APPENDIX A

Devices Tab Reference

The following topics describe the pages in the Devices tab. Topics are organized according to the following Devices tab options:

- Device Summary, page A-1
- Device Grouping, page A-32

Device Summary

The following topics describe the fields in the pages that are accessed from the Device Summary option:

- Device Table Page, page A-2
- Policy Assignment Dialog Box, page A-6
- Device Folder Setting Dialog Box, page A-7
- Device Properties Page, page A-8
- Display show run Page, page A-15
- Ignored Interfaces List Dialog Box, page A-15
- Interfaces Page, page A-16
- Interface Properties Page, page A-17
- Source-Dest Pair Page, page A-19
- Source-Dest Pair Properties Page, page A-20
- VLANs Page, page A-21

- VLAN Properties Page, page A-22
- Import Devices Wizard, page A-23
- Discovery Status Page, page A-29
- Discovery Status Devices List Dialog Box, page A-30

Device Table Page

Use this page to:

- View the devices in the device inventory and their device properties.
- Edit device properties.
- Rediscover device information.
- Assign network elements to and remove them from policy groups.
- Assign devices to and remove devices from device folders.
- Delete devices from the inventory.

To open this page, select **Devices > Device Summary**.

Table A-1 Device Table Page

Field	Description
Select Policy Group Filter list box	Contains the policy groups defined on the system. Choose the policy group that contains the devices you want to display. When you select a policy group, only devices that have network elements assigned to policy groups will be displayed.
Sys Name column	Displays the system name, which is obtained from the SysName MIB variable. Click a name to display that device's properties.
Primary Name column	Displays the device IP address or DNS name entered to identify the device when it was added to the inventory.
Model column	Displays the device model. See the section Adding Devices to the Device Inventory, page 4-3 for information about unsupported models.
OS column	Displays the device operating system (OS) version.

Table A-1 Device Table Page (continued)

Field	Description
Mapped OS column	Displays the OS version that QPM has mapped to the device. See the section Adding Devices to the Device Inventory, page 4-3 for information about mapped OS versions.

Table A-1 Device Table Page (continued)

Field	Description
Status column	Displays the device status. The following statuses indicate that the device is working properly: • OK • Virtual—The device is a virtual device. The following statuses indicate a problem with the device. You cannot deploy to devices with these statuses: • Unreachable—The QPM server cannot establish basic network connectivity to the device. • SNMP Error—The device has an SNMP error that is preventing QPM from gathering the data it needs to work with the device. These are the common causes: – The device public community string entered in QPM is incorrect. – QPM can't read all of the necessary SNMP information from the device, possibly because there are corrupted or missing MIBs. – The device does not have a functioning SNMP engine. – The SNMP request timed out, typically because the device or network was too congested to respond before the timeout limit. The possible resolutions are to increase the SNMP timeout value and to increase the number of SNMP retries. • Telnet Error—QPM cannot connect to the device using Telnet. These are the common causes: – The device Telnet password entered in QPM is incorrect. Correct the Telnet password in QPM. – SSH is enabled but SSH login failed because SSH is not configured correctly on the device. Fix the SSH configuration on the device. – The login to the device failed. – There is no Telnet connection to the device.

Table A-1 Device Table Page (continued)

Field	Description
Status Column (continued)	• DCR Error—The following are the common causes: – The device synchronization between DCR and the QPM device inventory is lost because the device has been deleted from DCR. – You have imported the device into QPM in ACS mode with the ACS user role as Network Operator, Approver, or Helpdesk. These roles do not have privileges to import devices.
Policy column	Displays the policy in the current policy group to which the device is assigned. The current policy group is the policy group selected in the Policy Group Filter list box above the table. If All Policy Groups is selected in the list box, the current policy group is displayed in the Policy Group field in the context area at the top of the page.
Device Folder column	Displays the device folder that contains the device.
Interfaces column	Click the icon for a device to display the Interfaces page for that device.
Add/Import button	Click to import devices into QPM by performing Manual import, Import from DCR, or Import from Virtual Devices file
Edit button	Click to edit the device properties of the selected devices. The Device Properties Page appears.
Rediscover button	Click to rediscover the selected devices. The Discovery Status Page appears.
Set Policy button	Click to assign the selected devices to another policy or remove them from assigned policies. The Policy Assignment Dialog Box opens.
Set Device Folder button	Click to assign the selected devices to a device folder or remove them from device folders. The Device Folder Setting Dialog Box opens.
Delete button	Click to delete the selected devices from the inventory. A confirmation prompt appears. When deletion is done, the device table refreshes.

Related Topics

- Viewing and Editing Device Properties, page 4-11
- Setting a Device's Policy Assignment, page 4-14
- Rediscovering Device Information, page 4-15
- Working with Device Folders, page 4-16
- Removing Devices, page 4-20

Policy Assignment Dialog Box

Policies contain QoS properties, device constraints, and the assigned network elements to which they will be applied.

Use this dialog box to change the policy assignment for network elements.

This dialog box can be opened in several ways. These sections describe how to get to this dialog box:

- Setting a Device's Policy Assignment, page 4-14
- Setting Network Element Policy Assignments, page 4-23

Table A-2 Policy Assignment Dialog Box

Field	Description
Policy Group list box	Lists policy groups defined on the system. Select the policy group that contains the policy you want to select.
Remove Policy Assignments radio button	Click to remove the selected network elements from a selected policy.
Set Policy radio button	Click to assign the selected network elements to a selected policy.

