



Additional Administration Features

The following topics describe additional QPM administration features:

- [Backing Up and Retrieving Data, page 10-1](#)
- [Using the QPM Audit, page 10-9](#)
- [Importing Policies from QPM 2.1.x, page 10-11](#)
- [Changing SNMP Settings, page 10-15](#)

Backing Up and Retrieving Data

You can back up all the QPM data on the QPM server. In the event of data loss, you can retrieve the data that has been backed up.

The following topics describe backing up and retrieving data:

- [Understanding QPM Backups, page 10-2](#)
- [Making and Scheduling Backups, page 10-3](#)
- [Viewing Backup History, page 10-4](#)
- [Retrieving Backup Information, page 10-5](#)
- [Deleting Backups, page 10-7](#)
- [Viewing and Deleting Backup Schedules, page 10-9](#)
- [Troubleshooting Database Backup Problems, page 11-20](#)

**Note**

Backing up is not the same as saving a version of an individual deployment group. To save a version of an individual deployment group, see [Chapter 7, “Deploying QoS Policies.”](#)

Understanding QPM Backups

QPM backups are useful for preserving data in the event of a system problem. However, backups are not suitable for migrating QPM data from one server to another, or for preserving data when upgrading QPM. If you are migrating or upgrading QPM, use the export utility as described in *Installation Guide for QoS Policy Manager*.

You can create the following types of backups to save QPM information on the QPM server:

- **Full backup**—Backs up the QPM database on the QPM server, which includes device information, policies, and completed monitoring tasks, but does not include reports. The file name of each full backup contains the date and time of the backup. You can make a full backup at any time to a location of your choice on the QPM server or to another computer through a mapped network drive. You can retrieve a full backup, and you can delete full backups.
- **Incremental backups**—An incremental backup saves all the changes since the previous incremental backup. Incremental backups are stored in a system-defined location on the QPM server. You can make an incremental backup at any time, and you can also create schedules for incremental backups.

When you retrieve data from incremental backups, all the previous incremental backup files are also used to recreate the QPM database. You can delete all the incremental backups on the QPM server, but you cannot delete individual incremental backups.

Related Topics

- [Making and Scheduling Backups, page 10-3](#)
- [Viewing Backup History, page 10-4](#)
- [Retrieving Backup Information, page 10-5](#)

- [Deleting Backups, page 10-7](#)
- [Viewing and Deleting Backup Schedules, page 10-9](#)

Making and Scheduling Backups

You can make a full or incremental backup at any time. You can also create schedules for incremental backups.

Procedure

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- Step 1** Select **Admin > Backup/Retrieve Backup**.
- If the Backup/Retrieve Backup application is already open, select **Create Backups** in the Backup/Retrieve Backup navigation TOC.
- The Create Backup page appears.
- Step 2** To make an immediate backup, select the Backup Now check box.
- To make a full backup, select the Full radio button. In the Backup directory path field, enter the full path of directory in which you want to save the backup files.
 - To make an incremental backup, select the Incremental radio button. The incremental backup files are saved to a default location on the QPM server.
- Step 3** To create a schedule of incremental backups:
- a. Select the Schedule Incremental Backup check box.
 - b. Enter the date and time of the first scheduled backup.
 - c. Choose the frequency of the backups—once, daily, or weekly.
- See [Create Backup Page, page E-2](#) for more information about the fields in this page.
- Step 4** Click **Submit**.
- If you selected to make an immediate backup, the backup process starts, and the corresponding Retrieve Backup page appears.
- If you created a backup schedule, you can view the next scheduled backup in the Scheduled Backups page. See [Viewing and Deleting Backup Schedules, page 10-9](#).



Note You can create multiple backup schedules. You must click **Submit** to save each schedule.

Related Topics

- [Viewing Backup History, page 10-4](#)
- [Retrieving Backup Information, page 10-5](#)
- [Deleting Backups, page 10-7](#)
- [Troubleshooting Database Backup Problems, page 11-20](#)

Viewing Backup History

You can view the status and other details of full and incremental backups.

