



## Using QoS Analysis

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QPM allows you to obtain a baseline traffic profile of your network and analyze the effect of QoS on the network.

The following topics describe how to use QPM performance analysis:

- [Understanding QoS Analysis, page 9-1](#)
- [Performing Baseline QoS Analysis, page 9-5](#)
- [Using QoS Analysis with Existing QoS Configuration, page 9-6](#)
- [Performing Historical QoS Analysis, page 9-7](#)
- [Performing Real-Time QoS Analysis, page 9-18](#)

## Understanding QoS Analysis

QPM allows you to perform the following analysis of your network's traffic:

- You can perform a baseline analysis to determine how traffic is flowing on the network. For more information, see [Performing Baseline QoS Analysis, page 9-5](#).
- You can analyze the effect of QoS on the network. You can use this information to assess the effectiveness of the QoS and plan policy changes. For more information, see [Understanding the Types of QoS Analysis, page 9-2](#).

Only policies that are deployed to the network by QPM can be monitored. For information about monitoring QoS that you configured without using QPM, see [Using QoS Analysis with Existing QoS Configuration, page 9-6](#).

**Tip**

If you add interfaces to a device that has network elements that are being monitored, either by running an historical monitoring task or by running a real-time monitoring report, you must rediscover the device. If you do not rediscover the device, the monitoring application will not be able to poll monitoring data for the device interfaces, resulting in an application error. For information about rediscovering devices, see [Rediscovering Device Information, page 4-19](#).

The following topics provide more overview information about using QPM QoS analysis:

- [Understanding the Types of QoS Analysis, page 9-2](#)
- [Understanding What QPM Monitors, page 9-3](#)

## Understanding the Types of QoS Analysis

There are two types of QoS analysis in QPM:

- Historical analysis monitors traffic for the QPM policies you select on one or more interfaces, polling on a regular basis and storing the gathered data.

Historical monitoring jobs gather data between a start time and end time that you define. All of the gathered data can be displayed in historical monitoring reports.

You would typically use historical monitoring as an operations tool. It is useful for monitoring the performance of your network's QoS configuration on an ongoing basis, over a period of time.

- Real-time analysis monitors traffic for all QPM policies on one interface continuously, in real time. No historical data is stored.

You would typically use real-time monitoring for immediately viewing the effects of QoS change, troubleshooting QoS problems, or investigating new QoS configurations in a lab environment.

### Related Topics

- [Performing Historical QoS Analysis, page 9-7](#)
- [Performing Real-Time QoS Analysis, page 9-18](#)

## Understanding What QPM Monitors

QPM monitors class-based QoS and CAR QoS policies on devices running specific Cisco IOS software versions. When you create a QoS analysis task, QPM only lets you select device interfaces that have supported Cisco IOS software versions and supported QoS policy types. Keep these things in mind when creating QoS analysis tasks; this information can also help you decide what types of policies to define on interfaces you want to monitor.

- See the QPM device support information for a detailed list of devices and Cisco IOS Software versions that are supported for QoS analysis. Select the device support page for your version of QPM at this URL:

[http://www.cisco.com/en/US/products/sw/cscowork/ps2064/products\\_device\\_support\\_tables\\_list.html](http://www.cisco.com/en/US/products/sw/cscowork/ps2064/products_device_support_tables_list.html)

- QPM uses the information collected in the Class Based QoS MIB and in the CAR MIB. Features that are not supported by the Class Based QoS MIB or the CAR MIB cannot be monitored. For example, the CAR MIB does not include DSCP information, so policies with the DSCP option cannot be monitored.
- An interface will have Class Based QoS MIB information if you define the QoS scheduling property for the interface as Class based QoS. In addition, only the policies on the interface are monitored. For example, if you want to monitor WRED, you must define it as the action for a policy. If you define it as a QoS property on the interface, it cannot be monitored.
- An interface will have CAR MIB information if you define the QoS scheduling property as Default, and define policing policies on the interface. Only policing policies are monitored.
- If you define WRED as a policy action, only IP precedence-based WRED can be monitored; if you use DSCP-based WRED, you will not be able to monitor WRED on the interface.
- QPM does not monitor network elements that are assigned to a policy group configured with Modular Shaping.
- QPM only monitors policies that were created by QPM. If you define a policy on the interface using the device's CLI commands, QPM cannot monitor the policy unless you upload it to QPM, and then redeploy it to the device using QPM.