Table A-2 Policy Assignment Dialog Box (continued)

Field	Description
Policy Name column	Lists policies that match the constraints of all of the selected network elements. Select the policy to assign by selecting its check box. The message "No suitable Policies Found" appears if there are no policies to which all of the selected network elements can be assigned. Only policies defined for the type of network element you selected are listed. For example, if you selected a device, you are only presented with device policies: you will not see interface policies.
Description column	Displays the description of the policy.
OK button	Click to save changes and close the dialog box.
Close button	Click to close the dialog box without saving changes.

Related Topics

- Setting a Device's Policy Assignment, page 4-14
- Setting Network Element Policy Assignments, page 4-23

Device Folder Setting Dialog Box

Device folders are groups of devices, used for organizational purposes.

Use this dialog box to change the device folder assignment for devices.

To open this dialog box, select one or more devices in the Device Table page by selecting their check boxes, then click **Set Device Folder**.

Table A-3 Device Folder Setting Dialog Box

Field	Description
Remove from Device Folder radio button	Click to remove all of the selected devices from any device folder.
Set Device Folder radio button	Click to assign the selected devices to the selected device folder.

Table A-3 Device Folder Setting Dialog Box (continued)

Field	Description
Device Folder Name column	Displays the names of the device folders on the system. Select the radio button next to a device folder name to select it.
Device Folder Description column	Displays a description of the device folder.
OK button	Click to save changes and close the dialog box.
Close button	Click to close the dialog box without saving changes.

Related Topics

- Working with Device Folders, page 4-16

Device Properties Page

Use this page to:

- View and edit a device's properties.
- Rediscover a device.
- View a device's running configuration.
- Telnet to a device.
- Export a device's information to a virtual device file.

To open this page, do any of the following in the Device Table page:

- Click a device name.
- Select the check box next to a device name, then click **Edit**.

General Information Area

Table A-4 Device Properties Page - General Information Area

Field	Description
Sys Name	Displays the system name, which is obtained from the SysName MIB variable. Click a name to display that device's properties.
Primary Device Name	Displays the device IP address or DNS name entered to identify the device when it was added to the inventory.
IP/DNS	Displays the device IP address or DNS name. Although this field is a field, you cannot change its data. Changes will not be saved when you click the Save button. You cannot use device DNS names that contain the backslash (\) character.

Table A-4 Device Properties Page - General Information Area (continued)

Field	Description
Status	Displays the device status. The following statuses indicate that the device is working properly: • OK • Virtual—The device is a virtual device. The following statuses indicate a problem with the device. Devices with these statuses are not usable in QPM: • Unreachable—The QPM server cannot establish basic network connectivity to the device. • SNMP Error—The device has an SNMP error that is preventing QPM from gathering the data it needs to work with the device. These are the common causes: – The device public community string entered in QPM is incorrect. – QPM can't read all of the necessary SNMP information from the device, possibly because there are corrupted or missing MIBs. – The device does not have a functioning SNMP engine. – The SNMP request timed out, typically because the device or network was too congested to respond before the timeout limit. The possible resolutions are to increase the SNMP timeout value and to increase the number of SNMP retries. • Telnet Error—QPM cannot connect to the device using Telnet. The most common cause is that the device Telnet password entered in QPM is incorrect. • DCR Error—The following are the common causes: – The device synchronization between DCR and the QPM device inventory is lost because the device has been deleted from DCR. – You have imported the device into QPM in ACS mode with the ACS user role as Network Operator, Approver, or Helpdesk. These roles do not have privileges to import devices.

Table A-4 Device Properties Page - General Information Area (continued)

Field	Description
Description	Displays the device description. Although this is an editable field, you cannot save changes you make to the description.
Role	Displays the device role, if one is assigned. Select a role from the list to assign it to the device.
OS	Displays the device operating system (OS) version.
Mapped OS	Displays the OS version that QPM has mapped to the device. See the section Adding Devices to the Device Inventory, page 4-3 for information about mapped OS versions. If you change the mapped OS version, QoS that is currently configured on the device might not be supported in the new OS version.
Model	Displays the device model.
Last Discovery	Displays the date the device was last discovered.
Device Group	Displays the device group to which the device belongs.
Device Folder	Displays the device group to which the device is assigned. Select a device folder from the list to assign it to the device. Select **Remove Device Folder** if you do not want the device in a folder.
All Interfaces	Displays the number of interfaces on the device that are in the QPM inventory.
Ignored Interfaces	Displays the number of ignored interfaces on the device. Click the number to remove the ignore setting from one or more interfaces. the Ignored Interfaces List Dialog Box opens.

Device Settings Area

Table A-5 Device Properties Page - Device Settings Area

Field	Description
Enable Access Control Policies	Select to enable creation and modification of access control policies.
Enable Write Memory	Select to enable writing device configuration changes to the device's memory.

Table A-5 Device Properties Page - Device Settings Area (continued)

Field	Description
Enable NBAR Port Mapping	Select to enable NBAR port mapping.
Reset to default button	Click to reset the device settings to the device group defaults.

Access Parameters Area

For security, fields that contain passwords do not display the text that you type.

