Hyperion® Calculation Manager

Designer's Guide

RELEASE 11.1.2.1

ORACLE®

ENTERPRISE PERFORMANCE MANAGEMENT SYSTEM

Calculation Manager Designer's Guide, 11.1.2.1

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1 Introduction

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About Calculation Manager

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

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, 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's 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, Fusion Edition 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 a Classic Planning or Financial Management application or an Essbase application, you do not need to install Performance Management Architect.
4. You must install and configure 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, 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 Classic Financial Management or Planning applications, 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.
   - Calculation Manager Server

     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 19.)

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

11.

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 Financial Management, Planning, and/or Essbase 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 Planning, Financial Management, and Essbase 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.

  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 70.)

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 Hyperion 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's Hyperion® Shared Services Console is consistent for all EPM System products that support Lifecycle Management. However, Oracle Hyperion 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's 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's 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 Financial Management, Planning, and/or Essbase 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.

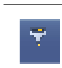
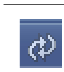
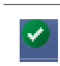
Table 1 **Standard Toolbar Buttons**

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 21
- "Edit Menu" on page 22
- "View Menu" on page 22
- "Favorites Menu" on page 23
- "Tools Menu" on page 23
- "Actions Menu" on page 24
- "Help Menu" on page 24

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 and 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 Financial Management, Planning, and/or Essbase 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, and deploy objects you select in the 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 selected **Note:** This is the only Actions menu option available from within the Deployment View.
Actions, Migrate	Migrates the rules or rulesets you selected.
Actions, Deploy	Deploys the rules or rulesets you selected.
Actions, Quick Deploy	Deploys the rule in fewer steps than regular deployment. **Note:** This feature is available only from within the Rule Designer for Planning and Essbase business rules. Planning rules are deployed by default to Planning; Essbase rules are deployed by default to Essbase.

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 25
- "System View" on page 27
- "Custom View" on page 28
- "Deployment View" on page 29
- "View Pane" on page 30

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 dialog with default values.

5 On **Advanced Options**, for **Object Label**, 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 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 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.

11 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.

12 For **Any Text**, select an option to display only objects containing text that starts with, ends with, contains, or matches text that you enter. To display objects that include this text regardless of its case, select **Ignore case.**

13 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.

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, 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 (Financial Management, Planning, or Essbase).**

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

3. **Select an Application Name. The application name must be a valid Performance Management Architect application, a Classic Financial Management or Planning application, or an Essbase aggregate or block storage application.**
4. **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, select the **Database**.

   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 32.

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 a Financial Management, Planning, or Essbase application. (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 (Financial Management, Planning, or Essbase) for which you want to create the business rule.

➤ To design a business rule:

1 **In the System View, do one of these tasks:**

- Select **File, New, Rule**.
- Expand the Financial Management, Planning, or Essbase application type, the application, and the calculation type, plan type, or database. Right-click **Rules**, and select **New**.

2 **In New Rule, enter the rule's name, the Application Type (Financial Management, Planning, or Essbase), and the Application Name. The application name must be a valid Performance Management Architect application, a Classic Financial Management or Planning application, or an Essbase application.**

- If you select Financial Management, select the **Calculation Type**.
- If you select Planning, select the **Plan Type**.
- If you select Essbase, select the **Database**.

Click **OK**.

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, plan type, or database you are working in within the System View.

3 **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, and Essbase block storage users only**) Formulas: See"Working with Formula Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 112.
- (**Financial Management, Planning, and Essbase block storage users only**) Scripts: See "Working with Script Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 124.

- (**Financial Management, Planning, and Essbase block storage users only**) Conditions: See "Working with Condition Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 130.
- (**Financial Management, Planning, and Essbase block storage users only**) Member Blocks: See "Working with Member Block Components (Planning and Essbase Block Storage Application Users Only)" on page 135.
- (**Financial Management, Planning, and Essbase block storage users only**) Member Ranges: See "Working with Member Range Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 138.
- (**Financial Management users only**) Data Ranges : See "Working with Data Range Components (Financial Management Users Only)" on page 143.
- (**Financial Management, Planning, and Essbase block storage users only**) Fixed Loops: See "Working with Fixed Loop Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 148.
- (**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 168.
- (**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 170.
- (**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 177.

From **Existing Objects**, drag existing objects from Financial Management, Planning, or Essbase 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, and Essbase Block Storage Application Users Only)" on page 156.

Tip: **Financial Management, 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, and Essbase Block Storage Application Users Only)" on page 46.)

4 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, 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.

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

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 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.)

6 **Planning 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 207. This chapter provides detailed procedures for variables.)
- Member (See "Working with Members" on page 186. This chapter provides detailed procedures for member selection.)
- Function (See "Working with Functions" on page 222. This chapter provides detailed procedures for functions.)

7 **Planning and Essbase users only:** On **Variables**, select **Merge Variables** to merge all instances of the *same variable* used in the business rule 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.

8 **Financial Management, 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, and Essbase Block Storage Application Users Only)" on page 46.

9 **Financial Management, 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.

10 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.

11 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.

12 Select **File, Save.**

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

- Print it. (See "Printing a Business Rule" on page 55.)
- 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) or from within Calculation Manager or Administration Services (for Essbase business rules). (See the *Oracle Hyperion Planning User's Guide*, Chapter 8, "Launching Essbase Business Rules (for Essbase Aggregate Storage and Block Storage Application Users Only)," in this guide, or the *Oracle Essbase Administration Services Online Help*.)

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 207.) 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 33 to step 5 on page 35.

   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 207. This chapter provides detailed procedures for variables.)
- Member (See "Working with Members" on page 186. This chapter provides detailed procedures for member selection.)
- Function (See "Working with Functions" on page 222. 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 makes these changes in the original business rule.

7 Select **File, Save.**

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

If you are working with a Oracle Hyperion Workforce Planning, Fusion Edition, Oracle Hyperion Capital Asset Planning, Fusion Edition, or Oracle Hyperion Public Sector Planning and Budgeting, Fusion Edition application, you must load predefined business rules into the application. These predefined business rules enable you to perform predefined calculations when you are working with Web forms in these applications.

Note: Use this procedure to load predefined business rules into only *Classic* Planning applications that have the Wrkforce, Capex, and/or Human Capital Planning plan types enabled. If you are working with a *Performance Management Architect* application that has the Wrkforce, Capex, or Human Capital Planning plan types enabled, the predefined business rules are loaded automatically when the application is created.

➤ To load predefined business rules:

1. From the System View, expand the Planning application type and the Classic 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 41.
- To open a business ruleset, see "Opening a Business Ruleset (Financial Management, Planning, and Oracle General Ledger Users Only)" on page 60.
- To open a custom defined template, see "Opening a Custom Defined Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 104.
- To open a component, see these topics:
  - "Opening a Formula Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 122 to open a formula component
  - "Opening a Script Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 128 to open a script component

- ❍ “Opening a Condition Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)” on page 132 to open a condition component
- ❍ “Opening a Member Block Component (Planning and Essbase Block Storage Application Users Only)” on page 136 to open a member block component
- ❍ “Opening a Member Range Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)” on page 141 to open a member range component
- ❍ **Financial Management users only:** “Opening a Data Range Component (Financial Management Users Only)” on page 145 to open a data range component
- ❍ “Opening a Fixed Loop Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)” on page 150 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 175 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 179 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 Financial Management, Planning, or Essbase application type, the application, the calculation type, plan type, or database, and **Rules.**
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 42
- “Editing a Business Rule in Script Mode (Financial Management, Planning, and Essbase Block Storage Application Users Only)” on page 46

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 Financial Management, Planning, or Essbase application type, the application, the calculation type, plan type, or database, and Rules. 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**.

2 **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, and Essbase block storage users only)** Formulas: See“Working with Formula Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)” on page 112.
- **(Financial Management, Planning, and Essbase block storage application users only)** Scripts: See “Working with Script Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)” on page 124.
- **(Financial Management, Planning, and Essbase block storage users only)** Conditions: See “Working with Condition Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)” on page 130.
- **(Planning and Essbase block storage users only)** Member blocks: See “Working with Member Block Components (Planning and Essbase Block Storage Application Users Only)” on page 135
- **(Financial Management, Planning, and Essbase block storage users only)** Member Ranges: See “Working with Member Range Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)” on page 138.
- **(Financial Management users only)** Data Ranges: See “Working with Data Range Components (Financial Management Users Only)” on page 143.
- **(Financial Management, Planning, and Essbase block storage users only)** Fixed Loops: See “Working with Fixed Loop Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)” on page 148.
- **(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 168.
- **(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 170.
- **(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 177.

- 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, 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, and Essbase Block Storage Application Users Only)” on page 156.

3 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, 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.

4 **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 38.

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

5 **Planning 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 **Select Value** column.

b. When the **Actions** icon is displayed, click it, and select one of these:

- Variable (See "Working with Variables" on page 207. This section provides detailed procedures.)
- Member (See "Working with Members" on page 186. This section provides detailed procedures.)
- Function (See "Working with Functions" on page 222. This chapter provides detailed procedures.)

6 **Planning and Essbase users only**: On **Variables**, you can create variables for the rule. (See "Working with Variables" on page 207.)

7 **Financial Management, 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, and Essbase Block Storage Application Users Only)" on page 46.

8 **Financial Management, 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.

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

10 Select **File**, **Save**.

Editing a Business Rule in Script Mode (Financial Management, 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 Financial Management, Planning, or Essbase block storage application type, the application, the calculation type, plan type, or database, and Rules. 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**.

2 **After the rule opens, 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.

3 **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 rule. (See "Working with Functions" on page 222.)
- Click **Insert member(s) selected from a dimension** to insert members from a dimension into the rule. (See "Working with Members" on page 186.)
- Click **Insert a variable** to insert a variable into the rule. (See "Working with Variables" on page 207.)
- **Planning users only:** Click **Insert smartlists** to insert a Smart List. (See "Working with Smart Lists (Planning Users Only)" on page 225.)
- 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, and Essbase Block Storage Application Users Only)" on page 49.)
- 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, and Essbase Block Storage Application Users Only)" on page 49.)

4 **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.

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 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 38.

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

6 **Planning and Essbase block storage application users only:** On **Variables**, you can create variables for the rule. (See "Working with Variables" on page 207.)

7 **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.

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

9 Select **File, Save.**

Searching for and Replacing a Text String in a Business Rule Script (Financial Management, 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 the Financial Management, Planning, or Essbase block storage application type, the application, the calculation type, plan type, or database, and **Rules.**

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**.

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.

Copying a Business Rule to Another Application

You can copy a business rule to another application and calculation, 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.

