

Configuring the Mediatrix Unit for VoIP Trunking with a Legacy PBX

Mediatrix Gateways

DGW 49.2.2941

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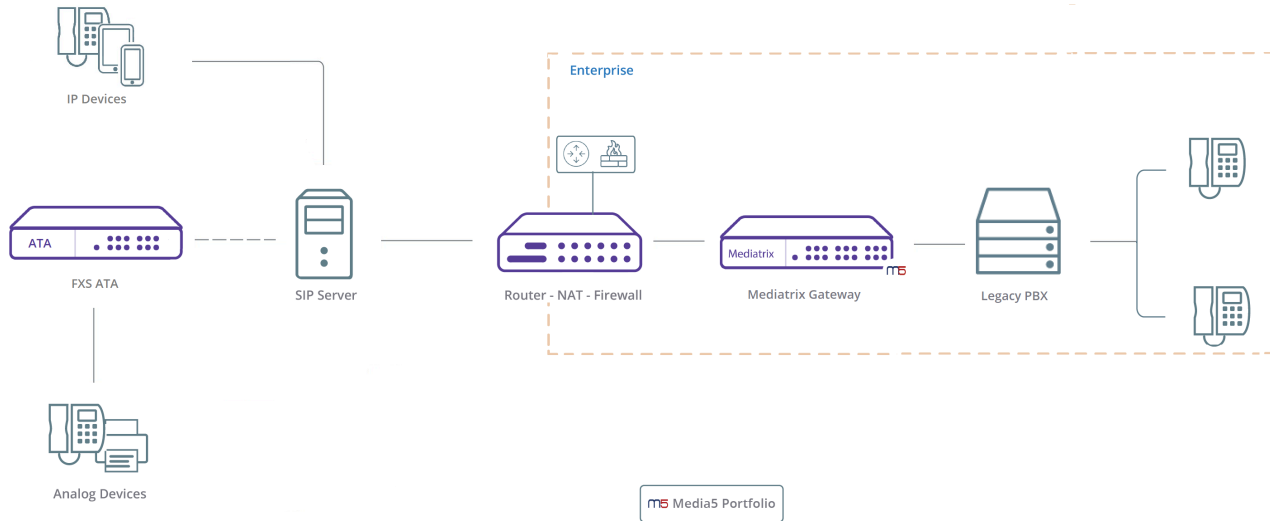
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VoIP Trunking with a Legacy PBX

This configuration note is a step-by-step guide to set up a Mediatrix gateway to provide VoIP trunking with a legacy PBX.

The Mediatrix gateway is used to connect an enterprise PBX to an existing VoIP network.



The Mediatrix digital gateway is configured to either:

- Receive calls from the PBX and route them to the VoIP network (right to left):
- Receive calls from the VoIP network and route them to the PBX (left to right)

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.

Note: The Mediatrix unit is configured in the NT mode. The ISDN ports of the Mediatrix Gateway, i.e the PRI and BRI ports, must first be configured. For the complete ISDN configuration information, refer to the [ISDN User Guide](#) published on the [Media5 Documentation Portal](#).

Note: 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.

This document includes the basic configuration of an FXO, PRI and/or BRI gateway. If you wish to add registration and authentication, refer to the [Technical Bulletin - Basic SIP Unit Registration](#) and [DGW Configuration Guide - SIP Authentication](#) documentation published on the [Media5 Documentation Portal](#).

Information	Value	Used in Step
IP address of unit		Logging on to the Mediatrix Unit Web Interface (p.6)
IP address or FQDN of Registrar host		Configuring the Default SIP Servers (p.7)
IP address or FQDN of Proxy host		Configuring the Default SIP Servers (p.7)
Type of endpoint used	BRI, PRI and/or FXO	Creating a Hunt Group - PSTN

Configuring the Mediatrix Digital Gateway

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

[Configuring the Default SIP Servers \(p.7\)](#)

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

[Registering a Unit to All Gateways \(p.7\)](#)

Registering a Unit to All Gateways

Steps

- 1) Go to **SIP/Registrations**.
- 2) In the **Unit Registration** table, enter in the **User Name**, a username to uniquely identify the user in the domain.

