HYPERION® BUSINESS RULES

RELEASE 11.1.1

HYPERION BUSINESS RULES
ADMINISTRATOR'S GUIDE

ORACLE®

**ENTERPRISE PERFORMANCE
MANAGEMENT SYSTEM**

Contents

1

Getting Started

This chapter describes the features and benefits of Oracle's Hyperion® Business Rules, the roles in Business Rules, and the concepts and terminology you should be familiar with before you use Business Rules. It also describes the components of Business Rules and how use them to create and launch business rules.

Before You Begin

Before you use this guide to learn about and work with Business Rules, do the following tasks:

- Install Oracle's Hyperion® Shared Services (Shared Services). See the *Hyperion Shared Services Installation Guide.*

- Install Oracle Essbase Administration Services, which installs Business Rules automatically. See the *Essbase Administration Services Installation Guide.*

- Create one empty database for Shared Services and one for Business Rules in Microsoft SQL Server Enterprise Manager, Oracle, DB2, or MYSQL. See the *Essbase Administration Services Installation Guide.*

- Configure Shared Services using the Oracle's Hyperion Enterprise Performance Management System Configurator. See the *Hyperion Shared Services Installation Guide.*

- Configure Administration Services and Business Rules using the EPM System Configurator. (You use this utility to configure the application server and the relational database repository, and to register Administration Services and Business Rules with Shared Services.) See the *Essbase Administration Services Installation Guide.*

- Provision users and groups for use in Business Rules, and assign Business Rules roles to them, using the Shared Services User Management Console™. See the *Hyperion Security Administration Guide.*

For an overview of Shared Services, see "Shared Services" on page 12.

About Business Rules

Business Rules guides users through the creation, execution, and management of business rules on Oracle Essbase server.

In a traditional multidimensional application, users must program complicated calculations to perform the business rules they need. In addition, business rule logic creation, validation, and error detection are usually time consuming and frustrating for users. Also, users must modify the calculations often, sometimes weekly or hourly, to keep up with business demands. These frequent changes create high maintenance and incur high cost for the customers of analytic applications.

Business Rules improves the response time to changing business application needs, shortens application development cycles, increases business user productivity, improves reuse of application components, and increases the return on analytic application investments.

Business Rules Features and Benefits

Business Rules makes it easy to create, run, and manage business rules and sequences in your multidimensional analytic application. The features and benefits of Business Rules are described in the following topics.

Easy to Create

- Macros simplify the creation of business rules and sequences, and save business rule designers time by enabling them to reuse pieces of business rules in other business rules or macros.

- Variables of the saved selection type can be used at runtime and during design time to make business rules easier to design.

- Predefined and reusable formulas that define unique cost and revenue calculations save business rule designers time during the design process. The following formulas are provided:

  - Pro-Rata Ratio
  - Units-Rates
  - Variable
  - Custom

- The graphical depiction of components, formulas, and processes makes it easy to construct business rules in a multidimensional application.

Easy to Use

- Business rules can be launched by business users from within Administration Services, the Business Rules Web Launcher, the Business Rules Command Line Launcher, and the Oracle Hyperion Planning, Fusion Edition (Planning) Web Client.

- Business rules can be launched in all Essbase environments.

- Business rules can be stored and run on a server across a wide area network (WAN).

- Business rules with runtime prompts ensure valid inputs from budget preparers.

- Entry of runtime prompt values during launching makes one, centrally created business rule reusable by several users.

Easy to Maintain

- The Business Rules architecture supports enterprise-wide maintenance and methods of use that can be managed and deployed to multiple business users.

- Business rules, sequences, macros, variables, and projects can be stored in these repositories: Microsoft Access, Microsoft SQL Server, Oracle, or DB2 for shared, enterprise-wide access.

- Use of a central repository makes administration and maintenance of business rules easy, because the repository stores information for several applications in one database.

- The logical organization of business rules, sequences, macros, and variables into projects makes them easier to find and maintain.

Business Rules Roles

The following table summarizes the typical Business Rules roles and the types of tasks that can be performed by the users and groups who are assigned these roles.

Note:

You set up users and groups, and assign roles to them, in the Shared Services User Management Console. See the *Hyperion Security Administration Guide.*

Business Rules Role	Tasks that Can Be Performed
Administrator	A user or group who has the role of *administrator* can do these tasks: • Create, launch, edit, validate, and manage business rules, sequences, macros, variables, and projects • Assign access privileges to business rules, sequences, macros, variables, and projects • Create and edit users, groups, and roles • Set up the repository and log file
Interactive User	A user or group who has the role of *interactive user* can do these tasks:

Business Rules Role	Tasks that Can Be Performed
	• Create, launch, edit, validate, and manage business rules, sequences, macros, variables, and projects • Assign access privileges (with the exception of the ability to launch business rules, which can only be assigned by an administrator) to business rules, sequences, macros, variables, and projects
Basic User	A user or group who has the role of *basic user* can do these tasks: • Launch business rules and sequences to which the user has access • View business rules and sequences to which the users has access • View all variables and macros • Edit business rules, sequences, macros, variables, and projects for which the user was granted editing privileges

Business Rules Product Components

This release of Business Rules contains the following three components:

- *Administration Services Administration Console (Administration Console):* Administrators use the Administration Console in *Administration Services* to create, edit, validate, launch, and maintain graphical and *non-graphical* business rules.

- Business Rules *Web Launcher:* Business users use the Business Rules Web Launcher to select a business rule, enter runtime prompts if necessary, and launch the business rule on the Web.

- Business Rules Command Line Launcher: Administrators use the Command Line Launcher to schedule business rules to run from outside of Business Rules by creating a command line launch (or shortcut) on the desktop.

Business Rules Prerequisite Knowledge

This section introduces Business Rules and the concepts that are important to know before using Business Rules. Hyperion recommends that users have introductory Essbase training, knowledge of their multidimensional applications, and familiarity with their business processes before using Business Rules.

Before Using the Administration Console

Users should have the following Essbase knowledge before using the Administration Console:

- An understanding of the Essbase application, including database dimensionality and outline structure

- Knowledge of where the data is stored in the database, how the data is stored and aggregated, and at what level the data gets loaded into the database

For more information on Essbase applications, database dimensionality, and database outlines, see the *Hyperion Essbase - System 9 Database Administrator's Guide.*

Users should also know the following aspects of their business processes:

- The order of calculations to take place

- The sequence of business rules

- The key assumptions being used to drive the calculations

Before Using the Web Launcher

Users should have the following information about their business rules before using the Business Rules Web Launcher:

- Which business rules they need to run

- Where to get the values for runtime prompts that need to be entered

- When the business rules need to run

- Familiarity with the application and the database outline

Using the Administration Console

To access and use the Administration Console in Administration Services, the Administration Services server must be running. In addition, Essbase server must also be running in order for you to select a database outline to refer to as you are creating your business rules, sequences, macros, and variables. For information on installing and starting Administration Services server and Essbase server, see the *Essbase Administration Services Installation Guide.*

➤ To access the Administration Console:

1 **Select Start > Programs > Hyperion > Administration Services > Start Administration Services Console.**

2 **On the Analytic Administration Services Login dialog box, enter a server name or select one from the drop-down list. Then enter your user name and password, and click OK.**

The Administration Services window is displayed with Business Rules collapsed in the left frame of the window.

3 **Expand the nodes under the Business Rules node to view their contents.**

Business Rules contains the following three nodes:

- The My Projects node lists the projects in the Business Rules repository that were created by the logged on user. Projects are a convenient way to organize business rules, sequences, macros, and variables into logical groupings of information.

- The Repository View node lists all of the repository objects (business rules, sequences, macros, variables, and projects) that are in the Business Rules repository. You use the features in this node to create, edit, validate, launch, and manage repository objects.

- The Administration node lists the properties of the client and server. You use the features in this node to change the level of error reporting in the log file, to migrate the repository, and to import and export business rules.

Refer to this guide for information on using the features of the Administration Console in Administration Services.

Using the Web Launcher

The Business Rules Web Launcher is designed for business users who need to run business rules that address their business needs. Business users use the Web Launcher to run business rules that you create for them. To use the Web Launcher, a business user must have Calculate access to at least one database on Essbase server.

➤ To lo on to Business Rules Web Launcher:

1 **Enter the URL for the Web Launcher.**

Business users must browse to the URL that their administrators provide, using Microsoft Internet Explorer.

The URL for the Business Rules Web Launcher is:

```
http://[Computer name]:[port]/hbrlauncher
```

where `[Computer name]:[port]` is the name and port where the Essbase server is running. (10080 is the default port.)

Your administrator can provide you with the computer name and port number, if the default port number is not used.

After you enter the Web Launcher URL, the Logon page is displayed.

2 **In the Server text box, select a server name from the drop-down list.**

3 **In the User text box, enter your user name.**

4 **In the Password text box, enter the password that corresponds with your user name.**

5 **Click Logon.**

The Business Rules Home page is displayed. The Business Rules Home Page allows the user to select a business rule to launch.

For information on using Business Rules Web Launcher, see the *Hyperion Business Rules Web Launcher User's Guide* or the *Hyperion Business Rules Web Launcher Online Help*.

Shared Services

Shared Services functionality is programmed into products, such as Planning and Business Rules. Shared Services integrates the products to provide the following functionality:

- User provisioning

- External authentication definition

- Metadata synchronization

- Data synchronization

- Task flow management

User provisioning functionality is described in the *Hyperion Security Administration Guide*. External authentication is described in the *Hyperion Shared Services Installation Guide*. All other Shared Services functionality is described in the administrator's and user's guides for the products that implement Shared Services. Products that implement Shared Services functionality require access to a Shared Services server running Shared Services client and server software, and to a database dedicated to Shared Services.

Business Rules implements Shared Services user provisioning functionality. For more information on user provisioning for Business Rules, see the Business Rules product appendix in the *Hyperion Security Administration Guide*. For more information on installing and configuring Shared Services for Business Rules, see the *Essbase Administration Services Installation Guide*.

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Working with Business Rules, Sequences, Macros, and Variables

You can use Business Rules to create a business rule (graphical or non-graphical) or business rule sequence using macros, variables, commands, and functions. This chapter describes how to create business rules, business rule sequences, macros, and variables.

About Business Rules

Business Rules enables you to create, use, and launch sophisticated multidimensional business rules. These business rules typically include the following:

- Allocation of costs among entities

- Revenue modeling

- Expense modeling for:

  ❍ Employee planning

  ❍ Depreciation planning

  ❍ Selling costs

  ❍ Manufacturing costs

- Balance sheet planning

- ❍ Capital expenditures
- ❍ Account receivables
- Sources and uses of cash

You can create business rules using commands, functions, macros, and variables (including runtime prompt variables). When you create the business rule, you become its owner and your user name becomes the Owner attribute of the business rule. As the owner of the rule, you have the right to edit and delete it. For users to launch the rule at a database location, you, as the administrator, must give launch privileges to the rule for that location.

Before you begin to create a business rule, you should be familiar with your Analytic Services outline and application. 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

➤ Following is an overview of the process you use to create a business rule:

1 Make sure Shared Services Server is running.

2 Make sure Analytic Administration Services Server is running.

3 Make sure Analytic Server is running.

4 Launch the Analytic Administration Services Administration Console.

5 Log on to Analytic Administration Services.

6 From within Analytic Administration Services, access Business Rules.

7 Write the new business rule. You can use variables, macros, commands, functions, formulas, and actions in the rule.

8 Specify the location where users can validate and/or launch the business rule.

9 Grant access privileges to the business rule.

10 Save the business rule.

11 Validate the business rule.

12 Launch the business rule.

Accessing Business Rules

Note:

Administration Services Server must be running before you can open the Administration Services Administration Console and access Business Rules. For more information on

Administration Services Server, see the *Essbase Administration Services Installation Guide* for this release of Business Rules.

➤ To access Business Rules:

1 **Select Start > Programs > Hyperion > Administration Services > Start Administration Services Console.**

2 On the **Analytic Administration Services Login** dialog box, enter a server name or select one from the drop-down list. Then enter your user name and password, and click **OK**.

The Administration Services Console window displays with Business Rules collapsed in the left frame of the window.

Creating a Business Rule

Note:

Before you create a business rule in the Administration Console, make sure that Administration Services Server is running. For more information on Administration Services Server, see the *Essbase Administration Services Installation Guide*.

➤ To create a business rule:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 If the **Enterprise View** tab is not displayed, select it in the bottom of the left frame of the Administration Console window.

Note:

When the Administration Console window opens, the tab that is displayed by default (the Enterprise View, BR Language, or BR Outline tab) is the last tab that you were working on prior to logging off.

4 In the left navigation frame of Administration Services, expand the Business Rules node. Then expand the **Repository View** node.

5 Right-click the **Rules** node and select **New Rule**.

The Rule Editor is launched with the Graphical tab displayed.

6 **Optional:** If you have not selected an outline, from the **Associated outline** drop-down list, do one of the following:

● Choose an outline. (The outlines that are displayed in the drop-down list are outlines that you worked with in this session.)

- Choose **Select outline** to access another dialog from which you can select an outline that you have not worked with in this session. From the **Select Database Outline** dialog box, drill down to select a database outline from Planning or Essbase, and click **OK**.

  The name of the outline is displayed in the **Associated outline** drop-down list. You can look at the contents of the outline on the **BR Outline** tab as you create your business rule.

- Choose **no associated outline selected** if you do not want to work with an outline. In this case, no outline is displayed on the **BR Outline** tab.

  Note:

  If you have not selected one, you must select an outline to use actions and formulas in graphical business rules.

7 On the **Graphical** and **Source** tabs, write the business rule. Depending on what type of business rule you want to create, do either of the following:

- Create a *graphical business rule* on the **Graphical** tab. You can insert actions and formulas into a graphical business rule by right clicking inside the **Graphical** tab. You can also insert actions and formulas by selecting them from the **BR Language** tab and dragging and dropping them onto the **Graphical** tab. You can do the following:

  a. Specify the global properties of the business rule, including how formula components should be calculated in the rule and what dimensions should be common to all of the formula components in the rule (known as the business rule range).

      Note:

      Action components are not included in the global business rule range. You must select dimensions and members for action components on the Range tab of each action component. See "About Adding Actions to Graphical Business Rules" on page 42

      - On the Overview tab, select the On button if you want to turn on intelligent calculation on. Intelligent calculation calculates only the data blocks that need to be calculated, which makes the calculation more efficient. Keep the default setting (Off) if you want all data blocks to be calculated.

      - On the Range tab, for each dimension in the list that you want to include, enter a value in the Selected Values text box or click the magnifying glass icon to select the members and variables. For more information on member selection, see "Selecting Members" on page 35.

  b. Add actions to the business rule. For more information on using actions in a graphical business rule, see "About Adding Actions to Graphical Business Rules" on page 42.

  c. Add formulas to the business rule. For more information on using formulas in a graphical business rule, see "About Adding Formulas to Graphical Business Rules" on page 47.

- Create a *non-graphical business rule* (that is, an enhanced calc script) on the **Source** tab. You can insert variables and macros into a non-graphical business rules by right clicking inside the **Source** tab. You can also insert functions and commands by selecting them from the **BR**

Language tab and dragging and dropping them onto the **Source** tab. You can do the following:

- ❍ Add global variables to the business rule. For more information on creating global variables, see "Creating Global Variables" on page 26.

- ❍ Add macros to the business rule. For more information on creating macros, see "Creating Macros" on page 37.

- ❍ Add Essbase calculation commands to the business rule. For more information on inserting Essbase calculation commands, see "Using Essbase Calculation Commands" on page 40.

- ❍ Add Planning formula expressions to the business rule. For more information on Planning formula expressions, see the *Hyperion Enterprise Performance Management Architect Administrator's Guide.*

- ❍ Add Essbase functions to the business rule. For more information on inserting Essbase functions, see "Inserting Functions with the Function Editor" on page 41.

  Note:

  You can create a *graphical business rule* on the Graphical tab and make changes to it on the Source tab. After you make changes to it on the Source tab, however, you cannot make additional changes to it on the Graphical tab; additional changes can only be made on the Source tab. You can view the graphical business rule in its enhanced calc script format on the Source tab. You can create a *non-graphical business rule on the Source tab, but you cannot make changes to it on the Graphical tab. When you create a rule on the Source tab, you can only make* changes to it on the Source tab.

8 **Optional:** From the **Variables** tab, create or modify local variables (that is, variables that are used only in this business rule) and local or global runtime prompt variables.

- ● On the **Local Variables** tab, do the following:
  - ❍ Edit local variables. See "Editing Local Variables" on page 32.
  - ❍ Create local variables. See "Creating Local Variables" on page 29.
  - ❍ Delete local variables. See "Deleting Local Variables" on page 36.

- ● On the **Runtime Prompts** tab, do the following:
  - ❍ Use the **Move Up** and **Move Down** buttons to reorder the local and global runtime prompts that are displayed during validation and launch.
  - ❍ Select the **Hide** check box next to a runtime prompt to hide it from users when they validate or launch the business rule.
  - ❍ Click **Add Global Variable Link** to access the Global Variables dialog box from which you can select global runtime prompt variables to associate with the business rule. See "Associating Global Runtime Prompt Variables with Business Rules" on page 37.
  - ❍ Select a variable, and click **Remove Global Variable Link** to remove the runtime prompt variable from the business rule.

Note:

You can remove a runtime prompt variable from a business rule only if it is not used in the business rule.

9 On the **Usages** tab, you can see which business rule sequences use this business rule. If you are creating the business rule, the tab is empty until you begin using the rule in sequences.

10 On the **Doc** tab, write a summary for other users of what this business rule does. For graphical business rules, you can also view and/or print HTML documentation for the rules.

For example, you might include a note that lets users know that a business rule should be used to calculate quarterly revenues for a product line, and aggregate them into a value for the year end.

11 On the **Properties** tab, enter a name, description, and owner for the business rule. If you want to prevent other users from viewing or editing the rule, select the **Locked** check box.

12 On the **Locations** tab, do one of the following:

- To enable users to validate and run the business rule against a database location or cluster:

a. Click **Add**.

b. In the **Associated Outline** dialog box, do one of the following:

  - Choose a database location. For more information on working with locations, see "Managing Database Locations" on page 103.

  - Choose a cluster. For more information on working with clusters, see "Managing Clusters" on page 108

  - Choose **Select Outline** to access another dialog from which you can select an outline. From the **Select Database Outline** dialog box, drill down to select a database outline from Planning or Essbase, and click **OK**.

    The server and database name is displayed in the Locations text box.

  - To enable users to validate and run the business rule against *all* database locations and clusters, click **Allow All locations**.

  - To delete one or more database locations so users cannot validate or launch the rule against them, select them from the **Locations** text box, and click **Delete**.

    Note:

    The ability to assign access privileges is based on the locations you assign to the business rule. If you want a cluster or database location to be available when you assign access privileges, you must select it from the Associated Outline dialog box, or select Allow All Locations to ensure that all locations and clusters are available.

13 On the **Access Privileges** tab, if you are an administrator, you can grant and/or delete access to the business rule. If you are the owner, or you were granted modify access to the rule, you can assign users edit/no edit privileges for the business rule. For more info, see "Adding or Editing Access Privileges for a Business Rule" on page 66 and "Deleting Access Privileges for a Business Rule" on page 68.

14 Click **Save** to save the business rule. For more information on saving business rules, see "Saving a Business Rule" on page 21.

Note:

You must save the business rule before you can validate and/or launch it.

15 **Optional:** Validate the business rule. For more information on validating business rules, see "Validating a Business Rule" on page 79.

16 **Optional:** Launch the business rule. For more information on launching business rules, see "Launching a Business Rule" on page 80.

Selecting a Database Outline

You should select a Planning or Essbase database outline while you create repository objects like business rules, sequences, and projects and while you assign access privileges for these objects. Then the database outline is available for you to refer to when you are assigning locations against which users can validate and run a business rule or sequence, and when you are assigning access privileges for a business rule, sequence, or project.

