

RTP Statistics
For all Mediatrix Products

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Basic Concepts

RTP Packet Statistics

The Mediatrix unit collects valuable RTP statistics that can be read via the DGW Web interface, SNMP, and the CLI.

The statistics are sent as Mipt notification messages, therefore the syslog information must be configured properly before setting the statistics (under **System/ Event Log/Notification Events**). (For more details, refer to the [DGW Configuration Guide - Generating Logs](#) published on the [Media5 Documentation Portal](#)).

There are two types of statistics:

- statistics for the last 10 connections (under **Media/RTP Statistics/Connection Statistics**)
- statistics for the last 10 collection periods (under **Media/RTP Statistics/Collection Period Statistics**)

Statistic	Connection Statistics	Collection Period Statistics
Octets Tx	Number of octets transmitted during the connection.	Number of octets transmitted during the collection period. This value is obtained by cumulating the octets transmitted in all connections that were active during the collection period.
Octets Rx	Number of octets received during the connection.	Number of octets received during the collection period. This value is obtained by cumulating the octets received in all connections that were active during the collection period.
Packets Tx	Number of packets transmitted during the connection.	Number of packets transmitted during the collection period. This value is obtained by cumulating the packets transmitted in all connections that were active during the collection period.
Packets Rx	Number of packets received during the connection.	Number of packets received during the collection period. This value is obtained by cumulating the packets received in all connections that were active during the collection period.
Packets Lost	Number of packets lost during the connection. This value is obtained by subtracting the expected number of packets based on the sequence number from the number of packets received.	Number of packets lost during the collection period. This value is obtained by cumulating the packets lost in all connections that were active during the collection period.
Min. Jitter	Minimum interarrival time, in ms, during the connection. All RTP packets belonging to the connection and received at the RTP level are considered in the calculation.	Minimum interarrival time, in ms, during the collection period. This value is the lowest interarrival jitter for all connections that were active during the collection period.

Statistic	Connection Statistics	Collection Period Statistics
Max. Jitter	Maximum interarrival time, in ms, during the connection. All RTP packets belonging to the connection and received at the RTP level are considered in the calculation.	Maximum interarrival time, in ms, during the collection period. This value is the highest interarrival jitter for all connections that were active during the collection period.
Avg. Jitter	Average interarrival time, in ms, during the connection. All RTP packets belonging to the connection and received at the RTP level are considered in the calculation.	Average interarrival time, in ms, during the collection period. This value is the weighted average of the interarrival jitter for all connections that were active during the collection period. For each connection, the total jitter of packets received during the collection period and the total number of packets received during the collection period are used in the weighted average calculation.
Min. Latency	Minimum latency, in ms, during the connection. The latency value is computed as one half of the round-trip time, as measured through RTCP.	Minimum latency, in ms, during the collection period. This value is the lowest latency for all connections that were active during the collection period.
Max. Latency	Maximum latency, in ms, during the connection. The latency value is computed as one half of the round-trip time, as measured through RTCP.	Maximum latency, in ms, during the collection period. This value is the highest latency for all connections that were active during the collection period.

Statistic	Connection Statistics	Collection Period Statistics
Avg. Latency	Average latency, in ms, during the connection. The latency value is computed as one half of the round-trip time, as measured through RTCP.	Average latency, in ms, during the collection period. This value is the weighted average of the latency for all connections that were active during the collection period. For each connection, the total latency of packets received during the collection period and the total number of packets received during the collection period are used in the weighted average calculation.

Channel Statistics

The Mediatrix unit collects valuable RTP statistics that can be read via SNMP and the CLI. Channel statistics are cumulated RTP statistics for all calls using a specific channel of a telephony interface. Channel statistics are updated at the end of each call.

The statistics are associated with the channel in use at the end of the call. In some cases, such as in hold/resume scenarios, the channel assignment may change during a call. This can result in discrepancies between the RTP statistics and the actual usage of the telephony interface.

Parameter	Description
PacketsSent	Number of packets transmitted on the channel since service start. This value is obtained by cumulating the packets transmitted in all the connections that ended during the collection period.
PacketsReceived	Number of packets received on the channel since service start. This value is obtained by cumulating the packets received in all the connections that ended during the collection period.
BytesSent	Number of bytes transmitted on the channel since service start. This value is obtained by cumulating the bytes transmitted in all the connections that ended during the collection period.
BytesReceived	Number of bytes received on the channel since service start. This value is obtained by cumulating the bytes received in all the connections that ended during the collection period.
AverageReceiveInterarrivalJitter	Average interarrival time, in microseconds, for the channel since service start. This value is based on the average interarrival jitter of each call ended during the collection period. The value is weighted by the duration of the calls.

Basic Tasks

Configuring RTP Statistic Collection

Before you start

You must set the Media IP Transport (Mipt) service to the Info or Debug level (under **System/Event Log**).

Steps

- 1) Go to **Media/RTP Statistics**.
- 2) In the **Statistics Configuration** table, set the **Collection Period (minutes)** parameter.

Note: The value 0 disables the collection period statistics feature.

- 3) From the **End-of-Connection Notification** selection list, choose whether or not to enable end-of-connection notifications.
- 4) From the **End-of-Period Notification** selection list, choose whether or not to enable end-of-period notifications.
- 5) Click **Apply** or **Apply & Reset Current Collection Period Statistics**

Advanced RTP Statistic 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

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

- **Mipt.ChannelStatistics**: Table with Statistics per endpoint/channel since last reboot or statistics reset.
- **Mipt.ChannelStatistics.Reset**: To reset channel statistics values of a specific endpoint to zero: **Mipt.ChannelStatistics[EpChannelId=<endpoint>].Reset=Reset** For example: **Mipt.ChannelStatistics[EpChannelId=FXS1].Reset=Reset**
- **Mipt.StatsCollectionPeriodDuration**: Specifies the collection period duration (in minutes).
- **Mipt.StatsPerConnectionNotificationEnable**: Enables the generation of connection end statistics notification.
- **Mipt.StatsPerPeriodNotificationEnable**: Enables the generation of period statistics notification.
- **Mipt.LastConnectionsStats**: Table with Last 10 connections statistics.
- **Mipt.LastPeriodsStats**: Table with Last 10 periods statistics.
- **Mipt.MinSeverity**: To set the minimal severity to issue a notification message incoming from this service.

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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