HP Universal CMDB

for the Windows and Solaris operating systems

Software Version: 7.50

CI Attribute Customization

hp ®

invent

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Documentation Updates

This manual's title page contains the following identifying information:

- Software version number, which indicates the software version
- Document release date, which changes each time the document is updated
- Software release date, which indicates the release date of this version of the software

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Table of Contents

Welcome to This Guide

This guide describes how to manage CI types (for example, create and edit CI types and edit relationships between CI types).

This chapter includes:

How This Guide Is Organized

The guide contains the following chapters:

Part I   CI Type Manager

Describes how to create new CI types and relationships and edit existing ones. You can modify the CI type description and its attributes and qualifiers.

Part II   System Type Manager

Describes how to create a predefined list whose values define an attribute type.

Who Should Read This Guide

This guide is intended for the following users of HP Universal CMDB:

➤ HP Universal CMDB administrators

➤ HP Universal CMDB platform administrators

➤ HP Universal CMDB application administrators

➤ HP Universal CMDB data collector administrators

Readers of this guide should be knowledgeable about enterprise system administration, have familiarity with ITIL concepts, and be knowledgeable about HP Universal CMDB.

Getting More Information

For a complete list of all online documentation included with HP Universal CMDB, additional online resources, information on acquiring documentation updates, and typographical conventions used in this guide, see the *HP Universal CMDB Deployment Guide* PDF.

Part I

CI Type Manager

1

CI Type Manager

This chapter provides information on CI Type Manager.

Note to HP Software-as-a-Service customers: The data in CI Type Manager can be viewed but not edited.

This chapter includes:

Concepts

➤ CI Types Overview on page 12

➤ CI Type Attributes on page 13

➤ CI Type Relationships on page 14

Tasks

➤ Create a CI Type on page 14

Reference

➤ Viewing Descriptions for CI Types and Relationships on page 16

➤ CI Type Manager User Interface on page 16

🌀 CI Types Overview

A configuration item (CI) can represent hardware, software, services, business processes, or any component of your IT infrastructure. CIs with similar properties are grouped under a CI type (CIT). Each CIT provides a template for creating a CI and its associated properties.

Every CI must belong to a CI type. The following are the main categories of CITs:

➤ **Business.** CITs that correspond to the logical elements of your business, such as processes and organizational groups.

➤ **IT Process.** CITs that correspond to changes that occur in your IT infrastructure.

➤ **Monitor.** CITs that handle incoming metrics collected from your business universe.

➤ **System.** CITs that correspond to the physical elements (hardware and software) installed in your business environment.

The CITs are arranged in a tree structure under these categories in the CI Types pane. You can browse the CI Type model by expanding the tree in the CI Types pane. The CIT selected in the left pane is displayed in the topology map along with all the potential valid relationships to other CITs.

You can also define new CITs to match your business needs. For details on defining new CITs, see "Create Configuration Item Type Wizard" on page 23.

🔵 CI Type Attributes

Every CI type has attributes which define it such as name, description, and default value. The CITs grouped under other CITs in the CI Type tree inherit attributes from the higher-level CITs.

When you define a new CI type, you first select a Base Configuration Item Type from a list of existing CITs. Your new CIT inherits the attributes of the existing CIT. You can then set the attributes for the new CIT. You edit the attributes of an existing CIT by selecting a CIT from the tree in the CI Types pane and selecting the Attributes tab of the topology map. For details on CIT attributes, see "Attributes Page" on page 25.

Every CIT must have at least one key attribute. A key attribute is an attribute that is used as an identifier of the CIT. When you define an instance of a CIT, the CIT's key attributes are mandatory fields for CIs of that type. You can assign as many key attributes as you want to a given CIT. If you do not assign a key attribute when defining a new CIT, the CIT is created, but it remains abstract, that is, you are unable to create instances of it (you are prompted to include the ABSTRACT_CLASS qualifier on the Qualifier page of the wizard).

Entity names in HP Universal CMDB for CMDB-based applications follow the conventions described below:

➤ **CIT attributes values.** All primitive types are supported: long, double, float, string, and so on.

➤ **CIT attributes values-type string.** All special characters are supported. The maximum length is 4000 characters.

➤ **CIT names and attributes names.** The following are permitted: a-z, A-Z, and underscore (_). The length is limited to 200 characters. The CIT name must be in English.

➤ **CIT attribute length.** The total length of all the attributes in one CIT cannot exceed 8K due to a Microsoft SQL Server limitation.

