

# Configuring VQM Reporter for AOS and n-Command MSP



Quick Configuration Guide

61700840G1-42.2A

July 2009

Voice quality monitoring (VQM) allows real time passive Voice over IP (VoIP) quality measurements to be taken on all Realtime Transport Protocol (RTP) voice streams transmitted through an ADTRAN Operating System (AOS) device. The VQM Reporter is a feature supported by AOS devices that allows the gathered VQM statistics to be aggregated by third-party collectors, such as the n-Command<sup>®</sup> Managed Service Provider (MSP) server (NetVanta Server 450). Allowing aggregation by the n-Command MSP server provides more flexibility in monitoring voice networks. Configuring the VQM Reporter is done through the command line interface (CLI) and consists of creating the reporter, configuring the parameters of the reporter, and viewing the reporter statistics. VQM should be enabled and configured on the AOS device before configuring the VQM Reporter. For more information about configuring VQM, refer to the *Voice Quality Monitoring Configuration Guide* available on the CD shipped with your AOS product or online at [kb.adtran.com](http://kb.adtran.com). You must also have the AOS device connected to the n-Command MSP server for the VQM Reporter feature to be effective. Refer to the help included in the n-Command MSP software for assistance in connecting your unit to the server.

## Accessing the CLI

To begin configuring the VQM Reporter, you must access the CLI on your AOS unit. To access the CLI, follow these steps:

1. Boot up the unit.
2. Telnet to the unit (**telnet** <ip address>).

For example, **telnet 208.61.209.1**.



*If during the unit's setup process you have changed the default IP address (10.10.10.1), use the configured IP address.*

3. Enter your user name and password at the prompt.



*The AOS default user name is **admin** and the default password is **password**. If your product no longer has the default user name and password, contact your system administrator for the appropriate user name and password.*

4. Enable your unit by entering **enable** at the prompt as follows:

**>enable**

5. Enter your Enable mode password at the prompt.

6. Enter the unit's Global Configuration mode as follows:

```
#config terminal
(config)#
```

## Creating the VQM Reporter

To create the VQM Reporter, enter the **ip rtp quality-monitoring reporter <name>** command from the unit's Global Configuration mode. This command creates and names the particular VQM Reporter, and enters the reporter's configuration mode. Enter the command as follows:

```
(config)#ip rtp quality-monitoring reporter Reporter1
Configuring New Reporter "Reporter1"
(config-rtp-reporter-Reporter1)#
```

You are now in the VQM Reporter's configuration mode and you can configure the parameters of this particular reporter.

## Configuring the VQM Reporter

Once you have created the VQM Reporter and entered its configuration mode, you can configure its parameters. Configurable parameters include: primary and secondary collector protocols and ports, a reporter description, the number of reports contained in the queue, the number of connection retries, whether the reporter is enabled or disabled, and the users the reporter is sent from and sent to. To configure the VQM Reporter, follow the steps below:

1. Specify the IP address or host name of the server that will be receiving information from the VQM Reporter using the **collector [primary | secondary] <hostname | ip address> [tcp <port> | udp <port>]**. With this command, you can set both a primary and secondary server to receive the VQM reports. Whether setting the primary or secondary collector, you must specify either a host name or an IP address for the server. IP addresses should be expressed in the decimal dotted notation (for example, **10.10.10.1**).

You can also specify the protocol and optionally the port number used to communicate with the server. You can choose from Transmission Control Protocol (TCP) or User Datagram Protocol (UDP). Port numbers range from **0** to **65535**. By default, the reporter is set to use **UDP** on port **5060**.

To specify the primary server, enter the command as follows:

```
(config-rtp-reporter-Reporter1)#collector primary 172.5.67.99
(config-rtp-reporter-Reporter1)#
```

To specify a secondary server, and include the protocol and port number, the command is entered as follows:

```
(config-rtp-reporter-Reporter1)#collector secondary 172.5.67.95 udp 517  
(config-rtp-reporter-Reporter1)#
```

Using the **no** form of this command removes the server from the reporter's configuration.

2. You can enter a description of this reporter using the **description <text>** command. Adding a description to the reporter helps in managing multiple reporters. Enter the command as follows:

```
(config-rtp-reporter-Reporter1)#description NV7100VQM  
(config-rtp-reporter-Reporter1)#
```

Using the **no** form of this command removes the description from the reporter's configuration.