Table A-6 Device Properties Page - Access Parameters Area

Field	Description
Read Community String	Contains the device read community string that QPM uses to access the device. You can change it by entering a new value in the field.
Blind login	Select to enable blind login to the device, in which QPM sends login information to the device (including access parameters) without waiting for or evaluating return prompts from the device. Blind login is required if you have defined custom prompts on the device. However, you must specify the correct user name and passwords for the device for blind login to be successful. If the device has non-standard prompts, ensure they are identified to QPM as described in QPM cannot log into a device, page 12-8.
Use SSH connection	Select to enable support for SSH when connecting to the device.
User Name	Contains the username that QPM uses to access the device. You can change it by entering a new value in the field.
Enable Password	Contains the enable or enable secret password that QPM uses to access the device. You can change it by entering a new value in the field.
Password	Contains the password that QPM uses to access the device. You can change it by entering a new value in the field.
Reset to Default button	Click to reset the values in the Access Parameters area to the device group default values.

ACL Ranges Area

Select ACL ranges for translation of QPM policies to CLI commands.

Note QPM supports only extended ACLs. QPM can upload standard ACLs, and on deployment, they are converted to extended ACLs.

Table A-7 Device Properties Page - ACL Ranges Area

Field	Description
Range 1	The starting (from) and ending (to) numbers for the first range of ACL numbers QPM can use. The default is 100 to 199.
Range 2	The starting (from) and ending (to) numbers for the second range of ACL numbers QPM can use. The default is 2000 to 2699.
Range 3	The starting (from) and ending (to) numbers for the third range of ACL numbers QPM can use. The default is that there is no third range.
Reset to Default button	Click to reset the ACL number ranges to QPM's default settings.

Topology Area

This area displays the topology of the device by listing the device to which each interface connects. Only devices in the QPM inventory that support Cisco Discovery Protocol (CDP) are listed.

Table A-8 Device Properties Page - Topology Area

Field	Description
Interface Name	Displays the interface name.
Sys Name	Displays the system name of the device to which to the interface connects. The system name is obtained from the SysName MIB variable.
Primary Device Name	Displays the primary device name of the device to which to the interface connects.

Table A-8 Device Properties Page - Topology Area (continued)

Field	Description
Model	Displays the Model of the device to which to the interface connects.
OS Version	Displays the OS version of the device to which to the interface connects.

Buttons

Table A-9 Device Properties Page - Buttons

Field	Description
Save	Click to save any changes you have made in the page.
Rediscover	Click to rediscover the device. The Discovery Status Page appears.
Show Run	Click to display the device's running configuration. The Display show run Page appears.
Telnet	Click to Telnet to the device using your client system's default Telnet application. Does not work if your client system does not have a Telnet application installed.
Export	Click to export the device's information to a virtual device file, which you can use to import the device into the inventory as a virtual device. The browser's file saving process starts.

Related Topics

- Viewing and Editing Device Properties, page 4-11
- Rediscovering Device Information, page 4-15
- Connecting to a Device Using Telnet, page 4-13
- Viewing Device Configuration, page 4-13
- Removing Devices, page 4-20
- Configuring Default Device Access Parameters, page 4-8
- Exporting Device Information, page 4-12

Display show run Page

Use this page to display a device's running configuration.

Click **Show Run** to open.

This page displays the device's running configuration.

Related Topics

- Viewing Device Configuration, page 4-13

Ignored Interfaces List Dialog Box

Use this dialog box to display interfaces that were previously marked as ignored, and therefore hidden in QPM.

Click the number in the Ignored Interfaces field of the Interface Properties page to open.

Table A-10 Ignored Interfaces List Dialog Box

Field	Description
Check box column	Click a check box to select its row.
Name column	Interface name.
Type column	Interface type.
Description column	Interface description.
Rate column	Interface rate.
Card Type column	Interface card type.
Cancel Ignore button	Click to cancel the ignore on the interface, which causes it to appear in the QPM UI again.
Close button	Click to close dialog box.

Related Topics

- Hiding and Displaying Interfaces, page 4-27

Interfaces Page

Use this page to:

- View the interfaces on a device and their properties.
- Mark interfaces as Ignored, hiding them and their DLCIs and VCs from being displayed in QPM.
- Assign policies to interfaces.

To open this dialog box, do any of the following:

- In the Managed Devices page, click the Interfaces icon in the Interfaces column of a device.
- From the Device Properties page, select **Device Information > Interfaces** from the TOC.

Use this page to view the interfaces on a device.

Table A-11 Interfaces Page

Field	Description
Name	Interface name.
Type	Interface type.
Description	Interface description.
Rate	Interface rate in kilobits per second.
Card Type	Interface card type.
Policy	Policy in the current policy group to which the interface is assigned. The current policy group is displayed in the Policy Group field in the context area at the top of the page.
Connected to Device	IP address or host name of the device to which the interface is connected.
Mark as Ignore button	Click to mark the selected interfaces as ignored, which causes them not to appear in the QPM UI. Any DLCIs and VCs configured on ignored interfaces are also ignored. A confirmation dialog box opens. Click **Yes** to confirm the action.
Set Policy button	Click to select the policy to which the interface should be assigned. The Policy Assignment Dialog Box opens.

Related Topics

- Hiding and Displaying Interfaces, page 4-27
- Policy Assignment Dialog Box, page A-6

Interface Properties Page

Use this page to:

- View and edit interface properties.
- Ignore or cancel the ignore setting of interfaces.
- Assign interface subelements to policy groups.