CI Type Relationships

A relationship defines the link between two CIs. Relationships represent the dependencies and connections between the entities in your IT environment. When you select Relationships in the drop-down box in the CI Types pane, the topology map displays all the valid instances of CITs linked by the selected relationship.

The same attributes defined for CITs are also defined for relationships. You can also assign key attributes for relationships but it is not required. For details on defining new relationship types, see "Create Configuration Item Type Wizard" on page 23.

Create a CI Type

This task describes the process you follow to create a CIT using the Create CI Type wizard.

This task includes the following steps:

➤ "Prerequisites" on page 14

➤ "Define the CI Type" on page 14

➤ "Set the CI Type Attributes" on page 15

➤ "Assign Qualifiers to the CI Type" on page 15

➤ "Assign an Icon to the CI Type" on page 15

➤ "Customize the CI Type Menu" on page 15

➤ "Define the CI Type Default Label" on page 15

1 Prerequisites

From the CI Type Manager, select **New** to start the Create CI Type Wizard.

2 Define the CI Type

Enter the name, description and base configuration item type for the new CI type. For details, see "Details Page" on page 24.

3 Set the CI Type Attributes

Edit the attributes of the new CI type and define key attributes for it. For details, see "Attributes Page" on page 25.

Note: List and Enumeration definitions are created in the System Type Manager. If required, you can create additional List and Enumeration definitions. For details, see "Create List and Enumeration Definitions" on page 40.

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4 Assign Qualifiers to the CI Type

Assign qualifiers to the definition of the new CI type. For details, see "Qualifiers Page" on page 28.

5 Assign an Icon to the CI Type

Select an icon to assign to the new CI type. For details, see "Icon Page" on page 30.

6 Customize the CI Type Menu

Select the menu items and commands to appear in the shortcut menu for the new CI type. For details, see "Attached Menu Page" on page 31.

7 Define the CI Type Default Label

Define the attributes to appear in the CI type label. For details, see "Default Label Page" on page 34.

Viewing Descriptions for CI Types and Relationships

You can view a complete list of available CI types in tree format in the left pane of CI Type Manager. You can search incrementally for a specific CI type as described in "CI Type Manager" on page 19. To see a description for a particular CI type, select it from the tree and hold the pointer over the icon which corresponds to it in the Topology Map. A tooltip containing a description of the CI type is displayed.

For relationships, select **Relationships** in the left pane and search incrementally by the first letter of the relationship. Select the relationship you want and hold the pointer over its icon in the Topology Map to display a tooltip containing a description of the relationship.

You can also view a list of relationships in "Relationship Definitions" in *Reference Information*.

CI Type Manager User Interface

This section describes:

➤ Add/Edit Attribute Dialog Box on page 16

➤ Add/Remove Relationship Dialog Box on page 19

➤ CI Type Manager on page 19

➤ Create Configuration Item Type Wizard on page 23

Add/Edit Attribute Dialog Box

Description	Enables you to define a new attribute to add to a CIT or to edit an existing attribute of a CIT.
	To access: In the CIT Manager, select the Attributes tab, then click the **Add** button, or select an attribute and click the **Edit** button or double-click the attribute.
Important Information	In Edit mode, fields that cannot be changed are disabled.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Advanced	You can set the following optional parameters: ➤ **Index.** Select to accelerate the attribute retrieval performance. This option is recommended for attributes that are used frequently in search conditions. For example, IP address is usually an index attribute of a host. ➤ **Lower Case.** When this option is selected, the attribute value remains in lower case. ➤ **Required.** Select to define this attribute as a required one, if its value is required for the creation of the CIT. ➤ **Visible.** Select to display this attribute in the Properties tab in IT Universe Manager. ➤ **Editable.** Select to enable future editing of the attribute. Only attributes that are marked as **Editable** (or ones that have values) are displayed in the Properties tab in IT Universe Manager. ➤ **Password.** When this option is selected, the attribute value appears as asterisks (a hidden value). ➤ **Change Monitored.** Select to define attributes whose values are being marked as **Change Monitored** in CI Type Manager. For every change in an attribute defined as **Change Monitored**, you are notified by a Change event in the Topology View. ➤ **Comparable.** Select to enable this attribute to be used for comparing compound CIs. ➤ **Asset Data.** Select to display the attribute value in the Asset Report.
Attribute Name	Enter a unique name for the new attribute. The name can contain all characters except the following: " \ / [ ] : | < > + = ; , ? * **Note:** The attribute name is not case sensitive.

