# Aegis Analytical

# Discoverant®

# Administrator's Guide

# Contents

# 1 • Introduction

For specific information on the general features, conventions and navigation of Discoverant's user interface, see Chapter 1, *Introduction*, of the *Discoverant User Guide*. Also see the *Discoverant User Guide* for information on the more common tasks users will perform and on Discoverant's functional areas.

Discoverant has two restricted domains from which software administrators can manage and customize the software. Both these domains require special permission to use and should be used only by trained Discoverant system administrators.

System administrators will use the "Administration" domain to maintain the software. In the Administration domain, you can:

- Manage users.
- Manage Discoverant system settings while Discoverant is running.
- Reload or refresh various types of pools while Discoverant is running.
- Generate logging or auditing reports.

System administrators will use the "Hierarchy Admin" domain to maintain the hierarchies available to users. In the Hierarchy Admin domain, you can:

- Create and edit hierarchies.
- Add and edit nodes, views, and parameters within hierarchies.

# Important Terms to Know

Discoverant uses some terms that you may or may not be familiar with. These terms are used to simplify concepts you probably already know well.

## Conditional Node

Every node and "leaf" organized underneath a conditional node carries the same database restrictions. Examples of this are conditional nodes restricted to raw materials, products, processes, machine IDs, etc.

## Connector ⦿

Connectors are similar to Windows® "shortcuts." Use connectors to duplicate an existing node from elsewhere in the hierarchy. When the hierarchy is promoted, the connector will be expanded to completely duplicate the original node (the "connectee").

Connectors let you define a subtree once, then use it in many places by adding connectors linked to the subtree. When the user makes a change to the original subtree, it is reflected across all of the connectors as well. A connector may increment or decrement BOM (Bill of Materials) level numbers. This is important when a connector links part of a Universe to another Universe, where the two Universes have a relationship with respect to the BOM. For example, one Universe may be an input ingredient into another Universe.

## ECI (Enterworks Content Integrator™) server

ECI (Enterworks Content Integrator) is a middleware product that Discoverant accesses in order to query the customer databases. ECI talks directly to the customer data sources and defines database views crossing one or more databases. ECI stores only the metadata (i.e., the schema) from the data sources to which it is connecting.

## Pools

Pools are sets of reusable objects (views, nodes, or parameter definitions) and are the building blocks for creating hierarchies in the Hierarchy Manager. The pool objects are defined based upon the underlying data model created in ECI.

### Node Pool

The Node Pool is a pool created within the Hierarchy Manager. Nodes are defined in the node pool and are available to be attached to one or more nodes in any given hierarchy. Nodes may be created with just a name, with conditions (see also *Conditional Node* on page 1-1), or with BOM information.

### View Pool

The View Pool is a pool created within the Hierarchy Manager. Views are created in the view pool and are used as default views in the node pool objects, in the parameter definition pool objects, and when creating a parameter in a hierarchy. Views are linked to a source view and given a name. Whether the view is a replicate view or a coded view is defined in the view pool.

### Parameter Definition Pool

The Parameter Definition Pool is a pool created within the Hierarchy Manager. Parameter definitions are created in the parameter definition pool and are available to be attached to one or more parameters in a hierarchy. Parameter definitions are associated with a source column, which determines its type (e.g., Numeric, Integral, String, or Date). Parameter definitions are also associated with default views (from the view pool), which determine whether they are coded and/or replicate.

### *Source Views*

This is the list of database views currently accessible within ECI from Discoverant.

# Customer Support

You may contact Aegis Analytical Corp. for customer support either by e-mail or phone:

support@aegiscorp.com

(303) 926-0317

# 2 • Administration

Discoverant Administration lets you make changes to and fix problems in the system while the server is running. You can add and edit user accounts, change system settings, reload and refresh pools, add Analysis Groups, and use the system's logging and auditing functions.

## *Logging On*

In the **Discoverant Login** dialog box, choose the Administration domain.

The **Discoverant Administration** window appears.

# User Management tab

Select a view: Default, Account, or Active. See below for explanations of each view.

### Functions

**To create a user account:**

1. In any tab, click **Create User**.

2. In the **User Properties** dialog box, enter the following information for the new user account:
   - **Logon Name**
   - **Full Name**
   - **e_mail**

3. Enter a **Password**[1] for the user.

4. Enter the same password again in the **Confirm Password** field.

5. Click on the **Domain** names to register the user with one or more of them.

6. Click **OK** to create the new user account.

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1. Password configuration can be set from the System Management tab. Two keys control password requirements: password_minimum_length and password_use_non_alpha_numeric. See *System Management tab* on page 2-3 for more information on keys.

**To edit a user account:**

You cannot edit the account of any user currently logged on to the server.

1.  Select a user, then click **Edit User**. The **User Properties** dialog box appears.

2.  You can not edit the user's **Logon Name** but you can edit the user's **Full Name** and **e_mail** address if needed.

3.  To change the domain(s) for which a user is registered, select or deselect any or all of the **Domains** listed.

4.  To reset the user's password to their logon name, select **Reset Password to Default (username)**.

**Other functions:**

To delete a user from the system, select a user, then click **Remove User**.

To print the table of users and their information displayed in the tab, click **Print View**.

To sort the user account information by a column other then the Logon Name column (the default), click the column heading.