Both historical and real-time QoS monitoring reports display the same types of QoS monitoring data. Each QoS monitoring report contains graphs of the following types of QoS monitoring data:

- The amount of traffic that matched the policy's filters (before QoS), the amount of matching traffic that was dropped by QoS, and the amount of matching traffic that was transmitted (after QoS).

This information provides a general view of the efficiency of queued traffic through an interface. For example, you can see how much traffic has been dropped, and whether, on average, the classes of traffic are using the bandwidth allocated to them efficiently.

See the following topics for more detailed information:

- [Policies Graphs: Matching and Dropped Traffic for Policies Page, page D-13](#)
- [QoS Policy Manager - Real Time Report Window, page D-24](#)
- A breakdown of the traffic that matched each of the policy's filters.

This information allows you to see how traffic within each class is distributed among its match statements. This enables you to analyze your traffic by application. For example, you can see if traffic from one application is using too much of the bandwidth allocated to its traffic class.

See the following topics for more detailed information:

- [Filters Graphs: Matching Traffic for Filter Conditions Page, page D-16](#)
- [QoS Policy Manager - Real Time Report Window, page D-24](#)
- The amount of traffic to which QoS actions were applied because of the policy's QoS configuration, broken out by the following types of QoS features:
  - Queuing
  - WRED
  - Policing
  - Traffic shaping

If the only action is marking or CAR, there are no action graphs.

See the following topics for more detailed information:

- [Actions Graphs: Policy Actions on Matching Traffic Page](#), page D-18
- [QoS Policy Manager - Real Time Report Window](#), page D-24

## Performing Baseline QoS Analysis

To determine how to deploy QoS on a network, it is helpful to perform a baseline analysis of the network's traffic flow. A baseline QoS analysis shows you how the important traffic classes on your network are flowing. You can use this information to design QoS that better meets the needs of your network.

Baseline QoS analysis is part of the larger QoS workflow that you should use to ensure the effectiveness of the QoS on your network on an ongoing basis. For more information, see [Planning for QoS Deployment](#), page 2-1.

In summary, you use QPM QoS analysis to perform a baseline traffic analysis by deploying QoS policies that identify the important traffic classes on your network without performing any QoS actions that affect traffic flow. The purpose of this is to identify the traffic and initiate data collection. Then you can view QoS analysis reports that show traffic throughput for identified applications or classes.

You can perform a baseline QoS analysis using either historical or real-time QoS analysis. For information about determining which type of QoS analysis to use, see [Understanding the Types of QoS Analysis](#), page 9-2.

### Selecting Traffic Classes

Baseline QoS analysis works best when you identify ten or fewer traffic classes to monitor. Each traffic class can contain one or more traffic types (for example, voice classes, SAP, Oracle, or web traffic), so you should group the important applications running on your network into sensible classes.

The QoS monitoring reports show network activity only at the class level. You can view the breakdown of the traffic types within a class, only if there are any policy traffic classifier rules defined for that class.

### Applying QoS Policies To Enable Baseline Traffic Analysis

After you have identified your traffic classes, you can create QPM policies that mark the classes without taking any QoS actions that affect traffic flow. The following QoS settings are ideal for this:

- QoS feature: Policing.
- Set conformed, exceeded, and violated actions to transmit.
- Do not configure an excess rate.

For information about creating policies, see [Working with Policy Groups and Policies](#).

### Related Topics

- [Planning for QoS Deployment, page 2-1](#)
- [Working with Policy Groups and Policies](#)

## Using QoS Analysis with Existing QoS Configuration

Only policies that are deployed to the network by QPM can be monitored. If you have configured QoS on devices without using QPM, you can use this procedure to monitor the QoS that you have already created. However, only supported policy types can be monitored, so if you have defined unsupported policy types, uploading them to QPM will not enable you to monitor them. See [Understanding What QPM Monitors, page 9-3](#) for information on supported policy types.