➤ To select an outline, from the **Select Database Outline** dialog box, drill down to select a Planning or Essbase database outline, and click **OK**.

The name of the outline displays in the Associated outline drop-down list. You can look at the contents of the outline on the BR Outline tab.

Editing a Business Rule

You can edit the following properties of a business rule:

- The business rule syntax
- The business rule name
- The business rule description
- The documentation created for the rule
- The business rule owner
- The Locked status of the business rule
- The business rule access privileges
- The business rule launch locations

Saving a Business Rule

After you create or edit a business rule, you must save it to the repository. After you save it, you can validate and/or launch it.

➤ To save a business rule:

1 After you create or edit the business rule, do one of the following:

- In the **Rule Editor**, click **Save** to save the rule to the database.

- In the **Enterprise View**, right-click the name of the business rule, and select **Save As** to save a copy of the business rule with a different name.

2   Click **Close**.

About Business Rule Sequences

You can group business rules in a business rule sequence to launch the business rules in order at one time. Graphical business rules, enhanced calc scripts, or calc scripts can be added to a sequence. Run time prompt values can be saved for each business rule in a sequence.

> **Note:**

You can add business rules and business rule sequences to a business rule sequence.

Creating a Business Rule Sequence

➤ To create a business rule sequence (or to add a business rule or business rule sequence to a business rule sequence):

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4   Do one of the following:

a.   If you are creating a new sequence, right-click **Sequences**, and select **New Sequence**.

b.   If you are adding a business rule or business rule sequence to a sequence, expand the **Sequences** node and double-click the sequence to which you want to add a business rule or business rule sequence.

The Sequence Editor is displayed showing the Sequence tab.

5   On the **Sequence** tab, click **Add**.

The Add to Sequence dialog box is displayed. A list of the rules you can add to the new business rule sequence is displayed on the Rules tab. A list of the sequences you can add to the new business rule sequence is displayed on the Sequences tab.

6   On the **Add to Sequence** dialog box, select the check boxes next to the business rules and business rule sequences you want to add to your new business rule sequence. Then click **OK**.

The business rules and business rule sequences that you select are added to your new sequence and are displayed on the Sequence tab. The order in which the business rules and business rule sequences are displayed is the order in which they are validated and launched.

Note:

You cannot create a sequence that contains business rules that are associated with an outline from Essbase and an outline from Planning.

7 **Optional: Use the Move Up and Move Down buttons to change the order in which the business rules and sequences are validated and launched.**

8 Click **OK** to save the business rules and sequences you want to add to the sequence.

9 On the **Launch Variables** tab, select the **Merge Launch Variables** check box to display only the first instance of each launch variable in the **Launch Variable Value** list. If you do not select this check box, all instances of each launch variable are displayed. For example, if there are two instances of the Execution Database Name launch variable, and you merge launch variables, only the first instance of the Execution Database Name launch variable is listed; if you do not merge launch variables, both instances are listed.

Note:

If you select Merge Launch 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.

10 Select the **Hide** check box next to business rules and sequences that contains a variable whose value you do not want users to see when they are validating or launching the sequence. For example, if the value is used to calculate employee bonuses, you may not want users to see the value when they launch the rule or sequence.

Note:

You must specify a launch value when you select Hide. If you select Merge Launch Variables, and the merged variables have different Hide settings, Hide is not selected.

11 In the **Execution Database Name** text box, enter or select the database against which the sequence is to be launched.

12 On the **Properties** tab, you can enter a name and description for the sequence, the name of the sequence owner, and specify whether or not the sequence should be locked so that other users cannot see it or edit it.

13 On the **Access Privileges** tab, if you are an administrator, you can grant and/or delete access to this sequence. If you are the owner, or you were granted modify access to the sequence, you can assign users edit/no edit privileges for the sequence. See "Adding or Editing Access Privileges for a Business Rule Sequence" on page 73 and "Deleting Access Privileges from a Business Rule Sequence" on page 75.

14 Click **Save** to save the new sequence.

Note:

You must save the sequence before you can validate or launch it.

15 **Optional:** To validate the sequence, click **Validate**. For more information on validating sequences, see "Validating a Business Rule Sequence" on page 81.

16 **Optional:** To launch the sequence, click **Launch**. For more information on launching sequences, see "Launching a Business Rule Sequence" on page 82.

Editing a Business Rule Sequence

You can edit the following properties of a business rule sequence:

- The rules in the sequence
- The name of the sequence
- The description of the sequence
- The owner of the sequence
- The Locked status of the sequence
- The access privileges for the sequence
- The locations where the sequence can be launched

Saving a Business Rule Sequence

After you create or edit a business rule sequence, you must save it to the repository. You must save it before you can validate or launch it.

➤ To save a business rule sequence:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Do one of the following:

   a. Right-click **Sequences** and select **New Sequence** to create a new business rule sequence. For more information on creating a business rule sequence, see "Creating a Business Rule Sequence" on page 22.

   b. Expand **Sequences** and double-click the business rule sequence you want to edit. For more information on editing a business rule sequence, see "Editing a Business Rule Sequence" on page 24.

5 After you create or edit the business rule sequence, do one of the following:

   a. In the **Rule Editor**, click **Save** to save the sequence to the database.

   b. In the **Enterprise View**, right-click the name of the sequence, and select **Save As** to save a copy of the sequence with a different name.

   Note:

   When you click Save to save a repository object (like business rules, sequences, macros, variables, and projects), the Save As dialog box is displayed for you to enter a name and a description for the object. Duplicate names are not allowed. You can only rename an object if you have edit privileges for that object.

Deleting a Business Rule or Sequence from a Sequence

When you delete a business rule or business rule sequence from a business rule sequence, you delete it from the sequence only; it is not deleted from the repository or other rules, sequences, macros, or variables.

➤ To delete a business rule or business rule sequence from another business rule sequence:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Sequences** node, and double-click the sequence from which you want to delete a business rule or business rule sequence.

The Sequence Editor is displayed showing the Sequence tab with a list of the business rules and sequences that are in the business rule sequence.

5 On the **Sequence** tab, select the rule or sequence you want to delete.

Note:

You can only delete one rule or sequence at a time.

6 Click **Delete** to delete the business rules and sequences you selected from your business rule sequence.

7 Click **Save** to save the changes you made to the business rule sequence.

About Variables

Variables assume values that you define for them. As a designer, you use them during design-time in your business rules and macros. If you set the variable usage type to runtime prompt, at runtime, users are prompted to supply a value or values for the variable.

Variables are *local* (apply to one business rule) or *global* (can be applied to multiple business rules and macros). Business Rules provides three types of variables that you can use in your business rules:

● **Use by Value** – At design time, you can use this variable type to design your business rule so that when a use by value variable is inserted into the business rule, the variable is substituted with a value.

For example, if you have a business rule that contains a variable named [CurrMonth], with a type of Use by Value and a value of May, when you insert the variable into the rule, the value May displays in the rule.

- **Saved Selection** – At design time, this type of variable inserts the name of the variable into the rule. Then at runtime, the value specified for the variable is used. This lets you use the same variable in a rule while allowing you to change the variable value without prompting.

  For example, if you have a business rule that contains a variable named [CurrMonth], with a type of Saved Selection and a value of May, when you insert the variable into the rule, [CurrMonth] appears, but when you run the rule, May is used.

- **Runtime Prompt** – At runtime, the user is asked to supply one member, multiple members, string, number, or dimension for the variable. Runtime prompts enable you to enter variables in a business rule that resolve when a user launches the rule.

  Note:

  When you create runtime prompt text, you can enter unlimited text. However, when you display the runtime prompt in an application, the text is truncated. The display limit varies, depending on the application that displays the runtime prompt.

  For example, if you have a business rule that contains a variable named [CurrMonth], and the user supplies a variable with a value of July, at runtime, July is substituted for [CurrMonth].

Creating Global Variables

➤ To create a global variable:

1 Launch the Analytic Administration Services Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console.**

2 To access Business Rules, in the left frame of the Analytic Administration Services window, expand the **Enterprise View** node, the **Business Rules** node, and the **Repository View** node.

3 Right-click **Global Variables**, and select **New Variable**.

In the right frame of the Analytic Administration Services window, the tabs for creating a global variable are displayed.

4 In the **Variable** tab, enter a name and a description for the variable.

5 In the **Type** text box, enter one of the following to define the type of variable:

- Member - a member from the dimension you select
- Members - a range of members from the dimension you select
- Dimension - a dimension to be used for member selection
- String - a text string
- Integer - an integer (This is the default selection.)
- Real - a real number
- Percent - a percentage

- String as number - a text string (This is only available if you selected a Planning outline.)

- Date as number - a date (This is only available is you selected a Planning outline.

6 Select the **Smart List** check box if you want to use a Smart List as the variable type. (See the *Hyperion Planning - System 9 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 outline that supports the use of Smart Lists to enable this check box.

7 In the **Smart List** text box, enter the name of the Smart List or use the **Lookup** button to search for a Smart List name. See .

8 In the **Dimension** text box, if you selected **Member or Members** in step 5, and you are creating a runtime prompt variable, select the dimension from which you want to choose a member or members for the runtime prompt to run against.

   Note:

   If you did not select an outline from the Associated Outline drop-down list, you are not able to select a dimension from the Dimension text box, and you are not able to select members from the Value text box.

9 In the **Limits** text box, do one of the following:

- If you specified **Member** or **Members** in step 5, enter the names of the members in the text box, or use the lookup button to search for and select a range of members against which users can validate the variable. To make selecting members easier, you can use the **Member** drop-down list and the **Exclude** text box to refine your member selection by specifying a group of members (and excluding others) based on their relationship to the member you selected from the outline.

- If you specified **Real #**, **Integer**, or **Percent** in step 5, enter minimum and maximum values in the **Limits** text box.

- If you specified a Smart List as the variable type in step 6, enter limits for the Smart List or use the lookup button to select limits. The limits you select for the Smart List display as names (rather than as the numbers associated with the names) in the **Limits** text box.

   Note:

   If you specified **Dimension** or **String** in step 5, or if you selected Saved Selection as your usage type, the Limits text box and lookup button are disabled.

10 Select the **Allow #Missing** check box to enable users to specify #Missing or blank as the default value for the variable.

Blank and #Missing mean that a cell has no data value. #Missing is different from zero. Zero is a data value, and #Missing indicates lack of a data value for the cell. #Missing decreases the size of the database and positively impacts system performance.

Note:

This check box is enabled only when the Type is numeric (that is, integer, real, or percent).

11 In the **Default Value** text box, if you are creating a variable of the runtime prompt type, and if you want to provide a default value for the user, click the **Search** button, and do one of the following:

- If you selected **Member** in step 5, in the **Single Select** dialog box, select a member. If you want to use aliases for the members names, select an alias table from the **Alias Tables** drop-down list, then select the **Use Alias Names** check box. Click **OK**.

- If you selected **Members** in step 5, in the **Multiple Select** dialog box, use the right, left, up, and down arrows to select and exclude members. To make selecting members easier, you can use the **Member** drop-down list and the **Exclude** text box to refine your member selection by specifying a group of members (and excluding others) based on their relationship to the member you selected from the outline. For more information on selecting multiple members, see "Selecting Members" on page 35.

- If you selected the **Smart List** check box, you must enter a default value for the Smart List in this text box.

12 In the **Usage type** text box, enter one of the following types of variables:

- **Use by Value** – At design time, you can use this variable type to design your business rule so that when a use by value variable is inserted into the business rule, the variable is substituted with a value.

- **Saved Selection – At runtime, the value specified for the variable is used. This lets you use the same variable in a rule while allowing you to change the variable value without prompting. (This is the default selection.)**

- **Runtime Prompt** – At runtime, the user is asked to supply one member, multiple member, number, string, or dimension for the variable. Runtime prompts enable you to enter variables in a business rule that resolve when a user launches the rule.

13 In the **Prompt string** text box, if you are creating a runtime prompt, enter the text of the prompt to be displayed when the business rule is launched by a user.

For example, if you want users to receive a runtime prompt that asks them to enter a range of members from a dimension, you might enter the following text, "Select members from the Product dimension."

Note:

When you create runtime prompt text, you can enter unlimited text. However, when the runtime prompt is displayed in Business Rules, the text is truncated. The display limit varies, depending on the application that displays the runtime prompt.

14 If you selected runtime prompt as the usage type for the variable, select the "Do not save value entered during validation and launch as the default value" check box if you want the value that you enter in the **Default Value** text box to be used as the default value for the runtime prompt. If you do not select this check

box, the last value that the user enters for the runtime prompt during validation and launch is used as the default value for the next runtime prompt.

15 On the **Usages** tab, you can see which business rules and macros use this variable. If you are creating the variable, the tab is empty until you begin using the variable in business rules and macros.

16 On the **Properties** tab, you can enter the name of the variable owner, specify whether or not the variable should be locked to prevent users from opening it for editing, and view other information about the variable.

17 On the **Access Privileges** tab, if you are an administrator, you can grant and/or delete access to this variable. If you are the owner, or you were granted modify access to the variable, you can assign users edit/no edit privileges for the variable. See "Adding or Editing Access Privileges for a Variable" on page 69 and "Deleting Access Privileges for a Variable" on page 70.

18 Click **Save** to save the new variable.

Selecting Smart Lists

To select a Smart List name as the variable type, select the name of the Smart List you want to use. You can select only one Smart List; the Smart List numbers are not selectable. When you select a Smart List name from this dialog box, the name is displayed in the Smart List text box on the Variable tab.

To select a Smart List value for the Default Value text box, select the Smart List option you want to use as the default value. When you select a Smart List option from this dialog box, only its numeric value is displayed in the Default Value text box on the Variable tab.

Note:

Smart List options with a lock cannot be selected.

Creating Local Variables

A local variable is the same as a global variable, but affects only the business rule for which you create it. You can add, modify, or delete a local variable on the Local Variable tab of the rule for which it is created.

Local variables assume the access privileges of the rule with which they are associated. Local variables are only added, modified, or deleted when the rule is saved.

➤ To create a local variable:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Rules** node, and double-click the rule to which you want to add a local variable.

The cursor is positioned on the first line of the Source tab.

5   Select the **Variables** tab.

The Local Variables tab is displayed.

6   On the **Local Variables** tab, click **Add**.

The Local Variable page is displayed.

7   On the **Local Variable** page, enter a name and a description for the variable.

8   In the **Type** text box, enter one of the following to define the type of variable:

- Member - a member from the dimension you select

- Members - a range of members from the dimension you select

- Dimension - a dimension to be used for member selection

- String - a text string

- Integer - an integer (This is the default selection.)

- Real - a real number

- Percent - a percentage

9   Select the **Smart List** check box if you want to use a Smart List as the variable type. (See the *Hyperion Planning - System 9 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.

Note:

If you do not select a Planning outline that supports the use of Smart Lists, this check box is not enabled.

10   In the **Smart List** text box, enter the name of the Smart List or use the **Lookup** button to search for a Smart List name. See "Selecting Smart Lists" on page 29.

11   In the **Dimension** text box, if you selected **Member, Members, or Dimension** in step 8, and you are creating a runtime prompt variable, select the dimension from which you want to choose a member or members for the runtime prompt to run against.

Note:

If you did not select an outline from the Associated Outline drop-down list, you are not able to select a dimension from the Dimension text box, and you are not able to select members from the Value text box.

12   In the **Limits** text box, do one of the following:

- If you specified **Member** or **Members** in step 8, enter the names of the members in the **Limits** text box, or use the lookup button to search for and select a range of members against which users can validate the variable. To make selecting members easier, you can use the **Member** drop-down list and the **Exclude** text box to refine your member selection by specifying a group of members (and excluding others) based on their relationship to the

member you selected from the outline. If you want to use aliases for the members names, select an alias table from the **Alias Tables** drop-down list, then select the **Use Alias Names** check box.

- If you specified **Real #**, **Integer**, or **Percent** in step 8, enter minimum and maximum values in the **Limits** text box.

- If you specified a Smart List as the variable type in step 9, enter limits for the Smart List or use the lookup button to select limits. The limits you select for the Smart List display as names (rather than as the numbers associated with the names) in the **Limits** text box.

  Note:

  If you specified **Dimension** or **String** in step 8, or if you selected Saved Selection as your usage type, the Limits text box and lookup button are disabled.

13 Select the **Allow #Missing** check box to enable users to specify #Missing or blank as the default value for the variable.

Blank and `#Missing` mean that a cell has no data value. `#Missing` is different from zero. Zero is a data value, and `#Missing` indicates lack of a data value for the cell. `#Missing` decreases the size of the database and positively impacts system performance.

Note:

This check box is enabled only when the Type is numeric (that is, integer, real, or percent).

14 In the **Default Value** text box, if you are creating a variable of the runtime prompt type, and if you want to provide a default value for the user, click the **Search** button, and do one of the following:

- If you selected **Member** in step 8, in the **Single Select** dialog box, select a member. If you want to use aliases for the members names, select an alias table from the **Alias Tables** drop-down list, then select the **Use Alias Names** check box. Click **OK**.

- If you selected **Members** in step 8, in the **Multiple Select** dialog box, use the right, left, up, and down arrows to select and exclude members. To make selecting members easier, you can use the **Member** drop-down list and the **Exclude** text box to refine your member selection by specifying a group of members (and excluding others) based on their relationship to the member you selected from the outline. For more information on selecting multiple members, see "Selecting Members" on page 35.

- If you selected the **Smart List** check box, you must enter a default value for the Smart List in this text box.

15 In the **Usage type** text box, enter one of the following types of variables:

- **Use by Value** – At design time, you can use this variable type to design your business rule so that when a use by value variable is inserted into the business rule, the variable is substituted with a value.

- **Saved Selection** – At runtime, the value specified for the variable is used. This lets you use the same variable in a rule while allowing you to change the variable value without prompting. (This is the default selection.)

- **Runtime Prompt** – At runtime, the user is asked to supply one member, multiple member, number, string, or dimension for the variable. Runtime prompts enable you to enter variables in a business rule that resolve when a user launches the rule.

16 In the **Prompt string** text box, if you are creating a runtime prompt, enter the text of the prompt to be displayed when the business rule is launched by a user.

For example, if you want users to receive a runtime prompt that asks them to enter a range of members from a dimension, you might enter the following text, "Select members from the Product dimension."

Note:

When you create runtime prompt text, you can enter unlimited text. However, when the runtime prompt is displayed in Business Rules, the text is truncated. The display limit varies, depending on the application that displays the runtime prompt.

17 If you selected runtime prompt as the usage type for the variable, select the "Do not save value entered during validation and launch as the default value" check box if you want the value that you enter in the **Default Value** text box to be used as the default value for the runtime prompt. If you do not select this check box, the last value that the user enters for the runtime prompt during validation and launch is used as the default value for the next runtime prompt.

18 On the **Properties** tab, you can enter the name of the variable owner, specify whether or not the variable should be locked so that other users cannot see it or edit it, and view other information about the variable.

19 Click **Apply** to save the local variable.

Editing Local Variables

➤ To edit a local variable:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Rules** node, and double-click the rule that contains the local variable you want to edit.

The cursor is positioned on the first line of the Source tab.

5 Select the **Variables** tab.

The Local Variables tab is displayed. This tab contains all of the local variables available for editing.

6 To edit a local variable, select the variable, and click **Edit**.

The Local Variable page is displayed.

7 On the **Local Variable** page, enter a name and a description for the variable.

8   In the **Type** text box, enter one of the following to define the type of variable:

- Member - a member from the dimension you select

- Members - a range of members from the dimension you select

- Dimension - a dimension to be used for member selection

- String - a text string

- Integer - an integer (This is the default selection.)

- Real - a real number

- Percent - a percentage

9   Select the **Smart List** check box if you want to use a Smart List as the variable type. (See the *Hyperion Planning - System 9 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.

Note:

If you do not select a Planning outline that supports the use of Smart Lists, this check box is not enabled.

10   In the **Smart List** text box, enter the name of the Smart List or use the **Lookup** button to search for a Smart List name. See .