## Default View

The Default view is a quick way to look at all user accounts. The following information is displayed in columns:

Logon Name—The user's logon name.

Full Name—The user's full name.

e-mail—The user's e-mail address.

enabled—Whether the user's account is currently enabled or not.

## Account View

The Account view matches users with all the domains for which they are registered. It may be helpful to sort this view by the **domain(s)** column to see all the users registered with a particular domain.

## Active View

The Active view lists all users who are currently logged on to the server.

To terminate a user's logon session, select the user, then click **Terminate Session**. This breaks the user's connection with the server; it does not shut down the Discoverant software on the user's terminal. The Discoverant software will have to be shut down by someone at the user's terminal.

The domain column shows the domain in which the user is currently working.

The client version column shows the version of Discoverant application the user is running.

# System Management tab

This tab displays the current system variables and settings from the file DeploymentBundle.properties. By editing the Values in the table, you can change system settings while the system is in use.

**CAUTION:** System variable values should be changed only by trained Discoverant system administrators.

You cannot add to or edit the Keys. To edit the value for a key, simply click on the value and edit or retype the entry. Press **Enter** (or click on another value) to make your change active throughout the system.

Click **Save** when you are finished editing the values and want to save your changes.

Click **Restore** to throw out your changes and reset the values to the state they were in when last saved.

Click **Restore Defaults** to import the original default settings (see *More About Saved Files* below).

### More About Saved Files

When your system is first installed, the keys and their values are saved in two files: DeploymentBundle.properties and DefaultDeploymentBundle.properties. The first file is recreated each time you **Save** your settings and is reloaded when you **Restore** settings. The second file is reloaded when you click **Restore Defaults**. You cannot change or overwrite the second file from within the Discoverant Administration window.

# Server Management tab

In the past, the Discoverant server would have to be restarted if any number of external conditions or internal changes were made. Now, with Server Management, the Discoverant server can adapt to external or internal changes without being restarted.

For definitions of new terms, see *Important Terms to Know* on page 1-1.

## *Data Access Options*

Discoverant maintains two separate pools of connections to its underlying database systems. One pool contains connections to the ECI server. These connections are used for all queries that Discoverant performs while creating Analysis Groups. The other pool contains connections to the MDE database. Those connections are used for all data access and insertion into the MDE database as a result of MDE activity. Discoverant creates both these connection pools when the server is started.

Either of the refresh buttons dumps the active pool of connections, and recreates a new pool of connections to the database(s) while the server is running. (For more information about pools, see *Important Terms to Know* on page 1-1.)

**Refreshing the ECI Pool:**

If the ECI (Enterworks Content Integrator) server is restarted or if its port number or catalog have been changed in System Management, you will need to refresh the ECI pool.

**Note:** If you refresh the ECI connections while an Analysis Group is being created (by another user working in Analysis Group Creation), the Analysis Group creation will fail and the Analysis Group will have to be re-created.

Click **Refresh ECI** to close all ECI connections then open new connections.

**Refreshing the MDE Pool:**

If the Oracle database service has been restarted or if its port number or name have been changed in System Management, you will need to refresh the MDE (Manual Data Entry) pool.

Click **Refresh MDE** to close all MDE database connections then open new connections.

## Hierarchy Manager Options

Use these options to update and refresh Discoverant's pools.

**Reloading the Parameter Definition Pool:**

In the rare case that the parameter definition pool has been manually edited—without using Hierarchy Manager—you will need to reload it.

Click **Reload Parameter Definition Pool** to reload the parameter definition pool into memory from the file system. These definitions are used by Discoverant's Hierarchy Manager and Analysis Group Creation functions.

**Reloading the View Pool:**

In the rare case that the view pool has been manually edited—without using Hierarchy Manager—you will need to reload it.

Click **Reload the View Pool** to reload the view pool into memory from the file system. These definitions are used by Discoverant's Hierarchy Manager and Analysis Group Creation functions.

**Reloading and Regenerating the Source Pool:**

If the data model in ECI has been updated, you will need to regenerate and reload the source pool. In the rare case that the source pool has been manually edited—without using Hierarchy Manager—you also will need to reload it.

Click **Regenerate the Source Pool** to read the source views from the ECI server and write them to server files. This does not load the source views into memory. You must click **Reload the Source Pool** to do this.

After you regenerate the source pool, you may want to manually verify the contents of the server files before reloading them into Discoverant.

Click **Reload the Source Pool** to reload the source views into memory from the file system. These definitions are used by Discoverant's Hierarchy Manager and Analysis Group Creation functions.

**Reloading the Node Pool:**

In the rare case that the node pool has been manually edited—without using Hierarchy Manager—you will need to reload it.

Click **Reload the Node Pool** to reload the node pool into memory from the file system. These definitions are used by Discoverant's Hierarchy Manager and Analysis Group Creation functions.

**Importing a Hierarchy:**

This option is used only during Discoverant installation to import hierarchies. For more detailed information, contact Aegis Analytical Corporation for help.

Click **Import a Hierarchy** to display the Hierarchy Manager Import dialog box.