GUI Element (A-Z)	Description
Attribute Type	Select one of the following options: ➤ **Primitive.** Choose from one of the following field types: boolean, bytes, date, double, float, integer, integer_list, long, string, string_list, xml. ➤ **Enumeration/List.** Contains a list of Enumerations and Lists defined in the System Type Manager. For details, see "System Type Manager" on page 39. This option enables you to define an attribute with a predefined value. For example, a location attribute might be defined by a **location** list containing the following values: Singapore, Paris, New York.
Default Value	Enter or select a default value for the attribute. The options for the **Default Value** field vary depending on the attribute type you selected. **Note:** If you select the integer_list or string_list **Primitive** attribute type, you can enter multiple values.
Description	Enter a description for the new attribute. **Note:** This field is optional.
Display Name	Enter a name for the new attribute to identify it in HP Universal CMDB. **Note:** This field is optional.
Value Size	Enter a value for the maximum physical size of the new attribute. (Enabled for bytes and string only).

🔖 Add/Remove Relationship Dialog Box

Description	Enables you to add or remove default or new relationships between CITs, which define their physical or logical connections.
	To access: In the CIT Manager, right-click a CIT or two CITs and select **Add/Remove Relationship** from the context menu.
Important Information	When adding a relationship between two CITs, select the two CITs to be linked by holding down CTRL and clicking the CIT names. Then right-click one of them to display the context menu and select **Add/Remove Relationship**.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<node1 to node2>	Select the relationships to add in the direction of the first node to the second.
<node2 to node1>	Select the relationships to add in the direction of the second node to the first.
Relationship Name	A list of the possible relationships.

🔖 CI Type Manager

Description	Enables you to view the information in the CI Type model, which contains the definitions of all configuration item types (CITs) defined in the system and the relationships that define the connections between them. Each CIT has its own attributes, as well as the attributes inherited from its parent CIT.
	To access: Select **Admin** > **Modeling** > **CI Type Manager**.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
✳	Click the **New** button to open the Create Configuration Item Type Wizard which enables you to define a new CI type. For details, see "Create Configuration Item Type Wizard" on page 23.
✖	Click **Delete** to delete the selected CI type or relationship.
💾	Click the **Save** button to save changes made to a CI type.
▤	Opens the System Type Manager which enables you to create a predefined list whose values define an attribute type. For details, see "System Type Manager User Interface" on page 43.
⤓	Enables you to export a CIT as an XML file. Use this option to move CITs from one server to another.
<Main Menu>	For details, see "Main Menu"in *Model Management*.
<CI Type/Relationship Box>	Select **CI Types** to display the CI types in the CIT model. Select **Relationships** to display the relationships in the CIT model.
<Toolbar>	For details, see "Toolbar Options" in *Model Management*.

GUI Element (A-Z)	Description
CI Types Pane	A hierarchical tree structure of the CI Type model containing the inheritance relationships among CITs, and displaying the number of instances of each CIT in the UCMDB. All CITs included in the CI Type model are classified as either a CIT or a relationship. You can drill down and view the relationships and neighbors of the selected CIT in the topology map. You can search in the list of CITs or relationships using the Incremental Search by entering the first letter of the CIT or relationship repeatedly until you reach the required selection. You can also search for a CIT or relationship by entering its full name.
	Note: Each CI type is represented by a unique icon. (If the CIT does not have a defined icon, it gets the icon of its ancestor.)

GUI Element (A-Z)	Description
Main Window	The following tabs are available: ➤ **Dependencies.** Displays the CI Type model in a topology map, including the CITs and the relationships between them. The name of the selected CI type or relationship appears in the border at the top of the pane. When you point to a CIT, a tooltip displays the display name of the CIT and its description. ➤ **Details.** Enables you to edit the basic information about the CI type selected in the left pane. For details, see "Details Page" on page 24. ➤ **Attributes.** Enables you to edit the attributes of the selected CIT. For details, see "Attributes Page" on page 25. ➤ **Qualifiers.** Enables you to assign qualifiers to the selected CIT. For details, see "Qualifiers Page" on page 28. ➤ **Icon.** Enables you to assign an icon to the selected CIT. For details, see "Icon Page" on page 30. This tab does not appear for relationships. ➤ **Attached Menu.** Enables you to customize the shortcut menu of a CI by adding menu items and commands (for example, ping, run a program, open a URL). The customized menu is displayed when you right-click a CI instance in IT Universe Manager. For details, see "Attached Menu Page" on page 31. ➤ **Default Label.** Enables you to define attributes that appear in the CIT label. You can include more than one attribute by using the function buttons. For details, see "Default Label Page" on page 34.