Click the interface name in the Interfaces page to open.

General Area

Table A-12 Interface Properties Page - General Area

Field	Description
Name	Interface name.
Index	Interface index.
Type	Interface type.
Card Type	Interface card type. If the card type is not correct, see QPM does not detect the correct card type, page 12-12. If the procedure described has been implemented, you can select a different card type in this field.
Rate	Interface rate.
Description	Interface description.
IP	Interface IP address.
Subnet Mask	Interface IP address subnet mask.
Is Ignored	Indicated whether the interface is marked as ignored, which prevents it from appearing in the QPM UI. Select the check box to ignore the interface, or clear it to remove the ignore setting.

Topology Area

Note Not all device information is displayed for devices that are not in the QPM inventory. Only devices that support CDP are displayed.

Table A-13 Interface Properties Page - Topology Area

Field	Description
Connected to Device	Name of the device to which the interface is connected.
IP	IP address of the device to which the interface is connected.
Model	Model of the device to which the interface is connected.

VC ATM Area

Table A-14 Interface Properties Page - VC ATM Area

Field	Description
Check box column	Click a check box to select its row.
VC Name	VC name.
Policy Group	Policy group in the current deployment group to which the VC is assigned. The current deployment group is displayed in the Deployment Group field in the context area at the top of the page.
Set Policy Group button	Click to assign the selected VCs to policy groups. The Policy Assignment Dialog Box opens.

DLCI Frame Relay Area

Table A-15 Interface Properties Page - DLCI Frame Relay Area

Field	Description
Check box column	Click a check box to select its row.
DLCI Name	DLCI name.

Table A-15 Interface Properties Page - DLCI Frame Relay Area (continued)

Field	Description
Policy Group	Policy group in the current deployment group to which the DLCI is assigned. The current deployment group is displayed in the Deployment Group field in the context area at the top of the page.
Set Policy Group button	Click to assign the selected DLCIs to policy groups. The Policy Assignment Dialog Box opens.

Interface VLAN Association Area

Table A-16 Interface Properties Page - Interface VLAN Association Area

Field	Description
VLAN Name	VLAN name.
Is Trunk	Indicates whether the VLAN is a trunk.
Is Auxiliary	Indicates whether the VLAN is an auxiliary VLAN.

Related Topics

- Viewing and Editing Network Element Properties, page 4-22
- Setting Network Element Policy Assignments, page 4-23
- Hiding and Displaying Interfaces, page 4-27

Source-Dest Pair Page

Source-destination pairs are logical (not physical) user-supplied network elements defined for Catalyst 8400 series and Catalyst 8500 series switches, which have QoS features that require a named source and destination interface pair on the device.

Use this page to:

- View, create, edit, and delete source-destination pairs on a device.
- Assign source-destination pairs to or remove them from a policy group.

To open this page, select **Devices > Device Summary**. The Device Table page appears. Open the Device Properties page by clicking the device name, then select **Device Information > Source-Dest Pair** from the TOC.

Table A-17 Source-Dest Pair Page

Field	Description
Pair Name	Source-destination pair name.
Source Interface	Source interface name.
Target Interface	Target (destination) interface name.
Policy Group	Policy in the current policy group to which the source-destination pair is assigned. The current policy group is displayed in the Policy Group field in the context area at the top of the page.
Create button	Click to create a new source-destination pair. The Source-Dest Pair Properties Page appears.
Edit button	Click to edit the selected source-destination pair. The Source-Dest Pair Properties Page appears.
Delete button	Click to delete the selected source-destination pair. The Source-Dest Pair Properties Page appears.
Set Policy Group button	Click to set the policy group assignment of the selected source-destination pair. The Policy Group Assignment dialog box Policy Assignment Dialog Box opens.

Related Topics

- Working with Source-Destination Pairs, page 4-25
- Source-Dest Pair Properties Page, page A-20

Source-Dest Pair Properties Page

Source-destination pairs are logical (not physical) user-supplied network elements defined for Catalyst 8400 and Catalyst 8500 switches, which have QoS features that require a named source and destination interface pair on the device.

Use this page to view and edit source-destination pair properties.

To open this page, do any of the following in the Source-Dest Pairs page:

- Click a source-destination pair name.
- Click **Create**.
- Select a source-destination pair, then click **Edit**.

Table A-18 Source-Dest Pair Properties Page

Field	Description
Pair Name	Enter the source-destination pair name.
Source Interface	Select the source interface.
Target Interface	Select the target interface.
Save button	Click to save changes.

Related Topics

- Working with Source-Destination Pairs, page 4-25
- Source-Dest Pair Page, page A-19

VLANs Page

Use this page to:

- View VLANs that are configured on a device.
- Assign VLANs to or remove them from a policy group.

To open this page, select **Devices > Device Summary**. The Device Table page appears. Open the Device Properties page by clicking the device name, then select **Device Information > VLANs** from the TOC.

Table A-19 VLANs Page

Field	Description
Name	VLAN name.
Index	VLAN index.
Type	VLAN type.