## Analysis Group Options

The manifest is a file that lists all the Analysis Groups in the system. The manifest holds the following information about each Analysis Group:

- **Owner.**
- **Path to the Analysis Group.**
- **Whether it is an Analysis Group or not.**
- **Whether it is shared.**
- **Whether it has been modified.**
- **Whether it is checked out.**

**Adding Analysis Groups to the manifest:**

The Analysis Groups you can add to the manifest must reside in the …\depot\AGStore\users\demo directory. You can only add Analysis Groups created in the current version of Discoverant.

1. Find the file you want to add and type its name into the **Add File** field.

2. Click **Add AG to Manifest** to add the Analysis Group to the system while the server is running. The new Analysis Group is added to the demo account and, by default, is shared.

**Clearing the AGStore Attic:**

The file …\depot\AGStore\attic holds all user-deleted Analysis Groups. These files build up and take up space on the server. Click **Clear AGStore Attic** to delete them.

## Log Options

Click **View Log** to use the logging and auditing functions.

### Logging

The system saves messages and errors generated during use. These messages are saved and reported chronologically. Only the current day and the previous seven days' messages and errors are saved.

**To Generate a Report:**

1.  Select **Log**.

2.  Select or enter a **Beginning** and **Ending** date. Enter a time for each date as well, if desired.

3.  Click **OK**.

A report will be generated showing every message and error generated by all areas of the software and all users within the date and time range selected.

### The Report

The first page of the report shows:

-   **The title of the report.**
-   **The date and time of the report.**
-   **The selection criteria of the report, including beginning and ending dates.**
-   **The logon name of the user who generated the report.**

The subsequent pages make up the log entries reported. Sample log entries look like this:

    N  2001-02-19  08:53:58   -   hierarchy   Loading hierarchy: Raw Materials.dat

    E  2001-02-19  10:20:00   JSmith   service   Compute Service : request name = <TTEST>

and consist of the following pieces of data (in order):

-   **Type of message: N (normal) or E (error).**
-   **Date.**
-   **Time.**
-   **User logon name (if applicable).**
-   **The product area from which the message originated.**
-   **The message.**

Click **Print** 🖨 to print the report.

Click **Save** 💾 to save the report. You can save the report as an Adobe Acrobat (.pdf) file, a browser-readable (.html) file, or a Postscript (.ps) file.

## Auditing

The system saves messages generated during Manual Data Entry use. These messages are saved and reported chronologically.

**To Generate a Report:**

1.  Select **Audit**.

2.  Select a **Beginning** and **Ending** date. Enter a time for each date as well, if desired.

3.  Select **MDE** in the **Product Area**.

4.  Select a **User**. To select more than one user, hold down the **Ctrl** key while you click.

5.  Click **OK**.

### *The Report*

The first page of the report shows:

- **The title of the report, including the product area.**
- **The date and time of the report.**
- **The selection criteria of the report, including beginning and ending dates.**
- **The logon name of the user who generated the report.**
- **The users included in the report.**

The subsequent pages make up the audit entries reported. A sample audit entry looks like this:

2001-02-19  08:53:58   JSmith   EDIT   6/26 from 15 to 55   Wrong Date Entered

and consists of the following pieces of data (in order):

- **Date.**
- **Time.**
- **User logon name (if applicable).**
- **The task performed in MDE (ADD, EDIT, DELETE, or APPROVE).**
- **The message.**
- **Any change reason entered.**

Click **Print** 🖨 to print the report.

Click **Save** 💾 to save the report. You can save the report as an Adobe Acrobat (.pdf) file, a browser-readable (.html) file, or a Postscript (.ps) file.

# 3 • Hierarchy Manager

In this chapter you will learn about the Hierarchy Manager and how to create and maintain hierarchies and their related objects.

Hierarchies help you organize your database information in a useful and efficient way. Pool objects—nodes, views and parameter definitions—provide structure for the data referenced by the hierarchy. Parameters reference information in databases and provide the user the raw data to analyze in Discoverant's functional areas.

For definitions of new terms, see *Important Terms to Know* on page 1-1.

## *Logging On*

In the **Discoverant Login** dialog box, choose the Hierarchy Admin domain.

The **Hierarchy Manager** window appears.

# The Hierarchy Manager Window

The first tab in the Hierarchy Manager window is always the Hierarchies tab, which lists all the hierarchies in the system. From this tab, you can edit existing hierarchies and create new ones.
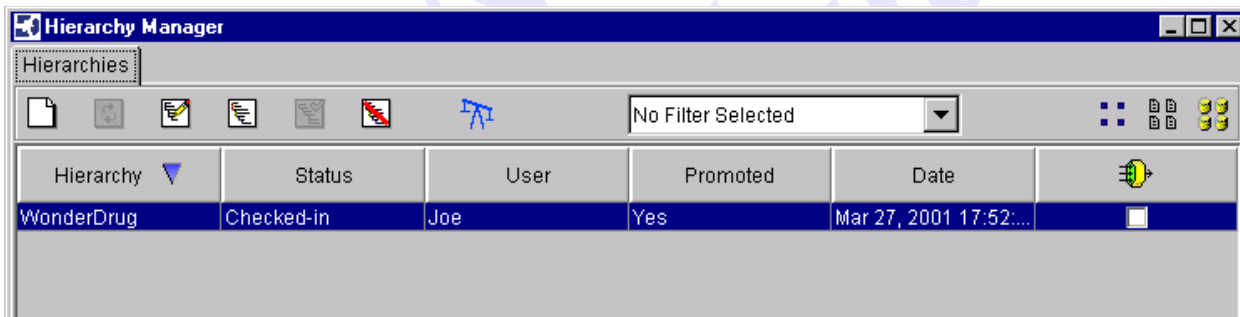


Example of the Hierarchies tab

The following columns present some basic information about each hierarchy listed:

- Hierarchy        The name of the hierarchy.
- Status           The status of the hierarchy (Checked-in, Checked-Out, or Removed).
- User             The logon name of the last user to edit the hierarchy or currently editing the hierarchy.
- Promoted         Whether the hierarchy has been promoted since it was last edited.
- Date             The date the hierarchy was last edited or, if being edited, checked-out.