Note: You cannot copy a business rule to the same application. You must use Save As 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 same application.

➤ To copy and paste a business rule to another application:

1. In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type, plan type, or database, and **Rules.**
2. Right-click the rule you want to copy, and select **Copy To.**
3. In **Save As**, enter a new name for the business rule or accept the default name, and select an application and calculation, plan type, or database.

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

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 (Financial Management, Planning, or Essbase). 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 Financial Management, Planning, or Essbase application type, the application, the calculation type, plan type, or database, and **Rules.** Do one of these tasks:

- 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 (Financial Management, Planning, or Essbase).

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 Financial Management, Planning, or Essbase application type, the application, the calculation type, plan type, or database, and **Rules.** Do one of these tasks:
   - 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 rules) and Calculation Manager or Administration Services (for Essbase 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 (for Financial Management), the plan type (for Planning) or the database (for Essbase), 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 53 to save a copy of a business rule
- "Saving a Business Ruleset with a Different Name (Financial Management, Planning, and Oracle General Ledger Users Only)" on page 66 to save a copy of a business ruleset
- "Saving a Custom Defined Template with a Different Name (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 105 to save a copy of a custom defined template
- "Saving Formula and Script Components with a Different Name (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 159 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 Financial Management, Planning, or Essbase application type, the application, the calculation type, plan type, or database, and **Rules.**
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 rule, select the **Plan Type**.
   - If the rule is an Essbase 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 Financial Management, Planning, or Essbase application type, the application, the calculation type, plan type, or database, and Rules.**

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 or plan types for which you want to create a shortcut. You can select multiple calculation or plan types in multiple applications belonging to the same application type (Financial Management, Planning, or Essbase).**

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 69.)

➤ To delete a business rule:

1. In the System View, expand the Financial Management, Planning, or Essbase application type, the application, the calculation type, plan type, or database, and **Rules**.
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 page 69.
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 Financial Management, Planning, or Essbase application type, the application, the calculation type, the plan type, or the database, and **Rules**.
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, 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, or Oracle General Ledger application. (Your ability to create rulesets is determined by the role you are assigned in Oracle's Hyperion® 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), 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, 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).
3. Select an **Application Name**.
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, select a **Database**.

   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, and Oracle General Ledger Users Only)" on page 57 to design the business ruleset.

Designing a Business Ruleset (Financial Management, 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 **In the System View, expand the Financial Management, Planning, or Essbase application type and the application.**

2 **Do one of these tasks:**

- **Financial Management users only:** Expand the calculation type, right-click **Rulesets**, and select **New**.
- **Planning and Essbase users only:** Right-click **Rulesets**, and select **New**.

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

3 **In New Ruleset, do these tasks:**

a. Enter the ruleset's name.

b. Select the **Application Type** (Financial Management, Planning, or Essbase).

c. Select the **Application Name**.

d. If you selected Financial Management as the application type, select the **Calculation Type**; if you selected Planning as the application type, select the **Plan Type**; if you selected Essbase as the application type, select the **Database**.

e. Click **OK**.

4 **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 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.

5 **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.

6 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.

7 **Planning users only**: 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.

8 Select **File, Save.**

Opening a Business Ruleset (Financial Management, 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 Financial Management, Planning, or Essbase 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 and Essbase 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 and Essbase applications, there is only one Rulesets node for each application at the same level as the plan types and databases.

Opening a Business Rule within a Business Ruleset (Financial Management, 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 Financial Management, Planning, or Essbase 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 and Essbase 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 and Essbase applications, there is only one Rulesets node for each application at the same level as the plan types and databases.

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, 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 Planning and Essbase, 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 Financial Management, Planning, or Essbase 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 and Essbase 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 and Essbase applications, there is only one Rulesets node for each application at the same level as the plan types and databases.

3 **In the Ruleset Designer, in Existing Objects, expand the application and the plan type or calculation type 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, 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 Financial Management, Planning, or Essbase 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 and Essbase 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 and Essbase applications, there is only one Rulesets node for each application at the same level as the plan types and databases.
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, and Oracle General Ledger Users Only)

See these topics:

- "Editing a Business Ruleset (Financial Management, Planning, and Oracle General Ledger Users Only)" on page 62
- "Copying a Business Ruleset to Another Application (Financial Management, Planning, and Oracle General Ledger Users Only)" on page 65

Editing a Business Ruleset (Financial Management, 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 Financial Management, Planning, or Essbase 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 and Essbase 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 and Essbase applications, there is only one Rulesets node for each application at the same level as the plan types and databases.
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 from Financial Management, Planning, or Essbase applications, 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.
   - 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.

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 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.

Note: Only global variables can be merged.

7 **Select File, Save.**

Copying a Business Ruleset to Another Application (Financial Management, 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 (Financial Management, Planning, or Essbase) and calculation type (for Financial Management rulesets) plan type (for 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 Financial Management, Planning, or Essbase application type and the application.**

2 **Do one of these tasks:**

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

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

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 Save As, enter a new name for the business ruleset, or accept the default name, and select an application and calculation or plan type. Click OK.**

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

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 68.

Saving a Business Ruleset (Financial Management, 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 it in Calculation Manager; you can launch it from Financial Management or Planning (for Financial Management or Planning rulesets).

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 it in Hyperion Allocation Manager; you can launch it from Financial Management or Planning (for Financial Management or 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 the application type, the application, the calculation type (Financial Management), the plan type (Planning), or the database (Essbase), 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, 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 Financial Management, Planning, or Essbase application type and the application.
2. Do one of these tasks:
   - **Financial Management users only:** Expand the calculation type and **Rulesets**.
   - **Planning and Essbase users only:** Expand **Rulesets**.

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

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 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, 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 69.) 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 Financial Management, Planning, or Essbase application type and the application.**

2 **Do one of these tasks:**

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

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

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 69.)**

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 Financial Management, Planning, or Essbase 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 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 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, plan type, or 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 69 to see information on the usages of a business rule or business ruleset

- "Showing the Usages of a Custom Defined Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 106 to see information on the usages of a custom defined template
- "Showing the Usages of Formula and Script Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 161 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 182 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 Financial Management, Planning, or Essbase 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 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.
   - To show the usages of a rule, expand the calculation type or plan type, or database, and **Rules**, 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 Financial Management, Planning, or Essbase 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 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 applications, there is only one Rulesets node for each application at the same level as the plan types.

- 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 component or template, expand the calculation type, plan type, or database, and then expand the component name, or **Templates**, depending on the object for which you want to change ownership.

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

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

5 Click **OK**.

The user you assigned ownership to can edit the object.

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

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

See these topics:

- "About Planning and Essbase Block Storage System Templates " on page 72
- "Using a System Template in a Business Rule (Planning and Essbase Block Storage Application Users Only)" on page 73
- "Saving a System Template as a Custom Defined Template (Planning and Essbase Block Storage Application Users Only)" on page 89
- "Inserting a System Template into a Business Rule's Flow Chart (Planning and Essbase Block Storage Application Users Only)" on page 90
- "Removing a System Template from a Business Rule's Flow Chart (Planning and Essbase Block Storage Application Users Only)" on page 90

About 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 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 and Essbase Block Storage Users Only)” on page 75.
- 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 and Essbase Block Storage Users Only)” on page 76.
- 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 and Essbase Block Storage Users Only)” on page 77.
- 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 and Essbase Block Storage Users Only)” on page 78.
- 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 and Essbase Block Storage Users Only)” on page 80.
- 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 and Essbase Block Storage Users Only)” on page 84.
- 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 and Essbase Block Storage Users Only)” on page 88.
- 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 and Essbase Block Storage Users Only)” on page 85.

Using a System Template in a Business Rule (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 Planning or Essbase application type, the application, the plan type (for Planning) or the database (for Essbase), and **Rules.**

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.

For users of Classic and Performance Management Architect Planning applications and users of Essbase block storage applications:

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

- To add information for the Clear Data template, see "Using the Clear Data Template in a Business Rule (Planning and Essbase Block Storage Users Only)" on page 75.
- To add information for the Copy Data template, see "Using the Copy Data Template in a Business Rule (Planning and Essbase Block Storage Users Only)" on page 76.
- To add information for the Amount–Unit–Rate template, see "Using the Amount–Unit–Rate Template in a Business Rule (Planning and Essbase Block Storage Users Only)" on page 77.
- To add information for the Allocate Level to Level template, see "Using the Allocate Level to Level Template in a Business Rule (Planning and Essbase Block Storage Users Only)" on page 78.
- To add information for the Allocate Simple template, see "Using the Allocate Simple Template in a Business Rule (Planning and Essbase Block Storage Users Only)" on page 80.
- To add information for the Aggregation template, see "Using the Aggregation Template in a Business Rule (Planning and Essbase Block Storage Users Only)" on page 84.
- To add information for the SET Commands template, see "Using the SET Commands Template in a Business Rule (Planning and Essbase Block Storage Users Only)" on page 85.
- To add information for the Export-Import Data template, see "Using the Export-Import Data Template in a Business Rule (Planning and Essbase Block Storage Users Only)" on page 88.

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 and Essbase Block Storage 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 74** **through** **step 4 on page 74****.**

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 and Essbase Block Storage 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 74 through step 4 on page 74.

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 77. If you select **No**, proceed to step 6.d on page 77.

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 77. If you do not enter a condition, proceed to step 6.f on page 77 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 and Essbase Block Storage 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 74 through step 4 on page 74.**

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 186, “Working with Variables” on page 207, and “Working with Functions” on page 222.

  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 and Essbase Block Storage 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 74 through step 4 on page 74.

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 and Essbase Block Storage 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 74 through step 4 on page 74.

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 and Essbase Block Storage 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 74 through step 4 on page 74.

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 and Essbase Block Storage 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 74 through step 4 on page 74.**

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

a. 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.

b. Specify when to mark data as clean.

c. Specify whether to stop the calculation if the FIX command evaluates to an empty member set.

d. 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**:

a. Specify whether to consolidate missing data values.

b. Specify whether to create new data blocks when a calculation formula assigns anything other than a constant to a member of a sparse dimension.

c. Specify whether to create blocks in memory and whether to store missing data blocks.

d. 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.

e. 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 and Essbase Block Storage 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 74 through step 4 on page 74.

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.**

Saving a System Template as a Custom Defined Template (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), 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 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), 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.

