	Not applicable
Using the List View	The List View displays a list of the objects you select from the Filter dialog. The filter dialog enables you to create a filtered list, by application type, of applications, calculation and plan types, and objects to which you have access.	Not applicable	Not applicable
Migrating business rules	You can migrate business rules and other objects from the previous release of Business Rules to this release of Calculation Manager. Note: To migrate Financial Management and Essbase business rules, you use the Import feature of Calculation Manager.	You can migrate business rules from the previous release of Business Rules to this release of Calculation Manager and from previous releases of Business Rules to this release of Business Rules.	You can migrate business rules from the previous release of Financial Management to this release of Calculation Manager and from previous releases of Financial Management to this release of Financial Management.
Importing business rules	You can import business rules (and other objects such as templates and components) into Calculation Manager from Business Rules or from another Financial Management, Planning, or Essbase application within Calculation Manager. You can also import Essbase calc scripts into Calculation Manager. When you import calc script files, they become graphical business rules in Calculation Manager.	You can import business rules from an xml file into Business Rules.	You can use the Load Rule option to import a valid Visual basic script file into the application.
Exporting business rules	You can export one or more business rules and other objects from Calculation Manager to an xml file.	You can export business rules and other objects from Business Rules to an xml file.	You can use the Extract Rule option to export business rules from Financial Management to an external Visual Basic script file.

Feature/ Action	In Calculation Manager	In Business Rules (for Planning and Essbase users)	In Financial Management (for Financial Management users)
Using business rule shortcuts	You can create shortcuts to a business rule in multiple applications and calculation or plan types. When you deploy business rules with shortcuts, a copy of the rule is deployed to the applications and calculation or plan types for which you created a shortcut.	Not applicable	Not applicable
Working with variables	There are four variable types for Planning, two variable types for Financial Management, and three variable types for Essbase in Calculation Manager: <ol style="list-style-type: none"> 1. Global: can be used in any Planning or Financial Management application 2. Application: can be used only in the Planning, Financial Management, or Essbase application for which it was created 3. Plan type or database: can be used only in the Planning plan type or Essbase database for which it was created 4. Business rule: can be used only in the Planning or Essbase business rule for which it was created 	There are two variable types in Business Rules: <ol style="list-style-type: none"> 1. Global: can be used in any business rule 2. Local: can be used only in the business rules for which they are created 	There are two variable types in Financial Management: <ol style="list-style-type: none"> 1. Global: apply to the whole calculation process 2. Local: apply to the individual subroutines only
Assigning access permissions to create and edit business rules	In Calculation Manager, your ability to create, view, and edit business rules and other objects is determined by the role you are assigned in Oracle Hyperion Shared Services and your ownership of the object in Calculation Manager. By default, a user owns the business rules and other objects the user creates. As an administrator or owner of the object, you can assign ownership of it to another user.	In Business Rules, you assign permission to edit business rules and other objects by selecting which users and groups can modify them.	In Financial Management, you do not need access permissions to create or edit business rules.
Assigning access permissions to launch business rules	You assign permission to launch business rules and business rulesets in Financial Management, Oracle Hyperion Planning, or Oracle Essbase Administration Services (for Oracle Essbase) after the business rules and business rulesets are deployed from Oracle Hyperion Calculation Manager.	You assign permission to launch business rules and sequences in Oracle Hyperion Business Rules by selecting the database location (or all locations) from which they can be launched and by selecting which users and groups can launch them.	You assign permission to execute a calculation process in Oracle Hyperion Financial Management by assigning the correct role security access for the application to which it belongs. For example, to run a Consolidate process, the user must have role security for Consolidate.

¹In Business Rules, you can create projects to organize your business rules, sequences, macros, and variables in ways that are meaningful to you.

Glossary

aggregation The activity of summarizing and consolidating records is often called aggregation in the technical vocabulary of database experts. Aggregation simply means that data is grouped and summarized to dramatically improve the performance of high-level queries.

block storage database The Essbase database storage model categorizing and storing data based on the sparsity of data values defined in sparse dimensions. Data values are stored in blocks, which exist only for sparse dimension members for which there are values.

business rules Logical expressions or formulas that are created within an application to produce a desired set of resulting values.

calc script A set of commands that define how a database is consolidated or aggregated. A calculation script may also contain commands that specify allocation and other calculation rules separate from the consolidation process.

calculate The process of aggregating or of running a calculation script on a database.

calculation The process of aggregating data, or of running a calculation script on a database.

Calculation Manager A module of Enterprise Performance Management Architecture (EPMA) that Planning and Financial Management users can use to design, validate, and administrate business rules in a graphical environment. c

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.

condition A set of circumstances that must take place to be true.

consolidation The process of aggregating data from dependent entities to parent entities. For example, if the dimension Year consists of the members Qtr1, Qtr2, Qtr3, and Qtr4, its consolidation is Year.

cube A block of data that contains three or more dimensions. An Essbase database is a cube.

database outline See outline.

dense dimension In block storage databases, a dimension likely to contain data for every combination of dimension members. For example, time dimensions are often dense because they can contain all combinations of all members. Contrast with sparse dimension.

dimension A data category used to organize business data for retrieval and preservation of values. Dimensions usually contain hierarchies of related members grouped within them. For example, a Year dimension often includes members for each time period, such as quarters and months.

enhanced calc script A calculation script that may contain values for runtime prompts.

formula A combination of operators, functions, dimension and member names, and numeric constants calculating database members.

function A routine that returns values or database members.

launch The process of running a business rule, calculation script, or sequence against a database to return calculated values.

level 0 member A member that has no children.

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.

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.

multidimensional database A method of organizing, storing, and referencing data through three or more dimensions. An individual value is the intersection point for a set of dimensions. Contrast with relational database.

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.

range A set of values including upper and lower limits, and values falling between limits. Can contain numbers, amounts, or dates.

relational database A "two-dimensional" database made up of tables of information. Two or more tables can be cross-referenced to generate a new table. A database that has only one table is called a flat file database. Compare with multidimensional database.

repository Stores metadata, formatting, and annotation information for views and queries.

runtime prompt A variable that users enter or select before a business rule is run.

saved selection An explicitly defined set of members across multiple dimensions. This selection does not change as the dimension is maintained.

scenario A dimension for classifying data; for example, Actuals, Budget, Forecast1, and Forecast2.

Shared Services Registry Part of the Shared Services database, the Shared Services Registry stores and reuses information for most installed Hyperion products, including installation directories, database settings, deployment settings, computer names, ports, servers, URLs, and dependent service data.

sparse dimension In block storage databases, a dimension unlikely to contain data for all member combinations when compared to other dimensions. Contrast with dense dimension. For example, not all customers have data for all products.

string A sequence of characters treated as a unit.

template A predefined format designed to retrieve particular data consistently.

user-defined attribute (UDA) User-defined attribute, associated with members of an outline to describe a characteristic of the members. Users can use UDAs to return lists of members that have the specified UDA associated with them.

validation A process of checking a business rule, report script, or partition definition against the outline to make sure that the object being checked is valid.

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