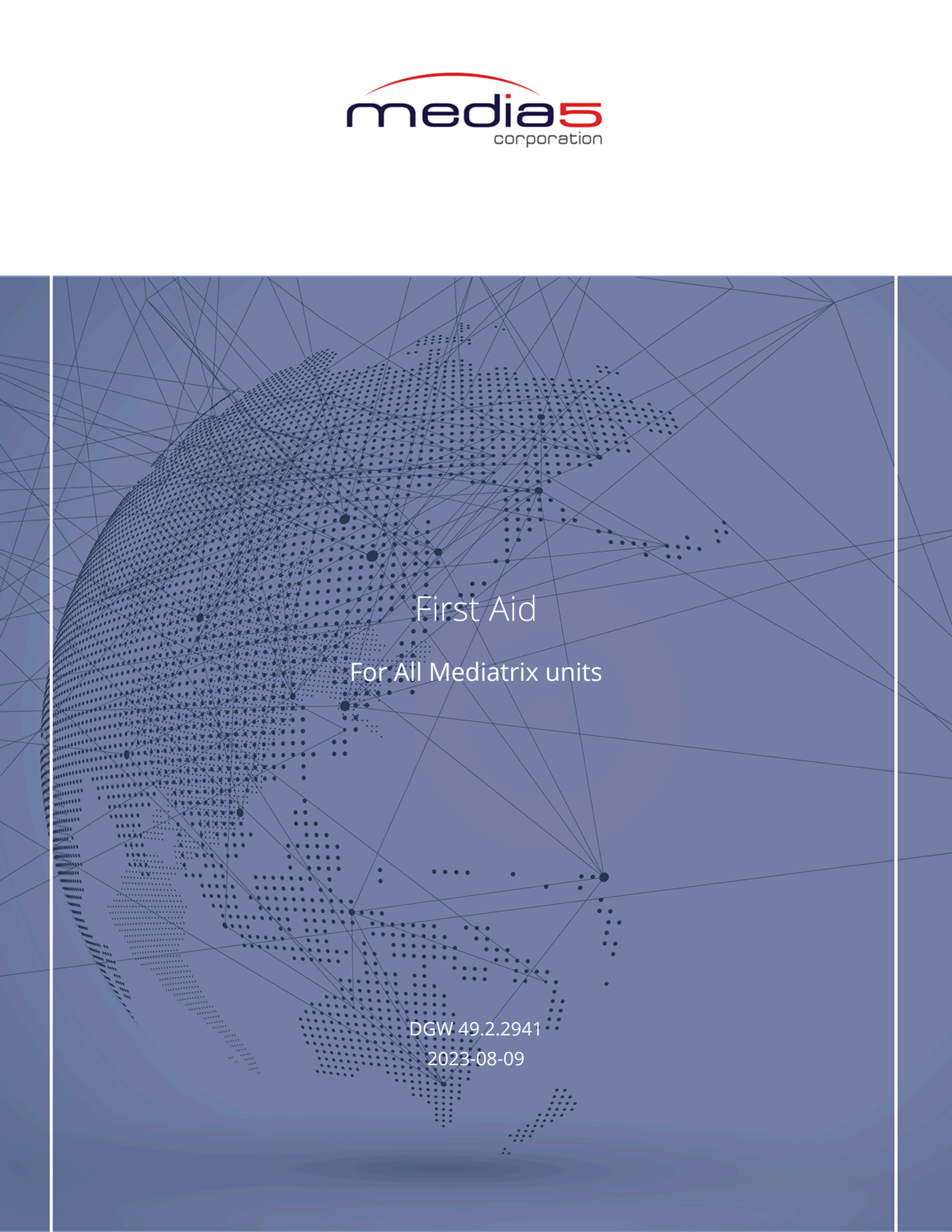


The background of the page is a dark blue gradient. It features a complex, abstract graphic consisting of a dense network of thin, light blue lines connecting numerous small, dark blue dots. These dots are arranged in a way that suggests a global map, with higher concentrations of dots in the Americas and Europe. The overall effect is a sense of global connectivity and technology.

First Aid

For All Mediatrix units

DGW 49.2.2941

2023-08-09

Table of Contents

Troubleshooting	3
Troubleshooting	4
Mediatrix Profile Default Settings for the Rescue Interface	4
Performing a Factory Reset	5
Performing a Partial Reset	5
Disabling the Rescue Interface	7
RESET/DEFAULT Button	8
LED Patterns	10
Locating the MAC Address of Your Mediatrix Unit	10
Locating the Link Local Address of Your Unit	10
Logging on to the Mediatrix Unit Web Interface	11
Locating the Product Serial Number	12
Online Help	14
DGW Documentation	15
Copyright Notice	16

Troubleshooting

The Mediatrix CPE provides several troubleshooting features such as notification messages, diagnostic traces and SIP signalling logs.

