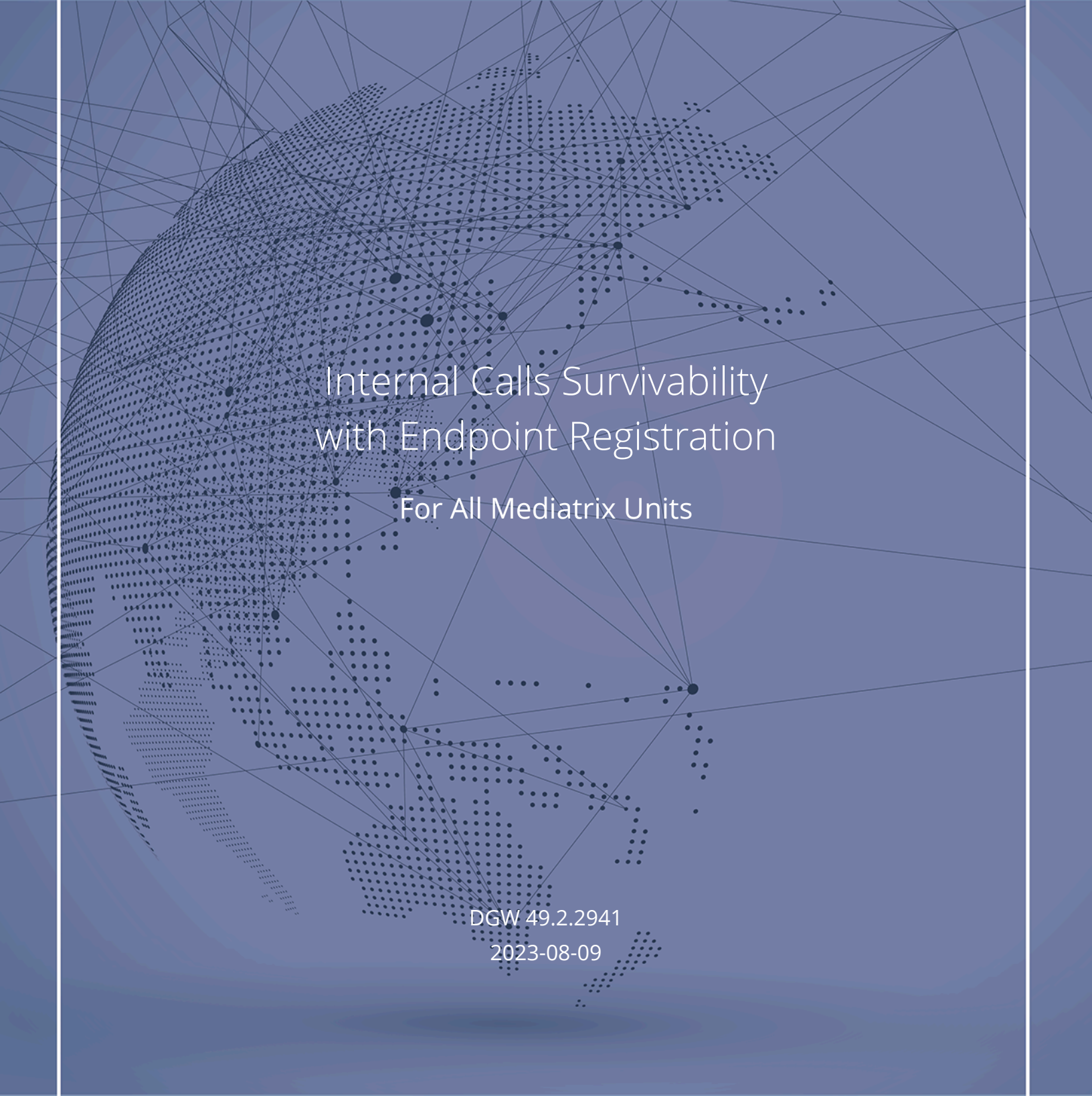


The background of the slide is a dark blue abstract graphic. It features a complex network of thin white lines connecting numerous small black dots, creating a mesh-like structure. On the left side, there is a curved, grid-like pattern of dots, resembling a stylized globe or a data visualization. The overall effect is one of a global or networked communication system.