- ![icon]          A check in this column indicates that this hierarchy contains the node, view or parameter definition for which you filtered (see *Filtering* on page 3-4).

Across the top of the Hierarchies tab are a number of tools to help you work with hierarchies. The following table describes these tools.

| Tool | Name | Function |
|------|------|----------|
| ![icon] | New Hierarchy | Prompts you for a name for the new hierarchy, then opens the new hierarchy in its own tab. The hierarchy can then be built by adding nodes, parameters and connectors. |
| ![icon] | Rollback Hierarchy | Resets the hierarchy to the last promoted state. |
| ![icon] | Edit Hierarchy | Opens the hierarchy as a separate tab in Hierarchy Manager and lets you edit it. Enabled only when the hierarchy is Checked-in. |
| ![icon] | View Hierarchy | Opens the hierarchy as a separate tab in Hierarchy Manager but doesn't allow you to edit it. |
| ![icon] | Promote Hierarchy | Promotes the last committed version of the selected hierarchy. Enabled only when the hierarchy is Checked-in. |
| ![icon] | Delete Hierarchy -or- Re-add Hierarchy | Delete Hierarchy removes the selected hierarchy from use. When a deleted hierarchy is selected, the tool changes to Re-add Hierarchy. Re-add Hierarchy places the hierarchy back into use. |
| ![icon] | Manage Units | Displays the Units Manager dialog box, where you can add and delete units of measure. |
| ![icon] | Parameter Definition Pool | Displays the Parameter Definition Pool window, where you can work with, create, and edit the parameter definition pool. |
| ![icon] | Node Pool | Displays the Node Pool window, where you can work with, create, and edit the node pool. |
| ![icon] | View Pool | Displays the View Pool window, where you can work with, create, and edit the view pools. |

Near the center of the tool bar is the Filter drop-down list. Filtering is actually done in the pool windows (Parameter Definition Pool, Node Pool or View Pool) and reflected on the Hierarchies tab. If object names appear in the Filter drop-down list, you can select them to repeat previous filters. (For more information, see *Filtering* on page 3-4.)

There are also a number of right-click options available. Right-click a hierarchy to choose any of the following options:

- Rollback Hierarchy to last saved state
- Edit Hierarchy
- View Hierarchy
- Promote Hierarchy
- Delete Hierarchy / Re-add Hierarchy

These have the same functions as the tools of the same name (and icon) in the toolbar.

# Working with Pools

Use the pool windows to view, create, and edit parameter definitions, nodes and views for use by the hierarchies. Across the top of each pool tab are a number of tools to help you work with pools. The following table describes these tools. Most of the major functions these tools help you perform are described in more detail late in this section.

| Tool | Name | Function |
|---|---|---|
| | New | Displays the Add Parameter Definition, Add Node, or Add View dialog box. Enabled only in Edit mode. |
| | Delete | Deletes the selected parameter definition, node, or view. Enabled only in Edit mode. |
| | Edit | Displays the Edit Parameter Definition, Edit Node, or Edit View dialog box. Enabled only in Edit mode. |
| | Use as Template | Copies the selected object and displays the Edit Parameter Definition, Edit Node, or Edit View dialog box pre-populated with the copied information. A new ID is assigned; you may want to change the name to avoid having two objects with the same name. You can also edit any of the other information. Enabled only in Edit mode. |
| | Search/ Replace | Displays the Find & Replace dialog box, where you can search for strings or values in different objects within Discoverant. Depending on the functional area from which you search, different options will be available to you. You can also use the Find & Replace dialog box to replace certain object references. For more information, see *Searching* on page 3-4. |
| | Filter | Lets you find and mark hierarchies containing certain parameter definitions, nodes, or views. For more information, see *Filtering* on page 3-4. |
| | Launch Separate HTML Window | Displays the properties information in a separate window. The second window floats and remains open until you close it. This is an excellent way to compare the properties of two or more objects. |

There are also a number of right-click options available. Right-click a pool object on the left side of the window to choose any of the following options:

- Validated        Marks the selected node validated or non-validated.
- Delete
- Edit
- Use As Template

The last three have the same functions as the tools of the same name (and icon) in the toolbar.

## Filtering

Filtering is done from the Parameter Definition Pool, Node Pool, or View Pool dialog boxes. It lets you mark, in the Hierarchies tab, hierarchies containing the parameter definition, node or view for which you filter.