Removing a System Template from a Business Rule's Flow Chart (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), 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.**
4. Select **File, Save.**

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

See these topics:

- "About Custom Defined Templates (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 92
- "Creating a Custom Defined Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 92
- "Designing a Custom Defined Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 93
- "Creating Design Time Prompts for a Custom Defined Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 96
- "Selecting Design Time Prompts for a Custom Defined Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 100
- "Creating a Custom Defined Template from a Template's or Business Rule's Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 103
- "Opening a Custom Defined Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 104
- "Editing a Custom Defined Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 104
- "Saving a Custom Defined Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 105
- "Saving a Custom Defined Template with a Different Name (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 105
- "Refreshing Custom Defined Templates (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 106
- "Showing the Usages of a Custom Defined Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 106
- "Deleting a Custom Defined Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 107
- "Copying and Pasting a Custom Defined Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 108
- "Inserting a Custom Defined Template into Business Rule's Flow Chart (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 108
- "Removing a Custom Defined Template from a Business Rule's Flow Chart (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 109
- "Searching for a Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 109

About Custom Defined Templates (Financial Management, 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, and Essbase Block Storage application business rules.

Note: Custom defined templates are not supported in Essbase aggregate storage applications.

Creating a Custom Defined Template (Financial Management, 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 **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 Name**. The application name must be a valid Performance Management Architect application, a Classic Financial Management or Planning application, or an Essbase block storage 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, 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 or plan type 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, and Essbase Block Storage Application Users Only)" on page 93.

Designing a Custom Defined Template (Financial Management, 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). 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 Financial Management template, enter the calculation type.
- **Planning users only:** If you are creating a Planning template, enter the plan type.
- **Essbase users only:** If you are creating an Essbase template, 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, and Essbase Block Storage Application Users Only)" on page 112.
- Scripts: See "Working with Script Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 124.
- Conditions: See "Working with Condition Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 130.

- Member Ranges: See "Working with Member Range Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 138.
- Data Ranges: See "Working with Data Range Components (Financial Management Users Only)" on page 143.
- Fixed Loops: See "Working with Fixed Loop Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 148.

From **Existing Objects**, drag existing rules, formulas, scripts, and templates from Financial Management, Planning, or Essbase 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, and Essbase Block Storage Application Users Only)" on page 156.

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 and Essbase Block Storage Application Users Only)" on page 89.

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 **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, and Essbase Block Storage Application Users Only)" on page 96.

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.

6 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, 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.

7. 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
8. 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.
9. Select **File, Save.**

Creating Design Time Prompts for a Custom Defined Template (Financial Management, 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 93 through step 4 on page 93.
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, and Essbase Block Storage Application Users Only)" on page 101.
   - 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, and Essbase Block Storage Application Users Only)" on page 102.
     - **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, and Essbase Block Storage Application Users Only)" on page 101.
   - Condition—prompts the user to enter a condition. See "Using the Condition Builder to Create Conditional Statements (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 118.
   - 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, and Essbase Block Storage Application Users Only)" on page 102.

- **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, and Essbase Block Storage Application Users Only)" on page 101.

- 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, and Essbase Block Storage Application Users Only)" on page 102.
  - **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, and Essbase Block Storage Application Users Only)" on page 101.
- 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, and Essbase Block Storage Application Users Only)" on page 102.
  - **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, and Essbase Block Storage Application Users Only)" on page 101.
- 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, and Essbase Block Storage Application Users Only)" on page 102.
  - **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, and Essbase Block Storage Application Users Only)" on page 101.
- 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, and Essbase Block Storage Application Users Only)" on page 102.
  - **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, and Essbase Block Storage Application Users Only)" on page 101.

- 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, and Essbase Block Storage Application Users Only)" on page 102.
- 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, and Essbase Block Storage Application Users Only)" on page 102.
- 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, and Essbase Block Storage Application Users Only)" on page 100.

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, and Essbase Block Storage Application Users Only)" on page 102.
- 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, and Essbase Block Storage Application Users Only)" on page 100.

9 Repeat step 1 on page 96 through step 8 on page 98 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" on page 99.
- 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

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 93 through step 5 on page 94.

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 **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, 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), 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, 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), 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, 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), 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 207.
  - To enter members, see "Working with Members" on page 186.
  - To enter functions, see "Working with Functions" on page 222.
- 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, 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), 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, 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 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, and Essbase Block Storage Application Users Only)" on page 106.

Opening a Custom Defined Template (Financial Management, 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), and Templates.**

2 **Right-click the custom defined template you want to open, and select Open.**

Editing a Custom Defined Template (Financial Management, 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, 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 of these levels in the outline: the application type, the application, the calculation type (Financial Management), the plan type (Planning), or the database (Essbase), or the Templates node, and select Refresh.

Saving a Custom Defined Template with a Different Name (Financial Management, 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), 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 **Save As**, do these tasks:
   a. Enter the template's new name and the **Application Name**. The application name must be a valid Performance Management Architect application, a Classic Financial Management or Planning application, or an Essbase block storage 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 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, and Essbase Block Storage Application Users Only)" on page 106.

Refreshing Custom Defined Templates (Financial Management, 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) 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 templates).

Showing the Usages of a Custom Defined Template (Financial Management, 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, and Essbase Block Storage Application Users Only)" on page 109.

➤ 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) 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, 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, and Essbase Block Storage Application Users Only)" on page 106. 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, and Essbase Block Storage Application Users Only)" on page 109.

➤ 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), 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, 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), and **Templates**.
2. Right-click the template you want to copy, and select **Open.**
3. In the **Template Designer**, select **Edit, Copy.**
4. Select **File, Open** to open the rule or template into which you want to paste the template.
5. In the **Template Designer** or **Rule Designer** of the template or rule into which you want to paste the custom defined template, select **Edit, Paste.**
6. Select **File, Save.**

Inserting a Custom Defined Template into Business Rule's Flow Chart (Financial Management, 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), 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 **Templates** node.
4. 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.
5. Select **File, Save.**

Removing a Custom Defined Template from a Business Rule's Flow Chart (Financial Management, 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), 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.**
4. Select **File, Save.**

Searching for a Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)

You can use the Advanced Search feature of EPM Workspace to search for a template or any other 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, and Essbase Block Storage Application Users Only)

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About Components

A business rule can be composed of components, including formulas, scripts, conditions, member blocks, member ranges, data ranges (Financial Management users only), and loops.

- 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 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, 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.
- 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, and Essbase Block Storage Application Users Only)

See these topics:

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- "Creating a Formula Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 113
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About Formula Components (Financial Management, 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, 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** (Financial Management, Planning, or Essbase).

3 Select an **Application Name.** The application name must be a valid Performance Management Architect application, a Classic Financial Management orPlanning application, or an Essbase block storage 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, 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 calculation or plan type you are working in within the System View.

5 **Click OK.**

The formula is displayed in the Component Designer. To design the formula component, see "Designing a Formula Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 114.

Designing a Formula Component (Financial Management, 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), 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 aFinancial Management formula component, enter the calculation type.
- **Planning users only:** If you are creating a Planning formula component, enter the plan type.
- **Essbase users only:** If you are creating an Essbase 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 no 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 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 186.

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, and Essbase Block Storage Application Users Only)" on page 118.

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, and Essbase Block Storage Application Users Only)" on page 118.

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 207.)
- Member (See "Working with Members" on page 186.)
- Function (See "Working with Functions" on page 222.)

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 207.)
- Member (See "Working with Members" on page 186.)
- Function (See "Working with Functions" on page 222.)
- Smart List (See "Working with Smart Lists (Planning Users Only)" on page 225.)

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 120.

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 116 through step 20 on page 117 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, 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), 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 207.)
  - Member (See “Working with Members” on page 186.)
  - Function (See “Working with Functions” on page 222.)

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 207.)
  - Member (See “Working with Members” on page 186.)
  - Function (See “Working with Functions” on page 222.)

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, and Essbase Block Storage Application Users Only)" on page 118.

6 In **Log Expression**, enter an expression.

7 Click **OK.**

Entering Comments for Formula Statements (Financial Management, 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), 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 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), and **Rules** or **Templates**, depending on whether you want to enter a caption for a component in a business rule or 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, 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).

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, 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), 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, and Essbase Block Storage Application Users Only)" on page 114 and "Using the Condition Builder to Create Conditional Statements (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 118.

   - 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, 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, and Essbase Block Storage Application Users Only)" on page 161.) 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), 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 (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 162.

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, 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), 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 51.)
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**.
5. Select **File, Save.**

Working with Script Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)

See these topics:

- "Creating a Script Component" on page 125
- "Designing a Script Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 125

- "Opening a Script Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 128
- "Editing a Script Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 128
- "Copying and Pasting a Script Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 130
- "Deleting a Script Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 129

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, a Classic Financial Management or Planning application, or an Essbase block storage 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, select the **Database**.

   Note: If you right-click Scripts, and select New to create a new script, 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 scripts) you are working in within the System View.
5. Click **OK**.

   The script is displayed in the Component Designer. To design the script, see "Designing a Script Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 125.

Designing a Script Component (Financial Management, 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 users only:** If you are creating an Essbase 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 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 only view it in script format.

- Click the **Insert a function and its parameters** icon to insert a function. See "Working with Functions" on page 222.
- Click the **Insert members selected from a dimension** icon to insert a member. See "Working with Members" on page 186.
- Click the **Insert a variable** icon to insert a variable. See "Working with Variables" on page 207.

  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. See "Working with Smart Lists (Planning Users Only)" on page 225.
- 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, and Essbase Block Storage Application Users Only)" on page 49.
- 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, and Essbase Block Storage Application Users Only)" on page 49.

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 creating a script component for a business rule only:** Select **Enable Logging** so, if the script 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 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.

8 **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.

9 **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.

10 **Financial Management users only:** In **Parameters**, enter script parameters.

11 **Financial Management, Planning, and Essbase block storage users only:** On **Script**, enter a caption for the script component.

12 **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

13 **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.

14 Select **File, Save.**

Opening a Script Component (Financial Management, 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).
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, 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), 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, and Essbase Block Storage Application Users Only)" on page 125.

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 log and timer options

5 Select **File, Save.**

Deleting a Script Component (Financial Management, 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, and Essbase Block Storage Application Users Only)" on page 161.) 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), 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 (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 162.

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, 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), 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 51.)

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**.

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

Working with Condition Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)

See these topics:

- "About Condition Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 131
- "Creating a Condition Component" on page 131
- "Opening a Condition Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 132

- "Editing a Condition Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 133
- "Deleting a Condition Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 133
- "Copying and Pasting a Condition Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 134

About Condition Components (Financial Management, 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). 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 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 186.

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, and Essbase Block Storage Application Users Only)" on page 118 and complete step 4 through step 13 on page 120.

8 Enter comments for the condition component.

9 Select **File, Save.**

Opening a Condition Component (Financial Management, 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). 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, 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). 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 131.)

   - 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, 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). 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, 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). 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**.