Internal Calls Survivability with Endpoint Registration For All Mediatrix Units

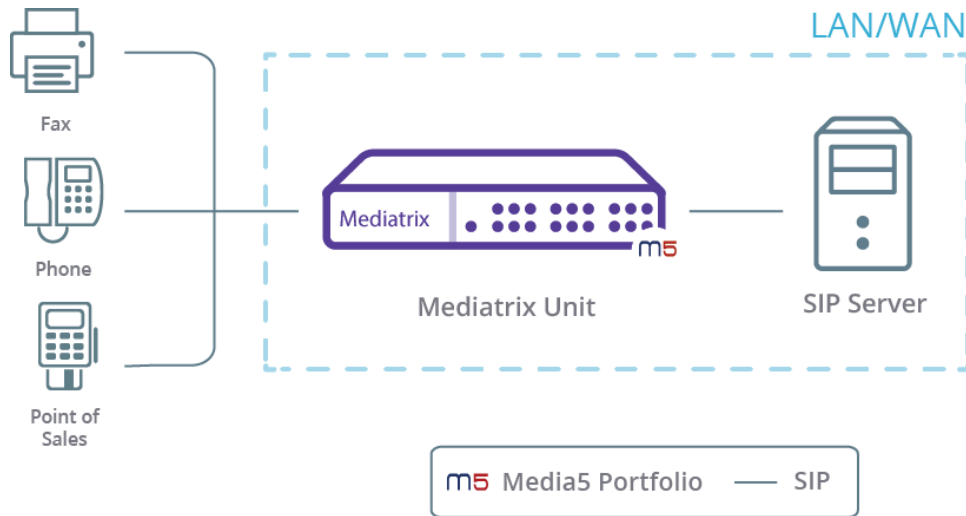
DGW 49.2.2941
2023-08-09

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Internal Calls Survivability

This document describes how a Mediatrix gateway which uses Endpoint Registration can preserve its internal calls (among its endpoints) when the primary SIP server cannot be reached.



Information to Know Before Starting

Before starting to use these configuration notes, complete the following table to make sure you have the required information to complete the different steps.

IMPORTANT: 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.

Note: The Mediatrix unit must be reinitialised to its factory default settings to make sure the configuration can be successfully executed.

Information	Value	Used in Step
IP address used by your Mediatrix unit to communicate with the Management Interface. If your computer is connected to the Ethernet port meant to be connected to the Local Area Network (LAN), i.e. Eth2 on most devices	Use this value 192.168.0.10	Logging on to the Mediatrix Unit Web Interface (p.5)
If your Mediatrix unit is configured to use a DHCP server, use the DHCP server-provided IP address.		Logging on to the Mediatrix Unit Web Interface (p.5)
IP address or FQDN of the Mediatrix unit		Assigning a Specific Proxy Server to the Local Gateway (p.7) and Configuring the Keep Alive Feature for Internal Call Survivability (p.8)
IP address or FQDN of the SIP Registrar Host		Configuring the Default SIP Servers (p.6)
IP address or FQDN of the Proxy Host		Configuring the Default SIP Servers (p.6)
IP address or FQDN of the SIP Proxy Host of Messaging Server Host (if required)		Configuring the Default SIP Servers (p.6)

Requirements

- Network configuration (default router, DNS server, etc.)
- SIP gateway credentials configured on SIP server
- Static IP address on the Mediatrix gateway (network setup is not covered in this guide)

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.

Related tasks

[Adding the Local Gateway \(p.5\)](#)

Adding the Local Gateway

Before you start

When using the trunk SIP gateway type, the Mediatrix unit may require a SIP gateway username and password. These need to be obtained from your SIP server administrator.

Steps

- 1) Go to **SIP/Gateways**.

- 2) In the **Gateway Configuration** table, in the **Name** field, enter **local**.
- 3) Click **+**.
- 4) Complete the fields as follows:
 - From the **Type** selection list, select **Trunk**.
 - From the **Signaling Network** selection list, select **Uplink**.
 - In the **Port** field, enter 5062.
 - In the **Secure Port** port field, enter 5068.
- 5) Click **Apply**.
- 6) Click **restart required services** located at the top of the page.

Result

The **local** gateway will be available under the **SIP/Servers** page.

Gateway Status						
Name	Signaling Network	Media Networks	Port	Secure Port	State	
default	Uplink	Uplink	0	0	Ready	
local	Uplink	Uplink	5062	5068	Ready	

Gateway Configuration							
Name	Type	Signaling Network	Media Networks	Media Networks Suggestion	Port	Secure Port	
default	Trunk	Uplink		--- Suggestion ---	0	0	—
local	Trunk	Uplink		--- Suggestion ---	5062	5068	—
							+

Next Step

[Configuring the Default SIP Servers \(p.6\)](#)

Configuring the Default SIP Servers

Information

In some instances, the configuration of the default servers may already be completed.

Steps

- 1) Go to **SIP/Servers**.
- 2) In the **Registrar Host** field, indicate the server IP address or FQDN of the SIP Registrar server .
- 3) In the **Proxy Host** field, indicate the server IP address or FQDN of the SIP Proxy server.
- 4) In the **Messaging Server Host** field, indicate the server IP address or FQDN of the Messaging server, if needed.

- 5) Leave the **Outbound Proxy Host** field empty, unless specifically instructed to set a value.

Note: Setting the address to 0.0.0.0:0 or leaving the field empty disables the outbound proxy host.