The Syslog daemon is a general purpose utility for monitoring applications and network devices with the TCP/ IP protocol. With this software, you can monitor useful messages coming from the Mediatrix CPE.

- **Diagnostic Traces** are sent using the Syslog to the Technical Assistance Centre to further assist in resolving some issues such as Interoperability.
- **PCM traces** are two different RTP streams made specifically to record all analog signals that are either sent or received on the analog or ISDN side of the Mediatrix device. PCM traces are an efficient tool to identify problems with:
 - Echo in your network
 - DTMF signals
 - Caller ID signals
 - Fax signals or false Fax detection
 - Message Waiting Indicator signals
 - Any other analog or digital signal
- **Statistics** are collected on each port of the PRI card, on Ping/Pingv6 on the CLI or on Media. Statistics are collected on:
 - Packet loss
 - Jitter
 - Latency
 - Packet count
 - Octet count
- **Live Network Captures** can be taken with the pcapure command and sent to Wireshark located on a separate terminal. The SBC can also capture the SIP/RTP traffic of a specific call, selected by rules. The Network Capture will gather information on:
 - Interoperability
 - Timing issues
- **Configuration scripts** can be generated from the configuration running on the Mediatrix CPE. This provides the content of your configuration that can be used by technical support to troubleshoot your faulty configuration.

Troubleshooting

Problem	Cause
Unable to contact the Management Interface.	Wrong Eth port used for the Network configuration (Mediatrix unit on the edge or in the LAN with or without a DHCP server).
Card does not appear in the Management Interface.	- The card is broken. - The unit is broken.
Card appears in the Management interface, but cannot be used (For example, unable to make calls).	The card is not configured properly. Refer to the Software Configuration Guide.
Unable to contact the Management Interface via the CLI.	- CLI service not activated in the configuration. - Protocol used to contact the CLI not activated.
Unable to contact the unit via SNMP.	- SNMP service not activated. - Credentials do not grant access.
Unable to make calls, although cards appear in the Management Interface.	Hour and date are not synchronized (required by certificates).

Mediatrix Profile Default Settings for the Rescue Interface

Parameter	Default Value
Username	admin
Password	administrator
IP address	192.168.0.1
Active (rescue) interface	the one meant for 'WAN' connection (usually Eth1)

Performing a Factory Reset

Information

The Factory reset alters any persistent configuration data of the Mediatrix unit.

Steps

- 1) Insert a small, unbent paper clip into the hole of the **Reset/Default** button, located on the Mediatrix unit.

Note: Do not release the **Reset/Default** button before the LEDs stop blinking and are steadily ON. This can last from 12 to 16 seconds. If you leave the inserted pin longer, no action will be taken which is useful if you accidentally pushed the button and do not need any action to be applied.

- 2) Release the paper clip.

Result

All configuration parameters are reset to their default value. The unit can then be contacted via its WAN interface DHCP-provided IP address (ETH1 or WAN on the 4102S), or via its LAN interface default IP address 192.168.0.10 (ETH2 or LAN on the 4102S).

Performing a Partial Reset

Before you start

Note: It is not recommended to access the unit on a regular basis through the Rescue Network Interface.

Important: Make sure the unit is connected to the WAN port, as the Rescue interface is bound to the unit's WAN port (wan for the Mediatrix 4102S, and ETH1 for all other Mediatrix units). The IP address of the Rescue interface is 192.168.0.1 (IPv4) or an IPv6 Link Local address.

Steps

- 1) When the Power LED is steady or blinking rapidly, insert a small unbent paper clip into the hole of the **Reset/Default** button located on the Mediatrix unit.

Note: The Power LED will start blinking.

- 2) Wait a few seconds.
- 3) When all LEDs are blinking, but before they stop blinking, remove the paper clip.

Note: You have between 7 to 11 seconds.

Result

The Rescue Network Interface is displayed when accessing the Management Interface. Several parameters and services are modified, refer to [Partial Reset](#). Do not forget to perform the [Disabling the Rescue Interface](#) step.

Partial Reset

The partial reset provides a way to contact the Mediatrix unit in a known and static state while keeping most of the configuration unchanged.