4 Select **File, Save.**

Working with Member Block Components (Planning and Essbase Block Storage Application Users Only)

See these topics:

- "About Member Block Components (Planning and Essbase Block Storage Application Users Only)" on page 135
- "Creating a Member Block Component (Planning and Essbase Block Storage Application Users Only)" on page 135
- "Opening a Member Block Component (Planning and Essbase Block Storage Application Users Only)" on page 136
- "Editing a Member Block Component (Planning and Essbase Block Storage Application Users Only)" on page 137
- "Deleting a Member Block Component (Planning and Essbase Block Storage Application Users Only)" on page 137
- "Copying and Pasting a Member Block Component (Planning and Essbase Block Storage Application Users Only)" on page 138

About Member Block Components (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 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). 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, and Essbase Block Storage Application Users Only)" on page 96.

4 Click the **Member Block** icon, select or search for a member, and click **OK.** See "About Adding Members and Functions to a Component" on page 186.

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

Opening a Member Block Component (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). 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 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). 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 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). 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 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). 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**.

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

Working with Member Range Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)

See these topics:

- "About Member Range Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 139
- "Creating a Member Range Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 139
- "Opening a Member Range Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 141
- "Editing a Member Range Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 141

- "Deleting a Member Range Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 142
- "Copying and Pasting a Member Range Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 143

About Member Range Components (Financial Management, 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, 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, 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). 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, and Essbase Block Storage Application Users Only)" on page 96.**
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 207.

  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 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 207.)
  - Member (See "Working with Members" on page 186.)
  - Function (See "Working with Functions" on page 222.)

- **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 207.)
  - Member (See "Working with Members" on page 186.)
  - Function (See "Working with Functions" on page 222.)

  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 207.

  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 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, 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). 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, 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). 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, and Essbase Block Storage Application Users Only)" on page 139.)

- 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, 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). 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, 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). 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**.

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 144
- "Creating a Data Range Component (Financial Management Users Only)" on page 144
- "Opening a Data Range Component (Financial Management Users Only)" on page 145
- "Editing a Data Range Component (Financial Management Users Only)" on page 146
- "Deleting a Data Range Component (Financial Management Users Only)" on page 147

- "Copying and Pasting a Data Range Component (Financial Management Users Only)" on page 147

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.

   The data range object is displayed as two circles with a connecting line in 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, and Essbase Block Storage Application Users Only)" on page 96.
4. 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.
5. Select **Enable Timer** to record the time it takes to process the data range component in the log file when the business rule or template 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 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:* select **Use Variable**, and enter or select a variable. See "Working with Variables" on page 207.

  Note: If you select this option, you cannot define a data range for the dimensions in the grid.

- *If you are creating the data range for a template and want to use a design prompt to define the data range:* select **Use Design Prompt**, and enter or select a design prompt.

  Note: If you select this option, you cannot define a data range for the dimensions in the grid.

- *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 207.)
     - Member (See "Working with Members" on page 186.)
     - Function (See "Working with Functions" on page 222.)

  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 207.

     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.

7 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 144.)**

- 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**.

4 Select **File**, **Save.**

Working with Fixed Loop Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)

See these topics:

- "About Fixed Loop Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 148
- "Creating a Fixed Loop Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 148
- "Opening a Fixed Loop Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 150
- "Editing a Fixed Loop Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 150
- "Deleting a Fixed Loop Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 151
- "Copying and Pasting a Fixed Loop Component (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 151

About Fixed Loop Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)

A fixed loop component is an object that cycles through a list of metadata members or data records (for Financial Management applications only) a fixed number of times. For example, you can create a fixed loop that loops through a list of accounts 10 times.

Creating a Fixed Loop Component (Financial Management, 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), 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, and Essbase Block Storage Application Users Only)" on page 96.

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 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 207.

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 207 and "Working with Functions" on page 222.

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 207.

9 Select **File**, **Save**.

Opening a Fixed Loop Component (Financial Management, 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). 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, 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 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), 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, and Essbase Block Storage Application Users Only)” on page 148.

- For fixed loop components in *Financial Management, 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, and Essbase business rules:* the caption

- For fixed loop components in *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, 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), 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, 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), 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**.

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

Working with DTP Assignment Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)

See these topics:

- "About DTP Assignment Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 152
- "Creating DTP Assignment Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 153
- "Opening DTP Assignment Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 154
- "Editing DTP Assignment Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 154
- "Deleting DTP Assignment Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 155
- "Copying and Pasting DTP Assignment Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 156

About DTP Assignment Components (Financial Management, Planning, and Essbase Block Storage Application Users Only)

You can assign a value to a design time prompt in a custom-defined template using the 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, 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), 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, and Essbase Block Storage Application Users Only)" on page 96.
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 207.
- To enter members, select **Member**. See "Working with Members" on page 186.
- To enter functions, select **Function**. See "Working with Functions" on page 222.
- To enter Smart Lists, select **Smart List**. See "Working with Smart Lists (Planning Users Only)" on page 225.

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, 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), 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, 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), 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, 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), 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, 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 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, or Essbase application type, the application, the calculation type (for Financial Management), the plan type (for Planning), or the database (for Essbase), 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**.

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

Sharing Script and Formula Components (Financial Management, 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, or loop 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, 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, and Essbase Block Storage Application Users Only)" on page 161.) 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), 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, 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), 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 (Financial Management, Planning, and Essbase Block Storage Application Users Only)

You can save a component, and save it as a 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 158
- "Saving Components as a Template (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 159
- "Saving Formula and Script Components with a Different Name (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 159

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, 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 them as a template. You save components as a template from within the Rule Designer or Template Designer flow chart.

➤ To save components 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), 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 **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 **Save As**, click **OK.**

   Tip: To see the new template, you may need to refresh the System View.

Saving Formula and Script Components with a Different Name (Financial Management, 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, and Essbase Block Storage Application Users Only)" on page 156.

➤ 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), 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 **Save As**.

- If you want to save a script with a different name, right-click the script, and select **Save As**.

2 In **Save As**, enter the formula or script's new name and the application name. The application name must be a valid Performance Management Architect application, a Classic Financial Management or Planning application, or an Essbase block storage application. If the formula or script is for Financial Management, select a **Calculation Type**; if it is for Planning, select a **Plan Type**; if it is for Essbase, select a **Database.** Click **OK.**

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 old formula or script.

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, and Essbase Block Storage Application Users Only)" on page 160.

Refreshing Formula and Script Components (Financial Management, 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) that contains the script or formula component.

2 Right-click **Scripts** or **Formulas**, and select **Refresh.**

Showing the Usages of Formula and Script Components (Financial Management, 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), 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**.
3. After you review the information, click **OK.**

Working with Components in a Flow Chart (Financial Management, Planning, and Essbase Block Storage Application Users Only)

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.

See these topics:

- "Collapsing and Expanding a Component in a Flow Chart (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 162
- "Removing a Component from a Flow Chart (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 162
- "Copying and Pasting a Component in a Flow Chart (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 163

- "Copying and Pasting a Reference to a Component in a Flow Chart (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 164
- "Copying and Pasting a Component Group in a Flow Chart (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 164

Collapsing and Expanding a Component in a Flow Chart (Financial Management, Planning, and Essbase Block Storage Application Users Only)

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 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 **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 (Financial Management, Planning, and Essbase Block Storage Application Users Only)

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 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 **Rules** or **Templates**, depending on whether you want to remove a component from 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**.

4 Select **File, Save**.

Copying and Pasting a Component in a Flow Chart (Financial Management, Planning, and Essbase Block Storage Application Users Only)

When you a 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 (that is, Financial Management, Planning, or Essbase).

➤ To copy and paste 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), and **Rules** or **Templates**, depending on whether the component you want to copy and paste is in 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.

5 Select **File, Save**.

Copying and Pasting a Reference to a Component in a Flow Chart (Financial Management, Planning, and Essbase Block Storage Application Users Only)

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 (that is, Financial Management, Planning, or Essbase).

➤ To copy and paste a reference to a component in 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), and **Rules** or **Templates**, depending on whether the reference to the component you want to copy and paste is in 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.

5. Select **File, Save.**

Copying and Pasting a Component Group in a Flow Chart (Financial Management, Planning, and Essbase Block Storage Application Users Only)

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 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 Rules or Templates, depending on whether the component group you want to copy and paste is in 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**.

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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Working with Formula Components (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only) 177

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, or 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 168
- "Editing a Point of View Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 169
- "Opening a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 175
- "Deleting a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 175
- "Copying and Pasting a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 176
- "Saving a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 177

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 186.)
  - Variables (See "Working with Variables" on page 207.)

    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 222.)

    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 168.)**

- 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 171
- "Editing an Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 174
- "Opening a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 175
- "Deleting a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 175
- "Copying and Pasting a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 176

- "Saving a Point of View or Allocation Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 177

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 descendents 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:**

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. 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.

b. 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."

c. 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 174.
- Select **Use biggest value** to round data values to their largest values. Proceed to step 14 on page 174.
- Select **Use smallest value** to round data values to their smallest values. Proceed to step 14 on page 174.
- Select **Discard rounding error** to use allocated data values as they are. Proceed to step 14 on page 174.

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 171.)

- 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.

5 **Select File, Save.**

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 177
- "Opening a Formula Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 179
- "Editing a Formula Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 180
- "Deleting a Formula Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 180
- "Copying and Pasting a Formula Component (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 181
- "Copying a Formula Component to Another Application or Database (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 181
- "Showing a Formula Component's Usages (Essbase Aggregate Storage Application Users and Oracle General Ledger Users Only)" on page 182

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 Name.** The application name must be a valid Essbase aggregate storage application.
5. Select the Essbase **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 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 207.)
- Member (See "Working with Members" on page 186.)

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 207.)
- Member (See "Working with Members" on page 186.)

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 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 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 177.
   - 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 182.

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 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 182.

3 Remove the formula component from any business rules that are using it. See "Removing a Component from a Flow Chart (Financial Management, Planning, and Essbase Block Storage Application Users Only)" on page 162.

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 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 51.)

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**.

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 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 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 186.

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 207.) 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 222 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 186
- "Adding One Member or Function from One or More Dimensions to a Component " on page 187
- "Adding Multiple Members or Functions from One or More Dimensions to a Component " on page 195
- "Removing Members and Functions from a Component" on page 204
- "Searching for Members" on page 205
- "Searching for Members by Name, Alias, or Property" on page 206

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 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 **Rules** or **Templates**, depending on whether the component is in a business rule or template.
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 9 Member Selector Buttons

Button	Description
Add Special	**(Financial Management, 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: ❍ Member ❍ Children ❍ iChildren ❍ Descendents ❍ iDescendents ❍ Siblings ❍ iSiblings ❍ Parent ❍ iParent ❍ Ancestors ❍ iAncestors ❍ Relative ❍ Level 0 (Base) ❍ Inclusive **(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: ❍ 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:

  a. Select a function.

  b. Enter the required values for the function, according to this table:

Table 10 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.