**To filter for a parameter definition, node or view:**

1. Select the object on the left side of the **Parameter Definition Pool**, **Node Pool**, or **View Pool** dialog box.

2. Click **Filter** ⬛.

If you look at the **Hierarchies** tab again, the hierarchies containing the filtered object have a

check mark in the ⬛ (Filter) column. The name of the filtered object appears in the Filter drop-down list.

## Searching

Use the **Find & Replace** dialog box to search the pools and hierarchies. Some options may be grayed out and unavailable, depending on the dialog box from which you selected **Search**.

1. Click **Search** 🔍.

2. In the **Find & Replace** dialog box, click the **Advanced** tab to begin.

3. Select a **Data Type** in the drop-down list. Possible data types are String, Numeric, Date, and Integer.

4. In **Match** drop-down list, select either "**any of the following**" (Boolean OR) or "**all of the following**" (Boolean AND).

5. Select one or more of the following criteria.

| Criteria | Search Function |
|---|---|
| BOM Column | TRUE/FALSE option. True if the node is a BOM (Bill of Materials) node. |
| Code Column Value | Searches hierarchies and parameter definition pools for parameters containing the entered code column value. |
| Column Value | Searches the values in the columns. |

| Criteria | Search Function |
|---|---|
| Connector | TRUE/FALSE option. TRUE if the node is a connector node (a pointer to another node). |
| Description | Searches the object descriptions. |
| Name | Searches the object names. |
| Node Column | Searches names of columns referenced by a node. |
| Replicate Identifier | Searches the contents of a Replicate column belonging to the view pool object. |
| Source Column Name | Searches the parameter definitions for the source column names. |
| Units | Unit of Measure. Searches the units label in the MDE Leaf/Parameter definition. |
| Unusable | TRUE/FALSE option. TRUE if the object is not usable (see Usable below). |
| Usable | TRUE/FALSE option. TRUE if the object has all references in place. If a view name, column name, etc., is invalid or blank, the search returns a FALSE. |
| View Name | Searches the name of the referenced context view. |

6. Click the **Find** tab.

   The **SearchOrigin** field displays the node, leaf, or object from the parent window from which you selected **Search**. When you search a hierarchy, the search will include only objects at or underneath the selected object (unless you select **Entire Hierarchy**; see below). When you search a pool, the search will include the entire pool.

7. In the **Find what** field, enter the string or value you want to search for. What you type depends on what you selected in the **Advanced** tab.

8. Customize your search, if desired:

   • Select **Exact Match** to search only for exact matches to the string or value you entered. If **Exact Match** is not selected, partial matches will be included in the results.

   • Select **Entire Hierarchy** to search the whole hierarchy. If you don't select this, only the object displayed in **SearchOrigin** will be searched. (This does not affect searches within pools.)

   • Select **Restart Search** to clear previous search results. Leave **Restart Search** cleared to search objects in the results list when you click Find Next.

9. Click **Find Next** to search for results one at a time. If **Restart Search** is not selected and previous results are visible, **Find Next** will find matching results in the results list first.

   Click **Find All** to find and list all results matching your criteria.

10. Click **Close** to close the **Find & Replace** dialog box.

### Search Results

Right-click a result to get a pop-up list. These options will be the same as the right-click options in the parent window.

Double-click a result to display and highlight it in the hierarchy tree or pool in the parent window.

### Replacing References to Views and Source Views

The **Replace** tab is available only to system administrators using the **Add/Edit Parameter Definition** or **Add/Edit View** dialog boxes in Edit mode.

Only exact matches can be replaced. Replace only works when the **View Name** option is selected on the **Advanced** tab.

From the **Add/Edit Parameter Definition** tab, only the referenced View name can be replaced.

From the **Add/Edit View** tab, only the referenced Source View name can be replaced.

1.  In the **Replace with** field, enter a string with which to replace found matches.

2.  Click **Replace** to replace the selected match.

    Click **Replace All** to replace all matches.

## Comparing Pool Objects

It may be useful to see the properties of two or more pool objects (parameter definitions, nodes or views) at the same time. To do this, in any pool window, select a pool object and click **Launch Separate HTML Window** . The properties of the pool object are displayed in a separate window you can move anywhere on the screen and will remain open and on top until you close it.

You can now select another pool object in the main pool window; its properties will be displayed on the right side of the window. You may display the properties of a third pool object by selecting the object and clicking  again. You can open as many separate windows as you need.

## *The Parameter Definition Pool*

To make any changes to the parameter definition pool, you must click **Edit** at the bottom of the window to enter Edit mode.

### Adding a Parameter Definition

1. In the **Parameter Definition Pool** window, click **New** ☐.

2. In the **Add Parameter Definition** dialog box, enter a **Name** and **Description** for the new parameter definition.

3. Select a **Default View**. (These views are from the View pool.) This view will be used to populate the source and code columns.

4. Select a **Source Column**. The source column contains the parameter data.

5. If the **Column Type** is numeric, you can also select a **Unit** (unit of measure) and enter a **Number of Decimals** (how many decimals will be displayed).

6. Edit the **Code Columns** values as needed.

   The code columns listed are determined by the Default View. Each view has a defined set of code columns.

   **To add a value to a code column:**

   a. Click **Add**.

   b. In the **Add Code Values** dialog box, enter a code value for each code column listed.

   c. When you're finished adding code values, click **OK**.