### Procedure

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- Step 1** Upload the devices' configurations into QPM. For more information, see [Uploading Device QoS Configurations to Policy Groups, page 6-16](#).  
QPM automatically creates policies based on device QoS configuration.
- Step 2** Edit the automatically created policies as desired. For more information, see [Working with Policy Groups and Policies](#).
- Step 3** Deploy the uploaded policies back to the network to monitor them.  
For more information, see [Deploying Policies and QoS Configurations, page 7-3](#).  
This step is necessary because QPM only monitors QoS that it has deployed.

You can now monitor the policies that you deployed to the network.

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## Performing Historical QoS Analysis

To monitor policies, you create a QoS monitoring task. Each historical monitoring task has a corresponding report that you can view.

You will not see data on the historical graphs immediately after the task starts. Depending on when you start the task, the length of the polling interval, and how many other tasks are being run concurrently, it can take several hours to see graphed data, due to how QPM collects the data and writes it to the QPM database. To see any data in the graphs, your task must include at least three polling periods. For example, if you use a polling period of 30 minutes, and run the task for only one hour, you will not see any graphed data for the task. If you need to see data immediately, as it is collected, use real-time monitoring.

You define the traffic to be monitored by specifying the interfaces and policies to be monitored. Each historical QoS analysis task can monitor a maximum of 12 interfaces, and a maximum of 12 policies on each interface. You should not try to monitor more than 600 interfaces simultaneously using concurrently running tasks. If you are monitoring a large network of more than 600 interfaces, select a representative set of interfaces rather than all of them.

You specify when each task starts and ends, and the polling interval. The duration limits for historical monitoring tasks depend on the polling interval, as shown in [Table 9-1](#).

**Table 9-1** Historical Monitoring Task Duration Limits

Polling Interval	Maximum Task Duration (Days)
1	1
5	5
10	10
15	30
20	40
25	50

**Table 9-1** *Historical Monitoring Task Duration Limits (continued)*

Polling Interval	Maximum Task Duration (Days)
30	90
60	180

**Note**

When viewing a historical analysis report, you can select the time period of data that is displayed. This lets you zoom in on selected parts of the graphs.

The amount of time required to load a report into the Analysis Report page depends on the amount of data collected, and can take from half a minute to several minutes.

Historical QoS analysis data is stored with all the QPM data, on the QPM server. If you run out of available disk space for collecting historical QoS analysis data, all current tasks are automatically stopped. For information about freeing disk space and resuming monitoring tasks, see [Freeing Disk Space for QoS Analysis, page 9-16](#).

**Tip**

- If you make changes using QPM to a QoS feature that QPM is monitoring, running historical monitoring tasks that are monitoring the QoS feature stop when you deploy the changes. All data collected up to the time of the change is preserved. To continue monitoring the QoS feature that you changed, you must create new monitoring tasks.
- If you remove a device that contains network elements that are being monitored by a historical monitoring task, QPM continues to monitor these network elements. To stop QPM from monitoring these network elements, you must stop or delete the historical monitoring task. If the historical monitoring task was monitoring other network elements that you want to continue to monitor, you must create a new historical monitoring task to monitor those network elements, because you cannot edit a historical monitoring task.

The following topics describe historical QoS analysis:

- [Defining a Historical QoS Analysis Task, page 9-9](#)

- [Editing Historical QoS Analysis Tasks, page 9-11](#)
- [Deleting Historical QoS Analysis Tasks, page 9-12](#)
- [Stopping Historical QoS Analysis Tasks, page 9-12](#)
- [Viewing Historical QoS Analysis Reports, page 9-13](#)
- [Exporting Historical QoS Analysis Data, page 9-14](#)
- [Customizing Historical QoS Analysis Reports, page 9-15](#)
- [Freeing Disk Space for QoS Analysis, page 9-16](#)

#### Related Topics

- [Understanding QoS Analysis, page 9-1](#)

## Defining a Historical QoS Analysis Task

Define a historical monitoring task to begin monitoring traffic for policies on one or more interfaces. The collected data is stored and used in historical monitoring reports.

#### Before You Begin

QoS analysis operates within the context of the active device group. For more information, see [Setting the Active Device Group, page 4-36](#). This has the following effects:

- When creating a QoS analysis task, only devices that belong to the active device group are available to select.
- The QoS analysis task lists (historical and real-time) only display tasks that monitor network elements that belong to the active device group.