3. Using the **max-queue-depth <value>** command, you can also specify the number of reports held in the queue that are waiting to send requests or receive responses. The number of reports that can be held ranges from **0** to **2000**. By default, the reporter is configured to hold **512** reports in the queue. To change this value, enter the command as follows:

```
(config-rtp-reporter-Reporter1)#max-queue-depth 700  
(config-rtp-reporter-Reporter1)#
```

Using the **no** form of this command returns the queue volume to the default value.

4. You can specify the number of times the reporter will attempt to contact the server using the **max-retries <value>** command. By default, the reporter is configured to attempt **3** times before stopping, but you can specify that the reporter try from **0** to **5** times. To change the default value, enter the command as follows:

```
(config-rtp-reporter-Reporter1)#max-retries 4  
(config-rtp-reporter-Reporter1)#
```

Using the **no** form of this command returns the number of retries to the default value.

5. You can specify whether the reporter is enabled or disabled by using the **shutdown** command. By default, the reporter is configured to be active. Using the **shutdown** command deactivates the reporter. Using the **no** form of this command returns the reporter to the active state. To shutdown the reporter, enter the command as follows:

```
(config-rtp-reporter-Reporter1)#shutdown  
(config-rtp-reporter-Reporter1)#
```

6. You can also specify the user that is sending the report and the user to whom the report is going. By default, the user that sends the report is the serial number of the AOS device, and the user to whom the report is going is the specified server. These users are Session Initiation Protocol (SIP) users, and specifying different users is done using the **sip grammar** **[from-user <user name> | to-user <user name>]** command. Using the **no** form of this command returns the user values to the default. To change the users, enter the command as follows:

```
(config-rtp-reporter-Reporter1)#sip grammar from-user user300
(config-rtp-reporter-Reporter1)#sip grammar to-user user500
(config-rtp-reporter-Reporter1)#
```



*Changing the **from-user** or **to-user** from the default values will cause communication with n-Command MSP to fail. These fields should only be changed if you are communicating with another type of VQM report collector. ADTRAN recommends leaving these values at the default setting.*

The VQM Reporter is now configured and you should save the configuration.

## Viewing VQM Reporter Statistics

You can view VQM Reporter statistics, clear these statistics, and view debug information regarding the VQM Reporter all from the CLI. These statistics and debug information can assist in troubleshooting VQM Reporters.

To view VQM Reporter statistics, enter the **show ip rtp quality-monitoring reporter [<name>] [realtime]** command from the Enable Configuration mode prompt. If you do not enter the name of a specific VQM Reporter, statistics from all reporters are displayed. Entering the **realtime** keyword displays the statistics in real time. The following is sample output from the command:

```
#show ip rtp quality-monitoring reporter
```

Name	Depth	Success	Failed	Request	Chalnge	Rollovr	Discard
Test 1	4	0	0	36	0	36	6
Test 2	4	0	0	36	0	36	6
Test 3	0	0	10	10	0	0	0
Test 4	0	0	10	10	0	0	0
Test 5	0	0	0	0	0	0	0

These statistics display the reporter name (**Name**), the queue volume or how many reports are waiting to send requests or receive responses (**Depth**), how many successful responses have been received (**Success**), how many failure responses have been received (**Failed**), how many requests have been transmitted (**Request**), how many challenge responses have been received (**Chalnge**), how many requests did not receive responses at all (**Rollovr**), and how many reports were discarded because the retry limit was exceeded (**Discard**).

To clear VQM Reporter statistics, enter the **clear ip rtp quality-monitoring reporter [<name>]** command from the Enable Configuration mode prompt. If you do not enter the name of a specific VQM Reporter, statistics from all VQM Reporters are cleared. To clear VQM Reporter statistics, enter the command as follows:

```
#clear ip rtp quality-monitoring reporter Reporter1  
#
```

To enable and view debug messages related to VQM Reporters, enter the **debug ip rtp quality-monitoring reporter [<name>]** command from the Enable mode prompt. If you do not enter the name of a specific VQM Reporter, debug messaging is enabled for all VQM Reporters.



*Turning on a large amount of debug information can adversely affect the performance of your unit.*

Sample output from this command appears below:

```
#debug ip rtp quality-monitoring reporter Reporter1  
08:46:13 VQM.REPORTER Reporter1 1 Enqueuing VQM Report - 2575556352@10.1.3.9 to  
6353@10.1.3.9, RTP=10.10.20.2:2234->10.17.138.1:3000  
08:46:13 VQM.REPORTER Reporter1 1 Generating VQM Report  
08:46:13 VQM.REPORTER Reporter1 1 Sending VQM Report  
08:46:13 VQM.REPORTER Reporter1 1 Transaction 0x022ad5f0: state changed -> Client  
General Request Sent
```