- 6) Click **Apply**.
- 7) Located at the top of the page, click **restart required services**.

Result

Default Servers	
Registrar Host:	sip.registrarserver.com
Proxy Host:	sip.proxyserver.com
Messaging Server Host:	
Outbound Proxy Host:	

Next Step

[Keeping EndPoints Enabled when the Registrar Server is Unreachable \(p.7\)](#)

Keeping EndPoints Enabled when the Registrar Server is Unreachable

Steps

- 1) Create a text file called EnableEndpoint.cfg
- 2) Add the following lines to your text file.
 - a) # SipEp Service
 - b) SipEp.DefaultRegistrationUnregisteredBehavior = "Enable"
 - c) # Restart all the services that require it.
 - d) Scm.RestartRequiredServices
- 3) Import the EnableEndpoint.cfg file to your system. Refer to the [Technical Bulletin - Importing a configuration script from a PC](#) published on the [Media5 Documentation Portal](#).

Next Step

[Assigning a Specific Proxy Server to the Local Gateway \(p.7\)](#)

Assigning a Specific Proxy Server to the Local Gateway

Before you start

You can assign a specific messaging server to the default gateway, or to a gateway you have created. The **local** gateway must be created. Refer to [Adding the Local Gateway \(p.5\)](#).

Steps

- 1) Go to **SIP/Servers**.
- 2) In the **Proxy Servers** table, from the **Gateway Specific** drop down located on the same row as **local**, select **Yes**.

- 3) In the **Proxy Host** field, indicate the IP address or FQDN of the unit, and the SIP port number of the local gateway.

Note: This must be consistent with the value used when the **local** gateway was configured.

- 4) In the **Outbound Proxy Host**, leave 0.0.0.0:0

Note: Setting the address to 0.0.0.0:0 or leaving the field empty disables the outbound proxy host.

- 5) Click **Apply**.
- 6) Click **restart required services**.

Result

The gateway will now use the specified server IP address or FQDN instead of the default server address.

Proxy Servers		Gateway Specific		Proxy Host	Outbound Proxy Host
Gateway					
local		Yes ☐		IP Address/FQDN + SIP port of local gateway	0.0.0.0:0

Next Step

[Configuring the Keep Alive Feature for Internal Call Survivability \(p.8\)](#)

Configuring the Keep Alive Feature for Internal Call Survivability

Steps

- 1) Go to **SIP/Servers**.
- 2) In the **Keep Alive** table, from the selection list, select **SIP OPTIONS**.
- 3) In the **Keep Alive Interval** field, enter 30.

Note: This is the recommended value.

- 4) From the **Keep Alive Destination** selection list, select **Alternate Destination**.
- 5) In the **Keep Alive Destination** table, in the **Alternate Destination** field, enter the server IP address or FQDN for the default gateway and the unit IP address or FQDN for the local.

Note: The **local** gateway must point to the Mediatrix unit IP address and port if you did not use the default port 5060.

- 6) Click **Apply**.
- 7) Click **restart required services**.

Result

Keep-Alive	
Keep-Alive Method:	SIP OPTIONS ▼
Keep-Alive Interval (s):	30
Keep-Alive Retry:	3
Keep-Alive Destination:	Alternate Destination ▼

Keep Alive Destination Gateway	Alternate Destination
phone_lines_gw	sip.server.com
trunk_lines_gw	SIP IP Address of unit

Next Step

Registering Endpoints to the Default Sip Gateway (p.9)

Registering Endpoints to the Default Sip Gateway

Steps

- 1) Go to **SIP/Registrations**.
- 2) In the **Endpoints Registration** table, from the **Register** selection list, select **Enable** for each endpoint to register.
- 3) In the **Endpoints Registration** table, from the **Messaging** selection list, select **Enable** for each endpoint to register if a messaging server was set in the [Configuring the Default SIP Servers](#) (p.6) step.
- 4) From the **Gateway Name** selection list, select **default** for each endpoint to register.
- 5) Click **Apply and Refresh**.

Result

Endpoints Registration	Endpoint	User Name	Friendly Name	Register	Messaging	Gateway Name
Slot1/E1T1	user_name 1			Enable	Disable	default
Slot2/FXO1	user_name 2			Enable	Disable	default
Slot2/FXO2	user_name 3			Enable	Disable	default
Slot2/FXO3	user_name 4			Enable	Disable	default

Next Step

[Configuring Authentication for Internal Call Survivability \(p.10\)](#)

Configuring Authentication for Internal Call Survivability

Steps

- 1) Go to **SIP/Authentication**.
- 2) In the **Authentication** table, click  on the same line of an unconfigured line.
- 3) In the **Authentication** table, from the **Criteria** selection list, select **Endpoint**.
- 4) From the **Endpoint** selection list, choose the proper endpoint.
- 5) From the **Validate Realm** selection list, select **Disable**.
- 6) In the **User Name** field, enter the registration username for that Endpoint.
- 7) In the **Password** field, enter the appropriate password.
- 8) Click **Apply and Refresh Registration**.