Function	Values to Enter	Description
@ANCEST	❍ Dimension Name ❍ Generation Level Number ❍ Member Name	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	❍ Member Name ❍ Generation Level Number ❍ Generation Level Name	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	❍ Member Name ❍ Generation Level Number ❍ Generation Level Name	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	❍ Dimension Name ❍ genName	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	❍ Member Name ❍ Generation Level Number	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	❍ Member Name ❍ Generation Level Number	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.
@IRDESCENDANTS	❍ Member Name ❍ Generation Level Number	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	❍ Dimension Name ❍ Level Name	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	❍ Member, Generation ❍ genName ❍ Pattern to Match	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	❍ List 1 ❍ List 2	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	❍ Dimension Name ❍ Member Name	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	❍ Member Name ❍ Range List	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	❍ Member Name ❍ Generation Level Number	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	❍ Member Name ❍ Generation Level Number	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	❍ List 1 ❍ List 2	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	❍ Dimension Name ❍ User Defined Attribute	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	❍ Dimension Name ❍ Operator ❍ Value	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	❍ Member Name 1 ❍ Member Name 2	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 222 for a list of supported functions for Financial Management, Planning, and Essbase.

c. Click the **right arrow** button to move the function to the **Selections** list. You can also use the options in Table 9 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 205.)

e. Select **Advanced Search** to access advanced search options. (See "Searching for Members" on page 205.)

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 9 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 11 Financial Management Member Lists and Parameters

Dimension	Member Lists and Parameters
Account	❍ For **Hierarchy**, **Descendants**, **Ancestors**, **Parents**, **Children**, and **Base**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **System**, enter no parameters.

Dimension	Member Lists and Parameters
Custom 1	❍ For **Hierarchy**, **Descendants**, **Children**, **Base**, **Ancestors**, and **Parents** enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **Currencies**, and **ConsolMethods**, enter no parameters.
Custom 2	❍ For **Hierarchy**, **Descendants**, **Ancestors**, **Parents**, **Children**, and **Base**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **Currencies**, enter no values.
Custom 3	❍ For **Hierarchy**, **Descendants**, **Ancestors**, **Parents**, **Children**, and **Base**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period
Custom 4	❍ For **Hierarchy**, **Descendants**, **Ancestors**, **Parents**, **Children**, and **Base**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period
Entity	❍ For **Hierarchy**, **Descendants**, **Ancestors**, **Parents**, **Children**, and **Base**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **Adjustment Entities**, and **Parent Adjustment Entities**, enter no values.

Dimension	Member Lists and Parameters
ICP	❍ For **Hierarchy**, **Descendants**, **Ancestors**, **Parents**, **Children**, and **Base**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **System**, enter no values.
Period	❍ For **Hierarchy**, **Descendants**, **Ancestors**, **Parents**, and **Children**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **First Generation**, **Second Generation**, **Third Generation**, **Fourth Generation**, **Fifth Generation**, and **Sixth Generation**, enter no values.
Scenario	❍ For **Hierarchy**, **Descendants**, **Ancestors**, and **Parents**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **Support Process Management**, enter no values.
Value	❍ For **Hierarchy**, and **Descendants**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **Input**, **Adjustments**, **Totals**, and **Default Currencies**, enter no values.
View	❍ For **Hierarchy**, and **Descendants**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period

Dimension	Member Lists and Parameters
Year	❍ For **Hierarchy**, and **Descendants**, enter values for these parameters: ❑ 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 9 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), and **Rules** or **Templates**, depending on whether the component is in a business rule or template.

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 12 Member Selector Buttons

Button	Description
Add Special	**(Financial Management, 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: ❍ Member ❍ Children ❍ iChildren ❍ Descendents ❍ iDescendents ❍ Siblings ❍ iSiblings ❍ Parent ❍ iParent ❍ Ancestors ❍ iAncestors ❍ Relative ❍ Level 0 (Base) ❍ Inclusive **(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: ❍ 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:

a. Use **Ctrl + Click** or **Shift + Click** to select functions.

b. Enter the required values for the functions, according to this table:

Table 13 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	❍ Dimension Name ❍ Generation Level Number ❍ Member Name	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	❍ Member Name ❍ Generation Level Number ❍ Generation Level Name	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	❍ Member Name ❍ Generation Level Number ❍ Generation Level Name	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	❍ Dimension Name ❍ genName	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	❍ Member Name ❍ Generation Level Number	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	❍ Member Name ❍ Generation Level Number	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	❍ Member Name ❍ Generation Level Number	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	❍ Dimension Name ❍ Level Name	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	❍ Member, Generation ❍ genName ❍ Pattern to Match	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	❍ List 1 ❍ List 2	i. Enter the first list of members to be merged. ii. Enter the second list of members to be merged.
@PARENT	❍ Dimension Name ❍ Member Name	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	❍ Member Name ❍ Range List	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	❍ Member Name ❍ Generation Level Number	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	❍ Member Name ❍ Generation Level Number	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	❍ List 1 ❍ List 2	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	❍ Dimension Name ❍ User Defined Attribute	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	❍ Dimension Name ❍ Operator ❍ Value	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	❍ Member Name 1 ❍ Member Name 2	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 12 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 205.)

e. Select **Advanced Search** to access advanced search options. (See "Searching for Members" on page 205.)

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 12 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 14 Financial Management Member Lists and Parameters

Dimension	Member Lists and Parameters
Account	❍ For **Hierarchy**, **Descendants**, **Ancestors**, **Parents**, **Children**, and **Base**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **System**, enter no parameters.

Dimension	Member Lists and Parameters
Custom 1	❍ For **Hierarchy**, **Descendants**, **Children**, **Base**, **Ancestors**, and **Parents** enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **Currencies**, and **ConsolMethods**, enter no parameters.
Custom 2	❍ For **Hierarchy**, **Descendants**, **Ancestors**, **Parents**, **Children**, and **Base**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **Currencies**, enter no values.
Custom 3	❍ For **Hierarchy**, **Descendants**, **Ancestors**, **Parents**, **Children**, and **Base**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period
Custom 4	❍ For **Hierarchy**, **Descendants**, **Ancestors**, **Parents**, **Children**, and **Base**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period
Entity	❍ For **Hierarchy**, **Descendants**, **Ancestors**, **Parents**, **Children**, and **Base**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **Adjustment Entities**, and **Parent Adjustment Entities**, enter no values.

Dimension	Member Lists and Parameters
ICP	❍ For **Hierarchy**, **Descendants**, **Ancestors**, **Parents**, **Children**, and **Base**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **System**, enter no values.
Period	❍ For **Hierarchy**, **Descendants**, **Ancestors**, **Parents**, and **Children**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **First Generation**, **Second Generation**, **Third Generation**, **Fourth Generation**, **Fifth Generation**, and **Sixth Generation**, enter no values.
Scenario	❍ For **Hierarchy**, **Descendants**, **Ancestors**, and **Parents**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **Support Process Management**, enter no values.
Value	❍ For **Hierarchy**, and **Descendants**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period ❍ For **Input**, **Adjustments**, **Totals**, and **Default Currencies**, enter no values.
View	❍ For **Hierarchy**, and **Descendants**, enter values for these parameters: ❑ Top Member ❑ Active Entities ❑ Scenario ❑ Year ❑ Period

Dimension	Member Lists and Parameters
Year	❍ For **Hierarchy**, and **Descendants**, enter values for these parameters: ❑ 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 12 on page 197 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 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.**

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 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 Rules or Templates, depending on whether the component is in a business rule or template.**

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 9 on page 188.

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 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 **Rules** or **Templates**, depending on whether the component is in a business rule or template.

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 206.

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 12 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.**

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 what application type you are working in and whether you are creating an execution or replacement variable.

  - **All users:** Numeric—a number
  - String—a text string
  - **Planning and Essbase block storage application users only:** Essbase—an Essbase substitution variable.
  - **Planning and Essbase users only:** Cross Dimension—a selection of dimensions
  - **Planning and Essbase users only:** Dimension—a dimension
  - **Planning and Essbase users only:** Member—a member
  - **Planning and Essbase users only:** Members—two or more members
  - **Planning and Essbase users only:** Percent—a percentage
  - **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.

Note: Runtime prompt variables can be used only in Planning business rules.

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 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 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.

➤ 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 one of these tasks:**

- **Financial Management and Planning users only:** 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.)
- **Financial Management, Planning, and Essbase users:** Right–click an application, and select **New** to create a variable that can be used in that application only.
- **Planning 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 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 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.

c. Enter a description for the variable.

d. 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.

e. 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 211
- For entering values for string variables, see “Entering Variable Values for a String Variable” on page 212
- For entering values for member range variables, see “Entering Variable Values for a Member or Members Variable (Planning and Essbase Users Only)” on page 216
- For entering values for data range variables, see “Entering Values for a Data Range Variable (Financial Management Users Only)” on page 217
- For entering values for log information variables, see “Entering Values for a Log Information Variable (Financial Management Users Only)” on page 218

6 **Planning and Essbase users only:** If you want to create a replacement variable for Planning or Essbase, 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
- 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
- **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.

c. Enter a description for the variable.

d. 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.

e. 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.

f. 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 211.
- For entering values for string variables, "Entering Variable Values for a String Variable" on page 212.
- For entering values for cross dimension variables, "Entering Variable Values for a Cross Dimension Variable (Planning and Essbase Users Only)" on page 215.
- For entering values for dimension variables, "Entering Variable Values for a Dimension Variable (Planning and Essbase Users Only)" on page 215.

- For entering values for member, members, or member range variables, "Entering Variable Values for a Member or Members Variable (Planning and Essbase Users Only)" on page 216.
- For entering values for percent, string as number, and date as number variables, "Entering Variable Values for Percent Variables (Planning and Essbase Users Only)" on page 216.

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 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:

a. Enter a name for the variable.

b. Select the variable type: numeric, string, Boolean, or array.

c. Enter a description of up to 255 characters for the variable.

d. Enter a value for the variable.

e. 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.

f. Enter the scope of the variable. It can be used in rules or rulesets.

g. If the variable type is an array:

i. Enter the size of the array.

ii. Select the string or numeric data type.

