

Jitter Buffer Configuration

For all Mediatrix units

DGW 49.2.2941

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Basic Jitter Buffer Concepts

Jitter Buffer

Because of network congestion, timing drift, or route changes, data packets can arrive at different intervals and pace. These variations in packet arrival time are called jitter which can be the cause of sound distortion. To insure a clear connection, incoming voice data packets are intentionally delayed by a jitter buffer and then sent in evenly spaced intervals to the voice processor.

Media5 recommends to avoid changing the target and maximum jitter buffer values unless experiencing or strongly expecting one of the following symptoms:

- If the voice is scattered, try to increase the maximum jitter buffer value.
- If the delay in the voice path (end to end) is too long, you can lower the target jitter value, ONLY if the end-to-end delay measured matches the target jitter value

For instance, if the target jitter value is 50 ms, the maximum jitter is 300 ms and the delay measured is 260 ms, it would serve nothing to reduce the target jitter.

However, if the target jitter value is 100 ms and the measured delay is between 100 ms and 110 ms, then you can lower the target jitter from 100 ms to 30 ms.

Basic Jitter Buffer Tasks

Configuring the Jitter Buffer of all Endpoints

Steps

- 1) Go to **Media/Misc.**
- 2) From the **Select Endpoint** drop down list, choose **Default**.
- 3) In the **Jitter Buffer** table, from the **Level** selection list choose one of the following
 - **Normal**
 - **Optimize Quality**
 - **Optimize Latency**
- 4) Click **Apply**.

Result

All endpoints of the unit will be configured with the same jitter buffer.

Jitter Buffer	
Level:	Normal
Voice Call	
Minimum:	30
Nominal:	0
Maximum:	125
Data Call	
Playout Type:	Fixed
Minimum:	0
Nominal:	67
Maximum:	135

Configuring the Jitter Buffer of a Specific Endpoint

Steps

- 1) Go to **Media/Misc.**
- 2) From the **Select Endpoint** drop down list, choose the endpoint for which the jitter buffer need to be configured.
- 3) In the **Jitter Buffer** table, from the **Endpoint Specific** selection list, choose **Enable**.

4) From the **Level** selection list choose one of the following:

- **Normal**
- **Optimize Quality**
- **Optimize Latency**

5) Click **Apply**.

Result

The selected endpoint of the unit will have the customised jitter buffer.

Jitter Buffer	
Endpoint Specific:	Enable ▾
Level:	Optimize Quality ▾
Voice Call	
Minimum:	30
Nominal:	0
Maximum:	125
Data Call	
Playout Type:	Fixed ▾
Minimum:	0
Nominal:	67
Maximum:	125

Configuring the Jitter Buffer of all Endpoints for Fax/Modem

Steps

- 1) Go to **Media/Misc**.
- 2) From the **Select Endpoint** drop down list, choose **Default**.
- 3) In the **Jitter Buffer** table, from the **Level** selection list, choose **Fax/Modem**.
- 4) Click **Apply**.

Result

All endpoints of the unit will be configured with a jitter buffer for Fax/Modem.

Jitter Buffer	
Level:	Fax / Modem ▼
Voice Call	
Minimum:	30
Nominal:	0
Maximum:	125
Data Call	
Playout Type:	Fixed ▼
Minimum:	0
Nominal:	67
Maximum:	135

Configuring the Jitter Buffer of a Specific Endpoint for Fax/Modem

Steps

- 1) Go to **Media/Misc.**
- 2) From the **Select Endpoint** drop down list, choose the endpoint you wish to configure for fax or modem.
- 3) In the **Jitter Buffer** table, from the **Endpoint Specific** selection list, choose **Enable**.
- 4) From the **Level** selection list, choose **Fax/Modem**.
- 5) Click **Apply**.

Result

The selected endpoint will be configured with a jitter buffer for Fax/Modem.