11   In the **Dimension** text box, if you selected **Member, Members, or Dimension** in step 8, and you are creating a runtime prompt variable, select the dimension from which you want to choose a member or members for the runtime prompt to run against.

Note:

If you did not select an outline from the Associated Outline drop-down list, you are not able to select a dimension from the Dimension text box, and you are not able to select members from the Value text box.

12   In the **Limits** text box, do one of the following:

- If you specified **Member** or **Members** in step 8, enter the names of the members in the text box, or use the lookup button to search for and select a range of members against which users can validate the variable. To make selecting members easier, you can use the **Member** drop-down list and the **Exclude** text box to refine your member selection by specifying a group of members (and excluding others) based on their relationship to the member you selected from the outline.

- If you specified **Real #**, **Integer**, or **Percent** in step 8, enter minimum and maximum values in the **Limits** text box.

- If you specified a Smart List as the variable type in step 9, enter limits for the Smart List or use the lookup button to select limits. The limits you select for the Smart List display as names (rather than as the numbers associated with the names) in the **Limits** text box.

If you specified **Dimension** or **String** in step 8, or if you selected Saved Selection as your usage type, the Limits text box and lookup button are disabled.

13 Select the **Allow #Missing** check box to enable users to specify #Missing or blank as the default value for the variable.

Blank and #Missing mean that a cell has no data value. #Missing is different from zero. Zero is a data value, and #Missing indicates lack of a data value for the cell. #Missing decreases the size of the database and positively impacts system performance.

Note:

This check box is enabled only when the Type is numeric (that is, integer, real, or percent).

14 In the **Default Value** text box, if you are creating a variable of the runtime prompt type, and if you want to provide a default value for the user, click the **Search** button, and do one of the following:

● If you selected **Member** in step 8, in the **Single Select** dialog box, select a member. If you want to use aliases for the members names, select an alias table from the **Alias Tables** drop-down list, then select the **Use Alias Names** check box. Click **OK**.

● If you selected **Members** in step 8, in the **Multiple Select** dialog box, use the right, left, up, and down arrows to select and exclude members. To make selecting members easier, you can use the **Member** drop-down list and the **Exclude** text box to refine your member selection by specifying a group of members (and excluding others) based on their relationship to the member you selected from the outline. For more information on selecting multiple members, see "Selecting Members" on page 35.

● If you selected the **Smart List** check box, you must enter a default value for the Smart List in this text box.

15 In the **Usage type** text box, enter one of the following types of variables:

● **Use by Value** – At design time, you can use this variable type to design your business rule so that when a use by value variable is inserted into the business rule, the variable is substituted with a value.

● **Saved Selection – At runtime, the value specified for the variable is used. This lets you use the same variable in a rule while allowing you to change the variable value without prompting. (This is the default selection.)**

● **Runtime Prompt** – At runtime, the user is asked to supply one member, multiple members, a number, a string, or a dimension for the prompt. Runtime prompts enable you to enter variables in a business rule that resolve when a user launches the rule.

16 In the **Prompt string** text box, if you are creating a runtime prompt, enter the text of the prompt to be displayed when the business rule is launched by a user.

For example, if you want users to receive a runtime prompt that asks them to enter a range of members from a dimension, you might enter the following text, "Select members from the Demo database."

Note:

When you create runtime prompt text, you can enter unlimited text. However, when the runtime prompt is displayed in Business Rules, the text is truncated. The display limit varies, depending on the application that displays the runtime prompt.

17 If you selected runtime prompt as the usage type for the variable, select the "Do not save value entered during validation and launch as the default value" check box if you want the value that you enter in the **Default Value** text box to be used as the default value for the runtime prompt. If you do not select this check box, the last value that the user enters for the runtime prompt during validation and launch is used as the default value for the next runtime prompt.

18 On the **Properties** tab, you can enter the name of the variable owner, specify whether or not the variable should be locked so that other users cannot see it or edit it, and view other information about the variable.

19 Click **Apply** to save the changes you made to the local variable.

Selecting Members

When you create runtime prompt variables, you can use Multiple Member Selection to provide users with a range of members from which they can choose a member or members at runtime. Limiting the members that users can select for a runtime prompt variable ensures that users choose valid members against which to validate or launch the business rule or sequence.

When you add actions and formulas to graphical business rules, you can also use Multiple Member Selection to select members that define the business rule range, the formula range, and the destination for copied values.

➤ To select multiple members:

1 In the **Multiple Select** dialog box, select a member you want to include from the database outline.

2 Use the drop-down list below the arrow keys to select additional members based on their relationship to the member you selected in step 1. This prevents you from having to select each of the members individually.

For example, assume you selected Year as your dimension and want to include Qtr1 and its child members in the selection. To do this, you select Qtr1 from the outline and Descendents (inc) from the drop-down list.

3 Use the right arrow key to move all of the members you selected to the **Selected** list in the right side of the dialog box.

4 **Optional:** Select the same or a different member from the outline, then use the drop-down list and the **Excluded** text box to exclude members based on their relationship to the member you select.

For example, assume you want to exclude Qtr2 and its child members from the selection. To do this, you select Qtr2 from the outline and Descendents (inc) from the drop-down list. Then you use the down arrow key to move Qtr2 and its child members to the Excluded list.

5 If you want to use aliases for the members names, select an alias table from the **Alias Tables** drop-down list, then select the **Use Alias Names** check box.

6   If you are selecting members for graphical business rules, there is a **Local Variables** and **a Global Variables** tab from which you can select variables. To select variables, repeat steps 1-4 above for the Local and the Global Variables tab.

7   Click **OK** after you move the members you want to include to the **Selected** list, and move members you do not want to include to the **Excluded** list.

Deleting Local Variables

➤ To delete a local variable:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4   Expand the **Rules** node, and double-click the rule that contains the local variable you want to delete.

    The cursor is positioned on the first line of the Source tab.

5   Select the **Variables** tab.

    The Local Variables tab is displayed. This tab contains all of the local variables that you can delete.

6   To delete a local variable, select the variable, and click **Delete**.

Inserting Variables

You can insert variables (local or global) into a business rule or macro as you are creating the business rule or macro on the Source tab.

➤ To insert a variable into a business rule or macro:

1   Right-click in the **Source** tab where you want to insert a variable.

    The Variables dialog box is displayed. It contains a list of all local and global variables.

2   In the **Variables** dialog box, select a global or a local variable.

3   Click **OK** to insert the variable into the business rule or macro.

    The variable is inserted on the Source tab to the right of the cursor.

Note:

You can also use variables in graphical business rules to define the business rule range, source, or destination. In addition, you can select a variable to use during single or multiple member selection.

Associating Global Runtime Prompt Variables with Business Rules

You can use the Global Runtime Prompt Variables dialog box to select one or more global runtime prompts to associate with a business rule. This enables users to see the global runtime prompts when they validate or launch the rule, though the runtime prompt may or may not be used in the business rule.

Note:

You can associate only *global* runtime prompt variables with a business rule.

➤ To associate global runtime prompt variables with a business rule, in the Global Runtime Prompt Variables dialog box, select the runtime prompts you want to associate with the business rule. Use Shift + click to select multiple continuous runtime prompts; use Ctrl + click to select multiple non-continuous runtime prompts. Then click OK.

About Macros

A macro is a reusable part of a business rule that can be referenced by other business rules and macros to save you time when you are writing business rules and sequences. Macros are global so you can reference them in business rules or another macro. Macros can contain variables and other macros, but they cannot contain themselves.

For example, you might want to create an initialization block macro for the beginning of your business rule that you name `%stdinit` instead of `set updatecalc On`; or `set aggmissg Off;`.

Creating Macros

➤ To create a macro:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Right-click the **Macros** node and select **New Macro**.

The cursor is positioned on the first line of the Source tab.

5 On the **Source** tab, write the macro. You can insert global variables, other macros, and parameters into the macro by right clicking inside the **Source** tab. You can also insert functions and commands.

- For more information on creating global variables, see "Creating Global Variables" on page 26.

- For more information on creating macros, see "Creating Macros" on page 37.

- For more information on inserting parameters, see "Inserting Parameters into Macros" on page 39.

- For more information on inserting Essbase commands, see "Using Essbase Calculation Commands" on page 40.

- For more information on inserting Essbase functions, see "Inserting Functions with the Function Editor" on page 41.

6 On the **Parameters** tab, you can view a list of the parameters that are being used in the macro and enter definitions for them.

Note:

No parameters are listed on this tab unless you insert them into the macro on the Source tab.

7 On the **Usages** tab, you can see which business rules and other macros are using this macro. If you are creating the macro, the tab is empty until you begin using the macro in business rules and other macros.

8 On the **Doc** tab, you can enter a description of the macro for other users.

9 On the **Properties** tab, you can enter the name of the macro owner, specify whether or not the macro should be locked so that other users cannot see it or edit it, and view other information about the macro.

10 On the **Access Privileges** tab, if you are an administrator, you can grant and/or delete access to this macro. If you are the owner, or you were granted modify access to the macro, you can assign users edit/no edit privileges for the macro. See "Adding or Editing Access Privileges for a Macro" on page 71 and "Deleting Access Privileges for a Macro" on page 72.

11 Click **Save** to save the new macro.

12 **Optional:** Validate the macro after selecting the associated outline.

Inserting Macros

You can insert a macro into a business rule or another macro as you are creating the business rule or macro.

➤ To insert a macro into a business rule or another macro:

1 Right-click in the **Source** tab where you want to insert a macro.

The Insert Macro dialog box is displayed. It contains a list of all macros that you can insert.

2 In the **Insert Macro** dialog box, select a macro to insert.

3 Click **OK** to insert the macro into the business rule or macro.

The macro is inserted on the Source tab to the right of the cursor.

Inserting Parameters into Macros

You can insert a parameter into a macro as your are creating it. Parameters provide you with flexibility when you are designing macros that users need to insert into rules. You give the parameter a name that instructs users what to substitute for it when the user is adding the macro to a business rule.

➤ To insert a parameter into a macro:

1 Right-click in the **Source** tab where you want to insert a parameter.

   The Macro Parameters dialog box is displayed. It contains a list of all of the parameters that you can insert into the macro.

2 In the **Macro Parameters** dialog box, select the parameter you want to insert into the macro.

3 Click **OK** to insert the parameter into the macro.

   The parameter is inserted on the Source tab to the right of the cursor.

Editing Macros

You can edit the following properties of a macro:

- The syntax of the macro
- The macro name
- The macro description
- The documentation for the macro
- The macro owner
- The Locked status of the macro
- The access privileges for the macro

About Essbase Calculation Commands

You can use calculation commands within business rules and macros to specify how the data in the database should be calculated when the business rule or business rule sequence is launched.

Business rules and macros can contain one or a series of calculation commands. The order of the commands defines the execution order of the calculation.

For a complete list of the calculation commands you can use in business rules, business rule sequences, macros and variables, see the *Hyperion Essbase Technical Reference*.

Using Essbase Calculation Commands

➤ To use a calculation command in a business rule, business rule sequence, macro, or variable:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node and the **Repository View** node.

4 Do one of the following:

- Create a new business rule or macro. See the following topics:

  ❍ "Creating a Business Rule" on page 17

  ❍ "Creating Macros" on page 37

- Open a business rule or macro by double-clicking it.

5 In the lower left area of the window, select the **BR Language tab**.

6 Under the **Language** folder, expand the **Commands** folder.

A list of the calculation commands you can use is displayed. See the "Calculation Commands" chapter of the *Essbase Technical Reference*.

7 To insert a command into a business rule, business rule sequence, macro, or variable, simply drag and drop the command onto the **Source** tab.

The command is inserted to the right of the cursor on the Source tab.

About Essbase Functions

Functions are predefined routines that perform specialized calculations and return sets of members or data values. The following list describes the types of functions you can use to help you design business rules, business rule sequences, macros, and variables. See the *Essbase Technical Reference*.

- **Boolean functions** – Provide a conditional test by returning a TRUE (1) or FALSE (0) value. For example, you can use the @ISMBR function to determine whether the current member is one that you specify.

- **Mathematical functions** – Perform specialized mathematical calculations. For example, you can use the @AVG function to return the average value of a list of members.

- **Relationship functions** – Look up data values within a database during a calculation. For example, you can use the @ANCESTVAL function to return the ancestor values of a specified member combination.

- **Range functions** – Declare a range of members as an argument to another function or command. For example, you can use the @SUMRANGE function to return the sum of all members that lie within a specified range.

- **Financial functions** – Perform specialized financial calculations. For example, you can use the @INTEREST function to calculate simple interest or the @PTD function to calculate period-to-date values.

- **Member Set functions** -–Generate a list of members that is based on a specified member. For example, you can use the @ICHILDREN function to return a specified member and its children.

- **Allocation functions** – Allocate values that are input at a parent level across child members. You can allocate values within the same dimension or across multiple dimensions. For example, you can use the @ALLOCATE function to allocate sales values that are input at a parent level to the parent's children; each child's allocation is determined by its share of the previous year's sales.

- **Forecasting functions** – Manipulate data for the purposes of smoothing or interpolating data, or calculating future values. For example, you can use the @TREND function to calculate future values that are based on curve-fitting to historical values.

- **Statistical functions** – Calculate advanced statistics. For example, you can use the @RANK function to calculate the rank of a specified member or a specified value in a data set.

- **Date and Time functions** -– Use date and time characteristics in calculation formulas. For example, you can use the @TODATE function to convert date strings to numbers that can be used in calculation formulas.

- **Miscellaneous functions** – Provide two different kinds of functionality:

  ○ You can specify calculation modes that Essbase should use to calculate a formula: cell, block, bottom-up, and top-down

  ○ You can manipulate character strings for member and dimension names; for example, to generate member names by adding a character prefix to a name or removing a suffix from a name, or by passing the name as a string.

- **Custom-Defined functions** – Enable you to perform functions that you develop for your calculation operations. These custom-developed functions are written in the Java programming language and are called by the Essbase calculator framework as external functions.

Inserting Functions with the Function Editor

You can use the Function Editor to insert Essbase functions into your business rules, sequences, variables, and macros. See the *Essbase Technical Reference*.

➤ To insert a function with the Function Editor:

1 If it is not open, open the business rule or macro into which you want to insert a function.

2 In the lower left area of the Administration Services Administration Console, select the **BR Language tab**.

3 Under the **Language** folder, expand the **Functions Alphabetically** or **Functions by Category** folder.

A list of the functions you can use to help you design your business rule, business rule sequence, macro, or variable is displayed. See the *Hyperion Essbase Technical Reference*.

4 To insert a function, drag and drop the function onto the **Source** tab.

The Function Editor is displayed. It contains the name of the function, its description, and whether it is required. It also contains arguments whose values you must enter.

5 In the **Value** text box, enter values for all of the required arguments that are listed.

6 Click **OK**.

About Adding Actions to Graphical Business Rules

You can choose from four possible actions to include in a *graphical* business rule: Aggregate Data, Copy Data, Clear Data, and Create Blocks.

- **Aggregate Data**—Use to calculate your database by specifying which dimensions to calculate and what calculation options you want to use during the aggregation.

- **Copy Data**—Use to copy data from one part of your database to another. You select the source data to copy and specify the target or destination value.

- **Clear Data**—Use to define a subset of data that will be cleared from the database before a new value is added. You can choose to clear cells or to clear blocks of data.

- **Create Blocks**—Use to specify a data slice to ensure that blocks are created for all sparse member combinations in that slice.

These actions, and the procedures for using them in graphical business rules, are described in the following topics.

Adding an Aggregate Data Action

You may want to update the data in the database outline to make sure that it is accurate. You can use the Aggregate Data action to update the data before and/or after a calculation is performed.

➤ To add an Aggregate Data action to your business rule:

1 If it is not open, open the graphical business rule to which you want to add an Aggregate Data action.

2 If the **BR Language** tab is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3 Expand the **Actions** folder and double-click the **Aggregate Data** action, or drag it to the desired location in the business rule on the **Graphical** tab.

The Aggregate Data action is added to the business rule and the Overview tab is displayed.

4 On the **Overview** tab, choose one of the following three calculation options:

- **Calculate Entire Database** (CALC ALL)—Calculates and aggregates the entire database based on the database outline.

- **Calculate Entire Database with Two Pass Calculation** (CALC TWOPASS)—Calculates all members tagged in the database outline as Two Pass Calc. These members must be in a dimension tagged as Accounts.

- **Calculate Portion of Database Specified Below** (default selection)—Calculates only the portion of the database outline specified in the table. The **Calculate Portion of Database Specified Below** option is the default selection that you can use to change or select the dimensions you want to calculate.

  For additional information on these calculation options, see the *Essbase Technical Reference*.

5 If you selected **Calculate Portion of Database Specified Below in step 4,** for each dimension in the list that you want to calculate, select the value type using the Value Type drop-down list.

Value Type	Description
Not Specified	The default for every dimension
User Defined	Members defined by the user through Member Selection
Derived	The union of values defined in the destinations before the aggregation component and the values defined in the sources after the aggregation
All	All members to be included in this dimension's aggregation

Note:

If all dimensions are <Not Specified>, no aggregation is performed. If at least one dimension has members selected, an aggregation is performed for the member values of dimensions that have selections and for all member values of the remaining dimensions.

6 If you selected the **User Defined** value type in the previous step, the **Member Selection** button is available. Enter a member value to be aggregated or select the values to be aggregated using the Member Selection button.

If you selected the Derived value type, values are created dynamically from the union of values in the Formula, Copy, and Clear destinations in previous components and the Formula and Copy sources in later components. Any additions or changes to the other components are automatically updated in the aggregate component. For additional information on calculation commands, refer to the *Essbase Technical Reference*.

7 Select one of the following methods of calculating the database:

- **Aggregate Missing Values in the Database** (SET AGGMISSG)—Specifies whether #MISSING values are aggregated in the database. If you select it, the component aggregates missing values. The default is determined by the database setting defined by the administrator. For additional information, see SET **AGGMISSG** in the *Essbase Technical Reference*.

- **Aggregate Data up to Local Currency** (SET UPTOLOCAL)—Restricts aggregations to those parents with the same defined currency. The setting is only valid if the Analytic Services currency conversion module is installed and the database is associated to a currency database. This option is not selectable if none is detected. For example, all cities in France

use the franc (FF) as the unit of currency. Therefore, all children of France, such as the cities Paris, Nancy, and Avignon, consolidate to France. Aggregation stops at this level, however, as Europe also contains countries that use other currencies. The option is set to Off by default if there is a currency dimension. For additional information, see SET UPTOLOCAL in the *Essbase Technical Reference*.

- **Optimize the Calculation of Formulas on Sparse Dimensions** (SET FRMLBOTTOMUP) —Optimizes the calculation of formulas on sparse dimensions in large database outlines by turning on the bottom-up sparse formula calculation method. The default is Off or not selected as a calculation option. If you set it to On, you can use CALC DIM and CALC ALL commands to calculate large, flat dimensions of the database more efficiently. See SET FRMLBOTTOMUP in the *Essbase Technical Reference*.

- **Use Calculator Cache** (SET CACHE)—Specifies the size of the calculator cache. The database uses the calculator cache to create and track data blocks during calculation. Using the calculator cache can significantly improve your calculation performance. The size of the performance improvement depends on the configuration of your database. The default is Not Selected which does not add a Set Cache command to the business rule. If you set it to On, there are five options: All, Default, High, Low, and Off. The size of the calculator cache at the levels is defined in the CALCCACHE {HIGH | DEFAULT | LOW} settings in the ESSBASE.CFG file. See SET CACHE in the *Essbase Technical Reference*.

8 **Optional:** On the **Range** tab, **restrict the aggregation to a range of members and variables in one or more dimensions**. For each dimension, enter a range of members and variables in the **Selected Values** text box, or double-click the magnifying glass button to select a range of members and variables. For more information on selecting members, see "Selecting Members" on page 35.

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

Adding a Copy Data Action

You can use the Copy Data action to copy data from one part of the database to another in the same database. Then you can calculate the data using addition, subtraction, multiplication, or division of a numeric value or a member. For additional information on this action, see the *Essbase Technical Reference*.

