



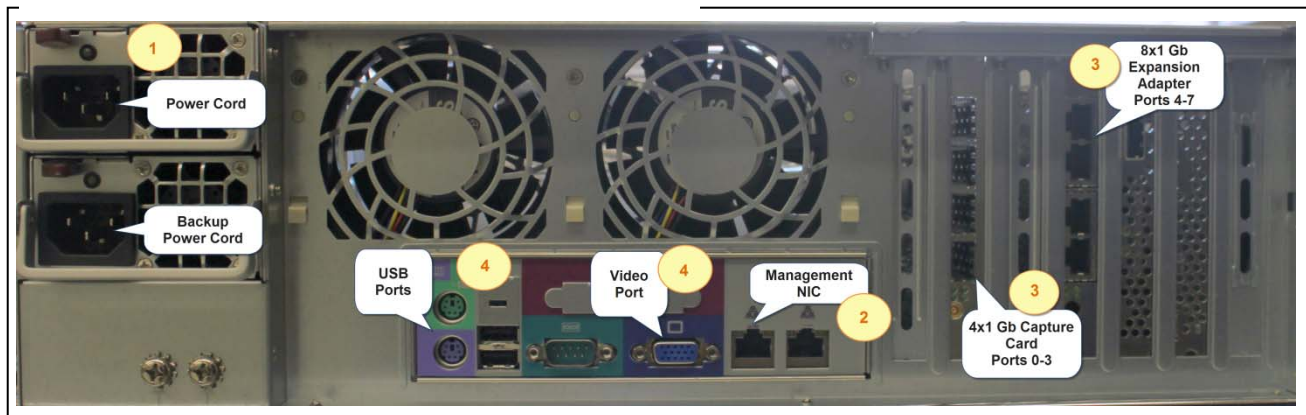
NetQoS Multi-Port Collector Setup Guide

The NetQoS Multi-Port Collector is a powerful appliance that captures and processes data at an extremely high rate, making more data available for faster reporting in NetQoS SuperAgent. This document describes how to set up the Multi-Port Collector appliance.

Unpacking and Inspecting the Appliance

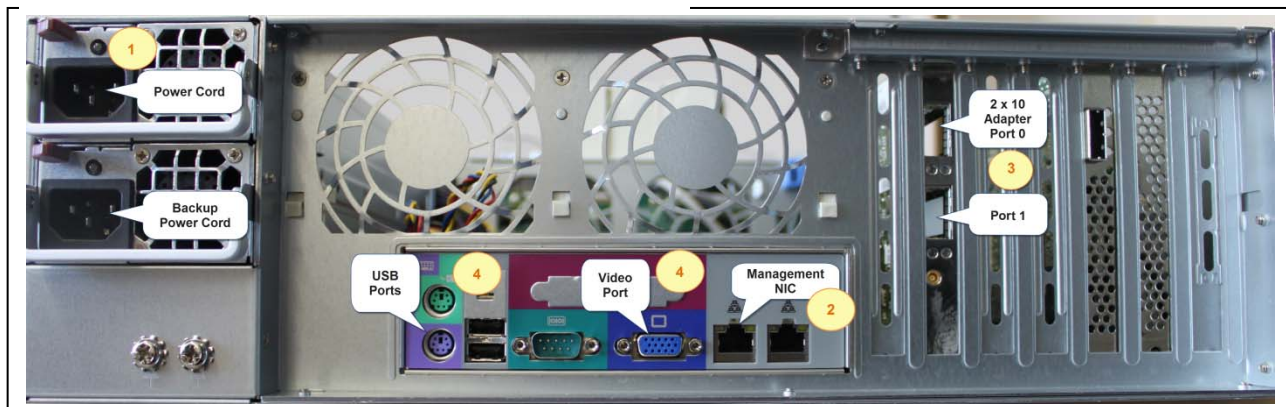
1. Locate each of the following parts as you unpack the Multi-Port Collector.
 - ☐ One Multi-Port Collector appliance
 - ☐ Two 6' power cords
 - ☐ A set of two rack-mount rails
 - ☐ 16 external hard disk drives, with identifying labels
 - ☐ One CD-ROM, containing a .tgz file, an installation script file (`setup-mtp`), and this Setup Guide
2. If any items are not present, call NetQoS Customer Care at 877-835-9575 (U.S.) or 512-407-9443 (global).
3. Inspect the back panel to confirm the configuration of the appliance:

4 x 1 or 8 x 1 Gb Multi-Port Collector (Back Panel)



Note that the 4 x 1 configuration lacks the expansion adapter pictured above.