Procedure

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- Step 1** Select **Admin > Backup/Retrieve Backup**. The Create Backup page appears.
- Step 2** To view the full backup history, select **Retrieve Full Backup** in the TOC in the left pane. The Retrieve Backup page appears displaying a list of full backups. From this page you can also retrieve and delete full backups. See [Retrieve Full Backup Page, page E-3](#) for information about this page.
- Step 3** To view the incremental backup history, select **Retrieve Incremental Backup** in the TOC in the left pane. The Retrieve Incremental Backup page appears displaying a list of incremental backups. From this page you can also retrieve and delete all incremental backups. See [Retrieve Incremental Backup Page, page E-4](#) for information about this page.
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Related Topics

- [Retrieving Backup Information, page 10-5](#)
- [Deleting Backups, page 10-7](#)

Retrieving Backup Information

You can retrieve the data from a full backup, or from the incremental backups. The retrieved data overwrites current QPM data on the QPM server.



Caution

You should use the QPM Retrieve feature with care.

The following topics describe retrieving full and incremental backups:

- [Retrieving a Full Backup, page 10-5](#)
- [Retrieving Incremental Backups, page 10-6](#)
- [Viewing Retrieved Backup History, page 10-7](#)

Retrieving a Full Backup

You can retrieve a full backup at any time. Each full backup file is identified by the backup date and time.

Procedure

- Step 1** Select **Admin > Backup/Retrieve Backup**. The Create Backup page appears.
 - Step 2** In the TOC in the left pane, select **Retrieve Full Backup**. The Retrieve Full Backup page appears displaying a list of full backups.
 - Step 3** Select the backup you want to retrieve.
 - Step 4** Click **Retrieve Backup**. The Retrieved Backup History page appears displaying the status and other details of the retrieved backup.
 - Step 5** Log out of QPM and the CiscoWorks desktop, and restart the QPM server.
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Note

After you retrieve a full backup, you must delete all previous incremental backups before you can make incremental backups for the retrieved database. See [Deleting Incremental Backups, page 10-8](#) for more information.

Related Topics

- [Retrieving Incremental Backups, page 10-6](#)
- [Viewing Retrieved Backup History, page 10-7](#)

Retrieving Incremental Backups

When you retrieve data from incremental backups, all the incremental backup files up to and including the selected backup are used to recreate the QPM database.

Procedure

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- Step 1** Select **Admin > Backup/Retrieve Backup**. The Create Backup page appears.
 - Step 2** In the TOC in the left pane, select **Retrieve Incremental Backup**. The Retrieve Incremental Backup page appears displaying a list of incremental backups.
 - Step 3** Select the backup you want to retrieve.
 - Step 4** Click **Retrieve Backup**. The Retrieved Backup History page appears displaying the status and other details of the retrieved backup.
 - Step 5** Log out of QPM and the CiscoWorks desktop, and restart the QPM server.
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**Note**

After you retrieve from an incremental backup that is not the latest, you must delete all previous incremental backups before you can create incremental backups for the retrieved database. See [Deleting Incremental Backups, page 10-8](#) for more information.

Related Topics

- [Retrieving a Full Backup, page 10-5](#)
- [Viewing Retrieved Backup History, page 10-7](#)

Viewing Retrieved Backup History

You can view the status and other details of retrieved backups.

Procedure

- Step 1** Select **Admin > Backup/Retrieve Backup**. The Create Backup page appears.
- Step 2** In the TOC in the left pane, select **Retrieved Backup History**. The Retrieved Backup History page appears displaying a list of retrieved backups. See [Retrieved Backup History Page, page E-5](#) for more information about this page.
- Step 3** To delete a row from the table, select the row, and click **Delete**.
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Related Topics

- [Retrieving a Full Backup, page 10-5](#)
- [Retrieving Incremental Backups, page 10-6](#)

Deleting Backups

The following topics describe deleting full and incremental backups:

- [Deleting a Full Backup, page 10-7](#)
- [Deleting Incremental Backups, page 10-8](#)

Deleting a Full Backup

You can delete a full backup at any time. Each full backup file is identified by the backup date and time.

Procedure

- Step 1** Select **Admin > Backup/Retrieve Backup**. The Create Backup page appears.
- Step 2** In the TOC in the left pane, select **Retrieve Full Backup**. The Retrieve Full Backup page appears displaying a list of full backups.

- Step 3** Select the backup you want to delete.
- Step 4** Click **Delete**. A warning appears. Click **OK** to continue.
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Related Topics

- [Deleting Incremental Backups, page 10-8](#)

Deleting Incremental Backups

You can delete all the incremental backups on the QPM server, but you cannot delete individual incremental backups. This is because when you retrieve incremental backups, all the previous incremental backup files are used to recreate the QPM database.