For example, to allocate your budget, you may want to initialize your data by last year's actuals. To build your budget, you initialize it by copying last year's actuals and increasing the budget by 30 percent, the growth rate of the company.

➤ To add a Copy Data action to your business rule:

1 If it is not open, open the graphical business rule to which you want to add an Aggregate Data action.

2 If the **BR Language** tab is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3 Expand the **Actions** folder and double-click the **Copy Data** action, or drag it to the desired location in the business rule on the **Graphical** tab.

The Copy Data action is added to the business rule and the Overview tab is displayed.

4   On the **Overview** tab, for the Destination, enter a name in the **Name** text box. (The default name is "Destination.")

5   To create blocks of data during copy, select the **Create Blocks During Copy** check box.

> **Note:**
>
> If you do not select the **Create Blocks During Copy** check box, a message informs you that no new destination blocks will be created during the data copy. If members are included in the source definition that do not exist in blocks, no values will be copied from those members. When the **Create Blocks During Copy** check box is not selected, you can also specify conditions under which the copy should take place using the **Data Condition** tab. See "Specifying a Data Condition in a Formula" on page 56.

6   Either enter values in the **Selected Values** text box for each available dimension or use the **Member Selection** button to select members and variables as the target destinations for the copied data. For more information on selecting members, see "Selecting Members" on page 35.

7   Select the **Select Source** icon. For each dimension in the list that you want to include, enter the source value to copy in the Selected **Values** text box, or click the **Member Selection** button to select members and variables as the source values to be copied.

> **Note:**
>
> If the source and destination are the same, you can make the selection for destination and the source is automatically inherited from the destination.

8   To apply a calculation to the copied portion of the database, select the **Apply Calculation** check box.

An operator and number component is added to the formula.

9   To choose an operator other than the plus sign (the default), select the plus sign in the formula, then select one of the following operators from the **Select Operator** drop-down list: addition (+), subtraction (-), multiplication (x), or division (/). (You can also select the plus sign and use a right mouse click to select another operator.)

10   Enter the calculation to apply by doing one of the following:

- Select the 123 icon in the formula and enter a number in the **Specify Number** text box. Or click the Member Selection button next to the **Specify Number** text box to select a numeric variable. (For example, you may want to enter a numeric runtime prompt to allow the user to dynamically select the calculation to apply at runtime.)

- Right-click the 123 icon in the formula and select **Change to Typical Source**. Enter a name for the source in the **Name** text box. Then enter values in the **Selected Values** text box for each available dimension, or use the **Member Selection** button to select members and variables as the target destinations for the copied data.

11   Click **Save** to save your changes.

Adding a Clear Data Action

You can use the Clear Data action to clear data from a portion of a database. This ensures that the destination is cleared before applying the next action or formula (or the *components* of a business rule). You can place the Clear Data action anywhere in the business rule. For additional information on this action, see the *Essbase Technical Reference*.

➤ To add a **Clear Data** action to your business rule:

1 If it is not open, open the graphical business rule to which you want to add a Clear Data action.

2 If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3 Expand the **Actions** folder and double-click the **Clear Data** action, or drag it to the desired location in the business rule on the **Graphical** tab.

The Clear Data action is added to the business rule and the Overview tab is displayed.

4 On the **Overview** tab, specify whether you want to clear cells only or clear data blocks.

- **Clear Cells Only**—Clears data cells from the database and sets them to #MISSING. For additional information, see the CLEARDATA command in the *Essbase Technical Reference*.

- **Clear Entire Block**—Clears blocks of data and sets them to #MISSING. For additional information, see the CLEARBLOCK command in the *Essbase Technical Reference*. You can choose one of the following:

  ❍ All (clears all data blocks)

  ❍ Dynamic Calc & Store (clear blocks containing values derived from Dynamic Calc and Store member combinations)

  ❍ Non-Input Blocks (clears blocks containing values derived from calculations)

  ❍ Upper Level Blocks (clears all consolidated level blocks)

5 For each dimension in the list that you want to include, select the values to be cleared by entering values in the **Selected Values** text box or by clicking the **Member Selection** button to select members and variables. For more information on selecting members, see .

Values are cleared for the intersection of all specified dimensions for all values of the dimensions left <Not Specified>.

Adding a Create Blocks Action

You can use the Create Blocks action to make sure that blocks are created in the database for sparse member combinations in a specified slice of data. Since there is a potential for a large increase in the database size when creating blocks, be careful when adding this action to your business rule. To help you get an idea of the size, the system displays a calculation of the block size and maximum possible blocks that would exist for the specified data slice after the business rule is launched. Since some blocks may exist in the database, this calculation does not represent

the exact amount of the increase. For additional information on this action, see the *Essbase Technical Reference.*

➤ To add a Create Blocks component to your business rule:

1 If it is not open, open the graphical business rule to which you want to add a Create Blocks action.

2 If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3 Expand the **Actions** folder and double-click the **Create Blocks** action, or drag it to the desired location in the business rule on the **Graphical** tab.

The Create Blocks action is added to the business rule and the Overview tab is displayed.

4 For each dimension in the list that you want to include, enter a value in the Selected Values text box or click the magnifying glass icon to select the members and variables. (Only sparse dimensions are available for selection.) For more information on member selection, see "Selecting Members" on page 35.

Note:

You cannot use Create Blocks with Dynamic Calc or Label Only members.

5 Click **Update** to calculate the potential increase in database size.

If you make a change to the member values to be included, repeat this procedure to view the change in database storage size.

About Adding Formulas to Graphical Business Rules

A formula is a mathematical expression that performs a calculation. To make creating a business rule easier, Business Rules provides four different formulas that you can insert into your business rules:

- "Adding a Pro-Rata Ratio Formula to a Graphical Business Rule" on page 57
- "Adding a Units-Rates Formula to a Graphical Business Rule" on page 58
- "Adding a Variable Formula to a Graphical Business Rule" on page 59
- "Adding a Custom Formula to a Graphical Business Rule" on page 60

These formulas are the most common types of calculations you need your business rules to perform. All formulas provide you with a custom toolbar to customize the formula to suit your needs.

The common steps in defining formulas are:

1. Specify the destination and sources for the calculation.

2. Specify the formula range.

3. Specify the data condition under which the formula is calculated.

Each formula has the following three tabs:

- **Formula tab**—Use the Formula tab to enter destination and source details for each part of a formula. Each formula contains a destination and at least one source. You can add additional sources, calculation functions, number operands, operators, and parentheses using the custom toolbar.

- **Formula Range tab**—Use the Formula Range tab to define the range of members, functions, and/or runtime prompts common to this formula. The range tab more narrowly defines the business rule range.

- **Data Condition tab**—Use the Data Condition tab to specify certain data criteria that must be met before a calculation is performed.

Adding a Formula to a Graphical Business Rule

➤ To add a formula to your business rule:

1 If it is not open, open the graphical business rule to which you want to add a formula.

2 If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3 Expand the **Formulas** folder. Select the type of formula to add, and double-click the formula or drag it to the desired location in the business rule on the **Graphical** tab.

- For information on adding a pro-rata ration formula, see "Adding a Pro-Rata Ratio Formula to a Graphical Business Rule" on page 57.

- For information on adding a pro-rata ration formula, see "Adding a Units-Rates Formula to a Graphical Business Rule" on page 58.

- For information on adding a pro-rata ration formula, see "Adding a Variable Formula to a Graphical Business Rule" on page 59.

- For information on adding a pro-rata ration formula, see "Adding a Custom Formula to a Graphical Business Rule" on page 60.

   The Overview tab for the formula you selected is displayed.

4 Define the formula details by using the **Formula**, **Formula Range**, and **Data Condition** tabs. See the following topics:

- "Specifying a Source in a Formula" on page 49
- "Specifying a Range in a Formula" on page 51
- "Using the Custom Toolbar" on page 51
- "Specifying a Data Condition in a Formula" on page 56

Specifying a Destination in a Formula

The destination values defined in a formula represent the portion of the database that stores the calculated values. Any dimension values you specify in the business rule range or the formula range are locked in for the destination and are displayed in italics.

The name of the destination is "Destination" by default. To help document and maintain the business rule, change the default name to a description of what the formula calculates.

➤ To define a destination:

1 If it is not open, open the graphical business rule to which you want to add a formula.

2 If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3 Expand the **Formulas** folder. Select the type of formula to add, and double-click the formula or drag it to the desired location in the business rule on the **Graphical** tab.

   The Formula tab is displayed.

4 On the **Formula** tab, select the **Destination** icon.

   The Destination icon is highlighted on the tab.

5 In the Name text box, enter a name for the destination.

6 For each available dimension in the list, do one of the following tasks:

   ● Click the **Member Selection** button (magnifying glass) to the right of the **Selected Values** text box for the dimension. Use Multiple Member Selection to select members and/or variables to define the destination.

   ● Select the **Selected Values** text box and enter a value next to the dimension.

   ● Leave the value <All> to use all members of a dimension.

   Note:

   Member expressions in italics are inherited from the business rule range or the formula range. These values can only be changed or deleted for the business rule range or the formula range. See the discussion of a business rule range in "Creating a Business Rule" on page 17 or a formula range in "Specifying a Range in a Formula" on page 51.

Specifying a Source in a Formula

The source values defined in a formula represent the portion of the database referenced in the calculation. You can use the Add Source toolbar button to add another source or specify a source that is part of a formula.

Source values default to members, expressions, or runtime prompts specified in the business rule range, formula range, and destination. The inherited/default values can be overridden by a member, function, or member runtime prompt.

➤ To define a source in a formula:

1 If it is not open, open the graphical business rule to which you want to add a formula.

2 If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3   Expand the **Formulas** folder. Select the type of formula to add, and double-click the formula or drag it to the desired location in the business rule on the **Graphical** tab.

The Formula tab is displayed.

4   On the **Formula** tab, select the **Select Source** icon.

The Select Source icon is highlighted.

5   In the **Name** text box, enter a name describing the source.

6   For each available dimension in the list, do one of the following tasks:

- Click the **Member Selection** button (magnifying glass) to the right of the **Selected Values** text box for the dimension. Use Single Member Selection to select members and/or variables to define the source. If you select a member, specify whether to use alias tables by selecting an alias table and if so whether to use alias names for the members.

- Double-click on the value in the **Selected Values** text box and enter the value next to the dimension.

- Leave the value <**All**> to use all members of a dimension.

    Note:

    Member expressions in italics are inherited from the business rule range or the formula range. These values can only be changed or deleted for the business rule range or the formula range. See "Specifying a Range in a Formula" on page 51.

7   Right-click the **Source** icon in the Custom Toolbar, and select one of the following sources:

- For a **Typical** source, select the dimensions to be used in the calculation. (This is the default selection.)

- For a **Percent to Total** source, select the dimension to be used in the denominator of the calculation.

- For a **Percent to Parent** source, select the dimension and generation or level to be used in the denominator of the calculation.

- For a **Percent to Member** source, select the dimension and member to be used in the denominator of the calculation.

- For an **Evenly Split by Selected Members** source, select the dimension and members to be used in the calculation. Then select whether you want to divide the parent by the total number or selected members or number of selected members with data.

- For an **Evenly Split by Children** source, select the dimension to be used in the calculation. Then select to divide the parent value by the total number of children or number of children with data.

- You can use a **remote source** (**XREF**) to reference data in a remote cube.

8   Click **Save** to save the changes you made on the **Formula** tab.

Specifying a Range in a Formula

You can specify a formula range to define the portion of the database that is the same for the current formula. The formula range is processed in conjunction with the business rule range and displays the values defined in the business rule range as the default in italics. You can redefine values inherited from the business rule range in the formula range to more narrowly define the portion of the database for this formula.

Note:

If you define a formula range that is outside the scope of the business rule range, no members meet both criteria so the formula does not calculate.

➤ To specify a formula range:

1 If it is not open, open the graphical business rule for which you want to specify a formula range.

2 If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3 Expand the **Formulas** folder. Select the type of formula to add, and double-click the formula or drag it to the desired location in the business rule on the **Graphical** tab.

The Formula tab is displayed.

4 If you did not select a source for the formula on the **Formula** tab, select a source. See "Specifying a Source in a Formula" on page 49.

5 Select the **Formula Range** tab, and do one of the following:

● For each available dimension in the list, select <**ALL**> or the default value in the **Selected Values** text box and enter a member name.

● Click the **Member Selection** button (magnifying glass) to the right of the **Selected Values** text box for the dimension. Use Member Selection to select members and variables to define the formula range.

6 Click **Save** to save the changes you made on the **Formula Range** tab.

Using the Custom Toolbar

Use the Custom Toolbar on the Formula tab or the Data Condition tab to help build and customize a formula. You can use the Custom Toolbar to add a source, a number operand, an operator, a calculation function, or parentheses to the formula or data conditions. Existing operands, operators, or parentheses can be deleted from the formula or data condition by right-clicking on the component and pressing the Delete button on your keyboard.

Figure 1   Custom Toolbar

Table 1 describes the buttons on the toolbar:

Table 1   Custom Toolbar Buttons

Item	Description
	Source
	Number
	Operator
	Function
	Left Parenthesis
	Right Parenthesis

The following topics describe how to use the buttons on the Custom Toolbar.

Adding a Source to a Formula

➤ To add a source, see "Specifying a Source in a Formula" on page 49.

Adding a Number Operand to a Formula

You can use the number operand in a formula to represent a number value or number runtime prompt. Number operands are part of some formulas by default. You can add number operands to formulas using the custom toolbar.

➤ To define a number operand in a formula:

1   If it is not open, open the graphical business rule to which you want to add an operand.

2   If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3   Expand the **Formulas** folder. Select the type of formula to add, and double-click the formula or drag it to the desired location in the business rule on the **Graphical** tab.

The Formula tab is displayed.

4   On the Formula tab, double-click the **Number** toolbar button on the Custom Toolbar.

The Number operand is inserted to the right of the last component in the formula.

5   In the **Specify Number** text box, enter a value for the number operand. Or if you want to enter a numeric local or global variable, click the **Member Selection** button to search for one.

6   Click **Save** to save the changes you made.

Adding an Operator to a Formula

➤   To add an operator to a formula:

1   If it is not open, open the graphical business rule to which you want to add an operand.

2   If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3   Expand the **Formulas** folder. Select the type of formula to add, and double-click the formula or drag it to the desired location in the business rule on the **Graphical** tab.

The Formula tab is displayed.

4   On the Formula tab, double-click the **Operator** toolbar button in the Custom Toolbar.

A plus sign is inserted to the right of the last component in the formula. (The plus sign is the default operator.)

5   In the **Select Operator** drop-down list, select another operator if you do not want to use the plus sign.

The following table describes the available operators for formulas and data conditions.

Type	Available Operators
Formulas	Addition (+)
	Subtraction (-)
	Multiplication (x)
	Division (/)
Data Condition	Addition (+)
	Subtraction (-)
	Multiplication (x)
	Division (/)
	Equal to (=)
	Greater than (>)
	Greater than or equal to (>=)
	Less than (<)
	Less than or equal to (<=)
	Boolean AND, OR, and NOT

Adding a Function to a Formula

You can add a function source to a formula using the Add Function toolbar button. The following types of functions are supported: Financial (Range) functions, Statistical functions, Math functions using Expression, Functions using ExpList, Functions using Variance, and Attribute Functions. For more information on these functions, see the *Hyperion Essbase - System 9 Database Administrator's Guide* and the following topics:

● "Relationship Functions" on page 55

● "Range and Financial Functions" on page 55

● "Mathematical Functions" on page 55

● "Statistical Functions" on page 56

➤ To add a function to a formula:

1 If it is not open, open the graphical business rule to which you want to add a function.

2 If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3 Expand the **Formulas** folder. Select the type of formula to add, and double-click the formula or drag it to the desired location in the business rule on the **Graphical** tab.

The Formula tab is displayed.

4 On the Formula tab, double-click the **Function** toolbar button on the Custom Toolbar.

The Add Function dialog box is displayed.

5 Select the function you want to add.

The list of available functions depends on what version of Analytic Services you are using. For a brief overview of each function, see the following sections:

● "Relationship Functions" on page 55

● "Range and Financial Functions" on page 55

● "Mathematical Functions" on page 55

● "Statistical Functions" on page 56

For a more detailed description of each function, see the *Essbase Technical Reference* .

6 Click **OK** to add the function.

The function is inserted to the right of the last component in the formula.

Note:

The following functions cannot be used with another source type in the formula without receiving an error: @NPV, @ACCUM, @COMPOUND, @COMPOUNDGROWTH, @DISCOUNT, @INTEREST, @IRR, @SLN. For example, the function source should be the only block to the right of the equal sign. These financial functions never return a value. They calculate a series of values internally based on the range specified.

Relationship Functions

@ATTRIBUTEVAL(attDimName)—Returns the numeric value that is associated with a level 0 attribute member from the numeric, Boolean, or date attribute dimension, for the current member being calculated.

Range and Financial Functions

@ACCUM—Accumulates values across a time period. For example, calculate year-to-date values, or accumulated depreciation.

@COMPOUND—Calculates the proceeds of a compounded interest calculation based on the balances of a specified member at a specified rate across a specified range.

@COMPOUNDGROWTH—Models compound growth.

@DISCOUNT—Financial discounting as applied to calculating present value (PV).

@GROWTH—Models linear growth of a value.

@INTEREST—Calculates simple interest.

@IRR—Calculates the Internal Rate of Return of an investment.

@NPV—Calculates the Net Present Value.

@SLN—Calculates the amount per period that an asset in the current period may be depreciated, calculated across a range of periods.

Mathematical Functions

@ABS(expression)—Returns the absolute value of the expression.

@AVG(SKIP*,expList)—Returns the average of all the values of expList. SKIPNONE includes all cells specified in the average operations regardless of content. SKIPMISSING excludes all values that are #MISSING in the average operation. SKIPZERO excludes values of zero from the average calculation. SKIPBOTH excludes all values of zero or #MISSING from the average calculation.

@INT(expression)—Returns the next lowest integer value of the expression.

@MIN(expList)—Returns the minimum value with the results of the expressions in expList.

@MAX(expList)—Returns the maximum value with the results of the expressions in the member list.

@ROUND(expression)—Rounds the expression to an integer value.

@SUM(expList)—Returns the summation of all the values in expList.

@TRUNCATE(expression)—Removes the fractional part of the expression, returning the integer.

@VAR(mbrname1, mbrname2)—Calculates the variance (difference) between two members.

@VARPER(mbrname1, mbrname2)—Calculates the percent variance (difference) between two members.

Statistical Functions

@COUNT—Counts a member selection in a formula. For example, the headcount of the admin department may be calculated as a multiple of the number of other non-admin departments.

@RANK—Runs a calculation for those meeting a certain rank. For example, those departments that are in the top ten most profitable departments.

Inserting a Parenthesis in a Formula

➤ To insert a parenthesis:

1 If it is not open, open the graphical business rule to which you want to add a parenthesis.

2 If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3 Expand the **Formulas** folder. Select the type of formula to add, and double-click the formula or drag it to the desired location in the business rule on the **Graphical** tab.

The Formula tab is displayed.

4 On the Formula tab, double-click the left or right parenthesis toolbar button on the Custom Toolbar.

The parenthesis is inserted to the right of the last component in the formula.

Specifying a Data Condition in a Formula

Use the Data Condition tab in a formula or the Copy Data action to define criteria for performing a calculation of the formula. If the condition or criteria you specify are met, the formula or Copy Data action calculates successfully. If the conditions are not met, the calculation is not performed.

Note:

Data conditions are performed against data values only. Do not include user defined attributes or member names in the expression.

You can use the Custom Toolbar on the Data Condition tab to build expressions to use as the data condition. The Custom Toolbar contains the following buttons: Source, Number, Operator, Function, Left Parenthesis, and Right Parenthesis. To build an expression to use as a data condition you follow the same process as building a custom formula and filling in the formula details.