   You can also select an existing row of code values and click **Use as Template**. This displays the **Add Code Values** dialog box, pre-populated with the code values from the original row of code values. Edit the code values as needed, then click **OK**.

   **To edit code column values:**

   a. Select a row of code values, then click **Edit**.

   b. In the **Add Code Values** dialog box, for each code column listed, you can edit the matching code value.

   c. When you're finished editing code values, click **OK**.

   **To delete code column values:**

   Select a row of code values, then click **Delete**.

7. Click **OK** to save any changes you made and close the **Add Parameter Definition** dialog box.

   Click **Cancel** to close the dialog box and ignore any changes.

**To delete a parameter definition:**

Select a parameter definition, then click **Delete** ✕.

### *Use as Template*

Another way to create a new parameter definition is to build one based on an existing definition.

Select a parameter definition, then click **Use as Template** 📑. The new parameter definition appears in the **Edit Parameter Definition** dialog box.

The system generates a new **ID** for the new parameter definition. You should change the name and description of the new parameter definition to avoid confusion later. Edit the rest of the parameter definition as needed, then click **OK**. (For more information, see *Editing a Parameter Definition* on page 3-8.)

## Editing a Parameter Definition

1. In the **Parameter Definition Pool** window, select a parameter definition, then click **Edit** 📝.

2. In the **Edit Parameter Definition** dialog box, edit the fields and code columns as needed. For more information on these, see *Adding a Parameter Definition* on page 3-7.

3. Click **OK** to save any changes you made and close the **Edit Parameter Definition** dialog box.

   Click **Cancel** to close the dialog box and ignore any changes.

# *The Node Pool*

To make any changes to the node pool, you must click **Edit** at the bottom of the window to enter Edit mode.

## Adding a Node

1. In the **Node Pool** window, click **New** 🗋.

2. In the **Add Node** dialog box, enter a **Name** and **Description** for the new node.

3. Select a **Default View**. (These views are from the View pool.) This view will be used to select conditional columns.

4. Select **This is a Conditional Node** to create a conditional node.

   If you create a conditional node, you must define the columns to be conditioned and the values by which you want to restrict the columns.

   a. Under the **Columns** field, click **Add** to add a column.

   b. In the **Add Column** dialog box, select a column and click **OK**.

      Add as many columns as you need.

   c. To add a value for each column, select the column then click **Add** under the **Values** field.

   d. In the **Add Code Values** dialog box, enter a value and click **OK**.

   To remove a column or value, select the column or value then click **Remove** under the respective field.

5.  Select **This is a BOM Node** to create a BOM (Bill of Materials) node.

    You cannot edit the **BOM Column** or **BOM Column Type** fields. The **BOM Column** is the global column name representing the BOM level number. The **BOM Column Type** is the database type of the BOM column. Both are set during system configuration.

    If you create a BOM node, enter the following information:

    a.  In the Initial Value field, enter the initial level this node represents within the BOM (e.g., 02).

    b.  In the Minimum Value field, enter the minimum level this node may reference within the BOM (e.g., 01).

6.  Click **OK** to save any changes you made and close the **Add Node** dialog box.

    Click **Cancel** to close the dialog box and ignore any changes.

**To delete a node:**

Select a node, then click **Delete** ✖.

### Use as Template

Another way to create a new node is to build one based on an existing definition. Select a node,

then click **Use as Template** 📑. The new node appears in the **Edit Node** dialog box.

The system generates a new **ID** for the new node. You should change the name and description of the new node to avoid confusion later. Edit the rest of the node as needed, then click **OK**. (For more information, see *Editing a Node* on page 3-9.)

## Editing a Node

1.  In the **Node Pool** window, select a node, then click **Edit** 📝.

2.  In the **Edit Node** dialog box, edit the fields as needed. For more information on these, see *Adding a Node* on page 3-8.

3.  Click **OK** to save any changes you made and close the **Edit Node** dialog box.

    Click **Cancel** to close the dialog box and ignore any changes.

# *The View Pool*

To make any changes to the view pool, you must click **Edit** at the bottom of the window to enter Edit mode.

## Adding a View

1.  In the **View Pool** window, click **New** 📄.

2.  In the **Add View** dialog box, enter a **Name** and **Description** for the new view.

3.  Select a **Source View**. (These views are from the ECI pool.)

4. To create a continuous parameter view, select **Continuous Attributes**:

   a. From the **Date/Time Column** drop-down list, select the column that will become the timestamp column for this view.

   b. In the **Time Stamp Group Name** field, enter a name for the offset group to be used in Analysis Group Creation.

5. To create a replicate parameter view, select **Replicate Identifier**.

   To identify replicate identifier column(s), choose one or more columns on the left side and move them to the right.

6. To create code columns within the view, select **Code Columns**.

   To identify code columns, choose one or more columns on the left side and move them to the right. These columns are now identified as code columns.

7. In the **Restriction String** field, enter any additional SQL restrictions needed.

8. Click **OK** to save any changes you made and close the **Add View** dialog box.

   Click **Cancel** to close the dialog box and ignore any changes.

**To delete a view:**

Select a view, then click **Delete** ✖.

### *Use as Template*

Another way to create a new view is to build one based on an existing definition. Select a view,

then click **Use as Template** 📑. The new view appears in the **Edit View** dialog box.