A partial reset can be performed at the initial start-up of the Mediatrix unit or on a unit already in use where the configuration was modified in such a way that the user can no longer access the system by the Web page or otherwise. In both cases, the user can manage the Mediatrix unit through its Rescue interface, which is bound to the unit's WAN port (wan for the Mediatrix 4102S, and ETH1 for all other Mediatrix units). The IP address of the Rescue interface is 192.168.0.1 (IPv4) or an IPv6 Link Local address.. These connections give access to the Rescue Management Interface where the configuration of a new unit can be completed and where an existing configuration can be modified.

By default the Rescue Network Interface is disabled. When a partial reset is performed, the Rescue network Interface becomes enabled and the "Power" and "Ready" LEDs are blinking at 1Hz with 75% duty and all other LEDs are off. Once the configuration has been modified to solve the problem that required the partial reset, it is important to disable the Rescue Network Interface to make sure that you are no longer working in the Rescue Network Interface.

Performing a partial reset on a new unit will not modify the configuration, as it has not yet been modified to your needs. However, a partial reset performed on a unit already in use will:

- Rollback Local Firewall settings that are not yet applied.
- Add a Local Firewall rule to allow complete access to the Rescue interface.
- Rollback NAT settings that are not yet applied.
- Add NAT rule to allow complete access to the Rescue interface.
- Cancel the changes that were being modified but not yet applied to the configuration.
- Disable any Network Interface in conflict with the Network Rescue Interface.
- Configure and enable the Rescue Network Interface to:
 - use the link as the default value used by the Uplink Network Interface
 - set the IP address to 192.168.0.1 and the Network Mask to 255.255.255.0.
 - set the IPv6 link-local address on all network links. The IPv6 link-local address can be found underneath the unit.

A partial reset will also modify the following parameters and preserve the values below even after the Rescue interface has been disabled.

Note: These changes are valid when using a MX profile. If the Mediatrix unit is not using a MX profile, the default values and therefore the behaviour of the parameters may be different.

Service	Parameter	Default Value
AAA	Users.Password	User(s) from profile are restored with their factory password. All other usernames keep their password.
	Users.AccessRights	User(s) from profile are restored with their factory rights.
	ServicesAaaType (table)	Each service will be configured to use Local authentication and no accounting mechanism.
CLI	EnableTelnet	Disable
	TelnetPort	23
	EnableSsh	Enable
	SshPort	22
	InactivityTimeOut	15
Ha	servicesInfoExecState (Scm)	Stopped
	servicesInfoStartupType (Scm)	Manual
HOC	ManagementInterface	Rescue
SNMP	Port	161
	EnableSnmpV1	Enable
	EnableSnmpV2	Enable
	EnableSnmpV3	Enable
Web	ServerPort	80
	SecureServerPort	443

Disabling the Rescue Interface

Information

By default the Rescue interface is disabled. However, after a partial reset the rescue interface is enabled.

IMPORTANT: The Rescue interface is bound to the unit's WAN port (wan for the Mediatrix 4102S, and ETH1 for all other Mediatrix units). The IP address of the Rescue interface is 192.168.0.1 (IPv4) or an IPv6 Link Local address.

Steps

- 1) Go to **Management/Misc.**
- 2) From the **Network Interface** drop-down menu, select the interface that will be used to manage the unit.

IMPORTANT: If you keep the **Rescue Interface** selected, you will not be able to get into the management interface after disabling it.

- 3) Click **Apply**
- 4) Go to **Network/Interfaces.**
- 5) In the **Rescue Interface** table, from the **Activation** selection list, select **Disable**.
- 6) Click **Apply**.

IMPORTANT: Make sure to reconfigure at least the user's authentication and firewall rules (if applicable), otherwise it may leave the unit unsecure.

Result

The unit will be reachable either on the new configured static IP address or on the DHCP .

Rescue Network Configuration			
Family	Link	IP Address	Activation
IP version 4	eth1	192.168.0.1/24	Disable ▼
IP version 6	All	fe80::0290:f8ff:fe09:b3db	

RESET/DEFAULT Button

The **Reset/Default** button is a switch that can be used to perform a partial or factory reset while the unit is running.

In other words, the **Reset/Default** button can be used to:

- Cancel an action that was started.
- Revert to known factory settings if the Mediatrix unit refuses to work properly for any reason or the connection to the network is lost.
- Reconfigure a unit.

The **Reset/Default** button will generate different actions depending on the amount of time the button is held.

IMPORTANT: It is the LED pattern that will indicate the action that is being applied to the unit. The action will occur more or less rapidly depending on the platform.

