

Quality of Service

DESCRIPTION



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INTRODUCTION

The Voice-over-IP Quality of Service (QoS) monitoring feature in MX-ONE collects data concerning end-to-end delay, jitter, and packet loss for RTP media traffic. This is functionality valid for the types of end-points that support the QoS features.

This document provides a high-level description of the MX-ONE QoS solutions in MX-ONE. There are two different QoS implementations in MX-ONE system:

- one for SIP end-points, based on RFC 3611, using the Mitel Performance Analytics application to present the QoS data, and
- one for H.323 end-points which uses Call Information Logging and the Service Node Manager for the same purpose.

Depending on which types of end-points (SIP or H.323) are used in the system, and which QoS solution that shall be used, some selection and configuration must be done for the applicable solution.

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QOS FOR SIP END-POINTS, USING MPA

The IP traffic’s QoS information can be collected during calls involving parties that use SIP signaling. The QoS data can also be collected in all services that can be requested on active calls. The QoS is an information flow from the end-points, including the Media Gateways, to collect the QoS information directly from the end-points, in accordance with the RFC 3611, “RTP Control Protocol Extended reports (RTCP XR)”, and present it via the MPA application.

See the Mitel Performance Analytics (MPA) documentation, the sections about Voice metrics: SIP set voice quality ratings by call (R factor) over multiple interfaces.

Mitel | Service Node Manager

Site: WBM85 | Logged in

Initial Setup | Number Analysis | Telephony | Services | System | Tools

Command Line | Quality of Service | Signal Tracing

Information

Start/Stop

Quality of Service Information

Enter Directory Number(s): 3055-3056

Enter Start Date:

Enter End Date:

View

	Calling Number	Connected Number	Dialled Number	Date (Time)	Ac
	3052	3055	3055	2016-01-21 (13:52:52)	0
	3052	3055	3055	2016-01-21 (12:30:20)	0

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QOS FOR H.323 END-POINTS

This section provides information on QoS for H.323 end-points using the call information logging and SNM. The QoS information for IP traffic can be collected during all calls involving parties **that use H.323 signalling**. The QoS data can also be collected in all services that can be requested on active calls. The QoS is an information flow from the end points and from the Gateway through the MX-ONE Service Node to link the QoS information to the call logging information (CIL) output as shown below.

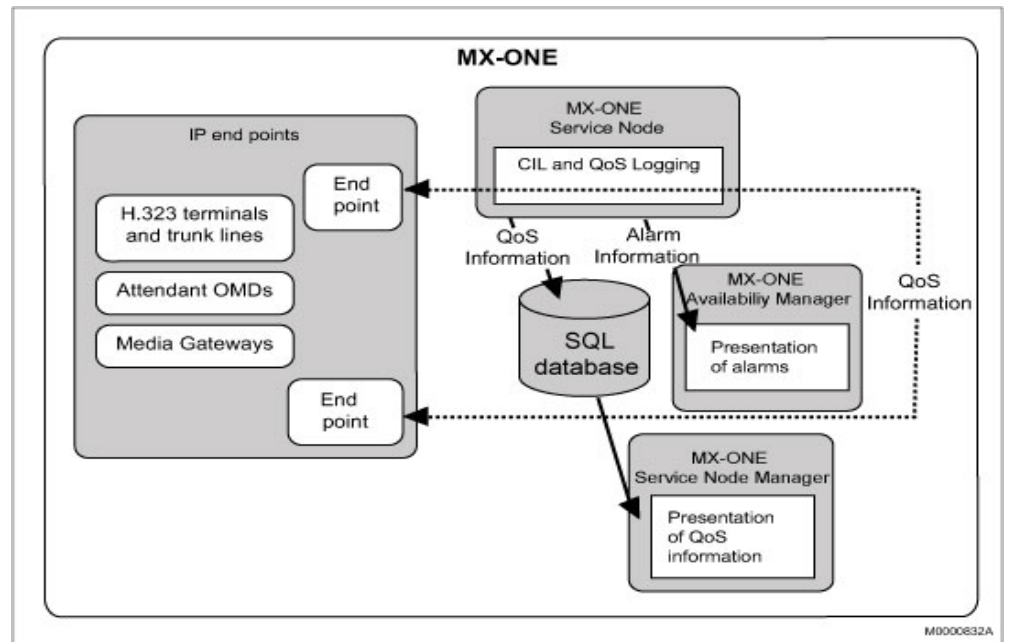


Figure 1: QoS overview

Typical IP end points are the following:

- H.323 terminals and trunk lines
- Attendant OMDs
- Media Gateways

The data is collected per call and stored in an SQL database using the Call Information Logging output feature. Exceptions which cannot provide QoS data are for example the SIP end points, H.323 soft clients, some older H.323 terminals, and older IPLU boards.

The QoS data is presented in the MX-ONE Service Node Manager application.

The call information logging is described in *CALL INFORMATION LOGGING, QUALITY OF SERVICE LOGGING*.

3.1

QOS IN MX-ONE SERVICE NODE MANAGER

QoS is set by the administrator. The QoS feature can be switched on or off using I/O commands. This is described in *CALL INFORMATION LOGGING*.

From the **Tools/ Quality of Service** window in MX-ONE Service Node Manager, the QoS information can be viewed and printed for a single directory number or for several directory numbers as a group as shown below.

Quality of Service Information

Shortcuts: <Manage Shortcuts> Go... [Print All](#) [Help](#)

Enter Directory Number(s): 3055-3056
Example: '7040' or '7040,7041-7050' or '7040,7052'

Enter Start Date:
Example: '2004-12-22' (yyyy-MM-dd)

Enter End Date:
Example: '2004-12-22' (yyyy-MM-dd)

[View](#)

Calling Number	Connected Number	Dialled Number	Date (Time)	Accumulated Packets Lost	Packet Loss Rate [%]
3052	3055	3055	2016-01-21 (13:52:52)	0	0
3052	3055	3055	2016-01-21 (12:30:20)	0	0

Figure 2: QoS data in MX-ONE Service Node Manager.

The QoS information viewed consists of the following information:

- Call information
- Total call quality data
- Endpoint VoIP quality data

For each row the QoS details can be viewed. The **Quality of Service Information-View** lists the following information for the specific number as shown below.

Quality of Service Information - View - 3052

[Done](#) [View](#) [View 3052](#) [Print](#) [Help](#)

Call Information

Calling Number	3052
Dialled Number	3055
Connected Number	3055
Date	2016-01-21
Time	13:52:52
Duration	1

Total Call Quality Data

Accumulated Packets Lost	0
Packet Loss Rate [%]	0

Endpoint VoIP Quality Data

Endpoint type	Calling party other gateway
Worst Estimated End to End Delay [ms]	0
Mean Estimated End to End Delay [ms]	0
Accumulated Packets Lost	0
Packet Loss Rate [%]	0
Worst Jitter [ms]	0
Mean Jitter [ms]	0
Estimated Throughput [kbps]	0
Simple R-value [%]	93.2

Figure 3: QoS Information View for one specific end-point