9 **Planning and Essbase block storage application users only:** If you want to create an execution variable for Planning or Essbase block storage applications, on **Execution**, do these tasks:

a. Enter a name for the variable.

b. Specify whether the variable is an array. If you select this check box, you must select a dimension, too.

c. Enter a value for the variable.

d. 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.

e. If you selected **Array** as the variable type, select a 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, Essbase, or Financial Management replacement variable or a Financial Management execution variable.

➤ To enter values for a Planning or Essbase numeric variable:

1 Complete step 1 on page 208 through step 4 on page 209.

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 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 208 through step 4 on page 209.

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 186.
- To enter functions, select **Function**. See "Working with Functions" on page 222.

4 Select **File**, **Save**.

Entering Variable Values for a String Variable

A string variable can be a Financial Management, Planning, or Essbase replacement variable or 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 or Essbase replacement string variable:

1. **Complete step 1 on page 208 through step 4 on page 209.**
2. **From Type, select String.**
3. **In the Value table, enter a value for the variable.**
4. **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. **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 208 through step 4 on page 209.**
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 186.
   - To enter functions, select **Function**. See "Working with Functions" on page 222.
5. **Select File, Save.**

Entering Values for an Array Variable

An array variable can be a Financial Management, Planning, 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 208 through step 4 on page 209.**
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, 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 208 through step 4 on page 209.

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, 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 207.
      - To enter members, see "Working with Members" on page 186.
      - To enter functions, "Working with Functions" on page 222.

      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 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 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 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 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 and Essbase Users Only)

A cross dimension variable is a Planning 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 208 through step 4 on page 209.

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 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 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 and Essbase Users Only)

A dimension variable is a Planning 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 208 through step 4 on page 209.

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 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 and Essbase Users Only)

The member and members variables are Planning 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 208 through step 4 on page 209.

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 222.

5 Enter or use the Member Selector to select a value for the variable. You can select one member or function for a member variable and multiple members and functions a members variables.

6 **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.

7 **Planning users only:** If you selected **RTP**, enter the runtime prompt text you want to display for users.

8 Select **File, Save.**

Entering Variable Values for Percent Variables (Planning and Essbase Users Only)

The Percent variable is a Planning and Essbase replacement or execution variable. This variable contains a percentage that you specify.

➤ To enter values for a percent variable:

1 Complete step 1 on page 208 through step 4 on page 209.

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 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 208 through step 4 on page 209.

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 208 through step 4 on page 209.

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 207.
- To enter a member, see “Working with Members” on page 186.
- To enter a function, see “Working with Functions” on page 222.

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)

Boolean variables are 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 208 through step 4 on page 209.

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 208 through step 4 on page 209.

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, and Essbase Block Storage Application Users Only)" on page 118.

4 Select **File, Save.**

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 Financial Management, Planning, or Essbase application type, the application, the calculation type, plan type, or database, and **Rules** or **Templates**, depending on whether you want to select a variable for a component is in a business rule or template.

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 208.
- 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 and Essbase users only**) Plan Type or Database: The variable applies to the plan type or database for which it is created.
  - (**Planning and Essbase users only**) Rule: The variable applies to the rule for which it is created.

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 can 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 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 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 208
- "Editing a Variable" on page 219
- "Deleting a Variable" on page 220

3 On **Replacement** or **Execution**, right-click, and select **Refresh.**

Copying a Variable

You can copy a variable with the *same* name into the same or a different application using copy and paste. You can also copy a variable with a *different* name into the same or a different application using Save As.

➤ To copy a variable with a different name using Save As:

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 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 **Save As.**

4 In **Save As**, enter a new name for the variable, then select the application, and the calculation type, plan type, or database, or accept the defaults. (By default, the variable is copied to the same application and calculation type, plan type, or database in which it is created.)

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, 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, 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 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, 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 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 block storage 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.
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 222.

- 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. 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 aggregate storage 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

In This Chapter

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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 a Financial Management, Planning, or Essbase 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 plan type (Planning users only) or the database (Essbase users only), 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 Financial Management, Planning, or Essbase 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 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 Essbase 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 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 a Classic Financial Management or a Classic Planning application, you can validate against only Financial Management or Planning. You cannot validate an object from a Classic 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 from a Classic Financial Management application 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 from a Classic Planning application against Planning only.
- You can validate an Essbase rule from an Essbase application against Essbase only.

➤ To validate a business rule from within the Rule Designer:

1. **In the System View, expand the Financial Management, Planning, or Essbase 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 a Classic Financial Management or a Classic Planning application:
     - 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 Classic Financial Management and Planning applications, 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.

Deploying Business Rules and Business Rulesets

You can deploy business rules to Planning and Essbase and business rulesets to Financial Management, Planning, and Essbase. 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 Oracle Essbase Administration Services or directly from Calculation Manager. See the *Oracle Hyperion Financial Management User's Guide*, the *Oracle Hyperion Planning User's Guide*, the *Oracle Essbase Administration Services Online Help*, and Chapter 8, "Launching Essbase Business Rules (for Essbase Aggregate Storage and Block Storage Application Users Only)" in this guide. 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.

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 Financial Management, Planning, or Essbase 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 227. 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 ruleset to Planning, Essbase, or Oracle General Ledger from within 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 (Planning and Essbase users only)" on page 232.

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: If you are deploying to Planning or Essbase, you can also deploy from the System View.

2 In the Deployment View, expand the Financial Management, Planning, or Essbase application type.

3 Do one of these tasks:

- **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 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 (Planning and Essbase users only)

After you design a business rule or ruleset, you can validate and deploy it 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 Planning or Essbase application type and the application that contains the rule or ruleset you want to deploy.**

Note: You can also deploy Planning and Essbase rules and rulesets from the System View. Right-click the rule or rulesets, and select Deploy.

2 **Do one of these tasks:**

- If you want to deploy a business rule, expand the plan type that contains the rule, then expand **Rules**.
- If you want to deploy a business ruleset, expand **Rulesets**.

Note: For Planning and Essbase applications, the Rulesets node is under the application; the Rules node is under each plan type or database.

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 (Planning and Essbase Users Only)

If you have business rules with shortcuts, when you deploy the business rules to Planning, Essbase, or Oracle General Ledger 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.**

Note: If you are deploying to Planning, Essbase, or Oracle General Ledger, you can also deploy from the System View.

2 **In the Deployment View, expand the Planning or Essbase 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 Ruleset 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 Financial Management, Planning, or Essbase 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 a Classic Financial Management or Planning application:
  - 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 Classic Financial Management orPlanning applications, 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.

8 Launching Essbase Business Rules (for Essbase Aggregate Storage and 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, which 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 Classic Financial Management or Planning applications 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's 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 launchable for all locations in the application in Business Rules or be launchable for at least one of the plan types in the application in Calculation Manager.
- When you migrate business rules that are launchable 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 launchable 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 then 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, Fusion Edition, Oracle Hyperion Workforce Planning, Fusion Edition, 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 launchable 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 15 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 16 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 17 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 18 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 255.

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, or Essbase application; you can also export individual business rules, business rulesets, templates, and formula and script components within an application.

After you export applications and objects, you can import them into other Financial Management, Planning, or Essbase 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 export business rules, sequences, macros, and variables from Oracle's Hyperion® Business Rules, and import them into Calculation Manager. Sequences are converted to business rulesets, and macros are converted to templates in Calculation Manager.

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 Financial Management, Planning, or Essbase 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 and Essbase aggregate storage application users working with Oracle General Ledger applications only:** To export Planning or Essbase aggregate storage rulesets, expand **Rulesets**.
- To export rules, formulas, scripts, or templates, expand the calculation, plan type, or database, then 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 (Financial Management, Planning, or Essbase).

  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 Financial Management, Planning, or Essbase 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 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 Financial Management, Planning, or Essbase application type.**
2. **Select the application into which you want to import the objects.**
3. **Select File, Import.**
4. **In Import, enter or select a file to import.**
5. **Click Update Details to enter a Financial Management, Planning, or Essbase 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 calculation or plan type, name 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 Click **Import.**

A Accessibility

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This appendix describes Calculation Manager accessibility and compatibility features. For information on the recommended screen reader and magnifier to use with Calculation Manager, refer to the *Hyperion Calculation Manager Readme*.

Screen Reader and Magnifier Standards

For Calculation Manager, Oracle supports the JAWS 8 screen reader and the MAGiC 10.5 screen magnifier. For additional information, refer to the documentation included with these products.

Note: Oracle does not recommend using JAWS and MAGiC simultaneously or using MAGiC as a screen reader.

If you are using JAWS Screen Reading Software, we recommend using the Internet Explorer browser.

Setting Preferences for JAWS

Preferences for JAWS should be set to allow JAWS to read the page properly and react to user interface updates. MAGiC does not require any configuration changes to work with Calculation Manager.

Following is a list of the preferences that you need to customize in JAWS.

- You should disable Forms Mode Auto Off in JAWS.

➤ To disable Forms Mode Auto Off in JAWS, select **Utilities**, then **Configuration Manager**, then **Set Options**, then **HTML Options**, then **Misc**, then **Forms Mode Auto Off**.

- You should disable Virtual PC Cursor when using DHTML applications, and enable it when reading regular documents.

➤ To set the default state of the cursor, do either of these tasks:

- Use the shortcut key **Ctrl**-**Alt**-**NumPadPlus** to toggle Virtual PC Cursor.
- Select **Utilities**, then **Configuration Manager**, then **Set Options**, then **Advanced Options**, and then **Use Virtual PC Cursor**.
- You should disable the Control Group Name preference in JAWS Verbosity Options. This prevents redundant reading of controls caused by the way the user interface is laid out.

➤ To disable the Control Group Name preference in JAWS Verbosity Options, select **Utilities**, then **Configuration Manager**, then **Set Options**, then **Verbosity Options**, then **Beginner Preferences** (or whichever verbosity level is selected), and then **Control Group Name**.

Enabling Screen Reader Support

When you enable screen reader support for Calculation Manager, preference screen readers, magnifiers, and other tools work with Calculation Manager. If screen reader support is not enabled, accessibility tools cannot use most of Calculation Manager. If you change this setting during a session, you must restart your browser to enable the changes.

Note: The Enable Screen Reader Support option is displayed in the EPM Workspace user preferences General tab when using Internet Explorer 6 and 7.

➤ To enable accessibility:

1. In EPM Workspace, select **File**, then **Preferences.**
2. From **Accessibility Mode**, select **Enable Screen Reader Support.**
3. Click **OK.**

Setting High-Contrast Mode

A high-contrast color mode is available for accessibility. This option is supported only on the same platforms on which screen readers are supported.

➤ To set high-contrast mode:

1. Do one of these tasks:
    - Select **File**, then **Preferences**. From **Accessibility Mode**, select **High Contrast** from the **Select Theme** menu.