Context Menu

CI Type Manager includes the following context menu options available by right clicking a CI type in the CI Types pane or the Dependencies map:

GUI Element (A-Z)	Description
Add/Remove Relationship	Opens the Add/Remove Relationship dialog box, which enables you to add or remove relationships from CITs. For details, see "Add/Remove Relationship Dialog Box" on page 19.
Delete	Deletes the selected CI type. This option is only available for CI types that have no children and no instances.
Export	Enables you to export a CIT as an XML file. Use this option to move CITs from one server to another.
New	Opens the Create Configuration Item Type Wizard which enables you to define a new CI type. For details, see "Create Configuration Item Type Wizard" on page 23.
Show CIT Instances	Opens the Show All Instances window, which displays all instances of the selected CIT. For details, see "Element Instances Dialog Box" in *Model Management*.

Create Configuration Item Type Wizard

Description	Enables you to define a new configuration item type or relationship.
	To access:
	➤ Click a CI type or relationship in the topology map or CI Types pane of the CIT Manager and select **New** from the context menu.
	➤ Click the **New** button ✳ in the CI types pane.
Wizard Map	The Create Configuration Item Type Wizard contains:
	Details Page > Attributes Page > Qualifiers Page > Icon Page > Attached Menu Page > Default Label Page

The Create Configuration Item Type wizard includes the following pages:

Details Page

Description	Enables you to enter basic information about the new CI type you are defining.
	The first step of the Create Configuration Item Type Wizard.
Important Information	For general information about the Create Configuration Item Type Wizard, see "Create Configuration Item Type Wizard" on page 23.
Wizard Map	The Create Configuration Item Type Wizard contains:
	Details Page > Attributes Page > Qualifiers Page > Icon Page > Attached Menu Page > Default Label Page

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Base CI Type	Select a base CIT for the CIT you are creating. The new CIT inherits the base CIT's attributes.
	Note: This field only appears in the Create CI Type Wizard. It is not relevant when editing an existing CIT in the Details tab of CI Type Manager.
Description	A description for the new CIT.
	Note: This field is optional.

GUI Element (A-Z)	Description
Display Name	The name of the CIT as it appears in the HP Universal CMDB interface.
Name	The unique name of the new CIT. The name can contain all characters except the following: " \ / [ ] : | < > + = ; , ? * **Note:** The name field is case sensitive, but you cannot use the same name with different cases for two different CITs.

Attributes Page

Description	Enables you to edit the attributes of the CIT. The second step of the Create Configuration Item Type Wizard.
Wizard Map	The Create Configuration Item Type Wizard contains: Details Page > **Attributes Page** > Qualifiers Page > Icon Page > Attached Menu Page > Default Label Page

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
	To define an attribute as a key attribute, click in the left column beside the attribute name. A key icon appears in the cell. A key attribute is an attribute that must be defined for CIs of that CI type.
	To remove the key attribute definition, click in the left column again. The key icon disappears.
	For more information on key attributes, see "CI Type Attributes" on page 13.
	Denotes a static attribute. A static attribute takes the same value for all the CIs of that type. If it is changed, all the CIs of that type are affected and automatically display the new value. A static attribute cannot be defined as a key attribute.
	Note: You cannot define an attribute as static from within the CIT Manager. It is done by deploying the relevant package. Static attributes are for internal use only.
	Click the **Add** button to define a new attribute. For details, see "Add/Edit Attribute Dialog Box" on page 16.
	Select a row and click the **Edit** button to open the Edit Attribute dialog box. For details, see "Add/Edit Attribute Dialog Box" on page 16.
	Note: If you modify an attribute belonging to a CIT's parent, the text turns light blue. If you modify an attribute belonging to the CIT itself, the text turns dark blue.
	Click the **Delete** button to delete a selected attribute. This option is only active for newly defined attributes.
	Click the **Reset** button to reset the attribute settings after editing a pre-existing attribute.
	Click **Select Columns** to select the columns to appear using the Select Columns dialog box.
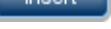
GUI Element (A-Z)	Description
<Attributes>	Displays all attributes associated with the new CIT. Attributes appearing in black are ones that the new CIT inherits from the base CIT. Attributes appearing in light blue are ones that have been modified for the new CIT.
Asset Data	Select to display the attribute value in the Asset Report. For details see "Asset Report User Interface" in *Model Management*. **Note:** When this qualifier is selected for a given attribute, the attribute appears as a visible column in the Element Instances dialog box. For details, see "Element Instances Dialog Box" in *Model Management*.
Change Monitored	Select to define attributes whose values are being marked as **Change Monitored** in CI Type Manager. **Note:** When this qualifier is selected for a given attribute, the attribute appears as a visible column in the Element Instances dialog box. For details, see "Element Instances Dialog Box" in *Model Management*.
Comparable	Select to enable this attribute to be used for comparing compound CIs. For details, see "Compare CIs User Interface" in *Model Management*. **Note:** When this qualifier is selected for a given attribute, the attribute appears as a visible column in the Element Instances dialog box. For details, see "Element Instances Dialog Box" in *Model Management*.
Default Value	The default value for the attribute. This value appears when the new CIT is defined and there is no runtime value for the attribute.
Description	A description of the attribute.
Display Name	The attribute name that appears in the HP Universal CMDB interface.
Editable	Select to enable future editing of the attribute. Only attributes that are marked as **Editable** (or ones that have values) are displayed in the Properties tab in IT Universe Manager.