You can use the following operators to define a data condition: addition, subtraction, multiplication, division, less than, greater than, equal to, less than or equal to, greater than or equal to, and Boolean AND, OR, and NOT.

➤ To specify a data condition:

1 If it is not open, open the graphical business rule for which you want to specify a data condition.

2   If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3   Expand the **Formulas** folder. Select the type of formula to add, and double-click the formula or drag it to the desired location in the business rule on the **Graphical** tab.

The Formula tab is displayed.

4   If you did not select a source for the formula on the **Formula** tab, select a source. See "Specifying a Source in a Formula" on page 49.

5   If you did not specify a range for the formula on the Formula Range tab, specify a formula range. See "Specifying a Range in a Formula" on page 51.

6   Select the **Data Condition** tab and enter criteria that must be met for the formula to be calculated.

7   Build an expression using the Custom Toolbar.

You can add a source, number, operator, function, or parentheses. For additional information, see "Using the Custom Toolbar" on page 51.

Adding a Pro-Rata Ratio Formula to a Graphical Business Rule

Use a Pro-Rata Ratio formula to calculate data based on results of a ratio of values. There are four types of Pro-Rata Ratio formulas to choose from:

● User Defined

● Percent to Total

● Percent to Parent

● Percent to Member

You can use the Pro-Rata Ratio Formula for profitability analysis or budgeting and planning purposes to allocate several types of centralized costs/expenses based on an inferred level of usage among various cost centers.

➤ To add a Pro-Rata Ratio formula to a business rule:

1   If it is not open, open the graphical business rule to which you want to add a Pro-Rata Ratio formula.

2   If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3   Expand the **Formulas** folder, then expand the Pro-Rata Ratio folder. Select the type of Pro-Rata Ratio formula to add: User Defined, Percent to Total, Percent to Parent, or Percent to Member. Then double-click the formula or drag it to the desired location in the business rule on the **Graphical** tab.

The Formula tab is displayed.

4   On the **Formula** tab, enter details for each operand of the formula. Do the following tasks:

a.   Define the destination for the formula. The destination stores the calculated values from the formula. See "Specifying a Destination in a Formula" on page 48.

b.   Define the source for the formula. See "Specifying a Source in a Formula" on page 49.

c.   Define the ratio by specifying the numerator and denominator, percent to total, percent to parent, or percent to member. See "Specifying a Source in a Formula" on page 49.

5   Select the **Formula Range** tab and specify the members that remain constant throughout the formula.

The formula range more narrowly defines the business rule range. See "Specifying a Range in a Formula" on page 51.

6   Select the **Data Condition** tab and enter criteria that must be met for the formula to be calculated.

See "Specifying a Data Condition in a Formula" on page 56.

Review the following sections for examples of some Pro-Rata Ratio formulas.

User Defined Pro-Rata Ratio Formula

A User Defined type of Pro-Rata Ratio formula bases its calculation on the results of a ratio of values.

Percent to Total Pro-Rata Ratio Formula

A Percent to Total type of Pro-Rata Ratio formula bases its ratio calculation on the total value for a dimension. It assumes the total value is stored in the generation 1 member of the dimension. The default calculation is: Destination = Source x Percent to Total.

Percent to Parent Pro-Rata Ratio Formula

A Percent to Parent type of Pro-Rata Ratio formula bases its ratio calculation on the value of a member's parents within a dimension. You can select any generation or level of the dimension to represent the parent. The default calculation is: Destination = Source x Percent to Parent.

Percent to Member Pro-Rata Ratio Formula

A Percent to Member type of Pro-Rata Ratio formula bases its calculation on the value of a member within a dimension. You can select any dimension or member. The default calculation is: Destination = Source x Percent to Member.

Adding a Units-Rates Formula to a Graphical Business Rule

A Units-Rates formula calculates based on values of a designated unit, rate, and amount values. There are three types of units-rates formulas from which you can choose. The types are:

- **Amount = Units x Rates**—The default calculation is Destination = Unit x Rate.
- **Rates = Amounts / Units**—The default calculation is Destination = Amount / Unit.
- **Units = Amount / Rates**—The default calculation is Destination = Amount / Rate.

➤ To add a Units-Rates formula to a business rule:

1 If it is not open, open the graphical business rule to which you want to add a Units-Rates formula.

2 If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3 Expand the **Formulas** folder, then expand the Units-Rates folder. Select the type of Units-Rates formula to add:

- Amount = Units x Rates

- Rates = Amounts / Units

- Units = Amount / Rates

4 Double-click the formula or drag it to the desired location in the business rule on the **Graphical** tab.

The Formula tab is displayed.

5 On the **Formula** tab, enter details for each operand of the formula. Do the following tasks:

    a.   Define the destination for the formula. The destination stores the calculated values from the formula. See "Specifying a Destination in a Formula" on page 48.

    b.   Define the source for the formula. See "Specifying a Source in a Formula" on page 49.

    c.   Define the ratio by specifying the numerator and denominator. See "Specifying a Source in a Formula" on page 49.

6 Select the **Formula Range** tab and specify the members that remain constant throughout the formula.

The formula range more narrowly defines the business rule range. See "Specifying a Range in a Formula" on page 51.

7 Select the **Data Condition** tab and enter criteria that must be met for the formula to be calculated.

See "Specifying a Data Condition in a Formula" on page 56.

Adding a Variable Formula to a Graphical Business Rule

Use a Variable formula to store the intermediary values results of calculations in a business rule. This is similar to the use of variables in Essbase. You may define multiple variables within one business rule. A variable must be defined before it can be used in another component; it represents one numeric value that is specified directly or derived from a calculation.

➤ To add a Variable formula to a business rule:

1 If it is not open, open the graphical business rule to which you want to add a Variable formula.

2 If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3 Expand the **Formulas** folder, and double-click the Variable formula or drag it to the desired location in the business rule on the **Graphical** tab.

The Formula tab is displayed.

4 On the **Formula** tab, enter details for each operand of the formula. Do the following tasks:

a.   Define the destination for the formula. The destination stores the calculated values from the formula. See "Specifying a Destination in a Formula" on page 48.

b.   Define the source for the formula. See "Specifying a Source in a Formula" on page 49.

c.   Define the ratio by specifying the numerator and denominator. See "Specifying a Source in a Formula" on page 49.

5   Select the **Formula Range** tab and specify the members that remain constant throughout the formula.

The formula range more narrowly defines the business rule range. See "Specifying a Range in a Formula" on page 51.

6   Select the **Data Condition** tab and enter criteria that must be met for the formula to be calculated. Define the destination for the variable by entering a name that describes the variable. See "Specifying a Data Condition in a Formula" on page 56.

7   Define the numerical value you want to assign to this variable.

Note:

You may delete a variable component from a business rule if the variable is not used as a source in another component.

Adding a Custom Formula to a Graphical Business Rule

Use a Custom formula to create your own formula starting with a destination and source. You can create any mathematical expression to suit your business needs. See "Using the Custom Toolbar" on page 51 for instructions on adding a source, a function, a number operand, an operator, or parentheses. The default calculation is Destination = Source.

➤   To add a Custom formula to a business rule:

1   If it is not open, open the graphical business rule to which you want to add a Custom formula.

2   If the **BR Language tab** is not selected, select it in the bottom of the left frame of the Analytic Administration Services window.

3   Expand the **Formulas** folder, and double-click the Custom formula or drag it to the desired location in the business rule on the **Graphical** tab.

The Formula tab is displayed.

4   On the **Formula** tab, enter details for each operand of the formula. Do the following tasks:

a.   Define the destination for the formula. The destination stores the calculated values from the formula. See "Specifying a Destination in a Formula" on page 48.

b.   Define the source for the formula. See "Specifying a Source in a Formula" on page 49.

c.   Define the ratio by specifying the numerator and denominator, percent to total, percent to parent, or percent to member. See "Specifying a Source in a Formula" on page 49.

5   Select the **Formula Range** tab and specify the members that remain constant throughout the formula.

The formula range more narrowly defines the business rule range. See "Specifying a Range in a Formula" on page 51.

6 Select the **Data Condition** tab and enter criteria that must be met for the formula to be calculated.

See "Specifying a Data Condition in a Formula" on page 56.

Deleting a Business Rule

Deleting a business rule deletes the rule from the repository and projects in which it is used. If a rule is part of a sequence, you must remove the rule from the sequence before deleting it.

Note:

You cannot delete a business rule that you have open for editing or browsing.

➤ To delete a business rule:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Rules** node. Right-click the business rule you want to delete, and select **Delete Rule**.

The Delete Confirmation dialog box is displayed.

5 In the **Delete Confirmation** dialog box, click **Yes** to confirm deletion of the business rule, or click **No** to cancel deletion and return to the Rule Editor.

The business rule is deleted from the system and is removed from the Rules list in Business Rules.

Deleting a Sequence

Deleting a business rule sequence deletes it from the repository and projects in which it is used. If a sequence is referenced in another sequence, you must remove it from the sequence before deleting it.

Note:

You cannot delete a business rule sequence that you have open for editing or browsing.

➤ To delete a business rule sequence:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Sequences** node. Then right-click the sequence you want to delete and select **Delete Sequence**.

   You are prompted to confirm deletion of the sequence.

5 Click **Yes** to confirm deletion of the sequence.

Deleting Macros

When you delete a macro, you delete all instances of the macro from all projects. If a macro is referenced in a rule or another macro, you must remove the macro before you can delete it.

Note:

You cannot delete a macro that you have open for editing or browsing.

➤ To delete a macro:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Macros** node. Then right-click the macro you want to delete and select **Delete Macro**.

   You are prompted to confirm deletion of the macro.

5 Click **Yes** to confirm deletion of the macro.

Deleting Global Variables

When you delete a global variable (that is, a variable that is used in more than one business rule or macro), you delete all instances of the variable from all projects. If a variable is part of a rule or macro, you must remove the variable before deleting it.

Note:

You cannot delete a global variable that you have open for editing or browsing.

➤ To delete a global variable:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Global Variables** node. Then right-click the variable you want to delete and select **Delete Variable**.

You are prompted to confirm deletion of the variable.

5 Click **Yes** to confirm deletion of the variable.

3

Assigning Access Privileges

You assign access privileges to repository objects such as business rules, business rule sequences, macros, variables, and projects. This chapter contains information and instructions for assigning access privileges for business rules, sequence, macros, variables, and projects.

About Adding Access Privileges

Note:

Before you grant users and groups access privileges to repository objects, they need to be provisioned for use in Business Rules and assigned a Business Rules role in Shared Services User Management Console. See the *Hyperion Security Administration Guide*.

You add access privileges for repository objects, such as business rules, sequences, macros, variables, and projects. Access privileges control what users can and cannot perform on these objects. For example, you can assign a privilege that prohibits a user (or group of users) from modifying a business rule, but permits the same user (or groups of users) to launch that business rule.

- For information on adding access privileges for business rules, see "Adding or Editing Access Privileges for a Business Rule" on page 66.

- For information on adding access privileges for variables, see "Adding or Editing Access Privileges for a Variable" on page 69.

- For information on adding access privileges for macros, see "Adding or Editing Access Privileges for a Macro" on page 71.

- For information on adding access privileges for sequences, see .

- For information on adding access privileges for a project, see .

About Access Privileges for Business Rules

Access privileges determine which users and groups can validate, launch, and/or modify business rules. You can specify any of the following privileges for users and groups who use a business rule:

- Validate or launch

- Cannot validate or launch

- Modify

- Cannot modify

You can also specify whether users can validate and run the business rule against a database location or cluster, or against all database locations and clusters.

Adding or Editing Access Privileges for a Business Rule

Note:

You cannot add multiple access privileges at one time. You must add access privileges one at a time.

➤ To add access privileges for a business rule:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Rules** node and double-click the business rule for which you want to add access privileges.

If the business rule is a graphical business rule, the text of the business rule is displayed on the Graphical tab; if the business rule is a non-graphical business rule (that is, an enhanced calc script) the text of the business rule is displayed on the Source tab.

5 Select the **Access Privileges** tab.

Any existing access privileges are displayed on the Access Privileges tab. If you have not previously added access privileges, none are displayed on this tab.

6 On the **Access Privileges** tab, click **Add** to add a new access privilege.

The Add Privilege dialog box is displayed.

7 In the **Add Privilege** dialog box, do the following:

a. From the **Privilege** drop-down list, select the type of privilege you want to grant:

Note:

The contents of the Privilege drop-down list vary according to whether you are adding access privileges for a business rule, sequence, macro, variable, or project. For example, if you are adding access privileges for a business rule, sequence, or project, the Privilege drop-down list contains all four of the types of privileges in the following list. If you are adding access privileges for a macro or variable, however, the Privilege drop-down list contains only the "Modify rule repository objects" and "Cannot modify rule repository objects" privileges.

- **Validate or launch** - enables a users or users you specify to validate and launch the business rule
- **Modify rule repository objects** - enables a user or users you specify to modify the business rule
- **Cannot validate or launch** - prevents the user or users you specify from validating or launching the business rule
- **Cannot modify rule repository objects** - prevents the user or users you specify from modifying the business rule

b. If you selected **Validate or launch** or **Cannot Validate or Launch** in step a, from the **Location** drop-down list, do one of the following:

Note:

The locations and clusters that are available from the Location drop-down list are dependent on the locations you assigned to the rule on the Locations tab. For example, if you did not add Cluster1 on the Locations tab (or click Allow All Locations), Cluster1 is not available from the Location drop-down list.

- Choose **All Locations** to enable the user to validate and launch the business rule against all database locations and clusters assigned to the rule. (This is the default selection.)
- Choose a cluster to enable the user to validate and/or launch the business rule against this cluster only. The user can validate and/or run the rule against any location in the cluster. For more information on clusters, see "Managing Clusters" on page 108.
- Choose a database location to enable the user to validate and/or launch the business rule against this location only. For more information on locations, see "Managing Database Locations" on page 103.
- Choose **Select Location** to select a database against which the user can validate and launch the business rule. Then in the **Select Database Outline** dialog box, drill down to select a Planning or Analytic Services database and click **OK**.

c.   In the **Available** area, select users and/or groups of users for whom you want to add this access privilege. (You can select multiple users and groups using **Shift + Click**.) Then use the arrow keys to move users and groups among the **Selected** and **Available** areas of the dialog box. When you move users and groups to the **Selected** area of the dialog box, these users and groups have the access privilege you assigned.

> **Note:**
>
> The users and groups that are listed in the Available area are provisioned for use in Business Rules using the Shared Services User Management Console. Provisioning is the process of assigning roles and access privileges to users and groups for Business Rules. For more information about provisioning users for use in Business Rules, see the *Hyperion Security Administration Guide*. If new users are provisioned after the Administration Services server is started, you may need to refresh the list of users on the Users tab in the Available area of the Add Privilege dialog box. To refresh the list of users on the Users tab, right-click Administration, and select Refresh User List.

d.   Click **OK** to save the access privilege and return to the **Access Privileges** tab.

8   On the **Access Privileges** tab, click **Save** to save the new access privilege.

Deleting Access Privileges for a Business Rule

➤   To delete access privileges for a business rule:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4   Expand the **Rules** node and double-click the business rule for which you want to delete access privileges.

If the business rule is a graphical business rule, the text of the business rule is displayed on the Graphical tab; if the business rule is a non-graphical business rule the text of the business rule is displayed on the Source tab.

5   Select the **Access Privileges** tab.

Any existing access privileges are displayed on the Access Privileges tab.

6   On the **Access Privileges** tab, do one of the following:

- Select the check boxes next to the access privileges you want to delete, and click **Delete**.

- Click **Delete All** to delete all of the access privileges for this business rule.

   The access privileges you selected are deleted from the business rule.

7   Click **Save** to save the changes you made to the business rule's access privileges.

About Access Privileges for Variables

Access privileges for variables let you specify which users and groups can and cannot modify variables.

Adding or Editing Access Privileges for a Variable

Note:

You cannot add multiple access privileges at one time. You must add access privileges one at a time.

➤ To add access privileges for a variable:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Global Variables** node and double-click the variable to which you want to add access privileges.

5 Select the **Access Privileges** tab.

Any existing access privileges are displayed on the Access Privileges tab. If you have not created access privileges for this variable previously, none are displayed on this tab.

6 On the **Access Privileges** tab, click **Add** to add a new access privilege.

The Add Privilege dialog box is displayed.

7 In the **Add Privilege** dialog box, do one of the following:

a. From the **Privilege** drop-down list, select the type of privilege you want to grant:

    Note:

    The contents of the Privilege drop-down list vary according to whether you are adding access privileges for a business rule, sequence, macro, variable, or project. For example, if you are adding access privileges for a business rule, sequence, or project, the Privilege drop-down list contains all four of the types of privileges in the following list. If you are adding access privileges for a macro or variable, however, the Privilege drop-down list contains only the "Modify rule repository objects" and "Cannot modify rule repository objects" privileges.

    ● **Modify rule repository objects** - enables a user or users you specify to modify the variable

- **Cannot modify rule repository objects** - prevents the user or users you specify from modifying the variable

b. In the **Available** area, select users and/or groups of users for whom you want to add this access privilege. (You can select multiple users and groups using **Shift + Click**.) Then use the arrow keys to move users and groups among the Selected and Available areas of the dialog box. When you move users and groups to the Selected area of the dialog box, these users and groups have the access privilege you assigned for the variable.

Note:

The users and groups that are listed in the Available area are provisioned for use in Business Rules using the Shared Services User Management Console. Provisioning is the process of assigning roles and access privileges to users and groups for Business Rules. For more information about provisioning users for use in Business Rules, see the *Hyperion Security Administration Guide*. If new users are provisioned after the Administration Services server is started, you may need to refresh the list of users on the Users tab in the Available area of the Add Privilege dialog box. To refresh the list of users on the Users tab, right-click Administration, and select Refresh User List.

c. Click **OK** to save the access privilege and return to the **Access Privileges** tab.

8 On the **Access Privileges** tab, click **Save** to save the new access privilege.

Deleting Access Privileges for a Variable

When you delete access privileges to a variable, you delete them for all instances of the variable in business rules and sequences. Before you delete an access privilege to a variable, you should review the list of business rules and sequences that use the variable on the Usages tab.

➤ To delete access privileges for a variable:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Global Variables** node and double-click the variable for which you want to delete access privileges.

5 Select the **Access Privileges** tab.

Any existing access privileges are displayed on the Access Privileges tab. If you have not created access privileges for this variable previously, none are displayed on this tab.

6 On the **Access Privileges** tab, do one of the following:

- Select the check boxes next to the access privileges you want to delete, and click **Delete**.

- Click **Delete All** to delete all of the access privileges for this variable.

The access privileges you selected are deleted from all uses of the variable in business rules, macros, and business rule sequences.

7   Click **Save** to save the changes you made to the variable's access privileges.

About Access Privileges for Macros

Access privileges for macros let you specify which users and groups can and cannot modify macros.

Adding or Editing Access Privileges for a Macro

Note:

You cannot add multiple access privileges at one time. You must add access privileges one at a time.

➤ To add access privileges for a macro:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4   Expand the **Macros** node and double-click the macro to which you want to add access privileges.

    If the macro contains a graphical business rule, the macro is displayed on the Graphical tab; if the macro contains a non-graphical business rule, the macro is displayed on the Source tab.

5   Select the **Access Privileges** tab.

    Any existing access privileges are displayed on the Access Privileges tab. If you have not created access privileges for this macro previously, none are displayed on this tab.

6   On the **Access Privileges** tab, click **Add** to add a new access privilege.

    The Add Privilege dialog box is displayed.

7   In the **Add Privilege** dialog box, do one of the following:

    a.   From the **Privilege** drop-down list, select the type of privilege you want to grant:

         Note:

         The contents of the Privilege drop-down list vary according to whether you are adding access privileges for a business rule, sequence, macro, variable, or project. For example, if you are adding access privileges for a business rule, sequence, or project, the Privilege drop-down list contains all four of the types of privileges in the following list. If you are adding

access privileges for a macro or variable, however, the Privilege drop-down list contains only the "Modify rule repository objects" and "Cannot modify rule repository objects" privileges.