Table A-19 VLANs Page (continued)

Field	Description
Status	Displays the VLAN status. The possible statuses are: • Operational—The VLAN is operational. • Suspended—The VLAN was suspended by the administrator. • mtuTooBigForDevice—The device cannot participate in the VLAN because the VLAN MTU is larger than the device can support. • mtuTooBigForTrunk—The VLAN MTU is supported by the device, but it is too large for one or more of the device trunk ports.
MTU	Displays the VLAN MTU.
Policy	Policy in the current policy group to which the VLAN is assigned. The current policy group is displayed in the PolicyGroup field in the context area at the top of the page.
Interfaces	Click the Interfaces icon in this column to view the interfaces that are assigned to the VLAN.
Set Policy button	Click to assign the selected VLANs to a policy. The Policy Assignment Dialog Box opens.

Related Topics

- Viewing and Editing Network Element Properties, page 4-22
- Setting Network Element Policy Assignments, page 4-23

VLAN Properties Page

Use this page to view and edit a VLAN's properties.

Click the VLAN name in the VLANs page to open.

General Information Area

Table A-20 VLAN Properties Page - General Information Area

Field	Description
Name	Displays the VLAN name.
Index	Displays the VLAN index.
IP	Displays the VLAN IP address.
Subnet Mask	Displays the IP address subnet mask.
MTU	Displays the VLAN MTU.
Rate	Displays the VLAN rate.
Type	Displays the VLAN type.

VLAN Interfaces Association Area

Table A-21 VLAN Properties Page - VLAN Interfaces Association Area

Field	Description
Interface Name	Displays the names of the interfaces that are associated to the VLAN.
Is Trunk	Indicates whether the interface is configured as a trunk.
Is Auxiliary	Indicates whether the interface is configured as an auxiliary.

Related Topics

- Viewing and Editing Network Element Properties, page 4-22

Import Devices Wizard

Use the Import Devices wizard to import devices into the inventory.

The Import Devices wizard contains the following pages:

- Import Devices Wizard - General Page, page A-24
- Import Devices Wizard - Select Devices Page, page A-27

Import Devices Wizard - General Page

Use this page to import new devices into the inventory. For all the import types except virtual devices (which are not physical devices), QPM discovers the devices to import them.

Therefore, devices you attempt to import must be online and connected to the network. You cannot use device DNS names that contain the backslash (\) character to import devices into QPM.

To open this page, select **Devices > Device Summary**. The Device Table page appears. Then click **Add/Import** from the Device Table page.

The Import Devices Wizard General page appears with the following device import options:

- Manual
- Import from DCR
- Import Virtual Devices from File

The contents of this page varies since it depends on the radio button that you select.

Import Options

The following radio buttons determine the source of the device import operation and the content of the rest of the page.

Table A-22 Import Devices Wizard - General Page

Field	Description
Manual radio button	Select to import one device manually. The content of the page is described in Manual Import Option, page A-25.
Import from DCR radio button	Select to import devices from DCR. The content of the page is described in Import From DCR Option, page A-25
Import Virtual Devices from file radio button	Select to import a virtual device from a virtual device file created by QPM. The content of the page is described in Import Virtual Devices from File Option, page A-26.
Next button	Click to proceed to the next step.
Cancel button	Click to cancel the wizard.

Manual Import Option

When importing a device manually, you can use the QPM default device access parameters that are configured for the device group to which the device belongs to connect to the device for discovery.

In this case, you only must enter the device IP address or DNS name. If the device does not use the defaults, or you have not configured defaults, you must enter all of the device access parameters necessary to connect to the device.

Table A-23 Import Devices Wizard - General Page - Manual Import Page

Field	Description
IP Address / DNS	Enter the IP address or the DNS name of the device to import. You cannot use device DNS names that contain the backslash (\) character.
Read Community String	Enter the device's read community string.
Login Mode radio buttons	Select the type of user name, password, and enable password you are entering in the page—either Telnet, SSH.
User Name	Enter the user name to connect to the device. This is not required if the username has not been configured
Password	Enter the password to use for connecting to the device.
Enable Password	Enter the enable or enable secret password to use for connecting to the device.

Import From DCR Option

The Device and Credential Repository (DCR) in Common Services is a common repository of devices, device attributes, and the credentials required to manage devices in a management domain. DCR enables device information to be shared among various network management applications.

Individual applications interact with this repository to get the device list, device attributes, and device credentials.

Applications can read or retrieve the information from DCR and update the information in DCR to share with other applications. Device Credentials Repository (DCR) is the central credentials repository for QPM.

You can import QPM-manageable devices from DCR.

You can choose not to re-import devices that were previously imported, but not added to the QPM inventory by selecting the do not reimport.. check box in the Import devices Wizard General page.

To import device information from CSV file or from RME, use the import functions in DCR. This information can then be imported to QPM using the Import from DCR option.

Table A-24 Import Devices Wizard - General Page - Import from DCR Option

Field	Description
Do not re-import devices that were previously imported, but not added to the QPM inventory check box.	Select to import only those devices that have not been previously imported. Devices that have been imported earlier but not added to the inventory will not be imported if you select this option. For example, if you import 100 devices and add only 50 of those devices to the inventory, the next time you import devices the 50 devices you imported but did not add to the inventory will not be imported again.

Import Virtual Devices from File Option

Table A-25 Import Devices Wizard - General Page - Import Virtual Devices from File Option

Field	Description
File field and Browse button	Use the Browse button to select the virtual devices file on the client system from which to import devices.