GUI Element (A-Z)	Description
Index	Select to accelerate the attribute retrieval performance. This option is recommended for attributes that are used frequently in search conditions. For example, IP address is usually an index attribute of a host.
Lower Case	Select to keep the attribute value in lower case.
Name	The actual name of the attribute (compare to "Display Name" on page 27).
Required	Select to define this attribute as a required one, if its value is required for the creation of the CIT.
Type	The type of the attribute.
Visible	Select to display this attribute in the Properties tab in IT Universe Manager.

Qualifiers Page

Description	Enables you to assign qualifiers to a CIT definition. The third step of the Create Configuration Item Type Wizard.
Important Information	Qualifiers enable you to define added attribute definitions to the CIT. In the **Qualifiers** list, select the required qualifiers using the Add buttons to move your selections to the **Configuration Item Type Qualifiers** list. You can make multiple selections by holding down the CTRL key.
Wizard Map	The Create Configuration Item Type Wizard contains: Details Page > Attributes Page > **Qualifiers Page** > Icon Page > Attached Menu Page > Default Label Page

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
	Click this button to move all qualifiers to the **Configuration Item Type Qualifiers** list.
	Select the qualifier and click this button to add the qualifier to the **Configuration Item Type Qualifiers** list. Select multiple qualifiers by holding down the CTRL key.
	To remove a qualifier from the CIT definition, select the qualifier from the **Configuration Item Type Qualifiers** list and click this button.
	Click this button to remove all qualifiers from the **Configuration Item Type Qualifiers** list
Insert	To define a new, custom qualifier, enter the qualifier name in the window and click **Insert**. The qualifier appears in the **Configuration Item Type Qualifiers** list.
<Configuration Item Type Qualifiers>	The list of qualifiers that define attributes of the new CIT. For example, you can use a qualifier to define a CIT as abstract, which means that you cannot create instances from it.
<Qualifiers>	For a list of the available qualifier options, see "Qualifier Tab" in *Model Management*.

Icon Page

Description	Enables you to select an icon to assign to the new CI Type.
	The fourth step of the Create Configuration Item Type Wizard.
	Note: This step of the wizard is not relevant for relationships.
Important Information	Each CIT is displayed with a default icon. However, you can attach different icons to the same CIT when certain conditions apply. For example, you can associate different icons with the same CIT when one of its attribute values changes.
Wizard Map	The Create Configuration Item Type Wizard contains:
	Details Page > Attributes Page > Qualifiers Page > **Icon Page** > Attached Menu Page > Default Label Page

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
✚	Click to add a row.
	Note: Only active if **Change the Configuration Item Type icon according to its attribute value** is selected.
✖	Click to remove a row.
	Note: Only active if **Change the Configuration Item Type icon according to its attribute value** is selected.
Change the Configuration Item Type icon according to its attribute value	Enables you to assign an icon for each attribute value. For example, you could define two values for the City attribute: if City=London, one icon is displayed. If City=Beijing, another icon is displayed.
	Note: If you change the icon of a CIT that appears in an existing view, the CIT's icon is not updated in the view.
Attribute Name	Select an attribute to determine the icon assigned to the CIT.