- 3) From the **Gateway Name** selection list, choose **All**.
- 4) Repeat steps 2 (p.7) and 3 (p.8) for each SIP account/Registration needed.
- 5) Click **Apply and Refresh**.
- 6) Click **restart required services** located at the top of the page.

Result

The information will be displayed in the **Unit Registration Status** table.

Unit Registration			
Index	User Name	Gateway Name	
1	default_user	all	-
			+

Next Step

[Configuring the Keep Alive feature \(p.14\)](#)

Configuring Unit Authentication

Before you start

The SIP gateway must be configured as a Trunk.

Unit Authentication applies to all challenges received for SIP dialogs. You can define several user names and passwords for the Mediatrix unit. These usernames and passwords apply to all endpoints of the unit.

Steps

- 1) Go to **SIP/Authentication**.
- 2) Click **Edit All Entries** located at the bottom of the page.
- 3) In the **Authentication** table, from the **Criteria** selection list, select **Unit**.
- 4) From the **Realm** field, enter the provided realm.
- 5) From the **Validate Realm** selection list, select **Enable**.

Note: If no **Realm** was provided, leave the **Realm** field empty and from the **Validate Realm** selection list, select **Disable**.

- 6) In the **User Name** field, enter the SIP user name.
- 7) In the **Password** field, enter the appropriate password for each entry.
- 8) Click **Apply and Refresh Registration**.

Result

Each gateway will be registered.

Authentication

Authentication									
Priority	Criteria	Endpoint	Gateway	Username Criteria	Validate Realm	Realm	User Name	Password	
1	Unit				Disable		user_name	password	
2	Unit				Enable	provided realm	user_name	password	
3	Unit				Enable				
4	Unit				Enable				

Creating a Hunt Group - PBX

Steps

- 1) Go to **Call Router / Route Config.**
- 2) In the **Hunt** table, click **+**.
- 3) In the **Configure New Hunt** table, set the following:
 - a) Set the **Name** field to **hunt_PBX**.
 - b) Using the **Destinations** selection list, add the destination endpoints to use.
 - c) Leave the other fields with their default value.
- 4) Click **Save**.

Result

Configure Hunt End	Value	Suggestion
Name	hunt_PBX	
Destinations	isdn-Slot3/E1T1, isdn-Slot4/E1T1, isdn-Slot5/E1T1	--- Suggestion ---
Selection Algorithm	Sequential	
Timeout (seconds)	0	
Causes	31, 34, 38, 41, 42, 43, 44, 47	--- Suggestion ---
Config Status		

Next Step

Creating a Route from Sip-Default to hunt-hunt_PBX (p.9)

Creating a Route from Sip-Default to hunt-hunt_PBX

Steps

- 1) Go to **Call Router / Route Config.**
- 2) In the **Routes** table, click **+**.

- 3) In the **Configure Route** table, set the following:
 - a) Set the **Sources** field to **sip-default**.
 - b) Set the **Destination** field to **hunt-hunt_PBX**.
 - c) Leave the other fields with their default value.
- 4) Click **Save**.

Result

Configure Route End		Value	Suggestion
Sources		sip-default	--- Suggestion ---
Properties Criteria		None	
Expression Criteria			--- Suggestion ---
Mappings			--- Suggestion ---
Signaling Properties			--- Suggestion ---
Destination		hunt-hunt_PBX	--- Suggestion ---
Config Status			

Next Step

Creating a Route From PRI/BRI/FXO ports to Sip-Default (p.10)

Creating a Route From PRI/BRI/FXO ports to Sip-Default

Steps

- 1) Go to **Call Router/Route Config**.
- 2) In the **Routes** table, click **+**.
- 3) In the **Configure Route** table, set the following:
 - a) Set the **Sources** field to one of the PRI, BRI and/or FXO endpoint of the gateway.