Related Topics

- Import Devices Wizard - Select Devices Page, page A-27
- Adding Devices to the Device Inventory, page 4-3
- Adding a Single Device, page 4-5
- Importing Virtual Devices, page 4-7
- Configuring Default Device Access Parameters, page 4-8

Import Devices Wizard - Select Devices Page

Use this page to select devices to import into the inventory.

To open this page, in the Import Devices Wizard - General page, click the **Next** button.

Tip For best performance, select no more than 200 devices. If you have more than 200 devices, import them 200 devices at a time.

Table A-26 Import Devices Wizard - Select Devices Page

Field	Description
Exists in QPM column	Displays the number of devices that are already in the QPM inventory, and therefore cannot be imported again. This field does not appear if you are importing devices manually or are importing virtual devices.
Previously Ignored column	Displays the number of devices that were previously imported but were not added to the QPM inventory. These devices are not available to add to the inventory if you selected the Do not re-import devices that were previously imported check box in the previous step. This field only appears if you are importing devices from DCR.
Total Devices column	Displays the total number of devices that were imported. This field does not appear if you are importing devices manually or are importing virtual devices.
Check box column	Select a check box to select its row.
Primary Device Name column	Displays the device IP address or DNS name entered to identify the device when it was added to the inventory.
Model column	Displays the device model.

Table A-26 Import Devices Wizard - Select Devices Page (continued)

Field	Description
Status column	Displays the device selection status. The following statuses indicate that the device is working properly: • New—Not all credentials present in DCR. • Previously ignored—Ignored during previous imports • Virtual—The device is a virtual device.
Device Group column	Displays the device group to which the device is assigned. If the device group is not listed, then QPM was not yet able to determine the device group. After device discovery, the device is placed in the correct device group: either the device's ACS group, or the default device group if the device does not have an ACS group. QPM might label the device group Unknown when you add a device using a DNS name. Also, if you use the IP address of an interface other than the one used to register the device with ACS.
Back button	Click to return to the previous step.
Finish button	Click to finish the wizard, importing the selected devices.
Cancel button	Click to cancel the wizard.

Related Topics

- Import Devices Wizard - General Page, page A-24
- Adding Devices to the Device Inventory, page 4-3
- Adding a Single Device, page 4-5
- Importing Virtual Devices, page 4-7
- Configuring Default Device Access Parameters, page 4-8

Discovery Status Page

Use this page to view the status of device discovery jobs.

To open this page, do one of the following:

- Select **Devices > Device Summary**. The Device Table page appears. Then select **Discovery Status** from the TOC.
- Finish the Add Device wizard. The Discovery Status page appears automatically.
- Select **Devices > Device Summary > Managed Devices**. The Device Table page appears. Then select a device and click **Rediscover**.
- Select **Devices > Device Summary**. The Device Table page appears. Then click a device name to open the Device Properties page. Click **Rediscover**.

Table A-27 Discovery Status Page

Field	Description
Check box column	Select a check box to select its row.
Job Type column	Displays the job type.
Start column	Displays the job start time.
End column	Displays the job end time.
In Progress column	Displays the number of devices that are in the process of being discovered. Click the number to view details about discovery of these devices. The Discovery Status Devices List Dialog Box opens.
Completed column	Displays the number of devices that have been discovered. Click the number to view details about discovery of these devices. The Discovery Status Devices List Dialog Box opens.
Total column	Displays the number of devices that are in the process of being discovered or have been discovered. Click the number to view details about discovery of these devices. The Discovery Status Devices List Dialog Box opens.
User column	Displays the user who started the job.

Table A-27 Discovery Status Page (continued)

Field	Description
Delete button	Click to delete the selected jobs. This does not stop the discovery job.
Refresh Rate list box	Select a page refresh rate from the list. The refresh rate determines how often the page refreshes with updated information.

Related Topics

- Discovery Status Devices List Dialog Box, page A-30
- Viewing Device Discovery Status, page 4-10
- Rediscovering Device Information, page 4-15

Discovery Status Devices List Dialog Box

Use this dialog box to get detailed information about devices in the Discovery Status report.

To open, click the number in the In Progress, Completed, or Total columns in the Discovery Status report.

Table A-28 Discovery Status Devices List Dialog Box

Field	Description
Primary Device Name column	Displays the device IP address or DNS name entered to identify the device when it was added to the inventory.
Model column	Displays the device model.

Table A-28 Discovery Status Devices List Dialog Box (continued)

Field	Description
Status column	Displays the device status. The following statuses indicate that the device is working properly: • OK • Virtual—The device is a virtual device. The following statuses indicate a problem with the device. Devices with these statuses are not usable in QPM: • Unreachable—The QPM server cannot establish basic network connectivity to the device. • SNMP Error—The device has an SNMP error that is preventing QPM from gathering the data it needs to work with the device. These are the common causes: – The device public community string entered in QPM is incorrect. – QPM can't read all of the necessary SNMP information from the device, possibly because there are corrupted or missing MIBs. – The device does not have a functioning SNMP engine. – The SNMP request timed out, typically because the device or network was too congested to respond before the timeout limit. The possible resolutions are to increase the SNMP timeout value and to increase the number of SNMP retries. • Telnet Error—QPM cannot connect to the device using Telnet. These are the common causes: – The device Telnet password entered in QPM is incorrect. Correct the Telnet password in QPM. – SSH is enabled but SSH login failed because SSH is not configured correctly on the device. Fix the SSH configuration on the device. – The login to the device failed. – There is no Telnet connection to the device.