| GUI Element (A-Z)	Description
Configuration Item Type Main Icon	Select the group to which the CIT belongs.
Icon	Select an icon to associate with the value you entered in the Value column.
Value	Enter a value corresponding to the attribute you selected. You can add a new line for each value you enter.
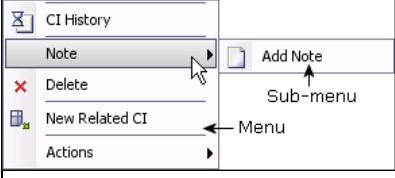
Attached Menu Page

Description	Enables you to customize the shortcut menu of a CI by adding menu items and commands (for example, ping, run a program, open a URL). The customized menu is displayed when you right-click a CI instance in IT Universe Manager.
	The fifth step of the Create Configuration Item Type Wizard.
Important Information	If a CIT does not have a method defined specifically for it, the CIT inherits all the menus from its parent CIT or the nearest ancestor that does have a method defined for it.
	If you create or modify a menu, the change occurs only in the specific CIT that is being edited.
Wizard Map	The Create Configuration Item Type Wizard contains:
	Details Page > Attributes Page > Qualifiers Page > Icon Page > **Attached Menu Page** > Default Label Page

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
✚	Select a menu item from the tree and click the button. A new entry appears under the selected item.
✖	Click to remove a menu item.

GUI Element (A-Z)	Description
⬆	Click to move a selected menu item up in the menu.
⬇	Click to move a selected menu item down in the menu.
<Tree>	Hierarchical tree containing the default menu items. **Caution:** It is not recommended to edit the definitions of the default menu items.
Command	To connect to a specific location on the World Wide Web, select URL, and enter the exact Internet address, for example, http://www.hp.com/go/software. (Available only if you select the URL command type option.) **Note:** If you use a variable in the Command field, use the format command name %1 and define the CIT attributes as described in Parameters. The parameter values replace %1 according to their order in the list. For example, %1 is replaced by the first parameter in the list, %2 is replaced by the second parameter in the list, and so on.
Description	Enter a description for the method. (This is for internal use only and does not appear in the menu.)
Existing Method	Select to choose a command from a list of defined methods inherited from the IT Universe CIT and all its ancestors.
Icon	Select the icon to appear next to the menu option in the context menu. **Note:** This field is optional.
Menu Item Name	Enter a name for the new menu item as it should appear in the menu.
Method	Enables you to add a command to the menu. **Note:** To create a method and not override the existing method, it is recommended to create a new menu item and place the new method there.
Method Name	Enter a name for the command.
New Method	Select to add an action (for example, ping) to the menu item.

GUI Element (A-Z)	Description
Parameters	To add attributes to the command or URL, click the **Add Parameter** button and select the attribute from the list.
	To delete an existing entry, select it and click the **Remove Parameter** button.
	Note: Parameters are not relevant when Inner Process is selected.
Require user confirmation?	Select the check box for users to confirm access to a menu item before the item is displayed.
Separator	To place a separator between two menu items:
	Click **OK** to place a separator underneath the selected menu option.
Shortcut	Press any key combination to create a shortcut for the menu item, for example, CTRL+H.
	Note: This field is optional.
Sub-Menu	Select to create a sub-menu under the selected menu option.
Type	Choose a command type:
	➤ **URL.** Opens a web page to the specified URL.
	➤ **Inner Process.** Displays a list of internal HP Universal CMDB actions.
URL	Enter the URL of a Web page for the command to open.

Default Label Page

Description	Enables you to define attributes that appear in the CIT label. You can include more than one attribute by using the function buttons.
	The final step of the Create Configuration Item Type Wizard.
Important Information	The label appears as the title under a CI of the new CI Type. The label definition can be customized to include different attribute values. For example, if the function label of the host CIT is composed of hostname and network, the displayed label is: server1 10.0.65.0.
	Labels can also be created using regular expressions.
Wizard Map	The Create Configuration Item Type Wizard contains:
	Details Page > Attributes Page > Qualifiers Page > Icon Page > Attached Menu Page > **Default Label Page**

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
	Selects the attributes to appear in the Format box. Use the following function buttons to display multiple attributes in the label.
	Adds parentheses to the formatted text (use in conjunction with the other functions).
And	Places an **AND** operator between two attributes in the formatted text. For example, **network_netaddr&network_domain** displays the network address and the domain of a node.
Attribute Name	Displays the available options of attributes to be included in the CIT label.
Clear	Click to clear the Format window.
Format	Displays the attributes that you select to appear in the CIT label. For example, to label a host by its host name and operating system, choose the **host_hostname** and **host_os** attributes. The CIT label is host1 UNIX. You can define conditions using AND and OR combinations. **Note:** To delete an attribute from the **Format** box, highlight it and press the DELETE key.
Or	Places an **OR** operator between two attributes in the formatted text.