#### Procedure

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- Step 1** Select **Reports**. The Historical Monitoring Tasks page appears.
- Step 2** Click **Create**. The Monitoring Task Wizard - Task Definition page appears. For more information about this page, see [Monitoring Task Wizard - Task Definition Page, page D-8](#).

- Step 3** Do the following in the Monitoring Task Wizard - Task Definition page:
- a. Enter a task name in the Name field.
  - b. Select a polling interval from the Polling Interval (min) list box.  
The polling interval is the period of time (in minutes) between each collection of the monitored data.
  - c. Enter a start date and an end date using the Start Time and End Time fields.  
You can enter each date directly into the field (in the format mm/dd/yyyy), or click the calendar button and use the popup calendar that appears.  
If the duration of the task is longer than the limit for the specified polling interval (see [Table 9-1](#)), an error message appears, displaying the duration limit in days.
  - d. Check the Enabled check box to enable the task. If you do not, the task will not run.
  - e. Optionally, you can enter a comment or description for the task in the Enter a comment or description field.
  - f. Click **Next**. The Monitoring Task Wizard - Select Devices page appears. For more information about this page, see [Monitoring Task Wizard - Select Devices Page, page D-9](#).
- Step 4** Do the following in the Monitoring Task Wizard - Select Devices page:
- a. Select the check box next to the devices containing the interfaces you want to monitor.  
QPM only lists devices that contain interfaces on which you have defined QoS policies that QPM can monitor.
  - b. Click **Next**. The Monitoring Task Wizard - Select Interfaces page appears. For more information about this page, see [Monitoring Task Wizard - Select Interfaces Page, page D-10](#).
- Step 5** Do the following in the Monitoring Task Wizard - Select Interfaces page:
- a. Select the check box next to the interfaces containing the policies you want to monitor.  
QPM only lists interfaces on which you have defined QoS policies that QPM can monitor.



- Step 2** Select a report from the list, then click **Edit**. The Monitoring Task Wizard starts.
- Step 3** Edit any of the task parameters using the Monitoring Task wizard, as described in [Defining a Historical QoS Analysis Task, page 9-9](#).
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#### Related Topics

- [Performing Historical QoS Analysis, page 9-7](#)
- [Viewing Historical QoS Analysis Reports, page 9-13](#)

## Deleting Historical QoS Analysis Tasks

You can delete historical monitoring tasks that you no longer want to use. When you delete a task, all historical data collected by that task is deleted.

#### Procedure

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- Step 1** Select **Reports**. The Historical Monitoring Tasks page appears.
- Step 2** Select a task from the list, then click **Delete**. You are asked to confirm the deletion.
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#### Related Topics

- [Performing Historical QoS Analysis, page 9-7](#)

## Stopping Historical QoS Analysis Tasks

You can stop a running task. You cannot restart or edit a stopped task, so the primary use of this feature is to stop tasks that have collected sufficient data, but are still running.

#### Procedure

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- Step 1** Select **Reports**. The Historical Monitoring Tasks page appears.

- Step 2** Select a report from the list, then click **Stop**. You are asked to confirm that you want to stop the task.
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#### Related Topics

- [Performing Historical QoS Analysis, page 9-7](#)

## Viewing Historical QoS Analysis Reports

You will not see data on the historical graphs immediately after the task starts. Depending on when you start the task, the length of the polling interval, and how many other tasks are being run concurrently, it can take several hours to see graphed data, due to how QPM collects the data and writes it to the QPM database. To see any data in the graphs, your task must include at least three polling periods. For example, if you use a polling period of 30 minutes, and run the task for only one hour, you will not see any graphed data for the task. If you need to see data immediately, as it is collected, use real-time monitoring.

#### Procedure

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**Step 1** Select **Reports**. The Historical Monitoring Tasks page appears.

**Step 2** Select a report from the list, then click **View Report**.

The Analysis Report page appears. For information about this report, see [Policies Graphs: Matching and Dropped Traffic for Policies Page, page D-13](#).