The system generates a new **ID** for the new view. You should change the name and description of the new view to avoid confusion later. Edit the rest of the view as needed, then click **OK**. (For more information, see *Editing a View* on page 3-10.)

## Editing a View

1. In the **View Pool** window, select a view, then click **Edit** 📝.

2. In the **Edit View** dialog box, edit the fields and columns as needed. For more information on these, see *Adding a View* on page 3-9.

3. Click **OK** to save any changes you made and close the **Edit View** dialog box.

   Click **Cancel** to close the dialog box and ignore any changes.

# Working with Hierarchies

The hierarchy tabs display hierarchies opened from the **Hierarchies** tab; each tab has the same name as the hierarchy it displays. Use these tabs to create new hierarchies and edit and view existing hierarchies.

Across the top of each hierarchy tab are a number of tools to help you work with pools. The following table describes these tools. Most of the major functions these tools help you perform are described in more detail later in this section.

| Tool | Name | Function |
|------|------|----------|
| | Commit Hierarchy | Saves the edited hierarchy. Enabled only in Edit mode. |
| | Cancel Edits | Cancels changes to the hierarchy. Enabled only in Edit mode. |
| | Cut | Cuts a selected node or parameter. Enabled only in Edit mode. |
| | Copy | Copies a selected node or parameter. Enabled only in Edit mode. |
| | Paste In | Pastes a cut or copied node or parameter at the top of the selected node. |
| | Paste After | Pastes a cut or copied node or parameter after a selected object. |
| | Toggle to Names -or- Toggle to Descriptions | Toggles the text in the hierarchy tree between descriptions and names. |
| | Search Hierarchy Tree | Displays the Find & Replace dialog box, where you can search for strings or values in different objects within Discoverant. Depending on the functional area from which you search, different options will be available to you. You can also use the Find & Replace dialog box to replace certain object names. For more information, see *Searching* on page 3-4. |
| | View Parameter Set Description | Displays the description of the Parameter Set currently selected in the Hierarchy Manager. |
| | Close Hierarchy | Closes the hierarchy. Prompts if changes were made and not committed. |

There are also a number of right-click options available. Right-click a pool object on the left side of the window to choose any of the following options:

| | | |
|---|---|---|
| • | Validated | Marks the selected node, parameter or sub-tree validated or non-validated. Enabled only in Edit mode. |
| • | Cut | |
| • | Copy | |
| • | Paste In | |
| • | Paste After | |
| • | Add Node | Displays the Add Node dialog box. |
| • | Add Connector | Displays the Add Connector dialog box. |
| • | Edit | Displays the Edit dialog box for the selected object. For more information, see Edit Parameter, Edit Hierarchy Node, or Edit Connector. |
| • | Add Parameter | Displays the Add Parameter dialog box. |
| • | Test the Parameter | Displays the Test Parameter dialog box for the selected parameter. |
| • | Test Connector | Displays the Test Connector dialog box for the selected connector. |
| • | Delete | Deletes the selected node (and any children). |

Many have the same functions as the tools of the same name (and icon) in the toolbar.

## Creating Hierarchies

Create new hierarchies by adding nodes and parameters from the pools.

**To create a new hierarchy:**

1. In the **Hierarchy** tab, click **New Hierarchy** 🗋.

2. In the **New Hierarchy** dialog box, enter a name for the new hierarchy.

3. Click **OK**.

   The new hierarchy is opened as another tab in Hierarchy Manager. Start building the hierarchy here.

4. Select the blank node in the hierarchy tree on the left of the window.

5. Right-click this node to begin building the hierarchy by adding more nodes, parameters (under nodes) and/or connectors. For more information, see:

   • *Adding Nodes to Hierarchies* on page 3-13,
   • *Adding Parameters to Hierarchies* on page 3-14, and
   • *Adding Connectors to Hierarchies* on page 3-15.

## *Editing Hierarchies*

Select a hierarchy in the **Hierarchy** tab, then click **Edit Hierarchy** . The hierarchy is opened as another tab in the **Hierarchy Manager** window.

### Cutting, Copying, Pasting, and Deleting

Any object (node, parameter or connector) in a hierarchy can be cut, copied, pasted or deleted. If you want an exact copy of a node, add a connector instead (see *Adding Connectors to Hierarchies* on page 3-15).

**To move objects:**

1.  Select the object and click **Cut** .

2.  Click in the hierarchy where you want to move the object, then click **Paste In** or **Paste After** (see the descriptions of these tools in the table on page 3-11).

**To copy and paste objects:**

1.  Select the object and click **Copy** .

2.  Click in the hierarchy where you want to paste a copy of the object, then click **Paste In** or **Paste After** (see the descriptions of these tools in the table on page 3-11).

**To delete an object:**

Right-click the object and select **Delete** .

### Adding Nodes to Hierarchies

1.  In the hierarchy tree on the left side of the hierarchy tab, right-click a node under which you want to add another node and select **Add Node**.

2.  In the **Add Node** dialog box, select a node.

3.  To create a data universe node, select **This is a Universe Node**.

    a.  To apply the node's conditions (if any) to all parameters within the Universe node, select **Apply Condition to Parameters**.

    b.  Select a **Universe View** (from the View pool) to retrieve the parameter set names and dates for the Universe.

    c.  If you want, you can enter a **Parameter Set Name Description** and **Parameter Set Date Description**.