2 x 10 Gb Multi-Port Collector (Back Panel)



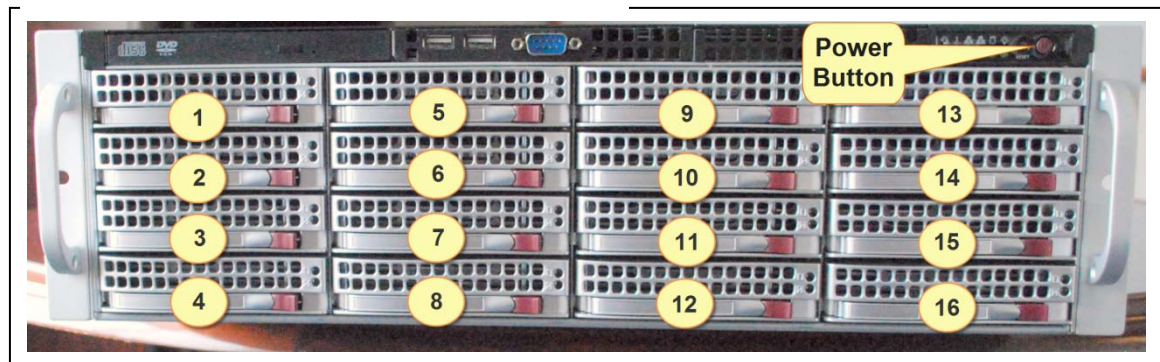
The appliance ships with 16 external hard disk drives in a separate section of the shipping box. Each drive is labeled with an identifying number.

4. As a first step, insert all 16 drives into the correct slots, as shown in the diagram below.

CAUTION: If the drives are inserted improperly or in the wrong order, they will not be successfully detected by the Multi-Port Collector software and will report disk failures.

Insert Drives 1 - 4 in the left bay, starting at the top. Then, proceeding left to right, insert Drives 5 – 8 in the next bay, followed by Drives 9 - 12 and 13 – 16. In the following diagram, the drives have been inserted and are labeled for your reference.

Front Panel



The power button is also labeled in the above image. See Step 5 in the table below.



Setting Up the Appliance

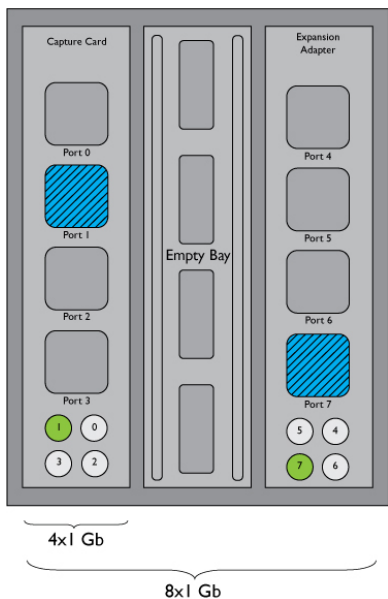
Refer to the image that corresponds to the Multi-Port Collector configuration that you have purchased as you take the steps described in the following table:

| Step | Action |
|------|---|
| 1. | Connect the power cords to the appliance in the slots marked with a 1 . Plug each one into a separate UPS. |
| 2. | Connect the Management cable to the network interface card (the eth0 slot, labeled 2 in the above image). Connect the other end of the Management cable to a switch that allows for network access to the Multi-Port Collector Web interface. |
| 3. | Connect monitoring cables to each of the multiple ports on the NIC, the high-performance capture card. Use a fiber-optic or Ethernet cable to connect each port to a switch SPAN port. See the diagram in “Identifying the Monitoring Ports,” below, for information about port numbering. |
| 4. | Attach a monitor and keyboard to the Collector appliance so that you can use the Network Settings configuration utility. The configuration utility is required to enable network access to the appliance. See “Enabling Network Access on the Appliance,” below, for the steps. |
| 5. | Power it on. The red power button is on the front of the appliance, as shown in the image above. |

Identifying the Monitoring Ports

When plugging in the network monitoring cables (Step 3 above), take particular care to understand the numbering scheme used to identify the ports on the capture card adapter. The adapter identifies each port using sequential numbers. When you set up the logical port definitions that will be sent to the NetQoS SuperAgent Management Console, you need to know which ports are active and connected to switch SPAN source ports.