Table A-28 Discovery Status Devices List Dialog Box (continued)

Field	Description
OS column	Displays the device operating system (OS) version.
Mapped OS column	Displays the OS version that QPM has mapped to the device. See Adding Devices to the Device Inventory, page 4-3 for information about mapped OS versions.
Close button	Click to close the dialog box.

Related Topics

- Discovery Status Page, page A-29
- Viewing Device Discovery Status, page 4-10
- Rediscovering Device Information, page 4-15

Device Grouping

The following topics describe the fields in the pages that are accessed from the Device Grouping option:

- Device Groups Page, page A-32
- Device Group Properties Page, page A-34
- ACS Device Group Privileges Page, page A-37
- Device Folders Page, page A-39
- Device Folder Properties Page, page A-40
- Device Group Selection Page, page A-40

Device Groups Page

Device groups are groups of devices (and their network elements) within the inventory that are created and maintained in ACS, except the default device group, which exists and is maintained only in QPM.

Use this page to:

- View the device groups in the inventory.
- Edit device group properties.

To open this page, select **Devices > Device Grouping**. The Device Table page appears. Then select **Device Groups** from the TOC.

Table A-29 Device Groups Page

Field	Description
Radio button column	Select a radio button to select its row.
Name column	Displays the device group name.
Description column	Displays the device group description.
Active Device Group column	Indicates whether the device group is the active device group. The active device group has a check mark in this column.
Device Folders column	Click the Device Folders icon in the column to view the device folders that exist within the device group. The Device Folders page appears.
Edit button	Click to edit the properties of the selected device group. The Device Group Properties Page appears.
Set Active button	Click to set the selected device group as the active device group. This setting takes effect throughout the QPM UI. Only the devices, deployment groups, and policy groups in the active device group appear in the UI. To work with items from another device group in the QPM UI, set that device group to be the active device group.
Delete button	Click to delete the selected device group. Any deployment groups and policy groups contained in the device group are also deleted. This feature is useful because device groups are not automatically deleted from QPM when you delete them in ACS, even when you synchronize device group information with ACS. This gives you the opportunity to edit your QPM deployment groups and policy groups before manually deleting the device group.

Related Topics

- Device Group Properties Page, page A-34
- Working with Device Groups, page 4-29
- Understanding Device Groups, page 4-30
- Setting the Active Device Group, page 4-32
- Synchronizing Permissions and Device Group Information, page 4-32
- Editing Device Group Properties, page 4-33

Device Group Properties Page

Device groups are groups of devices (and their network elements) within the inventory that are created and maintained in ACS, except the default device group, which exists and is maintained only in QPM.

Many of the device group properties are the same properties that QPM maintains for devices. These device group properties are assigned to all devices in the device group by default. You can override these defaults by entering different device properties for an individual device.

Use this page to view and edit device group properties.

To open this page, do any of the following in the Device Groups page:

- Click a device group name.
- Select the check box next to a device group, then click **Edit**.

General Information Area

Table A-30 Device Group Properties Page - General Information Area

Field	Description
Device Group Name	Displays the device group name.
Description	Displays the device group description. Edit the text in this field to change the description.

Device Settings Area

Table A-31 Device Group Properties Page - Device Settings Area

Field	Description
Enable Access Control Policies	Select to enable creation and modification of access control policies.
Enable Write Memory	Select to enable writing device configuration changes to the device's memory.
Enable NBAR Port Mapping	Select to enable NBAR port mapping.

Default Access Parameters Area

For security, fields that contain passwords do not display the text you enter.

Table A-32 Device Group Properties Page - Default Access Parameters Area

Field	Description
Read Community String	Contains the device read community string that QPM uses to access the device. You can change it by entering a new value in the field.
Blind login	Select to enable blind login to the device, in which QPM sends login information to the device (including access parameters) without waiting for or evaluating return prompts from the device. You can use any characters for the blind login, except $, ^, and \.
Use SSH connection	Select to enable support for SSH when connecting to the device.
User Name	Contains the username that QPM uses to access the device. You can change it by entering a new value in the field.
Enable Password	Contains the enable or enable secret password that QPM uses to access the device. You can change it by entering a new value in the field.
Password	Contains the password that QPM uses to access the device. You can change it by entering a new value in the field.

ACL Ranges Area

Select ACL ranges for translation of QPM policies to CLI commands.

Note QPM supports only extended ACLs. QPM can upload standard ACLs, and on deployment, they are converted to extended ACLs.

Table A-33 Device Group Properties Page - ACL Ranges Area

Field	Description
Range 1	The starting (from) and ending (to) numbers for the first range of ACL numbers QPM can use. The default is 100 to 199.
Range 2	The starting (from) and ending (to) numbers for the second range of ACL numbers QPM can use. The default is 2000 to 2699.
Range 3	The starting (from) and ending (to) numbers for the third range of ACL numbers QPM can use. The default is that there is no third range.

Buttons

Table A-34 Device Group Properties Page - Buttons

Field	Description
Save button	Click to save any changes you have made in the page.