- Select Ctrl-Shift-H to toggle between regular and high-contrast mode. You are prompted to either restart Oracle Enterprise Performance Management Workspace, Fusion Edition or continue working. If you restart, you are reauthenticated transparently.

2 Click **OK**.

Using the Tab Key in the User Interface

Default tab order in the Calculation Manager user interface flows from left to right and top to bottom. The component order is: toolbar, search control, object palette, content area, and content area (bottom) tab bar. The tab order loops in both directions so that tabbing from the last item focuses the first item, and reverse-tabbing from the first item focuses the last item. The following elements are not included in the tab order:

- The Navigate menu
- The main menu bar (Use shortcut keys to access menu items.)
- The “Welcome <username>” message and the accompanying logoff text link (Use the logoff or the exit icon in the toolbar or items from the File menu instead.)

Note: Accessibility Mode ensures that the toolbar can be navigated using tabs.

Using Global Navigation Shortcuts

Calculation Manager provides keyboard shortcuts for general navigation.

Table 19 Global Navigation Shortcuts

Keyboard Shortcut	Action
F10	Focus and activate Menu bar's first Menu Button (Individual Alt+letter accessors may also be used.)
Ctrl+0	Focus current object palette (An object palette cannot have focus itself, so this focuses the first valid child in the tab order.) If there is no object palette, nothing happens.
Ctrl+1,2...9	Select the first, second, through ninth object palette and move focus to its first focusable child.
Ctrl+R	Focus Related Content control
Ctrl+B	Focus Collaboration Area control
Ctrl+G	Focus bottom tab bar of Workspace (which lists open modules). Focus goes to current tab. If there are no open tabs, nothing happens.
Ctrl+F	Focus the Search text box
Ctrl+T	Focus the toolbar. Use the Tab key to select individual buttons.

Keyboard Shortcut	Action
Ctrl+Y	Focus the content area. As with object palette, this transfers focus to the first valid child in the tab order.
Ctrl+F4	Close current module. If no modules are open, nothing happens.
Ctrl+Shift+H	Toggle High-Contrast Mode
Ctrl+F6 followed by Tab	Opening document in focus moves focus into and out of an iframe
Ctrl+Shift+F6	Remove focus from an iframe
Arrow keys (left/right/bottom/top).	Move around Explore module and access different cells and rows in a grid or tree view

Accessibility Behaviors for General User Interface Elements

Listed below are keystrokes that activate user interface elements and the expected behavior of screen readers when the user interface element is focused.

Table 20 User Interface Element Types

User Interface Element	Action
Button	Either Enter or Space activates the button, causing the same action as a left click.
ComboBox	1. Up or down arrow keys display the popup menu and allow selection of combobox values. 2. Space or Enter selects a combobox item from the popup. 3. If editable, alphanumeric keys make an edit.
Dialog	1. If the dialog has an Accept button defined, the Enter key activates it. 2. The dialog is modal and blocks all other keyboard events.
Content Area (IFrame)	1. Ctrl + F6 navigates into the content area (iframe), selecting the first element. 2. Ctrl + Shift + F6 navigates out of the content area (iframe), returning focus to the content area.
List	1. The up or down arrow keys move selection focus up or down through the list elements. The selection is continually updated. An arrow key press results in a selection event. 2. The Ctrl + Up or Down key moves focus up or down without changing the current selection. The spacebar can be used to add the focused item to the selection. 3. The Shift + Up or Down key moves focus up or down, and the newly focused item is added to the selection. **Note:** If the list supports only a single selection, the Ctrl and Shift modifiers have no effect.
Tab Bar	Left or right arrow keys move selection focus and select the new tab immediately. The selection focus *wraps around* the ends of the tab bar.

User Interface Element	Action
Text Field	1. If editable, alphanumeric keys make an edit. 2. Tab proceeds in the tab order. 3. Tab cannot be entered as a character in the text field.
Tree	The left and right arrow keys collapse or expand the current node if it has children. If it has no children, there is no effect. The expansion is non-recursive. However, if the tree is capable of remembering the previous expansion state of any subnodes, it should do so.

Accessibility for Calculation Manager

The following table provides keyboard shortcuts for Hyperion Calculation Manager.

Table 21 Calculation Manager Shortcut Keys

Menu, Button, or Task	Keyboard Shortcut	Mnemonic Shortcut[1]
Global Menu		
File Menu	Alt+F	Alt+F
File, New Rule	Ctrl+Shift+R	Alt+F, N, R
File, New Ruleset	Ctrl+Shift+L	L
File, Custom Defined Template	Ctrl+Shift+M	T
File, Formula Component	Ctrl+Shift+F	F
File, Script Component	Ctrl+Shift+C	C
File, Print	No keyboard shortcut	Alt+F, P
Import	No keyboard shortcut	I
Export	No keyboard shortcut	E
Log Off	No keyboard shortcut	G
Exit	No keyboard shortcut	X
Edit Menu	Alt+E	Alt+E
Edit, Delete	No keyboard shortcut	D
Edit, Remove	No keyboard shortcut	R
Tools Menu	Alt+T	No mnemonic shortcut
Tools, Variables	Ctrl+Shift+B	b
Actions Menu	Alt+C	No mnemonic shortcut

Menu, Button, or Task	Keyboard Shortcut	Mnemonic Shortcut[1]
Actions, Validate	No keyboard shortcut	A
Actions, Migrate	No keyboard shortcut	M
Other Actions		
Maximize/Restore		No mnemonic shortcut
Close Module	Ctrl+F4	No mnemonic shortcut
Variable Designer Use the Tab key to reach the grid, and use the arrow keys to navigate within the grid.		No mnemonic shortcut
File, New Variable	Ctrl+Shift+V	N
File, Save	Ctrl+S	S
Context Menu		No mnemonic shortcut
New	No keyboard shortcut	N
Refresh	No keyboard shortcut	R
Export	No keyboard shortcut	E
Delete	No keyboard shortcut	D
Copy	No keyboard shortcut	C
Paste	No keyboard shortcut	P
Save	No keyboard shortcut	S
Access main object palette	Alt+O, followed by Tab	
Access Properties tab	Alt+P, followed by Tab	
Access main content frame for the Rule Designer	Alt+M, followed by Tab	
Variable Properties Grid		No mnemonic shortcut
Edit cells within the grid	F2	No mnemonic shortcut
Select or clear the Runtime Prompt check box	Reach the cell and press Alt+Shift+R or space bar	No mnemonic shortcut
Select or clear the Allow Missing check box	Reach the cell and press space bar	No mnemonic shortcut
Display the Limits dialog box	Reach the cell and press F2/Alt+Shift+L	No mnemonic shortcut
Display the Default Value dialog box	Reach the cell and press F2/Alt+Shift+U	No mnemonic shortcut
Rule Designer		No mnemonic shortcut
Focus on the horizontal scroll bar	Ctrl+8	
Focus on the vertical scroll bar	Ctrl+9	

Menu, Button, or Task	Keyboard Shortcut	Mnemonic Shortcut[1]
File Menu		
File, Save	Ctrl+S	S
File, Save As	No keyboard shortcut	A
File, Save As Template	No keyboard shortcut	M
Edit Menu	Alt+E	No mnemonic shortcut
Edit, Copy	Ctrl+Shift+C	O
Edit, Paste	Ctrl+Shif+V	P
Edit, Copy Group	No keyboard shortcut	G
Edit, Copy Reference	No keyboard shortcut	R
Edit, Script	No keyboard shortcut	S
Tools Menu	Alt+T	No mnemonic shortcut
Tools, Quick Edit	No keyboard shortcut	Q
Actions Menu	Alt+C	
Actions, Validate		A
Actions, Validate Planning	Ctrl+P	P
Actions, Validate Performance Management Architect	Ctrl + E	E
Actions, Validate Essbase	Ctrl + A	E
Actions, Validate Both	Ctrl + B	B
Actions, Validate Financial Management	Ctrl + H	C
Actions, Deploy	Ctrl+D	D
Actions, Quick Deploy	Ctrl+Q	Q
Context Menu		No mnemonic shortcut
Copy	No keyboard shortcut	C
Remove	No keyboard shortcut	D
Copy Group	No keyboard shortcut	G
Collapse	No keyboard shortcut	L
Expand	No keyboard shortcut	X
Paste	No keyboard shortcut	P

Menu, Button, or Task	Keyboard Shortcut	Mnemonic Shortcut[1]
Save As Template	No keyboard shortcut	T
Open	No keyboard shortcut	O
Export	No keyboard shortcut	E
Zoom In	Ctrl+Shift+2	No mnemonic shortcut
Zoom Out	Ctrl+Shift+1	No mnemonic shortcut
Focus on the rule flow chart	Alt+M	
Access the Properties tab	Alt+P, followed by tab	
Access the New Objects palette	Alt+W, followed by tab	
Access the Existing Objects palette	Alt+G, followed by tab	
Rule, Template Palette[2]		
Copy from palette and paste into the script editor		
Copy an object from the Existing Objects palette and paste it into the script editor as a shared object	Ctrl+Shift+V	
Copy from palette and paste in the flow chart		
Copy an object from either palette and paste it into the flow chart	D	No mnemonic shortcut
Paste by Reference (into rule)	R	No mnemonic shortcut
Paste by Copy	Ctrl+R	No mnemonic shortcut
Paste in Else part of a Condition component	Shift+R	No mnemonic shortcut
Copy and paste within a flow chart		
Move a component within the flow chart	Ctrl+Shift+X	
Copy	Ctrl+Shift+C	
Paste	Ctrl+Shift+V	
Paste next to end of a loop	Ctrl+Shift+E	
Paste in Else part of a Condition component	Ctrl+Shift+I	
Common menus for the System, Custom, and List views		
View Menu		
View, List View		L
View, System View		S

Menu, Button, or Task	Keyboard Shortcut	Mnemonic Shortcut[1]
View, Custom View		U
View, Deployment View		D
Tools Menu		
Tools, Filter		F
Actions Menu	Alt+C	
Actions, Execute		X
Actions, Deploy		D
System View		
Context Menu		
Open	No keyboard shortcut	O
Delete	No keyboard shortcut	D
New	No keyboard shortcut	N
Export	No keyboard shortcut	E
Validate	No keyboard shortcut	V
Deploy	No keyboard shortcut	D
Deploy All	No keyboard shortcut	A
Refresh	No keyboard shortcut	R
Copy To	No keyboard shortcut	Y
Create Shortcut	No keyboard shortcut	S
Launch	No keyboard shortcut	X
Show Usages	No keyboard shortcut	U
Migrate	No keyboard shortcut	M
Change Owner	No keyboard shortcut	W
Set Logger	No keyboard shortcut	L
Set Comments	No keyboard shortcut	C
Set Timer	No keyboard shortcut	T
Custom View		
File, Rename	No keyboard shortcut	R