The following schematic diagram, which illustrates the back of the Multi-Port Collector, shows how a 1 Gb adapter identifies ports internally.

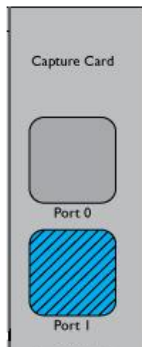


Below each series of four ports on the main adapter or on the expansion adapter (both of which are shown here) is a set of four lights. As each cable is connected, its corresponding light illuminates.

In this illustration, Port 1 on the 4-port adapter (labeled “Capture Card”) is cabled and active; Port 7 on the 8-port expansion adapter is similarly cabled and active.



The following diagram shows how a 10 Gb adapter identifies its ports (for the 2 x 10 Gb configuration):



In this illustration, Port 1 on the 2-port adapter is cabled and active.

Installing the Multi-Port Collector Software

The software you need to run the Multi-Port Collector has been provided on the CD-ROM that was included in the shipping carton along with the server hardware. Take the following steps:

| Step | Action |
|------|--|
| 1. | Once the server has started up, you will see the Linux login screen. Log in with the following credentials: Username: netqos Password: changeme |
| 2. | You will see a message prompting you to change your password. Supply the current password and a new password, and then retype the new password to confirm it. |
| 3. | Insert the Multi-Port Collector CD into the DVD tray and close it. The CD is auto-mounted to the <code>/misc/cd</code> folder. The auto-mount can take up to 30 seconds. Use the following command to confirm that the CD is recognized: <code>ls /misc/cd</code> |
| 4. | If after 30 seconds the <code>ls /misc/cd</code> command still shows no files found, manually mount the CD to the <code>/mnt/cd</code> folder using the following commands: <code>sudo mkdir /mnt/cd</code> <code>sudo mount -t auto /dev/dvd /mnt/cd</code> <code>ls /mnt/cd</code> Note: If you manually mount the CD to <code>/mnt/cd</code> , use the <code>/mnt/cd</code> path instead of <code>/misc/cd</code> in the commands below. |
| 5. | Launch the setup script by entering the following commands: <code>sudo /usr/bin/php /misc/cd/setup-mtp</code> |
| 6. | The setup script displays the Select Time Zone screen. Use the Tab or arrow key to move the cursor to the list of time zones. Use the arrow key to scroll through the list until you find and highlight the desired time zone. Use the Tab key to select the Next button, and press Enter to continue. |



| Step | Action |
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|----|---|
| 7. | The current date and time parameter should now reflect the time zone you selected. If necessary, set the date and time in the New Date and New Time fields. |
|----|---|

If the date and time are correct, tab to the **Next** button and press **Enter** to continue.

- | | |
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| 8. | The setup script starts the installation automatically. It untars the archive containing the executable and performs other configuration tasks. Software is installed to the <code>/opt</code> folder. |
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Note: Messages indicating “failed” when stopping processes are normal; the install script automatically tries to stop processes that may not be running.

Once the installation has completed, you will see a message stating, “Installation complete.”