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#### Related Topics

- [Performing Historical QoS Analysis, page 9-7](#)
- [Customizing Historical QoS Analysis Reports, page 9-15](#)
- [Troubleshooting QoS Analysis Problems, page 11-13](#)

## Exporting Historical QoS Analysis Data

You can export the data gathered by an historical monitoring task to a zip file on your client system. The zip file contains a set of XML files grouped by interface. You can use these files to import the data to another application for analysis.

If you export the data from a task that has not run or did not run successfully, the resulting file will contain only variable names, without the variable definitions that result from running the task.

If a device was unreachable during a polling period, the number shown for the data points is -1.0.

### Export File Format

The export file is in XML format. It contains the data collected by a historical monitoring task, which is separated into the following sections:

- Policy Data—This section contains traffic flow data about all of the traffic monitored by the task. This section contains the following columns:
  - TimeStamp—The time at which each sample was taken. The first column of the entire file contains timestamps, which are used to correlate the data in the sections of the file.
  - Per Class Traffic Discarded by All QoS Drop Actions Bits/sec—The rate, in bits per second, that data was dropped due to QoS actions, since the previous sample.
  - Per Class Traffic Discarded by All QoS Drop Actions Packets/sec—The rate, in packets per second, that data was dropped due to QoS actions, since the previous sample.
  - Matching Traffic Per Class After QoS Actions Bits/sec—The rate, in bits per second, that data was transmitted after QoS was applied, since the previous sample.
  - Matching Traffic Per Class After QoS Actions Packets/sec—The rate, in packets per second, that data was transmitted after QoS was applied, since the previous sample.
  - Per Class Prior to QoS Actions Bits/sec—The rate, in bits per second, that data matched the policy's filters before taking any QoS actions, since the previous sample.

- Per Class Prior to QoS Actions Packets/sec—The rate, in packets per second, that data matched the policy’s filters before taking any QoS actions, since the previous sample.
- Filter Data—This section contains a set of data for each filter monitored by the task. Each set of data contains the following columns:
  - TimeStamp—The time at which each sample was taken. The first column of the entire file contains timestamps, which are used to correlate the data in the sections of the file.
  - Matching Traffic Bits/sec—The rate, in bits per second, that data matched the filter, since the previous sample.
  - Matching Traffic Packets/sec—The rate, in packets per second, that data matched the filter, since the previous sample.
- Actions—This section contains a set of data for each QoS action monitored by the task. The columns differ depending on the type of QoS action, but the first column is the time at which each sample was taken.

### Procedure

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- Step 1** Select **Reports**. The Historical Monitoring Tasks page appears.
- Step 2** Select a report from the list, then click **Export Data**. A dialog box appears stating that the operation might take a few minutes.
- Step 3** Click **OK**. The browser file download process begins.
- Step 4** Use the browser file download process to save the file to your client system.

To view the exported files, unzip them so that the unzip process recreates the directory structure for the files. If the files are not unzipped into the correct directory structure, you will have problems viewing them.

In the directory structure, each interface has its own folder. Within the interface’s folder, there are separate files for each policy defined on the interface.

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## Customizing Historical QoS Analysis Reports

Each historical QoS analysis report has the same customization controls that you can use to customize how the analysis data is presented in the report.

The types of customization you can perform include:

- Displaying the graphs in line or bar format.
- Selecting the graph units of measure.
- Selecting the scale of the graph vertical axis.
- Selecting to organize the graphs by policy or by interface.
- Selecting the time period of data to display.
- Selecting which policies or interfaces to display.

### Procedure

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- Step 1** View a historical QoS analysis report as described in [Viewing Historical QoS Analysis Reports, page 9-13](#).
- Step 2** Use the customization controls available in each historical reports page. See the following for more information:
- [Policies Graphs: Matching and Dropped Traffic for Policies Page, page D-13](#)
  - [Filters Graphs: Matching Traffic for Filter Conditions Page, page D-16](#)
  - [Actions Graphs: Policy Actions on Matching Traffic Page, page D-18](#)
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### Related Topics

- [Performing Historical QoS Analysis, page 9-7](#)
- [Viewing Historical QoS Analysis Reports, page 9-13](#)

## Freeing Disk Space for QoS Analysis

Historical QoS analysis data is stored with all other QPM data, on the QPM server. If you run out of available disk space for collecting historical QoS analysis data, the following happens:

- All running monitoring tasks are stopped automatically, and are set to the status “Stopped due to out of disk space.”