Menu, Button, or Task	Keyboard Shortcut	Mnemonic Shortcut[1]
Context Menu		
Open	No keyboard shortcut	O
New	No keyboard shortcut	N
New Folder	No keyboard shortcut	F
New Rule	No keyboard shortcut	U
New Ruleset	No keyboard shortcut	L
New Formula	No keyboard shortcut	M
New Script	No keyboard shortcut	S
Refresh	No keyboard shortcut	H
Rename	No keyboard shortcut	A
Remove	No keyboard shortcut	R
Export	No keyboard shortcut	E
Validate	No keyboard shortcut	V
Custom Defined Template	No keyboard shortcut	T
Show Usages	No keyboard shortcut	U
Copy	Ctrl+Shift+C	No mnemonic shortcut
Paste	Ctrl+Shift+V	No mnemonic shortcut
Access object palette	Alt+O, followed by tab	
Access main content frame	Alt+M, followed by tab	
Deployment View		
Context Menu		
Open	No keyboard shortcut	O
Refresh	No keyboard shortcut	R
Export	No keyboard shortcut	E
Deploy	Ctrl+Y	P
Deploy All	No keyboard shortcut	A
Validate	Ctrl+M	V
Mark Selected	No keyboard shortcut	K

Menu, Button, or Task	Keyboard Shortcut	Mnemonic Shortcut[1]
Unmark Selected	No keyboard shortcut	M
Show Usages	No keyboard shortcut	U
Set Logger	No keyboard shortcut	L
Set Comments	No keyboard shortcut	C
Set Timer	No keyboard shortcut	T
Select or clear the Deployable check box	F2	No mnemonic shortcut
Template Designer		
File Menu	Alt+F	No mnemonic shortcut
File, Save	Ctrl+S	No mnemonic shortcut
File, Save As	No keyboard shortcut	A
Edit Menu	Alt+E	No mnemonic shortcut
Edit, Copy	Ctrl+Shift+C	C
Edit, Paste	Ctrl+Shift+V	P
Edit, Copy Group	No keyboard shortcut	G
Tools Menu	Alt+T	No mnemonic shortcut
Tools, Variables	Ctrl+Shift+B	B
Tools, Quick Edit	No keyboard shortcut	Q
Design Time Prompt Grid		
Display the Dimension Limits dialog box	Alt+Shift+S	No mnemonic shortcut
Define dependencies for a design time prompt	Alt+Shift+D	No mnemonic shortcut
Define a default value for a Member Range design time prompt	Alt+Shift+I	No mnemonic shortcut
Display the Design Time Prompt Selector	Alt+Shift+K	No mnemonic shortcut
Delete Row	Delete Key	No mnemonic shortcut
Insert a row before the selected row	Shift+Insert Key	
Insert a row after the selected row	Alt+Insert Key	
Insert a row as the last row	Insert key	
Move Up	Alt+Shift+U	No mnemonic shortcut
Move Down	Alt+Shift+V	No mnemonic shortcut

Menu, Button, or Task	Keyboard Shortcut	Mnemonic Shortcut[1]
Select or clear the isPrompt check box for a selected design time prompt	Alt+Shift+O	No mnemonic shortcut
Select or clear the isMandatory check box for a selected design time prompt	Alt+Shift+1	
Select or clear the isReadonly check box for a selected design time prompt	Alt+Shift+2	
Select or clear all check boxes at the row level for a selected design time prompt	Alt+Shift+O	
Context Menu		
Move row up		U
Move row down		O
Insert Row	No keyboard shortcut	I
Insert a row after the selected row		B
Insert a row before the selected row		A
Insert a row as the last row		E
Delete Row	No keyboard shortcut	D
Copy	No keyboard shortcut	C
Copy Grid	No keyboard shortcut	G
Paste	No keyboard shortcut	P
Template Reference		
Edit a cell	F2	No mnemonic shortcut
Select or clear a check box	Space	No mnemonic shortcut
Formula Component **Note:** After you drop a formula component into a flow chart, you may need to press Alt+M multiple times to shift focus to the formula component.		
Formula Grid		
Actions sub-menu	F2 **Note:** You may need to press F2 twice to display the Actions sub-menu from which you can access the Members, Variables, or Functions dialogs.	
In the Condition row, access the Log dialog	In the cell press F2,, or press Alt+Shift+G from the condition text area	No mnemonic shortcut

Menu, Button, or Task	Keyboard Shortcut	Mnemonic Shortcut[1]
In the Condition row, access the Comment dialog	In the cell press F2,, or press Alt+Shift+M from the condition text area	No mnemonic shortcut
In the Condition row, access the Condition dialog	In the cell press F2,, or press Alt+Shift+I from the condition text area	No mnemonic shortcut
In the Comment row, access the Comment dialog	In the cell press F2,, or press Alt+Shift+M from the condition text area	No mnemonic shortcut
Grid Section		
Insert a row or remove a row	In the cell, press F2	
Access the drop-down menu	F2	
Edit cells within the grid	F2	
Context Menu		
Insert Members	No keyboard shortcut	M
Edit Selection	No keyboard shortcut	S
Insert Condition	No keyboard shortcut	L
Delete Condition	No keyboard shortcut	T
Insert Row	No keyboard shortcut	I
Delete Row	No keyboard shortcut	R
Add Grid Before	No keyboard shortcut	B
Add Grid After	No keyboard shortcut	F
Add Grid End	No keyboard shortcut	E
Delete Grid	No keyboard shortcut	D
Copy Row	No keyboard shortcut	C
Copy all rows	No keyboard shortcut	A
Paste	No keyboard shortcut	P
Find	No keyboard shortcut	N
Replace	No keyboard shortcut	L
Script Component		
Find	Ctrl+F	No mnemonic shortcut
Replace	Ctrl+R	No mnemonic shortcut
Member Selector	Alt+Shift+B	No mnemonic shortcut

Menu, Button, or Task	Keyboard Shortcut	Mnemonic Shortcut[1]
Function Selector	Alt+Shift+U	No mnemonic shortcut
Variable Selector	Alt+Shift+G	No mnemonic shortcut
Smartlist Selector	Alt+Shift+M	
Tabbing in Script Editor	Ctrl+B	No mnemonic shortcut
When the Find dialog box is open, focus on the Find text box	Alt+N	
When the Find dialog box is open, search for a text string	Alt+F	
Component Designer		
Move Up	Alt+Shift+U	No mnemonic shortcut
Move Down	Alt+Shift+W	No mnemonic shortcut
Group	G	No mnemonic shortcut
Ungroup	N	No mnemonic shortcut
Delete	Delete key	No mnemonic shortcut
Add Condition	Insert key	No mnemonic shortcut
Replace Condition	Alt+Shift+R	No mnemonic shortcut
Ruleset Designer		
File Menu		
File, Save	Ctrl+S	S
File, Save As	No keyboard shortcut	A
Actions Menu		
Actions, Validate		A
Actions, Validate Oracle Hyperion Planning, Fusion Edition	Ctrl+P	P
Actions, Validate Oracle Hyperion EPM Architect, Fusion Edition	Ctrl + E	E
Actions, Validate Oracle Essbase	Ctrl + A	E
Actions, Validate Both	Ctrl + B	B
Actions, Validate Oracle Hyperion Financial Management, Fusion Edition	Ctrl + H	C
Actions, Deploy	Ctrl+D	D
Actions, Quick Deploy	Ctrl+Q	Q

Menu, Button, or Task	Keyboard Shortcut	Mnemonic Shortcut[1]
Context Menu		
Refresh	No keyboard shortcut	R
Open	No keyboard shortcut	O
Remove	No keyboard shortcut	R
Move Up	Alt+Shift+U	No mnemonic shortcut
Move Down	Alt+Shift+D	No mnemonic shortcut
Copy (drag)	Ctrl+Shift+C	No mnemonic shortcut
Paste (drop)	Ctrl+Shift+V	No mnemonic shortcut
Access the main object palette	Alt+O, followed by tab	
Access the Properties tab	Alt+P, followed by tab	
Access the main content frame	Alt+M, followed by tab	
Existing Objects		
Context Menu		
Refresh	No keyboard shortcut	R
Open	No keyboard shortcut	O
Loop Builder		
Member Range and Data Range components		
Comment dialog	Alt+Shift+M	No mnemonic shortcut
Reset Grid	Alt+G	
Sort columns in the variables grid and the List View		
Sort column <column number> [column number from 0 to n]	Ctrl+Shift+<column number>[0 to n]	
Dialog Boxes		
OK		O (Alt+O in Internet Explorer)
Cancel		L(Alt + L in Internet Explorer)
Help		H (Alt+H in Internet Explorer)

Menu, Button, or Task	Keyboard Shortcut	Mnemonic Shortcut[1]
Condition Builder		
Move up	Alt+Shift+U	
Move down	Alt+Shift+W	
Group	G	
Ungroup	N	
Delete condition	Delete key	
Add condition	Insert key	
Replace condition	Alt+Shift+R	
Create Shortcut dialog box		
Select or clear an option button	F2	
Member Shortcut dialog box		
Add members to the Selected list	Ctrl+M	
Remove members from the Selected list	Ctrl+U	
Remove all members from the Selected list	Ctrl+R	
Template Wizard		
Move members from the Available design time prompts list to the Selected design time prompts list	When in the Available design time prompts list, press Ctrl+M	
Remove members from the Selected design time prompts list	When in the Selected design time prompts list, press Ctrl+U	
Define restricted List dialog box		
Insert a row before the selected row	Shift+Insert key	
Insert a row after the selected row	Alt+Insert key	
Insert a row as the last row	Insert key	

[1]Any keys joined by a + sign must be pressed simultaneously.

[2]For templates and business rules, when you drag components from the Object Palette and drop them into a flow chart, use the keyboard shortcuts or the Tab key to set the focus on the correct component and shortcut.

Accessibility for Online Help

This table lists the keyboard shortcuts for online help.

Table 22 Keyboard Shortcuts for Online Help

Keyboard Shortcut	Description
Ctrl-Shift-1	Open and move focus to the Contents tab.
Ctrl-Shift-2	Open and move focus to the Index tab.
Ctrl-Shift-3	Open and move focus to the Search tab.
Ctrl-Shift-4	Move focus to the content frame, which is the frame that contains help topics.

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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