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| 9. | Unmount the CD by entering the following command: |
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```
sudo umount /misc/cd
```

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| 10. | Eject the CD by entering the following command: |
|-----|---|

```
eject /dev/dvd
```

This command opens the DVD tray. Remove the CD.

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| 11. | Restart the system by entering <code>sudo reboot</code> at the command prompt. |
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When the server comes back up, you are prompted to “press enter for Multi-Port Collector settings.” Take the steps provided in the following section to supply network settings for the server.

Enabling Network Access on the Appliance

As soon as you have completed the software installation, you must run the Multi-Port Collector Network Settings Utility on the appliance to enable network access. Take the following steps:

| Step | Action |
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|----|---|
| 1. | When you see the startup screen, press Enter to start the Network Settings Utility. (You can also press Alt + F2 to see the normal Linux login screen.) |
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- | | |
|----|---|
| 2. | Use the Tab or arrow key to move the cursor to the Configure button, and press Enter . |
|----|---|

- | | |
|----|---|
| 3. | You will see a list of network interfaces (<code>eth0</code> , <code>eth1</code>). The default is <code>eth0</code> . Press Enter to use the default interface as the Management interface and continue. |
|----|---|

- | | |
|----|---|
| 4. | Enter the IP address, subnet mask, and default gateway IP address for the Management NIC (typically <code>eth0</code>). Or select another NIC and select the check box to indicate that you want to designate it as the Management NIC. Use the Tab or arrow keys to move between fields. |
|----|---|

Keep in mind that the IP address of the Management NIC must match the IP address you have configured for the Collector in the SuperAgent Management Console.

Move to the **Next** button and press **Enter** to continue.

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| 5. | In the Hostname field, enter a fully-qualified DNS hostname for the appliance. |
|----|---|

- | | |
|----|--|
| 6. | In the Nameserver 1 field, enter the IP address of the local DNS server. If desired, supply IP addresses for secondary DNS servers in the remaining Nameserver fields. |
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| Step | Action |
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|-----|--|
| 7. | In the NTP Server field, supply the hostname or IP address of the Network Time Protocol (NTP) server you want to use, or leave the default (<code>pool.ntp.org</code>). Move to the Next button and press Enter to continue. |
| 8. | You are asked to confirm whether to save the settings you have entered. Move to the Yes button and press Enter to save them. Or select No to discard the settings and return to the previous screen to make changes. The Network Settings utility returns to the startup screen once settings have been saved. |
| 9. | Now try to access the Multi-Port Collector Web interface from a Web browser. Use the following syntax in the browser address field: <code>http://<hostname>/</code> If network configuration has succeeded, you should see the Multi-Port Collector Login page. |
| 10. | Log in using the following username and password: Username: <code>nqadmin</code> Password: <code>nq</code> |
| 11. | On the System Status page, find the section of data labeled Capture Card Status . The Link State column provides the current status (“connected” or “not connected”) of all ports on the adapter. The Capture Card Statistics section provides the number of packets received through each port. |

Enabling RAID Monitoring

The NetQoS Multi-Port Collector provides RAID status monitoring if the Adaptec Storage Manager (arcconf) utility is installed. If this utility is not installed, the RAID section on the System Status page will indicate “RAID status not available,” and you will not receive RAID-related SNMP traps. The following table provides the steps:

| Step | Action |
|------|--------|
|------|--------|

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|----|---|
| 1. | Download the .rpm file containing the utility from the Adaptec Web site. Navigate to: http://www.adaptec.com/en-US/speed/raid/storage_manager/asm_linux_x64_v6_00_17922_rpm.htm Note: Take care to download the Adaptec Storage Manager v6.00.17922 for 64-bit Linux. This is the only version that has been tested with the Multi-Port Collector. |
| 2. | Copy the file (<code>asm_linux_x64_v6_00_17922.rpm</code>) to the <code>/tmp</code> folder on the Multi-Port Collector server. This can be done via a number of methods. You might want to use the WinSCP freeware secure copy client, which can be downloaded from http://winscp.net/eng/index.php . When using secure copy, connect to the Multi-Port Collector using the Linux <code>netqos</code> account. |
| 3. | Once the file has been copied, log into Linux on the Multi-Port Collector server using the <code>netqos</code> account. To install the .rpm, issue the following command: <code>sudo /opt/NetQoS/install/setupRAIDCLI.sh /tmp/asm_linux_x64_v6_00_17922.rpm</code> Messages will indicate when the installation has completed. Note: The message “Stopping Adaptec Storage Manager agent” is correct and normal. |