- The next time you open the Historical Monitoring Tasks page, a message notifies you that there is a disk space shortage, and provides instructions to free disk space by rebuilding the database.

**Note**

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This message only appears on the Historical Monitoring Tasks page. You will not receive notification that the disk space limit was reached until you open this page.

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All data collected before the tasks were stopped is available for display in reports. To free the necessary disk space and continue monitoring, you must delete the stopped tasks, and run the Rebuild Database utility from the QPM server. Then you can recreate the deleted tasks to resume running them.

**Note**

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You might not have enough space in the QPM database for monitoring because the percentage reserved free disk space defined during installation is too high. If you have free disk space on the QPM server, you can change the percentage of reserved free disk space. See [Disk Space Shortage Problems, page 11-13](#) for details.

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**Procedure**

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- Step 1** Delete all tasks that have the status “Stopped due to out of disk space.” See [Deleting Historical QoS Analysis Tasks, page 9-12](#).
  - Step 2** Make a full backup of the QPM database. Go to **Admin > Backup / Retrieve Backup** in the CiscoWorks desktop.
  - Step 3** Close QPM and log out of the CiscoWorks desktop.
  - Step 4** On the QPM server, run the Rebuild Database utility. This utility is accessed from **Start > Programs > Cisco Systems > QoS Policy Manager > Rebuild Database** on the QPM server’s Windows desktop.
  - Step 5** After the utility finishes rebuilding the database, restart the QPM server.
  - Step 6** Log into the CiscoWorks desktop and open QPM.
  - Step 7** Optionally, recreate any QoS analysis tasks that you deleted but want to continue running.
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**Related Topics**

- [Defining a Historical QoS Analysis Task, page 9-9](#)

## Performing Real-Time QoS Analysis

To analyze the effect of QoS in real time, first create a real-time QoS monitoring task. Then you can immediately run the analysis task to display the data it collects in real time. Data collection occurs only while the task is running, and no historical data is saved.

Each real-time QoS analysis task monitors only one interface. You can run multiple real-time QoS analysis tasks simultaneously because each real-time report appears in a separate browser window.

There is no preconfigured limit to the number of real-time report windows you can open simultaneously. However, each new report window uses system resources on the client and server, degrading system performance.



- If you make changes using QPM to a QoS feature that QPM is monitoring, running real-time monitoring reports that are monitoring the QoS feature stop collecting data when you deploy the changes. Close and rerun the report to continue monitoring.
- If you remove a device that contains a network element that is being monitored by a running real-time QoS analysis task, QPM continues to monitor this network element. To stop QPM from monitoring this network element, you must stop running the real-time QoS analysis task.

The following topics describe real-time QoS analysis:

- [Defining a Real-Time QoS Analysis Task, page 9-19](#)
- [Editing Real-Time QoS Analysis Tasks, page 9-20](#)
- [Deleting Real-Time QoS Analysis Tasks, page 9-21](#)
- [Running Real-Time QoS Analysis Reports, page 9-21](#)
- [Customizing Real-Time QoS Analysis Reports, page 9-22](#)

# Defining a Real-Time QoS Analysis Task

Define a real-time monitoring task to begin monitoring QoS data on a single interface in real time. You define the traffic to be monitored by specifying the device interface. All policies configured on the interface are monitored.

## Before You Begin

QoS analysis operates within the context of the active device group. For more information, see [Setting the Active Device Group, page 4-36](#). This has the following effects:

- When creating a QoS analysis task, only devices that belong to the active device group are available to select.
- The QoS analysis task lists (historical and real-time) only display tasks that monitor network elements that belong to the active device group.