Result

The unit will register to the default server.

Authentication								
Priority	Criteria	Endpoint	Gateway	Username Criteria	Validate Realm	Realm	User Name	Password
1	Endpoint	Slot3/FXS1			Disable		user_name-1	

Next Step

[Configuring OPTIONS Method Support \(p.10\)](#)

Configuring OPTIONS Method Support

Information

Note: This step is required if your server is configured to only receive 200 OK by the Mediatrix unit, when it polls the Mediatrix with SIP OPTIONS.

Note: This is not supported by all SIP servers, this feature is not mandatory in most use cases.

Steps

- 1) Go to **SIP/Interop**.
- 2) In the **SIP Interop** table, from the **OPTIONS Method Support** selection list, select **Always 200 OK**.
- 3) Click **Apply**.

Result

The unit will always answer 200 OK to SIP OPTIONS messages received (Keep Alive).

SIP Interop	
Secure Header:	Disable
Default Username Value:	Anonymous
OPTIONS Method Support:	Always 200 OK
Ignore OPTIONS on no Usuable Endpoints:	Disable
SIP URI User Parameter Value:	
Behavior on Machine Detection:	Re-INVITE on Fax T38 Only
Registration Contact Matching:	Strict
Transmission Timeout:	32

Next Step

[Creating a Hunt Group for Internal Call Survivability \(p.11\)](#)

Creating a Hunt Group for Internal Call Survivability

Steps

- 1) Go to **Call Router/Route Config**
- 2) In the **Hunt** table, click **+** located at the bottom of the table.
- 3) In the **Configure Hunt** table, in the **Name** field, enter **SIP**.
- 4) In the **Destinations** field, enter:
 - sip-default
 - sip-local

Note: The order is important.

- 5) From the **Selection Algorithm** selection list, select **Sequential**.
- 6) In the **Causes** field, leave the default values.
- 7) Click **Save**.
- 8) In **Call Router/Route Config** page , click **Save** again.

Result

The Hunt-SIP will be available in the **Suggestion** selection list of the **Auto-Routing Destination** field, in the **Call Router/Auto-Routing** page.

Configure Hunt 1		
	Value	Suggestion
Name	SIP	
Destinations	sip-default, sip-local	--- Suggestion --- ▼
Selection Algorithm	Sequential ▼	
Timeout (seconds)	0	
Causes	31, 34, 38, 41, 42, 43, 44, 47	--- Suggestion --- ▼
Config Status		

Next Step

Modifying Auto-Routing for Internal Call Survivability (p.12)

Modifying Auto-Routing for Internal Call Survivability

Steps

- 1) Go to **Call Router/Auto-Routing**.
- 2) In the **Endpoints auto-routing** table, click .
- 3) In the **Configure Auto-Routing**, in the **Auto-Routing Gateway** field, enter **default, local**.
- 4) In the **Auto-Routing Destination** field, enter hunt-SIP.
- 5) Click **Check All**.
- 6) Click **Apply**.

Result

Endpoints auto-routing						
Endpoint	Auto-routable	Auto-routing Gateway	Auto-routing Destination	E164	SIP Username Name	
Port01	H/W Dependent	default, local	hunt-SIP	7102	7102	
Port02	H/W Dependent	default, local	hunt-SIP			
Port03	H/W Dependent	default, local	hunt-SIP			
Port04	H/W Dependent	default, local	hunt-SIP			
Port05	H/W Dependent	default, local	hunt-SIP			
Port06	H/W Dependent	default, local	hunt-SIP			

Next Step

[Testing Internal Calls Survivability \(p.13\)](#)

Testing Internal Calls Survivability

Before you start

IMPORTANT: Make sure the ETH cable connecting the unit with the network that reaches the SIP server is connected. If the cable is disconnected, then this scenario will not work.

Steps

- 1) When the SIP server is reachable, make a call from Endpoint1 (e.g. FXS1) to Endpoint2 (e.g. FXS2).
- 2) The call will go through the SIP server.
- 3) Bring the SIP server down (either by stopping its SIP service, or by adding a firewall rule that blocks SIP traffic between the Mediatrix and the server, etc).
- 4) Make a call from Endpoint1 (e.g. FXS1) to Endpoint2 (e.g. FXS2).
- 5) After the SIP Timer elapses (32 seconds by default, configurable via the **Transmission Timeout** parameter (under **SIP/Interop/SIP Interop**) the SIP server will be marked as unreachable by the Mediatrix units.
- 6) Call from FXS1 to FXS2 will be routed through the Mediatrix gateway itself.

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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