- **Modify rule repository objects** - enables a user or users you specify to modify the macro

- **Cannot modify rule repository objects** - prevents the user or users you specify from modifying the macro

b. In the **Available** area, select users and/or groups of users for whom you want to add this access privilege. (You can select multiple users and groups using **Shift + Click.**) Then use the arrow keys to move users and groups among the **Selected** and **Available** areas of the dialog box. When you move users and groups to the **Selected** area of the dialog box, these users and groups have the access privilege you assigned for the macro.

Note:

The users and groups that are listed in the Available area are provisioned for use in Business Rules using the Shared Services User Management Console. Provisioning is the process of assigning roles and access privileges to users and groups for Business Rules. For more information about provisioning users for use in Business Rules, see the *Hyperion Security Administration Guide.* If new users are provisioned after the Administration Services server is started, you may need to refresh the list of users on the Users tab in the Available area of the Add Privilege dialog box. To refresh the list of users on the Users tab, right-click Administration, and select Refresh User List.

c. Click **OK** to save the access privilege and return to the **Access Privileges** tab.

8 On the **Access Privileges** tab, click **Save** to save the new access privilege.

Deleting Access Privileges for a Macro

When you delete access privileges to a macro, you delete them for all instances of the macro being used in business rules, sequences, and other macros. Before you delete an access privilege to a macro, you should review the list of business rules, sequences, and other macros that reference the macro on the Usages tab.

➤ To delete access privileges for a macro:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Macros** node and double-click the macro for which you want to delete access privileges.

If the macro contains a graphical business rule, the macro is displayed on the Graphical tab; if the macro contains a non-graphical business rule, the macro is displayed on the Source tab.

5   Select the **Access Privileges** tab.

Any existing access privileges are displayed on the Access Privileges tab. If you have not created access privileges for this macro previously, none are displayed on this tab.

6   On the **Access Privileges** tab, do one of the following:

- Select the check boxes next to the access privileges you want to delete, and click **Delete**.

- Click **Delete All** to delete all of the access privileges for this macro.

  The access privileges you selected are deleted from all uses of the macro in business rules, other macros, and business rule sequences.

7   Click **Save** to save the changes you made to the macro's access privileges.

About Access Privileges for Business Rule Sequences

Access privileges for business rule sequences determine which users and groups can validate, launch, and/or modify the sequence. You can specify any of the following privileges for users and groups who use a sequence:

- Validate or launch

- Cannot validate or launch

- Modify

- Cannot modify

You can also specify whether users can run the business rule sequence against a database only or against any database during validation and launch.

Adding or Editing Access Privileges for a Business Rule Sequence

Note:

You cannot add multiple access privileges at one time. You must add access privileges one at a time.

➤ To add or edit access privileges for a business rule sequence:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Right-click **Sequences**, and double-click the sequence for which you want to add new or editing existing access privileges.

The Sequence Editor is displayed showing the Sequence tab.

5 On the **Access Privileges** tab, click **Add** to add a new access privilege.

The Add Privilege dialog box is displayed.

6 In the **Add Privilege** dialog box, do the following:

a. From the **Privilege** drop-down list, select the type of privilege you want to grant:

> **Note:**
>
> The contents of the Privilege drop-down list vary according to whether you are adding access privileges for a business rule, sequence, macro, variable, or project. For example, if you are adding access privileges for a business rule, sequence, or project, the Privilege drop-down list contains all four of the types of privileges in the following list. If you are adding access privileges for a macro or variable, however, the Privilege drop-down list contains only the "Modify rule repository objects" and "Cannot modify rule repository objects" privileges.

- **Validate or launch** - enables a users or users you specify to validate and launch the business rule sequence
- **Modify rule repository objects** - enables a user or users you specify to modify the business rule sequence
- **Cannot validate or launch** - prevents the user or users you specify from validating or launching the business rule sequence
- **Cannot modify rule repository objects** - prevents the user or users you specify from modifying the business rule sequence

b. If you selected **Validate or launch** or **Cannot Validate or Launch** in step a, from the **Location** drop down list, do one of the following:

> **Note:**
>
> The locations and clusters that are available from the Location drop-down list are dependent on the locations you assigned to the rules in the sequence. For example, if you did not add Cluster1 to any of the rules in the sequence (or click Allow All Locations), Cluster1 is not available from the Location drop-down list.

- Choose **All Locations** to enable the user to validate and launch the sequence against all database locations and clusters assigned to the rules in the sequence. (This is the default selection.)

- Choose a cluster to enable the user to validate and/or launch the sequence against this cluster only. The user can validate and/or launch the sequence against any location in the cluster. For more information on clusters, see "Managing Clusters" on page 108.

- Choose a database location to enable the user to validate and/or launch the sequence against this location only. For more information on locations, see "Managing Database Locations" on page 103.

- Choose **Select Location** to select a database against which the user can validate and launch the sequence. Then in the **Select Database Outline** dialog box, drill down to select a Planning or Essbase database and click **OK**.

c. In the **Available** area, select users and/or groups of users for whom you want to add this access privilege. (You can select multiple users and groups using **Shift + Click**.) Then use the arrow keys to move users and groups among the **Selected** and **Available** areas of the dialog box. When you move users and groups to the **Selected** area of the dialog box, these users and groups have the access privilege you assigned.

Note:

The users and groups that are listed in the Available area are provisioned for use in Business Rules using the Shared Services User Management Console. Provisioning is the process of assigning roles and access privileges to users and groups for Business Rules. For more information about provisioning users for use in Business Rules, see the *Hyperion Security Administration Guide*. If new users are provisioned after the Administration Services server is started, you may need to refresh the list of users on the Users tab in the Available area of the Add Privilege dialog box. To refresh the list of users on the Users tab, right-click Administration, and select Refresh User List.

d. Click **OK** to save the access privilege and return to the **Access Privileges** tab.

7 Click **Save** to save the changes you made to the business rule sequence's access privileges.

Deleting Access Privileges from a Business Rule Sequence

➤ To delete access privileges for a business rule sequence:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Sequences** node and double-click the business rule sequence for which you want to delete access privileges.

The rules and other sequences that comprise the sequence are listed on the Sequence tab.

5 Select the **Access Privileges** tab.

Any existing access privileges are displayed on the Access Privileges tab.

6   On the **Access Privileges** tab, do one of the following:

●   Select the check boxes next to the access privileges you want to delete, and click **Delete**.

●   Click **Delete All** to delete all of the access privileges for this business rule sequence.

The access privileges you selected are deleted from the business rule sequence.

7   Click **Save** to save the changes you made to the business rule sequence's access privileges.

About Access Privileges for Projects

Access privileges for projects determine what users and groups can access a project and what tasks they can perform on the objects in the project.

Adding Access Privileges to a Project

If you are the owner of a project, and you grant a user access to that project, by default the user is granted access to all of the business rules, sequences, macros, and variables in that project. However, if the user to whom you grant access to the project has been denied access to some of the individual objects in that project previously, then the user is only granted access to the objects in the project for which he/she was not previously denied access.

➤   To grant users and groups access to a project:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4   Expand the **Projects folder**. Double-click the project to which you want to grant users and groups access.

The contents of the project are displayed on the Contents tab.

5   Select the **Access Privileges** tab.

6   On the **Access Privileges** tab, click **Add** to add grant users and groups access to the project.

The Add Privilege dialog box is displayed.

7   In the **Add Privilege** dialog box, do the following:

a.   From the **Privilege** drop-down list, select the type of privilege you want to grant:

Note:

The contents of the Privilege drop-down list vary according to whether you are adding access privileges for a business rule, sequence, macro, variable, or project. For example, if you are adding access privileges for a business rule, sequence, or project, the Privilege drop-

down list contains all four of the types of privileges in the following list. If you are adding access privileges for a macro or variable, however, the Privilege drop-down list contains only the "Modify rule repository objects" and "Cannot modify rule repository objects" privileges.

- **Validate or launch** - enables a users or users you specify to validate and launch the business rules and sequences in the project
- **Modify rule repository objects** - enables a user or users you specify to modify the business rules, sequences, macros, and variables in the project
- **Cannot validate or launch** - prevents the user or users you specify from validating or launching the business rules and sequences in the project
- **Cannot modify rule repository objects** - prevents the user or users you specify from modifying the business rules, sequences, macros, and variables in the project

b. If you selected **Validate or launch** or **Cannot Validate or Launch** in step a, from the **Location** drop down list, do one of the following:

Note:

The locations and clusters that are available from the Location drop-down list are dependent on the locations you assigned to the rules in the project. For example, if you did not add Cluster1 to any of the rules in the project (or click Allow All Locations), Cluster1 is not available from the Location drop-down list.

- Choose **All Locations** to enable the user to validate and/or launch the rules and sequences in the project against all database locations and clusters assigned to the rules in the project. (This is the default selection.)
- Choose a cluster to enable the user to validate and/or launch the rules and sequences in the project against this cluster only. The user can validate and/or launch the rules and sequences in the project against any location in the cluster. For more information on clusters, see "Managing Clusters" on page 108.
- Choose a database location to enable the user to validate and/or launch the rules and sequences in the project against this location only. For more information on locations, see "Managing Database Locations" on page 103.
- Choose **Select Location** to select a database against which the user can validate and/or launch the rules and sequences in the project. Then in the **Select Database Outline** dialog box, drill down to select a Planning or Essbase database and click **OK**.

c. In the **Available** area, select users and/or groups of users for whom you want to add this access privilege. (You can select multiple users and groups using **Shift + Click**.) Then use the arrow keys to move users and groups among the **Selected** and **Available** areas of the dialog box. When you move users and groups to the **Selected** area of the dialog box, these users and groups have access to the project.

Note:

The users and groups that are listed in the Available area are provisioned for use in Business Rules using the Shared Services User Management Console. Provisioning is the process of assigning roles and access privileges to users and groups for Business Rules. For more information about provisioning users for use in Business Rules, see the *Hyperion Security Administration Guide.* If new users are provisioned after the Administration Services server is started, you may need to refresh the list of users on the Users tab in the Available area of the Add Privilege dialog box. To refresh the list of users on the Users tab, right-click Administration, and select Refresh User List.

    d.   Click **OK** to save the access privilege and return to the **Access Privileges** tab.

8   Click **Save** to save the changes to the project.

Deleting Access Privileges to a Project

You might want to delete a user's or group's access to a project when the user's or group's role changes and they no longer need access to the project.

➤ To delete a user or group's access from a project:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4   Expand the **Projects folder**. Double-click the project from which you want to delete a user or group's access.

The contents of the project are displayed on the Contents tab.

5   On the **Access Privileges** tab, select the user or group whose access privileges you want to delete from the project. (You can select multiple users and groups by using **Shift + Click**.)

6   Do one of the following:

- Click **Delete** to delete the users and groups you selected on the **Access Privileges** tab.

- Click **Delete All** to delete all of the users and groups that display on the **Access Privileges** tab.

The access privileges of the users and groups you selected are deleted from the project, and the users and groups no longer display on the Access Privileges tab.

7   Click **Save** to save the changes to the project.

4

Validating and Launching Business Rules and Sequences

You can launch a business rule or sequence from Business Rules within Administration Services, the Business Rules Web Launcher, or the Business Rules Command Line Launcher. This chapter contains information and instructions for launching a business rule or sequence from Business Rules within Administration Services and from the Command Line Launcher (also known as launching from a shortcut). For information on launching a business rule or sequence from the Web Launcher, see the *Hyperion Business Rules Web Launcher User's Guide* or the *Hyperion Business Rules Web Launcher Online Help*.

Validating a Business Rule

When you validate a business rule, Business Rules determines whether the member or members you select exist in the database and whether the syntax of the business rule is correct. If a members or members do not exist in the database or the syntax of the business rule is incorrect, Business Rules returns an error message when you validate the rule.

Note:

You need to have access privileges to a business rule before you can validate it. For more information about granting access privileges to a rule, see "Adding or Editing Access Privileges for a Business Rule" on page 66.

➤ To validate a business rule:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4   Expand the **Rules** node, and do one of the following:

●   Double-click the business rule you want to validate. When the business rule opens in the Rule Editor with the syntax of the rule displayed, click **Validate**.

The Validate dialog box is displayed.

●   Right-click the business rule you want to validate, and select **Validate**.

The Validate dialog box is displayed.

5   In the **Validate** dialog box, do the following:

a.   In the **Execution Database Name** text box, enter the name of the database against which you want to validate the business rule. Or click the **Search** button to search for a database.

b.   If the business rule contains one or more runtime prompts, enter values for them, or click the **Search** button to search for values.

Note:

A value for a runtime prompt may be entered by default. If so, you can accept the default, enter a new value, or search for a new value.

6   Click **Validate**. If there are any validation errors, Business Rules displays error messages for them. If you want more information about the error messages, click **Get Detail**.

7   Click **OK** to return to the Rule Editor.

Launching a Business Rule

While you work in Business Rules, you can launch a business rule that you saved. You select the business rule from the list of business rules under the Rules node, enter any required runtime prompts, and launch the business rule.

Note:

You need to have access privileges to a business rule before you can launch it. For more information about granting access privileges to a rule, see "Adding or Editing Access Privileges for a Business Rule" on page 66.

➤ To launch a business rule:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Rules** node, and do one of the following:

- Double-click the business rule you want to launch. When the business rule opens in the Rule Editor with the syntax of the rule displayed, click **Launch**.

  The Launch dialog box is displayed.

- Right-click the business rule you want to launch, and select **Launch**.

  The Launch dialog box is displayed.

5 In the **Launch** dialog box, do the following:

a. In the **Execution Database Name** text box, enter the name of the database against which you want to launch the business rule. Or click the **Search** button to search for a database.

b. If the business rule contains one or more runtime prompts, enter values for them, or click the **Search** button to search for values.

> **Note:**
>
> A value for a runtime prompt may be entered by default. If so, you can accept the default, enter a new value, or search for a new value.

6 Click **Launch**. If there are any launch errors, Business Rules displays error messages for them. If you want more information about the error messages, click **Get Detail**.

7 Click **OK** to return to the Rule Editor.

Validating a Business Rule Sequence

As you are creating a business rule sequence, you may want to validate portions of it (or all of it) to determine whether there are any problems with the sequence before you launch it. If there are problems, you can view the log file for a description of the problems, and rewrite the portion of the sequence that caused the validation error.

> **Note:**
>
> You need to have access privileges to all rules in the sequence before you can validate it. For more information about granting access privileges to a sequence, see "Adding or Editing Access Privileges for a Business Rule Sequence" on page 73.

➤ To validate a business rule sequence:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Sequences node,** and double-click the sequence you want to validate.

The Sequence Editor is displayed showing the Sequence tab. The business rules and sequences that comprise the sequence are listed on this tab.

Note:

You cannot validate a sequence that contains business rules that are associated with an outline from Essbase and an outline from Planning.

5 Click **Validate** to validate the business rule sequence.

The Validate dialog box is displayed.

6 In the **Validate** dialog box, do the following:

a. In the **Execution Database Name** text box, enter the name of the database against which you want to validate the business rule sequence. Or click the **Search** button to search for a database.

b. If the business rule sequence contains one or more runtime prompts, enter values for them, or click the **Search** button to search for values.

Note:

A value for a runtime prompt may be entered by default. If so, you can accept the default, enter a new value, or search for a new value.

7 Click **Validate** to validate the sequence.

Launching a Business Rule Sequence

There may be times that you want to launch a business rule sequence while you are creating it to check the results of the sequence before you finish designing it. For example, if you are creating a complex business rule sequence that uses many different rules, you might want to validate the results as you include each rule.

Note:

You need to have access privileges to all rules in the sequence before you can launch it. For more information about granting access privileges to a sequence, see "Adding or Editing Access Privileges for a Business Rule Sequence" on page 73.

➤ To launch a business rule sequence:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Sequences node,** and double-click the sequence you want to launch.

The Sequence Editor is displayed showing the Sequence tab. The business rules and sequences that comprise the sequence are listed on this tab.

> **Note:**
>
> You cannot launch a sequence that contains business rules that are associated with an outline from Essbase and an outline from Planning.

5 Click **Launch** to launch the business rule sequence.

The Launch dialog box is displayed.

6 In the **Launch** dialog box, do the following:

a. In the **Execution Database Name** text box, enter the name of the database against which you want to launch the business rule sequence. Or click the **Search** button to search for a database.

b. If the business rule sequence contains one or more runtime prompts, enter values for them, or click the **Search** button to search for values.

> **Note:**
>
> A value for a runtime prompt may be entered by default. If so, you can accept the default, enter a new value, or search for a new value.

7 Click **Launch** to launch the sequence.

Launching from a Shortcut

As an administrator, you can schedule business rules to run from outside of Business Rules by creating a shortcut (also known as a command line launch) on your desktop.

You can schedule business rules to calculate in an order you specify by creating a shortcut on your desktop that launches:

- A business rule

- A business rule with runtime prompts

- An Essbase calc script

- A sequence of business rules, runtime prompt files, or calc scripts

The target directory for the shortcut should include the path to the `CmdLnLauncher.bat` program with a space followed by the parameters listed below:

- -S*servername*

- -U*username*

- -P*password*

Note:

If you want to suppress the password prompt (for example, if you have an unattended batch job), the –p option must be the first parameter in the command line. See "Suppressing Password Prompts in Business Rules Utilities" on page 84.

- *-rBusiness Rule Name* or *-sSequence Name* (This is an either/or option; specify only one.)

- *-fRun Time Prompts file* (If this file is not in the same directory as `CmdLnLauncher.bat`, specify the full runtime prompt file name with the location. You can only use the runtime prompt file name to launch business rules; it is ignored for launching sequences. Instead, the sequence's default launch values are used. You set up default launch values when you create a sequence from within the Business Rules node.)

- *-validate (Use this parameter to validate the business rule or sequence, but not run it. For sequences, each rule is validated and any errors are written to the* Business Rules *log file.)*

Note:

By default, validation is turned off. You need to include the validation parameter to turn it on.

Suppressing Password Prompts in Business Rules Utilities

When running Business Rules utilities that prompt for passwords, you can set an option to suppress password prompts, for example, when running utilities in batch mode. To enable suppressing prompts, use the PasswordEncryption utility (`PasswordEncryption.bat`) to create a file that stores a password in encrypted form.

After you set this file up, run Business Rules utilities with the –p option as the first parameter in the command line to skip the password prompt and use the password from the encrypted file. Each password file contains one password; the password file is stored in the location specified when running the utility.

The PasswordEncryption utility uses a command line interface. By default, it is installed in: `<HYPERION_HOME>\products\Essbase\eas\console\bin`.

➤ To enable suppressing password prompts in Business Rules utilities:

1 Enter this command from the `bin` directory, where `PASSWORD_FILE` is the full file path and file name for the password file:

Windows: `PasswordEncryption.cmd PASSWORD_FILE`

UNIX: `PasswordEncryption.sh PASSWORD_FILE`

2 When prompted, enter your password.

The masked password is encrypted and stored in the file and location specified in `PASSWORD_FILE`. For other Business Rules utilities with password prompts, you can use the –p option to skip the prompt and use the encrypted password from the password file.

Command Line Launch Example

Here is how to launch a business rule called Budget with the runtime prompt information for the month of the year stored in a file called MONTH.

Target:

```
"C:\Hyperion\eas\console\bin\CmdLnLauncher.bat"  -Sserver1 -Uadmin -
Ppassword -rBudget
-fmonth.rtp
```

Start in:

```
"C:\Hyperion\eas\console\bin"
```

Each command line option should be separated by spaces.

Example:

```
"C:\Hyperion\eas\console\bin\CmdLnLauncher.bat" -Sserver1 -Uadmin -
Ppassword -rBudget -fmonth.rtp
```

Start in:

```
"C:\Hyperion\eas\console\bin"
```

Note:

The letters before the parameters are required. For example the "S" is required before the server name in the following: `CmdLnLauncher.bat -Smyserver`

Launching Several Business Rules from a Shortcut

➤ To launch several business rules from a shortcut:

1 Add `java.exe` **to your system path.**

2 **Change to the directory in which the file** `CmdLnLauncher.bat` **is located. By default, it is in** `<HYPERION_HOME>\products\Essbase\eas\console\bin`.