## Procedure

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- Step 1** Select **Reports**. The Historical Monitoring Tasks page appears.
- Step 2** Select **Real Time** in the TOC. The Real-Time Monitoring Tasks page appears.
- Step 3** Click **Create**. The Real Time Monitoring Wizard - Device Selection page appears. For more information about this page, see [Real-Time Monitoring Wizard - Device Selection Page, page D-23](#).
- Step 4** Do the following in the Real Time Monitoring Wizard - Device Selection page:
  - a. Enter a task name in the Name field.
  - b. Select a polling interval from the Polling Interval (sec) list box. The polling interval is the period of time (in seconds) between each collection of the monitored data.
  - c. Select the device that contains the interface to monitor using the device table at the bottom of the page.
  - d. Optionally, you can enter a comment or description for the task in the Enter a comment or description field.
  - e. Click **Next**. The Real Time Monitoring Wizard - Interface Selection page appears. For more information about this page, see [Real-Time Monitoring Wizard - Interface Selection Page, page D-24](#).

- Step 5** Do the following in the Real Time Monitoring Wizard - Interface Selection page:
- a. Select the interface to monitor from the interfaces list.  
Only interfaces that have QoS policies that QPM can monitor appear in the list.
  - b. Click **Finish**. QPM opens the QoS Policy Manager Real-Time Report Window and begins collecting data. See [QoS Policy Manager - Real Time Report Window, page D-24](#).
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#### Related Topics

- [Performing Real-Time QoS Analysis, page 9-18](#)
- [Running Real-Time QoS Analysis Reports, page 9-21](#)
- [Troubleshooting QoS Analysis Problems, page 11-13](#)

## Editing Real-Time QoS Analysis Tasks

You can edit real-time QoS analysis tasks. If you edit a task while running its report, the changes you make will not take effect until the next time you run the report.

#### Procedure

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- Step 1** Select **Reports**. The Historical Monitoring Tasks page appears.
- Step 2** Select **Real Time** in the TOC. The Real-Time Monitoring Tasks page appears.
- Step 3** Select a task from the list, then click **Edit**. The Real-Time Monitoring wizard starts.
- Step 4** Edit any of the task parameters using the Monitoring Task wizard, as described in [Defining a Real-Time QoS Analysis Task, page 9-19](#).
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#### Related Topics

- [Performing Real-Time QoS Analysis, page 9-18](#)
- [Running Real-Time QoS Analysis Reports, page 9-21](#)

## Deleting Real-Time QoS Analysis Tasks

You can delete real-time QoS tasks. If you delete a real-time QoS task while viewing its report, the report will continue to work correctly. When you close the report, you will not be able to run it again.

### Procedure

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- Step 1** Select **Reports**. The Historical Monitoring Tasks page appears.
  - Step 2** Select **Real Time** in the TOC. The Real-Time Monitoring Tasks page appears.
  - Step 3** Select a task from the list, then click **Delete**. You are asked to confirm the deletion.
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## Running Real-Time QoS Analysis Reports

Real-time QoS monitoring reports are run immediately after you define the task. After stopping the task, you can run it again using this procedure.

### Procedure

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- Step 1** Select **Reports**. The Historical Monitoring Tasks page appears.
- Step 2** Select **Real Time** in the TOC. The Real-Time Monitoring Tasks page appears.
- Step 3** Select a task from the list, then click **Run**.

The QoS Policy Manager - Real Time Report window appears. Use this window to view and customize the real-time monitoring report. For information about this window, see [QoS Policy Manager - Real Time Report Window, page D-24](#).

You can open multiple real-time monitoring reports by repeating this procedure.

- Step 4** Click **Close Window** to close the report window and stop the task.
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### Related Topics

- [Performing Real-Time QoS Analysis, page 9-18](#)

- [Customizing Real-Time QoS Analysis Reports](#), page 9-22
- [Troubleshooting QoS Analysis Problems](#), page 11-13

## Customizing Real-Time QoS Analysis Reports

Real-time QoS analysis reports have the following customization controls that you can use to customize how the analysis data is presented in the report.

- Displaying the graphs in line or bar format.
- Selecting the graph units of measure.
- Selecting the scale of the graph vertical axis.
- Selecting which policies to display.

### Procedure

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- Step 1** View a real-time QoS analysis report as described in [Running Real-Time QoS Analysis Reports](#), page 9-21. The Report window appears.
- Step 2** Use the customization controls. See [QoS Policy Manager - Real Time Report Window](#), page D-24 for more information.
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### Related Topics

- [Performing Real-Time QoS Analysis](#), page 9-18