LED Pattern	Action	Comment
Power1 blinking, all other LEDs OFF	Restarts the Mediatrix unit.	No changes are made to the Mediatrix unit settings.
All LEDs blinking, 1 cycle per second, 50% duty	Initiates a Partial Reset of the Mediatrix unit. Note: The partial reset is optional as it can be disabled with the CLI Hardware.ResetButtonManagement parameter. For more details, refer to the DGW Configuration Guide - Reference Guide published on the Media5 Documentation Portal .	Restarts the unit in a known and static state while keeping most of the configuration unchanged.
All LEDs steady ON	Initiates a Factory Reset of the Mediatrix unit.	Reverts the unit back to its default factory settings.
All LEDs will become OFF after blinking and being steady on.	No action is taken. This is useful if you accidentally pushed the button and do not need an action to be applied.	The action is ignored.

LED Patterns

LED state	Description
All LEDs cycling from left to right, individually blinking 1 cycle per second, 33% duty.	A firmware pack is being downloaded into the unit and written to persistent storage.
All LEDs blinking at 3 cycles per second, 50% duty. One LED out of two has a 180 degree phase. This pattern lasts for 8 seconds.	The download of the firmware has failed. After 4 seconds, the unit restarts.
Power1 or 2 and Ready LEDs blinking (synchronized) 1 cycle per second, 75% duty.	The partial reset is completed.
Power LED blinking, 1 cycle per 4 seconds, 75% duty.	Triggered when the unit is booting on the recovery bank and no update is pending.
Power LED blinking green 3 cycles per second, 50% duty.	Waiting for DHCP (IPv4 or IPv6) answer or IPv6 router advertisement or PPPoE connection. No Ip Address configured.
Ready LED OFF, all other LEDs cycling from right to left, left to right.	The unit tries to download and install a firmware given by the Network Rescue server.

Locating the MAC Address of Your Mediatrix Unit

Information

The MAC address of the unit is:

- printed on a label located under the Mediatrix unit
- displayed in the **Current Status** table of the Web Interface (**System/Information**)

Locating the Link Local Address of Your Unit

Steps

- 1) Locate the Link Local address of the unit printed on a label under the unit.

2) Add a scope ID to the link local address ([fe80::290:f8ff:fe12:3456%11]).

- On Windows, execute an `ipconfig` command in the prompt command to identify the scope ID.
- On Linux, execute an `ifconfig` command in the Linux command line to identify the scope ID or use the link name as the scope ID.

Result

The Link Local address can be used to access your unit's management interface, provided you have configured your unit to use the IPv6 Link Local Address.

Logging on to the Mediatrix Unit Web Interface

Before you start

The computer IP address must be in the same TCP/IP network as the Mediatrix unit.

Information

For better performances, it is recommended to use the latest available version of Microsoft Internet Explorer, Google Chrome, or Mozilla Firefox.

Note: You may not be able to log on to the Mediatrix unit Web interface if you are using older browser versions.

Steps

- 1) In your Web browser, enter the IP address at which the Web interface of your Mediatrix unit can be reached.
 - If your network has an IPv4 DHCP server, connect the primary Ethernet port of the Mediatrix unit to the network (ETH1 port), use the provided DHCP server IP address.
 - You can also connect your computer to the secondary Ethernet port of the Mediatrix unit (ETH2), use the 192.168.0.10 IP address. However, the computer must also own an IP address in the 192.168.0.0/24 network.
- 2) Enter **admin** as your username and **administrator** as the password.

Note: You can also use **public** as a username and leave the password field empty; it has the full administration rights by default.

- 3) Click **Login**.

Result

The **Information** page of the Web interface is displayed.

Locating the Product Serial Number

Before you start



Warning: Make sure your unit is powered off.

Steps

- 1) Flip the unit. The serial number is located underneath the unit.

Mediatrix®

Model M

Input: 100-240 Vac, 1.3A, 50-60 Hz

Serial # 0500200M348180001

ETH1 MAC Address:

0090F80E6AEC

ETH1 IPv6 MAC Address:

fe80::290:f8ff:fe0e:6aec

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: Use with internal ethernet cable only

Assembled in Canada with foreign parts

Media5 Corporation
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REPUBLICA ARGENTINA
50

NOM NYCE

08365-17-02323

CAN ICES-3 (B) / NMB-3 (B)
CNC ID : H-21118

Note:

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, (2) this device must accept any

interference received, including interference that may cause undesired operation. Designed and assembled in Canada.



Caution: Use with internal Ethernet cable only.



Warning: Make sure your unit is powered off before flipping it over. Make sure all your cables are well connected.

- 2) Flip the unit and power the unit.

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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