3 **Create a batch file defining all the business rules you want to launch, and define it in the** `Target` **section of the shortcut.**

    If you are using different processes (for example, business rules, business rules with runtime prompts, sequences, and so on), use the correct variable (-r for business rules without runtime prompts, -s for sequences, and –r and –f for business rules with runtime prompts).

4 **Create a new shortcut or modify your existing shortcut by setting the** `Target` **and** `Start in` **fields to point to the location of your batch file.**

Batch File Example

The following is an example of running a batch file, called `Budget08.bat`, located on the local drive.

Target:

```
C:\Budget08.bat
```

Start in: `C:\`

The `Budget08.bat` file looks like the following:

```
cd c:\hyperion\eas\console\bin
call CmdLnLauncher -Sserver1 -Uadmin -Ppassword -rBudget_2008
call CmdLnLauncher -Sserver1 -Uadmin -Ppassword -sBudget_2008
```

Automating Business Rules with Runtime Prompts

You can automate a business rule that contains runtime prompts so it can be launched from the command line launcher in batch mode.

➤ To automate business rules with runtime prompts:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Rules node.**

5 Right-click the rule you want to automate and select **Automate Launch Variables**.

The Automate Launch Variables dialog box is displayed.

    a.   In the **Execution Database Name** text box, enter the name of the database against which you want to launch the business rule. Or click the **Search** button to search for a database.

    b.   If the business rule contains one or more runtime prompts, enter values for them, or click the **Search** button to search for values.

6 Click **Automate**.

The Save dialog box is displayed.

7 Enter a name for the file and give it an xml extension. Then click **Save**.

The file is saved to the location you specified. The file contains the name of the business rule, the database you want to launch it against, and any runtime prompts.

Note:

The file must be an xml file.

5

Using Projects to Manage Repository Objects

Projects help you organize business rules, business rule sequences, macros, and variables into logical groupings of repository objects. This chapter contains information on creating and managing projects in Business Rules.

About Projects

Projects help you organize business rules, business rule sequences, macros, and variables. For example, you might create a project that contains the business rules, sequences, macros, and variables that you work with most often. You might also group business rules into projects to help identify and manage individual business rules for each Essbase server.

Using descriptive names for your projects makes finding the business rules and other objects that belong to them easier. For example, you might group business rules in a project called "Yearly Budget," "Three Year Plan," or "Monthly Reporting." Or if you create some business rules using the Formula Guide, you might create a project that you identify by the type of formula used, such as "Fixed Facilities/Lease Costs" or "Operating Expense Business Rule."

Creating Projects

➤ To create a project:

1 Launch the Administration console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4   From the **Projects** folder, select **New Project.**

The Contents tab for the project is displayed.

5   Click the **Add to Project** button to add rules, sequences, macros, and variables to the project.

The Add to Project dialog box is displayed. It contains lists of the business rules, sequences, macros, and variables that you can add to the project.

6   In the **Add to Project** dialog box, select the rules, sequences, macros, and variables that you want to add to the project by selecting the check boxes next to their names. Then click **OK**.

The objects that you select are listed on the Contents tab.

7   On the **Project Info** tab, enter a name, description, and owner for the project. Also, specify whether the project should be locked from editing by selecting the **Locked** check box.

8   On the **Access Privileges** tab, click the **Add** button to grant access to the project.

The Add Privilege dialog box is displayed.

9   In the **Add Privilege** dialog box, do the following:

   a.   From the **Privilege** drop-down list, select the type of privilege you want to grant:

   - **Validate or launch** – Enables users to validate and launch the business rules and sequences in the project.

   - **Modify rule repository objects** – Enables users to modify the business rules, sequences, macros, and variables in the project.

   - **Cannot validate or launch** – Prevents users from validating or launching the business rules and sequences in the project.

   - **Cannot modify rule repository objects** – Prevents users from modifying the business rules, sequences, macros, and variables in the project.

   b.   If you selected **Validate or launch** or **Cannot Validate or Launch** in step a, from the **Location** drop down list, do one of the following:

   - Choose **All Locations** to enable the users to validate and launch the business rules and sequences against all databases on the server. (This is the default selection.)

   - Choose **Select Location** to select a database against which the users can validate and launch the business rules and sequences. Then in the **Select Database Outline** dialog box, select a database and click **OK**.

   c.   In the **Available** area, select users and/or groups of users for whom you want to add this access privilege. (You can select multiple users and groups using **Shift + Click**.) Then use the arrow keys to move users and groups among the **Selected** and **Available** areas of the dialog box. When you move users and groups to the **Selected** area of the dialog box, these users and groups have access to the project.

   d.   Click **OK** to save the access privilege and return to the **Access Privileges** tab.

10   Click **Save** to save the new project.

Editing Projects

You can edit any of the following properties of a project:

- The name of the project
- The description of the project
- The owner of the project
- The Locked status of the project
- The contents of the project (that is, the business rules, sequences, macros, and variables) of the project
- The users and groups who have access to the project
- The access privileges for the project

Adding Business Rules, Sequences, Macros, and Variables to a Project

You can add business rules, sequences, macros, and variables to as many projects as you want.

Note:

You cannot add a project to another project.

➤ To add business rules, sequences, macros, and variables to a project:

1 Launch the Administration console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Projects folder**. Double-click the project to which you want to add a business rule, sequence, macro, or variable.

The contents of the project are displayed on the Contents tab.

5 Click **Add to Project** to add a business rule, sequence, macro, or variable to the project.

The Add to Project dialog box is displayed. It contains lists of the business rules, sequences, macros, and variables that you can add to the project.

6 In the **Add to Project** dialog box, select the business rules, sequences, macros, and variables that you want to add to the project by selecting the check boxes next to their names. Then click **OK**.

The objects that you select are listed on the Contents tab of the project.

7 Click **Save** to save the changes to the project.

Deleting Business Rules, Sequences, Macros, and Variables from a Project

When you delete business rules, sequences, macros, or variables from a project, they are not deleted from the Business Rules repository; they still exist in the repository and are displayed in the Repository View node within Business Rules.

➤ To delete business rules, sequences, macros, and variables from a project:

1 Launch the Administration console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Projects folder**. Double-click the project from which you want to delete a business rule, sequence, macro, or variable.

The contents of the project are displayed on the Contents tab.

5 On the **Contents** tab, select the business rules, sequences, macros, and variables you want to delete from the project. (You can select multiple objects by using **Shift + Click**.)

6 Click **Remove From Project** to delete the business rules, sequences, macros, and variables you selected from the project.

The objects you selected are deleted from the project and no longer display on the Contents tab.

7 Click **Save** to save the changes to the project.

Deleting Projects

You can delete a project when you no longer need to use it. When you delete a project, none of the business rules, sequences, macros, or variables that you added to the project are deleted. They continue to exist as individual objects in the Business Rules repository.

Note:

You cannot delete a project that you have open for editing or browsing.

➤ To delete a project:

1 Launch the Administration console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Repository View** node.

4 Expand the **Projects folder**. Right-click the project you want to delete, and select **Delete Project**.

The Delete Confirmation dialog box is displayed.

5 In the **Delete Confirmation** dialog box, click **Yes** to confirm deletion of the project.

The project is deleted from the repository.

6

Importing and Exporting

You can import and export business rules, sequences, macros, variables, and projects. You can also import and export the access privileges and database locations you assigned to them. This chapter contains instructions for, and information about, importing and exporting business rules.

Note:

You cannot import or export database locations or access privileges by themselves; you can only import or export database locations or access privileges as part of a business rule that you are importing or exporting.

Exporting Business Rules, Macros, Variables, Sequences, and Projects

You can export repository objects such as business rules, macros, sequences, variables and projects. You can also export any access privileges and database locations that you specified for them. You may want to export objects from the repository to use them as backup copies or to move them to another repository. You export repository objects to an xml file.

Note:

You can export only repository objects created in this release of Business Rules.

➤ To export repository objects:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, right click the **Business Rules** node and select **Export Business Rules**.

The Export Business Rule frame is displayed. Initially, these tabs are empty until you connect to a repository from which you want to export.

4 On the **Enter Source Repository Information** dialog box, do the following:

Note:

You can only export business rules, sequences, macros, variables, and projects that were created in this release of Business Rules.

a. From the **Repository Type** drop-down list, select one of the following repository types from which to export:

- Microsoft SQL
- Oracle
- DB2
- My SQL

b. Enter the name and port number of the server on which the repository resides. If you are using an Oracle repository, enter the instance.

c. For My SQL and DB2, enter the database name (this is the empty Business Rules database that was created in Microsoft SQL Server or DB2 during configuration) followed by the user name and password for that database.

d. Click **Test Connection** to test the connection to the database. If the connection fails, make any necessary changes until you can connect successfully.

e. Click **Connect** to connect to the server.

If the connection is successful, the business rules, sequences, macros, variables, and projects that you can export are listed on the Business Rules, Sequences, Variables, Macros, and Projects tabs.

5 On the **Business Rules**, **Variables**, **Macros, Sequences, and Projects** tabs, select the check boxes next to the names of the business rules, variables, macros, sequences, and projects you want to export. Or click the **Select All** button to export all of them.

Note:

If you want to export all of the items listed on each tab, click the Select All button for each tab.

6 Select the **For Calc Mgr** check box, if you want to export to Hyperion Calculation Manager.

7 Click the **Dependents** button to export the variables and macros that are associated with the business rules you selected.

The variables and macros associated with the business rules you selected are listed on the Variables and Macros tabs.

8 Click **Export** to export the objects you selected.

The Save dialog box is displayed.

9 In the **Save** dialog box, create a new export file in which to save the exported objects by entering a name for the file In the **File Name** text box.

Note:

The file to which you export must be an xml file.

10 Click **Save**.

The business rules, variables, macros, sequences, and projects you selected are exported to the xml file.

Importing Business Rules, Macros, Variables, Sequences, and Projects

You can import repository objects such as business rules, macros, sequences, variables and projects. You can also import any access privileges and database locations that you specified for them. You may want to import objects into the Business Rules repository when you need to move them from another Business Rules repository on another server. You import repository objects from an xml file.

Note:

You can import only repository objects created in this release of Business Rules. You cannot import repository objects that were exported from a previous release of Business Rules.

➤ To import repository objects:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then right-click the **Administration** node and select **Import Business Rules**.

The Import from Business Rules XML File dialog box is displayed.

4 Navigate to the xml file you want to import, select the file, and click **Open**.

If the import is successful, a message is displayed.

Note:

If the import is not successful, see the Business Rules log file, `hbrclient.log`, for details.

5   If the xml file is imported successfully, you can refresh each of the nodes in Business Rules to see the new business rules, macros, variables, sequences, and projects that you imported.

7

Managing the System

This chapter contains information on administration tasks in Business Rules: migrating the Business Rules repository, changing the level of error reporting, viewing information in the `HBRServer` and `HBRClient` properties files, and managing database locations.

Migrating the Repository

The repository stores all repository objects (including business rules, sequences, macros, and variables) defined in Business Rules. To migrate the repository from a previous release of Business Rules to the repository for this release of Business Rules, or to migrate a repository to a new server, you can use the Migrate Repository feature. To do so, you must set up a connection to the server from which you want to migrate, test the connection, and select the business rules, variables, macros, sequences, and projects you want to migrate.

To create a repository for this release of Business Rules, use the EPM System Configurator. See the *Oracle Essbase Administration Services Installation Guide* for this release.

Note:

You need to migrate graphical repositories (from release 2.x forward) and Business Rules repositories (from release 4.x forward) to the Business Rules repository for this release to work with business rules using this version of Business Rules.

➤ To migrate the repository:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4 Right-click **Administration** and select **Migrate Repository**.

The Migrate Business Rules window is displayed with the Business Rules tab selected; this tab is empty initially. After you connect to a server, database, and repository from which to migrate, this tab lists the business rules that you can migrate.

> **Note:**
>
> You cannot migrate any access privileges that are associated with business rules, variables, macros, sequences, or projects.

5 Click **Connect** to connect to the repository from which you want to migrate repository objects.

6 On the **Enter Source Repository Information** dialog box, do the following:

> **Note:**
>
> You cannot use the Migrate Repository feature in Business Rules to migrate a 4.1 or higher release to the current release. You need to upgrade the 4.1 or higher repository to a repository for this release using the EPM System Configurator. See the *Oracle Essbase Administration Services Installation Guide*.

    a.   From the **Repository Version** drop-down list, select one of the following repository versions from which to migrate:

- **Current Version:** Select this option if your repository is upgraded to a repository for this release (using the Oracle's Hyperion Enterprise Performance Management System Configurator), and you want to migrate business rules, variables, macros, sequences, projects, and database locations and the access privileges assigned to them, to another repository for this release. You cannot use this option to upgrade from a previous release to the current release.

- **Business Rules 4.0 Repository:** If you are migrating a 4.0 repository to a repository for this release, run the Externalize Users utility in Administration Services first. When you run this utility, all native Administration Services and Business Rules users from the previous release are migrated from the Administration Services/Business Rules repository into the Shared Services repository. For more information on using the Externalize Users utility to migrate users to Shared Services, see the *Oracle Essbase Administration Services Installation Guide*.

  Select this option to migrate non-graphical business rules, variables, macros, sequences, projects, and database locations and the access privileges assigned to them, from a Business Rules 4.0 repository into a Business Rules repository for this release. When you migrate your Business Rules 4.0 repository to a repository for this release, all Business Rules repository objects including rules, sequences, variables, macros, projects, and database locations and the access privileges assigned to them, are

migrated to Shared Services automatically. During migration, any Business Rules roles assigned to users are migrated and assigned equivalent roles in Shared Services. In addition, any Business Rules groups are migrated to Shared Services. If the groups have roles assigned to them, these roles are also migrated and assigned equivalent roles in Shared Services. If a Business Rules group does not exist in Shared Services, it is created. After they are migrated to the Shared Services repository, existing Business Rules users and groups are automatically provisioned for use in Business Rules. You can work with Business Rules users and groups, and assign roles to them, in Shared Services User Management Console. For an overview of Shared Services User Management Console, Hyperion's new centralized interface for managing users, groups, and roles for all Hyperion products, see the *Hyperion EPM System Security Administration Guide.*

- **Graphical Repository:** Select this option to migrate graphical business rules from a graphical repository (from 2.x through 4.0.1) into a Business Rules repository for this release. All of your graphical business rules remain graphical business rules in the Business Rules repository for this release.

    Note:

    You cannot convert non-graphical business rules into graphical business rules by migrating to a new repository. Also, you cannot migrate rules from an active repository to another repository. For example, if you have repositories A and B, and A is the active repository, you cannot migrate rules from the A repository into the B repository, though you can migrate rules from the B repository into the A repository.

b. From the **Repository Type** drop-down list, select one of the following repository types from which to migrate:

- Microsoft SQL

- Oracle

- DB2

- Microsoft Access

    Note:

    You can only select Microsoft Access if you are migrating from a graphical repository.

c. Enter the name and port number of the server on which the repository resides. If you are using an Oracle repository, enter the instance.

d. For SQL and DB2, enter the database name (this is the empty Business Rules database that was created in Microsoft SQL Server or DB2 during configuration) followed by the username and password for that database.

e. Click **Test Connection** to test the connection to the database. If the connection fails, make any necessary changes until you can connect successfully.

f. Click **Connect** to connect to the server.

Select Current if you want to connect to the server that you are connected to currently.

The business rules and sequences that you can migrate to this release of Business Rules are listed on the Business Rules tab and the Sequences tabs, respectively. If you are migrating a 4.0 or 4.1 repository, any variables, macros, and projects that you can migrate are listed on their respective tabs.

7 **Do one of the following:**

● If you are migrating a 4.0 or 4.1 database, on the **Business Rules, Variables, Macros, Sequences, and Projects** tabs, select the check boxes next to the names of the business rules, variables, macros, sequences, and projects you want to migrate. Or click the **Select All** button to migrate all of them.

● If you are migrating a graphical repository, select the check boxes next to the names of the business rules and sequences you want to migrate. Or click the **Select All** button to migrate all of them. Go to step 9.

Note:

If you want to migrate all of the items listed on each tab, click the Select All button for each tab.

8 **If you are migrating a 4.0 or 4.1 database, click the Dependents button to migrate the variables and macros that are associated with the business rules you selected.**

The variables and macros associated with the business rules you selected are listed on the Variables and Macros tabs.

9 **Click Migrate to migrate the objects you selected.**

Migrating Identities in the Repository with the Migrate Identities Utility

The Migrate Identities utility updates old identity attributes in the Business Rules repository with new attributes from Shared Services. This utility enables movement of user ids across organizational units (OUs) and duplicate common names in different OUs. See the *Oracle Hyperion Enterprise Performance Management System Security Administration Guide* for configuration information and a list of identity attributes for external providers.

Note:

Before you run the Migrate Identities utility, run the UpdateNativeDir utility in Shared Services. See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.

The Migrate Identities utility file, `MigrateIdentities.bat`, is located in: `<HYPERION_HOME>\products\Essbase\eas\console\bin\` The command line options are: `-S<servername> -U<username> -P<password>` where:

- `-S<servername>` is the Administration Services server name.
- `-U<username>` is the logon users name of an administrator
- `-P<password>` is the password for the logon user name

Note:

If you want to suppress the password prompt, the -P parameter must be the first parameter. See "Suppressing Password Prompts in Business Rules Utilities" on page 84.

You can also migrate identities from Shared Services to Business Rules using the Migrate Identities button.

➤ To migrate unique Shared Services identities to Business Rules:

1 Select **Start > Programs > Analytic Administration Services > Administration Console**.

2 On the Administration Services **Login**, enter a server name, or select one from the drop-down list. Then enter your user name and password, and click **OK.**

The Administration Services Administration Console window displays with Business Rules collapsed in the left frame of the window.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node.

4 Right-click the **Administration** node, and select **Migrate Identities**.

5 In the **Migrate Identities** results window, review the results of the migration, and click **OK**.

Note:

If Planning is installed, clicking the Migrate Identities button in Planning automatically migrates identities to Business Rules in addition to Planning.

Viewing Information from Properties Files

You can view information about the configuration of the Business Rules server and client generated from the `HBRServer.properties` and the `HBRClient.properties` files. This information includes repository connection information and error log configuration information.

➤ To view information about the Business Rules client and server configurations:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter a server name and your user name and password to log on to Administration Services.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4   Double-click the **Properties** node.

The properties of the Business Rules client configuration are displayed.

5   Select the **Server Configuration** tab to view properties of the server configuration.

6   When you finish viewing the information, click **Close**.

Changing the Level of Message Reporting in the Log File

The log file contains information about the contents and processes run in the Business Rules client, such as the date a business rule was run, the values entered by users at runtime, and any errors. By default, Business Rules records warning level messages in the `log.txt` file, but you can change the level of the messages that are recorded.

➤   To change the level of messages recorded in the `log.txt` file:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

Note:

If the Administration Services port was changed from the default port during Administration Services installation, enter the port information before the Administration Services server name as follows: port number name:port#

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4   Double-click the **Properties** node.

The properties of the Business Rules client configuration are displayed.

5   To change the level of error reporting for the client on the **Client Configuration** tab, select one of the following error levels from the **Log Level** drop-down list:

- Severe - Select to record only severe errors in the log file

- Warning (default) - Select to record only warning messages in the log file

- Info - Select to record only informational messages in the log file

- Config - Select to record only configuration errors in the log file

- All - Select to record all messages and errors in the log file

6   To change the level of error reporting for the server on the **Server Configuration** tab, select one of the error levels described in step 5 from the **Log Level** drop-down list.

After you change the level of error reporting for the server, you must restart it.