Jitter Buffer	
Endpoint Specific:	Enable v
Level:	Fax / Modem v
Voice Call	
Minimum:	30
Nominal:	0
Maximum:	125
Data Call	
Playout Type:	Fixed v
Minimum:	0
Nominal:	67
Maximum:	125

Customising the Jitter Buffer of all Endpoints

Steps

- 1) Go to **Media/Misc.**
- 2) From the **Select Endpoint** drop down list, choose **Default**.
- 3) In the **Jitter Buffer** table, from the **Level** selection list, choose **Custom**.
- 4) Complete the fields of the **Voice Call** and **Data Call** sections.
- 5) Click **Apply**.

Result

All endpoints of the unit will have the configured jitter buffer.

Jitter Buffer	
Level:	Custom v
Voice Call	
Minimum:	30
Nominal:	0
Maximum:	125
Data Call	
Playout Type:	Fixed v
Minimum:	0
Nominal:	67
Maximum:	135

Customising the Jitter Buffer of a Specific Endpoint

Steps

- 1) Go to **Media/Misc.**
- 2) From the **Select Endpoint** drop down list, choose an endpoint.
- 3) In the **Jitter Buffer** table, from the **Endpoint Specific** selection list, choose **Enable**.
- 4) From the **Level** selection list, choose **Custom**.
- 5) Complete the fields of the **Voice Call** and **Data Call** sections.
- 6) Click **Apply**.

Result

The selected endpoint of the unit will have the selected jitter buffer.

Jitter Buffer	
Endpoint Specific:	Enable v
Level:	Custom v
Voice Call	
Minimum:	30
Nominal:	0
Maximum:	125
Data Call	
Playout Type:	Fixed v
Minimum:	0
Nominal:	67
Maximum:	125

Advanced Jitter Buffer Parameters

Although the services can be configured in great part in the Web browser, some aspects of the configuration can only be completed with the configuration parameters by :

- using a MIB browser
- using the CLI
- creating a configuration script containing the configuration parameters

For more details on the following parameters, refer to the [DGW Configuration Guide - Reference Guide](#) published on the [Media5 Documentation Portal](#).

To start a call in voiceband data mode: **Telif.InteropDtmfDetectionRiseTimeCriteria**

Online Help

If you are not familiar with the meaning of the fields and buttons, click **Show Help**, located at the upper right corner of the Web page. When activated, the fields and buttons that offer online help will change to green and if you hover over them, the description will be displayed.

DGW Documentation

Mediatrix devices are supplied with an exhaustive set of documentation.

Mediatrix user documentation is available on the [Media5 Documentation Portal](#).

Several types of documents were created to clearly present the information you are looking for. Our documentation includes:

- **Release notes:** Generated at each GA release, this document includes the known and solved issues of the software. It also outlines the changes and the new features the release includes.
- **Configuration notes:** These documents are created to facilitate the configuration of a specific use case. They address a configuration aspect we consider that most users will need to perform. However, in some cases, a configuration note is created after receiving a question from a customer. They provide standard step-by-step procedures detailing the values of the parameters to use. They provide a means of validation and present some conceptual information. The configuration notes are specifically created to guide the user through an aspect of the configuration.
- **Technical bulletins:** These documents are created to facilitate the configuration of a specific technical action, such as performing a firmware upgrade.
- **Hardware installation guide:** They provide the detailed procedure on how to safely and adequately install the unit. It provides information on card installation, cable connections, and how to access for the first time the Management interface.
- **User guide:** The user guide explains how to customise to your needs the configuration of the unit. Although this document is task oriented, it provides conceptual information to help the user understand the purpose and impact of each task. The User Guide will provide information such as where and how TR-069 can be configured in the Management Interface, how to set firewalls, or how to use the CLI to configure parameters that are not available in the Management Interface.
- **Reference guide:** This exhaustive document has been created for advanced users. It includes a description of all the parameters used by all the services of the Mediatrix units. You will find, for example, scripts to configure a specific parameter, notification messages sent by a service, or an action description used to create Rulesets. This document includes reference information such as a dictionary, and it does not include any step-by-step procedures.

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