Related Topics

- Device Groups Page, page A-32
- Working with Device Groups, page 4-29
- Understanding Device Groups, page 4-30
- Setting the Active Device Group, page 4-32
- Synchronizing Permissions and Device Group Information, page 4-32
- Editing Device Group Properties, page 4-33

ACS Device Group Privileges Page

Use this page to manually synchronize the user permissions and device group information in the inventory with ACS or CiscoWorks Common Services (depending on which you are using to administer device groups and user permissions).

Typically you would synchronize in the following cases:

- When you know changes have been made to the ACS or CiscoWorks Common Services device group assignments or access privileges.
- When your CiscoWorks user role has changed since you logged into QPM.

To open this page, select **Devices > Device Grouping**. The Update Passwords page appears. Then select **ACS Device Group Privileges** from the TOC.

If you are using ACS mode, this view only gives you a high-level view of your privileges. Although this table might show that you have a privilege, you might not have all the sub-privileges for that privilege type.

If you cannot perform a task even though this page indicates you have permission, first press Sync to synchronize with ACS.

If you still cannot perform the task, view the privilege settings within ACS to determine if you are missing a sub-privilege.

Table A-35 ACS Device Group Privileges Page

Field	Description
Server mode	Displays which server type is being used to administer user permissions and device groups, either ACS or CiscoWorks (CMF).
Privilege Summary Table	
Device Group	A list of the device groups defined in QPM. If you are using CiscoWorks (CMF) mode, only the Default device group is listed. If you are using ACS mode, there might be additional groups. For each device group, the privileges you have for the device group are displayed. Privileges are indicated using these symbols: • Check mark—Indicates you have the privilege. • X—Indicates the privilege is denied. • Dash—Indicates the privilege is not applicable to this item.

Table A-35 ACS Device Group Privileges Page (continued)

Field	Description
View	Whether you have permission to view devices. View privilege also typically includes the permission to view deployment groups and deployment job status, preview CLI commands for QPM policies, and view monitoring reports and graphs. View privileges do not allow you to make changes in QPM.
Modify	Whether you have permission change device credentials, import devices, edit de Modify privilege also typically includes the permission to create and modify policies, and to upload deployment groups. Modify privileges do not allow you to deploy policies.
Deploy	Whether you have permission to deploy QPM policies
Delete	Whether you have permission to delete monitoring reports. Delete privilege also typically includes the ability to delete deployment logs and jobs.
Report	Whether you have permission to create or run QPM monitoring reports.
Global Privilege	Displays your privileges for global settings in QPM, that is, settings that are not tied to a specific device group. The possible privileges are: • View—Whether you can view global QPM libraries. Global View privilege also typically includes the permission to view audit logs. • Modify—Whether you can change administrative settings, or create and retrieve backups. Global Modify privilege also typically includes the permission to modify QPM global libraries. To make changes to global settings in QPM, you must have Modify privilege for the device group that contains the CiscoWorks Common Services server. • Delete—Whether you can delete audit logs.
Sync button	Click to synchronize the QPM inventory device group configuration with the ACS or CMF device group configuration.

Device Folders Page

Device folders are groups of devices, used for organizational purposes.

Use this page to view, create, edit, and delete device folders.

To open this page, do any of the following:

- From the Device Groups page, click the Device Folders icon in the Device Folders column of a device group.
- Select **Devices > Device Grouping**. The Device Table page appears. Then select **Device Folders** from the TOC.

Table A-36 Device Folders Page

Field	Description
Check box column	Select a check box to select its row.
Name column	Displays the device folder name. Click a device folder name to view or edit the device folder properties.
Description column	Displays the device folder description.
Devices column	Click the Devices icon in the Devices column to view the devices in a device folder. The Device Table page appears.
Create button	Click to create a new device folder. The Device Folder Properties Page appears.
Edit button	Click to edit the selected device folder. The Device Folder Properties Page appears.
Delete button	Click to delete the selected device folder.

Related Topics

- Device Folder Properties Page, page A-40
- Working with Device Folders, page 4-16
- Creating Device Folders, page 4-17
- Organizing Devices with Device Folders, page 4-17
- Editing Device Folders, page 4-18
- Deleting Device Folders, page 4-19

Device Folder Properties Page

Device folders are groups of devices, used for organizational purposes.

Use this page to view and edit device folders properties, and create new device folders.

To open this page, do any of the following from the Device Folders page:

- Click a device folder name.
- Select the check box next to a device folder name, then click **Edit**.

Table A-37 Device Folder Properties Page

Field	Description
Device Folder Name field	Displays the device folder name. Change the name by editing this field.
Description field	Displays the device folder description. Change the description by editing this field.
Save button	Click to save any changes you have made in the page.

Related Topics

- Device Folders Page, page A-39
- Working with Device Folders, page 4-16
- Creating Device Folders, page 4-17
- Organizing Devices with Device Folders, page 4-17
- Editing Device Folders, page 4-18
- Deleting Device Folders, page 4-19

Device Group Selection Page

Use this page to apply the device groups in ACS, DCR, or CiscoWorks Local, to QPM device inventory.

Table A-38 Device Group Selection page

Field	Description
ACS Groups	Click this radio button to specify that the ACS device groups be used in the QPM device inventory. This radio button will be inactive if QPM has not been configured to work with ACS.
DCR Groups	Click this radio button to specify that the DCR device groups be used in the QPM device inventory.
CiscoWorks Local	Click this radio button to specify that the local CiscoWorks device groups be used in the QPM device inventory.
Apply button	Click to apply the selected option for QPM device inventory.