Note: More than one endpoint can be added at a time.
 - b) Set the **Destination** field to **sip-default**.
 - c) Leave the other fields to their default value.
- 4) Click **Save**.

Result

Configure New Route		
	Value	Suggestion
Sources	isdn-Slot1/E1T1, isdn-Slot5/BRI1, isdn-Slot5/BRI2, fxo-Slot4/FXO1, fxo-Slot4/FXO2, fxo-Slot4/FXO3, fxo-Slot4/FXO4	--- Suggestion ---
Criteria Property	None	
Criteria Rule		--- Suggestion ---
Transformations		--- Suggestion ---
Signaling Properties		--- Suggestion ---
Destination	sip-default	--- Suggestion ---
Config Status		

Next Step

[Configuring ISDN \(p.11\)](#)

Saving the Routes

Steps

- 1) Go to **Call Router/Route Config**.
- 2) Scroll to the bottom of the page.
- 3) Click **Save**.

Result

At the top of the page, make sure **Config.Modified** is set to **No**.

Next Step

[Configuring the Country for all Endpoints \(p.12\)](#)

Configuring ISDN

Steps

- 1) Go to **ISDN/Primary Rate Interface**.
- 2) From the **Select Interface** dropbox, select the interface for which you want to make modifications.

Note: Depending on the Mediatrix model, there may be several interfaces.

- 3) In the **Interface Configuration** table, set the **Endpoint Type** to **NT**.
- 4) Leave all the other parameters to their default values.

- 5) Click **Apply**.
- 6) Repeat the tasks 2 (p.11) to 5 (p.12) for each interface.

Next Step

[Saving the Routes \(p.11\)](#)

Configuring the Country for all Endpoints

Steps

- 1) Go to **Telephony/Misc**.
- 2) Make sure the **Select Endpoint** drop-down list is set to **Default**.
- 3) In the **Country** table, select your country from the drop-down list.
- 4) Click **Apply**.

Result

Country	
Country Selection:	NorthAmerica1 ▼

Next Step

[Configuring DTMF Transport \(p.12\)](#)

Configuring DTMF Transport

Steps

- 1) Go to **Media/Misc**.
- 2) In the **DTMF Transport** table, set the **Transport Method** to the one set in the VoIP server.
 - a) **In-band**
 - b) **Out-of-Band using RTP** (RFC2833). This is usually the preferred method. Remember to set the payload type if different (e.g.: 96, 101 or 110 in some cases).
 - c) **Out-of-Band using SIP**. For Cisco or Avaya systems, from the **SIP Transport Method** field, use **Info DTMF Relay**. For legacy Nortel and others, leave **Draft Choudhuri SIP Info Digit 00**.
 - d) **Signaling Protocol Dependent**: choose this method if unsure. It will try to use the method negotiated by the VoIP server.
- 3) Click **Apply**.

Result

DTMF Transport	
Transport Method:	Out-of-Band using RTP
SIP Transport Method:	Draft Choudhuri SIP Info Digit 00
Payload Type:	101

Optional Step

Configuring the Keep Alive feature

Before you start

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

Steps

- 1) Go to **SIP/Servers**.
- 2) In the **Keep-Alive** table, complete the fields as required.
- 3) If you selected an alternate destination, complete the fields of the **Alternate Destination** table.

Next Step

[Configuring Gateway Authentication](#)

Additional Configuration

- If you need to add/remove digits, configure different destinations based on calling or called number, or other transformations, refer to the [Call Router Basic Routes Configuration](#).
- For advanced analog port settings such as Caller ID or Tone Detection, refer to [POTS Configuration \(FXS-FXO\)](#).
- For ISDN settings, refer to the [ISDN User Guide](#).

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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