Note

You must delete all incremental backups after you retrieve a full backup, or an incremental backup that is not the latest backup, before you can make incremental backups for the retrieved database.

Procedure

- Step 1** Select **Admin > Backup/Retrieve Backup**. The Create Backup page appears.
- Step 2** In the TOC in the left pane, select **Retrieve Incremental Backup**. The Retrieve Incremental Backup page appears displaying a list of incremental backups.
- Step 3** To delete all incremental backups, click **Delete All**. A warning appears. Click **OK** to continue.
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Related Topics

- [Deleting a Full Backup, page 10-7](#)

Viewing and Deleting Backup Schedules

You can view details of the next incremental backup for each schedule you have defined, and you can delete an entire backup schedule.

Procedure

- Step 1** Select **Admin > Backup/Retrieve Backup**. The Create Backup page appears.
- Step 2** In the TOC in the left pane, select **Scheduled Backups**. The Scheduled Backups page appears displaying a list of the next scheduled backup for each backup schedule. See [Scheduled Backups Page, page E-6](#) for more information about this page.
- Step 3** To delete an entire schedule (not just the next backup), select the backup that belongs to the schedule you want to delete, and click **Delete Schedule**.
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Tip

To modify the time or frequency of a schedule, delete the schedule and create a new schedule.

Related Topics

- [Making and Scheduling Backups, page 10-3](#)

Using the QPM Audit

The QPM audit feature provides audit logs about changes made to QPM deployment groups, global libraries, and device information:

- [Viewing Audit Logs, page 10-10](#)
- [Deleting Audit Logs, page 10-11](#)

Viewing Audit Logs

You can view the following audit logs:

- **Policy groups**—These logs track changes made to policy group properties and policies, including policy group device assignments in a specified deployment group.
- **Deployment groups**—These logs track Deploy, Save, Restore, Upload, and Import actions on a deployment group. The audit provides a message for each operation. Three message levels are available—information, warning, and error.
- **Libraries**—These logs track changes made to IP aliases, application aliases, and policy group templates. (System-created policy group templates are not recorded in the Audit logs.)
- **General**—These logs track changes made to the QPM device inventory following device rediscovery.

The logs provide links to view the items that have been modified.

Procedure

- Step 1** Select **Admin > Audit**. The Audit Trail Policy Groups/Policies page appears.
- Step 2** Select the type of logs you want to view in the TOC.
- Step 3** For policy groups and deployment groups logs, select the deployment group for which you want to view information.

See the following topics for more information about the fields in these pages:

- [Audit Trail Policy Groups/Policies Page, page E-7](#)
 - [Audit Trail Deployment Group Actions Page, page E-8](#)
 - [Audit Trail Library Components Page, page E-9](#)
 - [Audit Trail General Logs Page, page E-10](#)
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Related Topics

- [Deleting Audit Logs, page 10-11](#)

Deleting Audit Logs

You can delete old audit logs that you no longer need.

Procedure

- Step 1** Select **Admin > Audit**. The Audit Trail Policy Groups/Policies page appears.
 - Step 2** Select the type of logs you want to delete in the TOC.
 - Step 3** For policy groups and deployment groups logs, select the deployment group for which you want to delete logs. The logs for the selected deployment group are displayed.
 - Step 4** Click **Clear**. A Calendar dialog box opens.
 - Step 5** Use the navigation arrows above the calendar table to navigate through the calendar. In the calendar table, choose the date to which you want to delete logs.
 - Step 6** Click **OK**. The audit logs before and including the selected date are deleted, and no longer appear in the Audit display.
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Related Topics

- [Viewing Audit Logs, page 10-10](#)

Importing Policies from QPM 2.1.x

QPM provides a utility to import policy information from a QPM 2.1.x export file. This serves as a basis for using QPM 3.x with policies that were defined using QPM 2.1.x.

The QPM 2.1.x export file contains QPM policy database information (including both deployed and non-deployed policies) in XML format. The QPM import process creates a separate policy group for each interface that has QoS properties and policies defined for it in the export file. If the network elements on which the policies were originally defined, exist in the QPM device inventory, they can be assigned to the appropriate policy groups during the import process.

The import process from a QPM 2.1.x export file can result in a large number of policy groups if you have defined policies for many interfaces. After the import process has completed, you can reduce the number of policy groups, to simplify working with QPM.