4.  Click **OK** to add the new node and close the dialog box.

    Click **Cancel** to close the dialog box without adding a node.

## Editing Nodes in Hierarchies

1. In the hierarchy tree on the left side of the hierarchy tab, right-click the node you want to edit and select **Edit**.

2. In the **Edit Node** dialog box, edit the fields as needed. For more information on these, see *Adding Nodes to Hierarchies* on page 3-13.

3. When you are finished, click **OK**. The node will be modified.

    To close the **Edit Node** dialog box without applying your changes, click **Cancel**.

## Adding Parameters to Hierarchies

1. In the hierarchy tree on the left side of the window, right-click a node under which you want to add a parameter and select **Add Parameter**.

2. In the **Add Parameter** dialog box, select a **Parameter Definition** (from the Parameter Definition pool) and a **View** (from the View pool) for the new parameter.

3. Click **OK** to add the new parameter and close the dialog box.

    Click **Cancel** to close the dialog box without adding a parameter.

## Editing Parameters in Hierarchies

1. In the hierarchy tree on the left side of the hierarchy tab, right-click the parameter you want to edit and select **Edit**.

2. In the **Edit Parameter** dialog box, edit the fields as needed. For more information on these, see *Adding Parameters to Hierarchies* on page 3-14.

3. When you are finished, click **OK**. The parameter will be modified.

    To close the **Edit Parameter** dialog box without applying your changes, click **Cancel**.

## Testing Parameters

To test the validity of parameters you've created, you should test the parameter. This allows you to view how the parameter will appear in Discoverant's functional areas.

1. Right-click the parameter you want to test and select **Test Parameter**.

2. In the **Test Parameter** dialog box, enter or select the parameter set you want to test.

    If you know the name of the parameter set, enter it in the **Parameter Set Name** field, then continue with Step 3.

    If you want to search for parameter sets, click **Choose Parameter Sets**.

    a. Enter the start and end dates.

    b. Click **Retrieve List**.

    c. From the list of parameter sets retrieved, select up to 10 parameter sets.

3. Click **Execute Test**.

4. In the **Test Parameter Results** dialog box, check whether the parameter is returning the correct data.

The first column contains the parameter set names.

The heading for the last column is the parameter name. This column displays the parameter data.

The columns between the first and the last display either replicate parameters or continuous timestamps.

## Adding Connectors to Hierarchies

1. In the hierarchy tree on the left side of the window, right-click the node you want to duplicate and select **Copy**. (The node becomes the "connectee.")

2. Right-click the node under which you want to add the connectee and select **Add Connector**.

3. In the **Add Connector** dialog box, click **Paste**. The copied connectee will be displayed in the **Connectee Location** field.

4. If you need to change the BOM level number, select Increment or Decrement in the **BOM Column Change** drop-down list. This changes the BOM level by ±1.

5. If you need to change the view and/or node mappings, follow these steps:

   a. In the **Add Connector** dialog box, choose **Views**.

   b. Click **Add**.

   c. In the **Add View Mapping** dialog box, select an **Old View** (the view in the connectee node) and a **New View** (the view with which to replace the old view).

   d. Click **OK**.

   e. In the **Add Connector** dialog box, choose **Nodes**.

   f. In the **Add Node Mapping** dialog box, select an **Old Node** (the node in the connectee node) and a **New Node** (the node with which to replace the old node).

   g. Click **OK**.

   To remove view or node mappings, select **Views** or **Nodes**, select the view or node you want to remove, and click **Remove**.

6. When you are finished setting up the connector, click **OK**. The connector will be displayed in the hierarchy tree with this symbol: . When you promote the hierarchy, the connector will be expanded to duplicate the copied node, with your changes included.

   To close the **Add Connector** dialog box without creating a new connector, click **Cancel**.

### Editing Connectors in Hierarchies

1.  In the hierarchy tree on the left side of the hierarchy tab, right-click the connector you want to edit and select **Edit**.

2.  In the **Edit Connector** dialog box, edit the fields as needed. For more information on these, see *Adding Connectors to Hierarchies* on page 3-15.

3.  When you are finished, click **OK**. The connector will be modified. When you promote the hierarchy, the connector will be expanded to duplicate the copied node, with your changes included.

    To close the **Edit Connector** dialog box without applying your changes, click **Cancel**.

### Testing Connectors

To see how Discoverant will expand the connector you've created, you can test the connector. This allows you to view how the expanded connector will appear in Discoverant's functional areas. You can also test parameters while you're testing the connector.

1.  Right-click the connector you want to test and select **Test Connector**.

2.  The **Test Connector** dialog box displays the portion of the hierarchy tree directly related to the placement of the expanded connector and the properties of the selected node or parameter.

3.  To test a parameter, right-click the parameter and select **Test Parameter**. Continue with Step 2 of *Testing Parameters* on page 3-14.

## Marking Hierarchies as Validated

To mark a node or parameter as validated, right-click the node or parameter and select **Validated**. If you selected a node, Discoverant prompts you whether you want to validate just the node or the sub-tree under the node as well.

Repeat this step to un-mark a node or parameter as validated (to mark the node or parameter as non-validated).

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