| Step | Action |
|------|--|
| 4. | <p>To test that the utility is properly working, you can issue the following command to see the status of the first RAID controller (the System array):</p> <pre>sudo /usr/StorMan/arcconf getconfig 1</pre> <p>To see the status of the second RAID controller (the Data array):</p> <pre>sudo /usr/StorMan/arcconf getconfig 2</pre> |

Once the Adaptec utility is installed, the System Status page on the Multi-Port Collector Administration Web interface displays the status of both RAID arrays.

Note: RAID status is checked every two minutes; after the installation, there might be a short delay before the status is displayed on the System Status page.

Next Steps

To complete Collector configuration, you must now add the Multi-Port Collector as a collection device in NetQoS SuperAgent. If you are familiar with NetQoS SuperAgent, the steps to add a Multi-Port Collector are nearly identical to those required to add a standard SuperAgent Collector.

Note: You might want to take some optional steps before you add the collection device. We recommend assigning meaningful labels to each logical port to make it easier to identify each data source. You might also want to configure hardware filters on the capture card(s) to control the data being sent to NetQoS SuperAgent. See the *Multi-Port Collector User Guide* or the online Help for a full set of instructions.

Take the following steps to add the collection device:

1. In your Web browser, make sure popup blocking is disabled. SuperAgent uses popups as it adds the collection device.
2. From the **Administration** tab, click **Data Collection > Collection Devices**.
3. On the SuperAgent Device List page, click **Add Collector**.
4. On the Collector Properties page, supply the IP address and hostname of the Multi-Port Collector appliance. (Or supply one of these items and click the **IP** or **DNS** button to resolve the name and address.)

The Management Console runs a quick check and verifies the collection device type. You should see a page like the following:



Note that there is no **Monitor IP** field, and that the page title identifies the Collector type.

5. On the Multi-Port Collector Properties page, click to select a Collector **Incident Response**, if desired, and enable **Availability Monitoring** if you want to be notified, by means of a SuperAgent incident report, when the Collector is not running.



6. Click **OK** to add the collection device. If you see the **No HASP** warning, ignore it; it disappears after you reload the collection device as described in Step 8.
7. Configure the networks, servers, and applications to monitor in NetQoS SuperAgent. The *SuperAgent Administrator Guide* contains a full set of instructions.
Note: The Multi-Port Collector supports the auto detect feature, a way to rapidly create server and application definitions from monitored traffic. See the section titled “Managing Automatic Detection” in the SuperAgent online Help for more information.
8. Reload the collection device: click **Data Collection > Collection Devices**, and click the **Edit** button for the Multi-Port Collector.
9. On the Properties page, click the arrow menu above the **Options** column, and select **Reload Configuration**. When asked to confirm the reload operation, click **Continue**.

You can confirm that the Multi-Port Collector is sending data to NetQoS SuperAgent by checking the SuperAgent Collection Device List, which provides status information for all collection devices. Click the **Administration** tab, and then click **Data Collection > Collection Devices**.

| SuperAgent Device List | | | | | |
|------------------------|------------|----------------------|---------|--------------------|---|
| Device Name | Address | Type | Status | Last Collection | Options |
| smkong | 10.0.11.20 | Multi-Port Collector | Running | 01/22/09 12:45 EST |   |

Last Collection and Status information are not updated until you provide at least one valid Server, Application and Network combination. It could take several minutes to update after the reload operation.

For More Information

The Multi-Port Collector Web interface includes a complete online Help system to help you administer the product and interpret the performance status and statistical data provided on the System Status page. In addition to this quick-install guide, you can find useful information in the following documents:

- » [Multi-Port Collector User Guide](#)
- » [Multi-Port Collector Release Notes](#)
- » [SuperAgent Administrator Guide](#)

We strongly recommend reading the *Multi-Port Collector User Guide*, which contains all the information compiled in the online Help, plus a comprehensive installation chapter that provides tips for setting up a SPAN port to capture the data you are most interested in monitoring.

You can access the product documentation in the following ways:

- » In the Multi-Port Collector Web interface, click the **Help** link to access the online Help.
- » In the Multi-Port Collector Web interface, click the **About** link to access the *User Guide* in PDF format.
- » On the NetQoS Self-Service Portal, click the links to the Release Notes and *User Guide* in PDF format. The SuperAgent product documentation is also available there.



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