**Note**

Alternatively, if the QPM 2.1.x policies were deployed to devices, you can avoid the creation of a large number of policy groups by uploading your deployed policies from the devices rather than importing the QPM 2.1.x data. See [Uploading Device QoS Configurations to Policy Groups, page 6-16](#) for information on uploading policies.

QPM does not assign network elements to existing devices in the following cases:

- The current device constraints are different from the imported devices, for example, the IOS version has been changed.
- The network element belongs to an ASIC group.

**Note**

If an interface is a member of an imported QPM 2.1.x device group, and also has its own policies, network element assignments are made only for the QPM 2.1.x device group policies.

The following changes are made to imported policies:

- Imported policies of policy types that have been upgraded in QPM 3 are upgraded. For example, QPM 2.1.x limiting policies are converted to QPM 3 policing policies, QPM 2.1.x coloring policies with PBR are converted to QPM 3 marking policies, and so on.
- Imported application services are translated into appropriate conditions in the filters.
- Imported policies for devices with IOS 12.2T branch versions are mapped to the relevant 12.2T branch version.
- Imported policies for devices with IOS 12.1E branch versions are mapped to the relevant 12.1E branch version.
- Policies for GGSN that are supported by 7200 devices, are imported into policy groups with device constraints for 7200 devices.

The following policies are not imported:

- Policies for devices with IOS 11.1, 11.2, and 11.3.
- Policies for LocalDirector devices.
- GGSN policies that are not supported by 7200 devices.

Before You Begin

- The concepts used in QPM 3 differ from those used in QPM 2. Become familiar with how QPM groups and organizes QoS policies before you convert to QPM 3.
- Export your QPM 2.1.x databases using the Export to XML utility that is provided on the QPM installation CD. See the *Installation Guide for QoS Policy Manager* for information on installing and using the Export to XML utility.
- Ensure that the devices to which you want to assign the imported policies, exist in the QPM device inventory. You can import devices from a QPM 2.1.x exported database into the QPM device inventory. See [Chapter 4, “Managing Devices”](#) for more details.

Before You Begin

If you are working with multiple ACS device groups, you should repeat this procedure for each device group in your QPM 3 system.

Procedure

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- Step 1** Select **Admin > Import Policy Groups**. The Import Policy Groups From 2.1 page appears.
 - Step 2** Select the deployment group to which you want to import the policies.
 - Step 3** In the Import file path field, enter the name and location of the QPM2.1.x XML file you want to import, or click the Browse button to select the file.
 - Step 4** Click **OK**.

The Import Policy Groups - Device Selection page appears displaying a list of the devices in the QPM device inventory. By default, all devices are selected.

For more information about this page, see [Import Policy Groups - Device Selection Page, page E-13](#).

Step 5 Clear the check boxes by those devices you do not want to assign to imported policy groups. Click **Import Policies**.

A dialog box appears informing you that the import process has started.

Step 6 In the dialog box, do one of the following:

- View a report showing the status of the import process, and information about the policies that were not imported:
 - Click **View**. The Import Policy Groups Reports page appears.
 - Select the report you want to view, and click **View**. The selected report is displayed in a separate window. See [Import Report, page D-30](#) for information about the Import report.



Note To view a report later, select **Reports > Import Policy Groups** to display the Import Policy Groups Reports page.

- Click **Continue** to continue editing policies. The Policy Groups page appears.

Step 7 Minimize the number of policy groups in one of the following ways:

- If you have several identical policy groups, assign all corresponding interfaces to only one of these policy groups. Delete the other identical policy groups.
 - If you have several sets of identical policy groups, create a new deployment group. Copy one of each type of policy group to the new deployment group, and assign the relevant interfaces to each new policy group.
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Changing SNMP Settings

QPM uses Simple Network Management Protocol (SNMP) to query network devices, and discover device information.

You can change the following SNMP properties, if you have the appropriate privileges:

- **Timeout**—Amount of time the system should wait for a device to respond before trying to access it again.
- **Retries**—Number of times the system tries to access devices.
- **Minimum thread number**—The minimum number of SNMP requests that can be processed concurrently.
- **Maximum thread number**—The maximum number of SNMP requests that can be processed concurrently.

Procedure

- Step 1** Select **Admin > SNMP**. The SNMP Properties page appears.
- Step 2** Change SNMP parameters as required. See [SNMP Parameter/Properties Page](#), page E-14 for more information about the fields in this page.
- Step 3** Click **Save**.
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