7 Click **Save** to save the changes.

Managing Database Locations

You can manage database locations, and the access privileges of repository objects that are assigned to them, using the Location Editor. You can use the Location Editor to create, edit, and copy database locations, assign new access privileges to locations, copy access privileges from one location to another, and copy business rules from one location to another.

If you are moving from a test to a production environment, you can use the Location Editor to create a new database location for the production environment. Then you can copy all of your business rules and access privileges from the database location in the test environment to the new database location in the production environment. This prevents you from having to assign access privileges to each business rule individually after you copy them to the production environment.

Similarly if your company changes its server name, you can use the Location Editor to add a new database location for the new server name, and copy all of the business rules to that new location. This saves you from having to edit the database location for each business rule individually.

Adding a New Database Location

You can add a new database location to the Locations node. After you add the new location, you can edit it by copying access privileges for repository objects to it or deleting access privileges for repository objects from it.

Before you begin creating new locations, the Locations node lists only locations for the previous release of Business Rules. As you add new locations, you can refresh the Locations node to display all of your locations.

➤ To create a database location:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4 Under the Administration node, right-click **Locations** and select **New Location**.

The Select Location dialog box is displayed.

5 In the **Select Location** dialog box, drill down to select a Planning or Essbase database location to copy.

6 Click **OK**.

The new location is added to the Locations node.

Note:

If the new location is not displayed under the Locations node, select Locations > Refresh to refresh the list of locations.

Editing a Location

➤ To edit a database location:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4 Expand the **Locations** node.

5 Under the **Locations** node, right-click the location you want to edit and select **Open**.

The Location Editor is displayed. It lists the user/group types, the user/group names, the repository object types, the repository objects names, and the access privileges for this location.

6 Do any or all of the following:

   a. Click **Add Access Privileges** to add access privileges. For information on adding access privileges to this location, see "Adding Access Privileges to a Location" on page 104.

   b. Click **Add Rules** to add rules to this location. For information on adding rules to a location, see "Adding Rules to a Location" on page 106.

   c. Click **Delete** or **Delete All** to delete some or all access privileges for this location. For information on deleting access privileges from a location, see "Deleting Access Privileges from a Location" on page 106.

7 Click **Save** to save the changes you make to the database location.

Adding Access Privileges to a Location

You can add access privileges for existing rules, sequences, and projects to a new location simultaneously. This prevents you from having to edit each rule, sequence, and project individually to add their access privileges to the new location.

➤ To add access privileges to a database location:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4 Expand the **Locations** node.

5 Under the **Locations** node, right-click the location to which you want to add access privileges and select **Open**.

The Location Editor is displayed. It lists the user/group types, the user/group names, the repository object types, the repository objects names, and the access privileges for this location.

6 Click **Add Access Privileges**.

The Add Location Access Privileges dialog box is displayed. It lists all of the rules, sequences, and projects whose access privileges you can add to this location.

7 In the **Add Access Privileges** dialog box, select the rules, sequences, and projects whose access privileges you want to assign to the location. Then click **OK**.

Note:

You can add sequences to the "All Locations" node only.

The Add Privilege dialog box is displayed.

8 In the **Add Privilege** dialog box, do the following:

a. From the **Privilege** drop-down list, select the type of privilege you want to grant:

- **Validate or launch** - enables a users or users you specify to validate and launch the business rules and sequences in the database location.

- **Cannot validate or launch** - prevents the user or users you specify from validating or launching the business rules or sequences in the database location.

b. In the **Available** area, select users and/or groups of users for whom you want to add this access privilege. (You can select multiple users and groups using **Shift** + **Click**.) Then use the arrow keys to move users and groups among the **Selected** and **Available** areas of the dialog box. When you move users and groups to the **Selected** area of the dialog box, these users and groups have the access privilege you assigned.

Note:

The users and groups that are listed in the Available area are provisioned for use in Business Rules using the Shared Services User Management Console. Provisioning is the process of assigning roles and access privileges to users and groups for Business Rules. For more information about provisioning users for use in Business Rules, see the *Hyperion EPM*

System Security Administration Guide. If new users are provisioned after the Administration Services server is started, you may need to refresh the list of users on the Users tab in the Available area of the Add Privilege dialog box. To refresh the list of users on the Users tab, right-click Administration, and select Refresh User List.

    c.   Click **OK** to save the access privilege and return to the **Access Privileges** tab.

9   Click **Save** to save the changes to the access privileges of the location.

Adding Rules to a Location

You can add multiple rules to a location at once. For example, if your company changes the name of its server, you can create a new location for the new server name, then copy all of the business rules from the old location to the new location. This prevents you from having to open each rule individually, and add the new location to it on the Locations tab.

➤   To add business rules to a database location:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4   Expand the **Locations** node.

5   Under the **Locations** node, right-click the location for which you want to add business rules and select **Open**.

The Location Editor is displayed. It lists the user/group types, the user/group names, the repository object types, the repository objects names, and the access privileges for this location.

6   Click **Add Rules**.

The Add to Location dialog box is displayed. It lists all of the rules you can add to this location.

7   In the **Add to Location** dialog box, select the check boxes next to the names of the business rules you want to add to this location.

8   Click **OK** to add the rules you selected.

Note:

When rules are added to a new location, they are not copied to it. Only their access privileges are copied to the new location.

Deleting Access Privileges from a Location

You can delete access privileges for some or all of the repository objects assigned to a database location. When you delete access privileges, you delete them only for the repository objects

assigned to the location you select. If the repository objects are assigned to other locations, their access privileges remain.

➤ To delete access privileges from a database location:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4   Expand the **Locations** node.

5   Under the **Locations** node, right-click the location for which you want to delete access privileges and select **Open**.

The Location Editor is displayed. It lists the user/group types, the user/group names, the repository object types, the repository objects names, and the access privileges for this location.

6   Do one of the following:

- To delete access privileges for repository objects assigned to the location, select the check boxes next to their names, and click **Delete**.

- To delete access privileges for all repository objects assigned to the location, click **Delete All**. Confirm deletion of all of the access privileges from the repository objects.

7   Click **OK** to save the changes.

Copying Access Privileges to a Location

You can copy the access privileges of all or a subset of the repository objects that are assigned to a database location from that location to another location or multiple locations.

➤ To copy access privileges to a location:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4   Expand the **Locations** node.

5   Under the **Locations** node, right-click the location from which you want to copy access privileges and select **Copy Access Privileges**.

The Copy Access Privileges dialog box is displayed.

6   In the **Copy Location Access Privileges** dialog box, from the **Destination Location** drop-down list, select a destination location to which you want to copy the access privileges. Or accept the default selection, **All locations,** to copy the access privileges to the **All locations** node.

7   Click **OK** to copy the access privileges to the locations you selected.

Deleting a Location

You can delete locations from the database that you no longer use. When you delete a location, none of the repository objects is deleted from the repository; only the objects' access privileges to the location are deleted.

Note:

You can only delete one location at a time.

➤ To delete a location from the database:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services Then click **OK**.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4   Expand the **Locations** node.

5   Under the **Locations** node, right-click the location you want to delete, and select **Delete Location**.

    A message is displayed asking you to confirm deletion of the location and all of its access privileges.

6   Click **Yes** to delete the location from the database.

Managing Clusters

A cluster is a database location that functions as a container for other database locations. You can assign access privileges for a cluster; when you do, all of the locations in the cluster inherit the access privileges you assign to the cluster as a whole.

Creating a Cluster

You can create a cluster of database locations in the Clusters node. After you create the cluster, you can add locations to it, and add access privileges or copy access privileges from another cluster.

Note:

Before you begin creating new clusters, the Clusters node is empty. As you add clusters, you can refresh the Clusters node to display all of the clusters. Each cluster in the Clusters node contains a list of the locations within the cluster. Clusters are also displayed in the Locations node. Each cluster in the Locations node contains a list of all of the repository objects to which the cluster has access.

➤ To create a cluster:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4 Under the **Administration** node, right-click **Clusters** and select **New Cluster**.

The Cluster Editor is displayed. The Locations and Access Privileges tabs are empty until you add locations and access privileges to the cluster.

5 On the **Locations** tab, select a location by typing the location name in the text box or by clicking the **Lookup** button and selecting a location. Then do either of the following:

   ● To add the location to the cluster, click **Add**. For information on adding locations, see "Adding Locations to a Cluster" on page 110.

   ● To delete the location from the cluster, click **Delete**. For information on deleting locations from a cluster, see "Deleting Locations from a Cluster" on page 111.

6 On the **Access Privileges** tab, select an access privilege by typing it in the text box or by clicking the **Lookup** button and selecting an access privilege. Then do either of the following:

   ● Add the access privilege to the cluster by clicking **Add**. See "Adding Access Privileges to a Cluster" on page 111.

   ● Delete the access privilege from the cluster by clicking **Delete**. See "Deleting Access Privileges from a Cluster" on page 113.

7 Click **Save** to save the cluster.

Editing a Cluster

➤ To edit a cluster:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4   Expand the **Clusters** node.

5   Under the **Clusters** node, right-click the cluster you want to edit and select **Open**.

The Cluster Editor is displayed. The Locations tab lists the locations in the cluster. The Access Privileges tab lists the access privileges for the cluster.

6   On the **Locations** tab, select a location by typing the location name in the text box or by clicking the **Lookup** button and selecting a location. Then do either of the following:

- To add the location to the cluster, click **Add**. For information on adding locations, see "Adding Locations to a Cluster" on page 110.

- To delete the location from the cluster, click **Delete**. For information on deleting locations from a cluster, see "Deleting Locations from a Cluster" on page 111.

7   On the **Access Privileges** tab, select an access privilege by typing it in the text box or by clicking the **Lookup** button and selecting an access privilege. Then do either of the following:

- Add the access privilege to the cluster by clicking **Add**. See "Adding Access Privileges to a Cluster" on page 111.

- Delete the access privilege from the cluster by clicking **Delete**. See "Deleting Access Privileges from a Cluster" on page 113.

8   Click **Save** to save the changes you make to the cluster.

Adding Locations to a Cluster

You can add locations to a cluster. The locations you add to the cluster allow the repository objects assigned to the cluster to be launched at all of the assigned locations.

You may want to use clusters if your company horizontally scales Oracle Hyperion Planning, Fusion Edition or Oracle Essbase servers where users log on to a proxy that may connect to one of many servers for failover or load balancing reasons.

A cluster allows you to assign launch locations and access privileges (for all locations in the cluster) to business rules in one session without having to add multiple locations to each business rule.

➤ To add locations to a cluster:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4   Expand the **Clusters** node.

5   Under the **Clusters** node, right-click the cluster to which you want to add a location and select **Open**.

The Cluster Editor is displayed. The Locations tab lists the locations in the cluster. The Access Privileges tab lists the access privileges for the cluster.

6   On the **Locations** tab, enter the location you want to add by typing the location name in the text box or by clicking the **Lookup** button and selecting a location.

7   To add the location to the cluster, click **Add.**

8   In the Cluster Editor, click **Save** to save the cluster with the locations you added.

Deleting Locations from a Cluster

You can delete locations that you no longer use from a cluster. When you delete a location from a cluster, you do not delete the location, or the repository objects assigned to the location, from the database; you delete the access privileges of the location to the cluster.

➤ To delete a location from a cluster:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4   Expand the **Clusters** node.

5   Under the **Clusters** node, right-click the cluster from which you want to delete a location and select **Open**.

The Cluster Editor is displayed. The Locations tab lists the locations in the cluster. The Access Privileges tab lists the access privileges for the cluster.

6   On the **Locations** tab, select the locations you want to delete from the **Locations** list.

7   To delete the locations from the cluster, click **Delete.**

The Confirm Deletion dialog box is displayed.

8   **Confirm deletion of the locations from the cluster by clicking Yes**.

9   In the Cluster Editor, click **Save** to save the cluster.

Adding Access Privileges to a Cluster

You can add access privileges to all of the locations in a cluster simultaneously. This prevents you from having to edit the access privileges of the rules, sequences, and projects in each location of the cluster individually.

➤ To add access privileges to a cluster:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4   Expand the **Clusters** node.

5   Under the **Clusters** node, right-click the cluster for which you want to assign access privileges and select **Open**.

The Cluster Editor is displayed. The Locations tab lists the locations in the cluster. The Access Privileges tab lists the access privileges for the cluster.

6   Select the **Access Privileges** tab and click **Add Access Privileges**.

The Add Location Access Privileges dialog box is displayed.

7   In the **Add Access Privileges** dialog box, select the rules and projects whose access privileges you want to assign to the cluster. Then click **OK**.

The Add Privilege dialog box is displayed.

8   In the **Add Privilege** dialog box, do the following:

   a.   From the **Privilege** drop-down list, select the type of privilege you want to grant:

      ● **Validate or launch** - enables a users or users you specify to validate and launch the business rules and sequences in each of the database locations in the cluster.

      ● **Cannot validate or launch** - prevents the user or users you specify from validating or launching the business rules or sequences in each of the database locations in the cluster.

   b.   In the **Available** area, select users and/or groups of users for whom you want to add this access privilege. (You can select multiple users and groups using **Shift + Click**.) Then use the arrow keys to move users and groups among the **Selected** and **Available** areas of the dialog box. When you move users and groups to the **Selected** area of the dialog box, these users and groups have the access privilege you assigned.

      Note:

      The users and groups that are listed in the Available area are provisioned for use in Business Rules using the Oracle's Hyperion® Shared Services User Management Console. Provisioning is the process of assigning roles and access privileges to users and groups for Business Rules. For more information about provisioning users for use in Oracle's Hyperion® Business Rules, see the *Hyperion EPM System Security Administration Guide*. If new users are provisioned after the Administration Services server is started, you may need to refresh the list of users on the Users tab in the Available area of the Add Privilege dialog box. To refresh the list of users on the Users tab, right-click Administration, and select Refresh User List.

   c.   Click **OK** to save the access privilege and return to the **Access Privileges** tab.

9   Click **Save** to save the changes to the access privileges of the cluster.

Deleting Access Privileges from a Cluster

You can delete access privileges for the repository objects assigned to the database locations in a cluster. When you delete access privileges, you delete them only for the repository objects in the locations of the cluster you select. If the repository objects are assigned to locations in another cluster, their access privileges remain.

➤ To delete access privileges from a cluster:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3 In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4 Expand the **Clusters** node.

5 Under the **Clusters** node, right-click the cluster for which you want to delete access privileges and select **Open**.

The Cluster Editor is displayed. The Locations tab lists the locations in the cluster. The Access Privileges tab lists the access privileges for the cluster.

6 Select the **Access Privileges** tab.

7 Do one of the following:

- To delete one or more access privileges for the cluster, select the **Delete** check box next to the names of the privileges you want to delete and click **Delete.**

- To delete all access privileges for the cluster, click **Delete All**.

8 Confirm that you want to delete the access privileges.

9 Click **Save** to save the changes to the access privileges of the cluster.

Adding Rules to a Cluster

You can add multiple business rules to a cluster simultaneously. You may want to do this if, for example, your company decides to add another server to the network to help balance the performance load from additional users. After creating the new cluster and adding the old and new servers to it, you can add all of the rules to the cluster so users logging on to either server can launch business rules.

When you add a rule to a cluster, all locations within that cluster inherit the rule's access privileges. This prevents you from having to assign access privileges for each location in the cluster individually.

➤ To add business rules to a cluster:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4   Expand the **Clusters** node.

5   Under the **Clusters** node, right-click the cluster for which you want to add business rules and select **Open**.

The Cluster Editor is displayed. The Locations tab lists the locations in the cluster. The Access Privileges tab lists the access privileges for the cluster.

6   Select the **Access Privileges** tab.

7   Click **Add Rules**.

The Add to Location dialog box is displayed. It lists all of the rules you can add to this location.

8   In the **Add to Location** dialog box, select the check boxes next to the names of the business rules you want to add to this location.

9   Click **OK** to add the rules you selected.

> **Note:**
>
> When rules are added to a cluster, they are not copied to it. Only their access privileges are copied to the cluster.

Copying Access Privileges to a Cluster

You can copy the access privileges of the repository objects that are assigned to a location from that location to another cluster or clusters.

➤ To copy access privileges to a cluster:

1   Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2   In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3   In the left navigation frame of Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4   Expand the **Clusters** node.

5   Under the **Clusters** node, right-click the cluster from which you want to copy access privileges and select **Copy Access Privileges**.

The Copy Location Access Privileges dialog box is displayed.

6   In the **Copy Location Access Privileges** dialog box, from the **Destination Location** drop-down list, select a destination cluster to which you want to copy the access privileges. Or accept the default selection, **All Locations,** to copy the access privileges to the **All Locations** node.

7   Click **OK** to copy the access privileges to the clusters you selected.

Deleting a Cluster

You can delete clusters that you no longer use from the database. When you delete a cluster, none of the locations in the cluster, or repository objects in the locations, are deleted from the repository; only the objects' access privileges to the cluster are deleted.

Note:

You can only delete one cluster at a time.

➤ To delete a cluster from the database:

1 Launch the Administration Console by selecting **Start > Programs > Hyperion > Administration Services > Start Administration Services Console**.

2 In the **Analytic Administration Services Login** dialog box, enter the Administration Services server name and your user name and password to log on to Administration Services. Then click **OK**.

3 In the left navigation frame of Oracle Essbase Administration Services, expand the **Business Rules** node. Then expand the **Administration** node.

4 Expand the **Clusters** node.

5 Under the **Clusters** node, right-click the cluster you want to delete, and select **Delete Cluster**.

A message is displayed asking you to confirm deletion of the cluster and all of its access privileges.

6 Click **Yes** to delete the cluster from the database.

Glossary

access permissions A set of operations that a user can perform on a Hyperion resource.

alias An alternative name. For example, for a more easily identifiable column descriptor you can display the alias instead of the member name.

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.

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.

component range A selected portion of the database that represents the dimensions that are common to a particular component in an allocation process.

cube A block of data that contains three or more dimensions. An Analytic Services database is a cube.

destination A block of the database where calculated values are stored

dimension A data category used to organize business data for retrieval and preservation of values. Each dimension usually contains a hierarchy of related members grouped within it. For example, a Year dimension often includes members for each time period, such as quarters and months.

enhanced calc script A calculation script that may contain values for runtime prompts.

formula A combination of operators and calculation functions, as well as dimension names, member names, and numeric constants, used to perform specific calculations on members of a database.

function A predefined routine that returns a value, a range of values, a Boolean value, or one or more database members.

interactive user Interactive users can review and approve budgets, set up e-mail notification to other users, create Web-based data forms, create worksheets using Hyperion Smart View for Office, create reports using Hyperion Reports, create and launch integrations using Hyperion Application Link, create and launch business rules using Hyperion Business Rules and/or Analytic Services, enter and view data in Web data forms and Hyperion Smart View.

launch The process of running a business rule, calculation script, or sequence against a database to return calculated values.

macro A reusable part of a business rule that can be referenced by other business rules and macros to save users time when they are writing their business rules. A macro can contain variables and other macros, but it cannot contain a copy of itself.

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.

migration The process of copying an application or users from one environment or computer to another.

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.

provisioning The process of granting users and groups specific access permissions to Hyperion resources.

range A set of values that includes an upper and lower limit, and the values that fall between the limits. A range can consist of numbers, amounts, or dates.

relational database A type of database that stores data in the form of related two-dimensional tables. *Contrast with access permissions*.

repository Stores metadata, formatting, and annotation information for views and queries.

role The means by which access permissions are granted to users and groups for Hyperion resources.

runtime prompt A system variable that allows values to be entered during the execution of an allocation process. Values can be members, strings, or numbers.

saved assumptions Planning assumptions, created globally or locally, that can be named, saved and referenced in planning methods and allocations to help drive plan and budget values.

saved selection An explicitly defined set of members across multiple dimensions. This selection does not change as the dimension is maintained.

source A block of the database or a number that is referenced in a calculation.

validate The process of checking a business rule or sequence against a database to ensure that its syntax is valid

Web Launcher A component of Business Rules that enables you to launch business rules and enter runtime prompts via a Web interface

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