GUI Element (A-Z)	Description
RegExp	Adds a regular expression (using regular expression syntax) to the label definition. The structure of the entry is **(v1, v2, v3)**, where **v1** represents the selected attribute, **v2** represents the regular expression itself (which divides the value into groups), and **v3** represents the number of the selected group. For example, if the selected attribute is a name, consisting of a first name, a space, and a surname, the regular expression would be (name, (\S*)(\s*)(\S*), 3), which indicates that the surname can be used for the name attribute in the default label. For examples of how to use regular expression syntax, see "Regular Expression Examples" in *Reference Information*.
Undo	Click to undo the last change in the Format window.

Part II

System Type Manager

2

System Type Manager

This chapter provides information on System Type Manager.

This chapter includes:

Concepts

➤ System Type Manager Overview on page 39

Tasks

➤ Create List and Enumeration Definitions on page 40

➤ Enumeration Definition on page 41

Reference

➤ System Type Manager User Interface on page 43

System Type Manager Overview

System Type Manager enables you to create a predefined list whose values define an attribute type. You can create the following attribute types:

➤ **List**. Enables you to create a predefined list of values, for example, Location.

➤ **Enumeration**. Enables you to create a predefined list of values, as well as assign each value a color. Enumerations are designed to be used as severity value lists by states. For details, see "State Manager" in *Model Management*.

Severity lists are used for:

➤ Retrieving Correlation results in Topology View Application. For details, see "Topology View Application" in *Model Management*.

➤ Creating a Correlation rule. For details, see "Correlation Manager" in *Model Management.*

You can use both List and Enumeration values for:

➤ Editing the attributes of a CIT. For details, see "Create a CI Type" on page 14.

➤ Defining an attribute condition for a TQL node or relationship. For details, see "Node/Relationship Properties Dialog Box" in *Model Management.*

Create List and Enumeration Definitions

This section describes the tasks for creating List and Enumeration definitions.

1 Create a List Definition

You can create a **List** definition of predefined values. For example, a List definition called Location might contain:

➤ New York

➤ Boston

➤ Baltimore

For details, see "Create/Update List/Enumeration Definition Dialog Box" on page 43.

2 Create an Enumeration Definition

You can create an **Enumeration** definition, which enables you to assign a color for each value on the list. For details, see "Create/Update List/Enumeration Definition Dialog Box" on page 43. For an example of an Enumeration definition, see "Enumeration Definition" on page 41.

🪝 Enumeration Definition

The following steps describe how to create an Enumeration definition.

Note: To retrieve the required results, you must follw each step in this task.

To create an Enumeration definition:

1 Select **Admin** > **Modeling** > **CI Type Manager**.

2 In the left pane, click the **System Type Manager** button to open the System Type Manager dialog box.

3 Click the **Add** button to open the Create List/Enumeration Definition dialog box.

Note: Alternatively, you can select **Admin** > **Settings** > **State Manager** and then click the **New Enumeration** button to open the Create List/Enumeration Definition dialog box.

---

4 Select **Enumeration**.

5 In the **Name** box, enter the required name.

6 (Optional) In the **Display Name** box, enter the required display name.
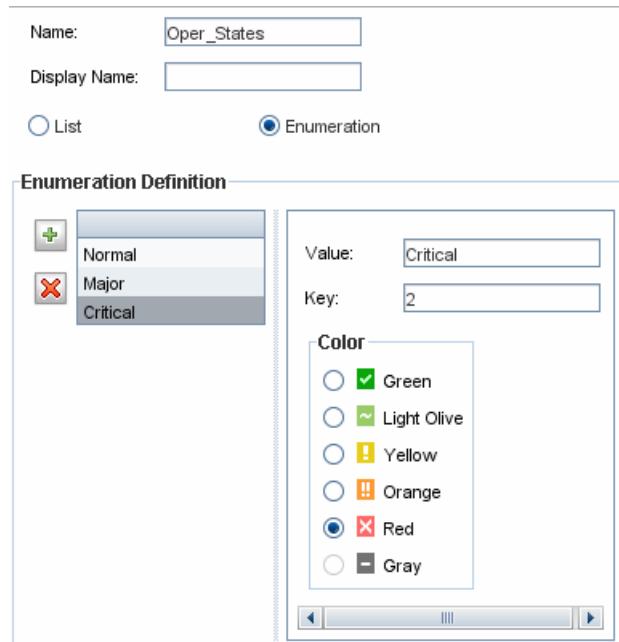
This example describes how to create the following severity list:

Key	Value	Severity Represented
0	Green	Normal
1	Orange	Major
2	Red	Critical

7 Click the **Add** button to create a new row.

8 In the **Value** box, enter Normal.

9 In the **Key** box, enter 0.

10 In the **Color** section, select **Green**.

✚ **11** Click the **Add** button to create another row.

12 In the **Value** box, enter Major.

13 In the **Key** box, enter 1.

14 In the **Color** section, select **Orange**.

✚ **15** Click the **Add** button to create another row.

16 In the **Value** box, enter Critical.

17 In the **Key** box, enter 2.

18 In the **Color** section, select **Red**.

The following image shows the Enumeration Definition section after the changes:

19 Click **OK** to save your changes.

⚑ System Type Manager User Interface

This section describes:

➤ Create/Update List/Enumeration Definition Dialog Box on page 43

➤ System Type Manager Dialog Box on page 46

⚑ Create/Update List/Enumeration Definition Dialog Box

Description	Enables you to define a new List or Enumeration or edit an existing one. **To access:** Click the **Add** button in the System Type Manager dialog box.
Included in Tasks	"Create List and Enumeration Definitions" on page 40

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Display Name	Enter the name you want to appear in the list of System Type Definitions. If you leave this field empty, the entry in the Name field is used.
Enumeration	Enables you to create a predefined list of values, as well as assign each value a color. For details, see "Enumeration Definition Area" on page 45.
List	Enables you to create a predefined list of values. For details, see "List Definition Area" on page 44.
Name	Enter a unique name for the definition.

List Definition Area

Description	Create a predefined list of values. For example, a Location attribute might be defined by a location list containing the following values: ➤ New York ➤ Boston ➤ Baltimore **To access:** Select **List** in the Create List/Enumeration Definition dialog box.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
➕	Add a List definition. Double-click inside the row and either select a date from the calendar that appears (if you chose the type **Date**) or type the required value.
✖	Delete a List definition.
Type	Choose one of following field types: ➤ Date ➤ Double ➤ Integer ➤ Long ➤ String

Enumeration Definition Area

Description	Enables you to create a list from a predefined list of values (similar to **List**), with capabilities such as assigning a color for every value. Enumerations are designed to be used as severity value lists by states. You can use Enumerations for lists that require key values.
	To access: Select **Enumeration** in the Create List/Enumeration Definition dialog box.
Useful Links	"Enumeration Definition" on page 41

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
✚	Add an Enumeration definition.
	Double-click inside the row and either select a date from the calendar that appears (if you chose the type **Date**) or type the required value.
✖	Remove an Enumeration definition.
Color	Select a color that indicates the severity level.

GUI Element (A-Z)	Description
Key	Type a number to create an enumeration that describes a severity list for a category. Assign key values according to the following rules: ➤ The list of key values must always begin with zero (0). (Zero represents the Normal state.) Otherwise, it does not appear in the State Manager (for details, see "State Manager" in *Model Management*). ➤ The list must always be numbered consecutively. For an example of an Enumeration definition, see "Enumeration Definition" on page 41.
Value	Type a value, either a string or a number, for example, Red or my value. The value appears in the tooltip for the CI in IT Universe. For details, see *Model Management*.

🔍 System Type Manager Dialog Box

Description	Displays the attribute types you defined in the Create List/Enumeration Definition dialog box. **To access:** Click the **System Type Manager** 🔡 button in the CI Types pane in the CI Type Manager.
Included in Tasks	"Create List and Enumeration Definitions" on page 40
Useful Links	"Enumeration Definition" on page 41

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
✚	Create a predefined list whose values define an attribute type. You can create a definition for the following attribute types: ➤ List definition. ➤ Enumeration definition. For a description of these attribute types, see "Create/Update List/Enumeration Definition Dialog Box" on page 43.
✖	Delete an existing definition. Select the system type definition you want to delete and click the **Delete** button.
✏	Enables you to edit an existing definition. For details, see "Create/Update List/Enumeration Definition Dialog Box" on page 43.
<System Type Definitions>	The list of Enumeration and List definitions created in the System Type Manager.

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