

Call Router Basic Routes

All Mediatrix Products

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Creating a Basic Route

Several configuration steps are required to be able to route a call from one endpoint to another.

Steps

- 1) Create a route to determine the destinations the calls should be sent to.
 - a) [Creating a Route from a SIP Gateway to a Destination](#) (p.5)
 - b) [Creating a Route from a Physical Interface to a SIP Destination](#) (p.6)
- 2) Create the transformation rules to be applied to selected call properties by creating a transformation.
 - a) [Creating a Call Property Transformation](#) (p.7)
- 3) Associate the call property transformations to a specific route.
 - a) [Associating a Call Property Transformation to a Route](#) (p.8)
- 4) Apply changes.

Creating a Hunt

Steps

- 1) Go to **Call Router/Route Config**.
- 2) In the **Hunt** table,
 - click  located on the same row as an existing hunt to add a new hunt above or,
 - click  located at the bottom of the table to add a hunt at the end of the table.

Note: You can create up to 40 hunts.

- 3) In the **Configure Hunt** table, enter a name in the **Name** field.
- 4) From the **Suggestion** selection list next to the **Destinations** field, select 1 or several destinations.
- 5) From the **Suggestion** selection list next to the **Causes** field, select the causes pertinent to your situation.
- 6) To create another hunt group, repeat steps 2 to 5.

Note: Up to 40 hunt groups can be created.

- 7) Click **Save**.

Result

The hunt is available to be used in a route.

Configure New Hunt	
	Suggestion
Name	Name
Destinations	Select Destination --- Suggestion ---
Selection Algorithm	Sequential
Timeout (seconds)	0
Causes	Select Causes --- Suggestion ---
Config Status	

Next Step

[Creating a Route from a SIP Gateway to a Destination \(p.5\)](#)

[Creating a Route from a Physical Interface to a SIP Destination \(p.6\)](#)

Creating a Route from a SIP Gateway to a Destination

Steps

- 1) Go to **Call Router/Route Config**.
- 2) In the **Routes** table, click **+**.
 - click **+** located on the same row as an existing route to add a new route above or,
 - click **+** located at the bottom of the table to add a route at the end of the table.

Note: A maximum of 40 routes can be created.

- 3) In the **Configure Route** table, from the selection list of the **Sources** field, select a SIP gateway.
- 4) If necessary, from the selection list of the **Destination** field, select an Interface or a hunt group.

Note: Leave the **Signaling Properties**, the **Transformations** and **Criteria Property** fields empty.

- 5) Click **Save**.

Result

A new route is created and will appear in the **Routes** table.

Configure New Route		
	Value	Suggestion
Sources	Sip Gateway	--- Suggestion ---
Criteria Property	None	
Criteria Rule		--- Suggestion ---
Transformations		--- Suggestion ---
Signaling Properties		--- Suggestion ---
Destination	Destination	--- Suggestion ---
Config Status		

Next Step

[Creating a Call Property Transformation \(p.7\)](#)

Creating a Route from a Physical Interface to a SIP Destination

Steps

- 1) Go to **Call Router/Route Config**.
- 2) In the **Routes** table, click **+**.
- 3) In the **Configure Route** table, from the selection list of the **Sources** field, select an interface.
- 4) From the selection list of the **Destination** field, select a SIP Gateway or a SIP hunt group.

Note: Leave the **Signaling Properties**, the **Transformations** and **Criteria Property** fields empty.

Note: A maximum of 40 routes can be created.

- 5) Click **Save**.

Result

Configure New Route		
	Value	Suggestion
Sources	Interface	--- Suggestion ---
Criteria Property	None	
Criteria Rule		--- Suggestion ---
Transformations		--- Suggestion ---
Signaling Properties		--- Suggestion ---
Destination	Sip-Gateway	--- Suggestion ---
Config Status		

Next Step

[Creating a Call Property Transformation \(p.7\)](#)

Creating a Call Property Transformation

Steps

- 1) Go to **Call Router/Route Config**.
- 2) In the **Transformations** table, click **+**.
 - click **+** located on the same row as an existing call property transformation to add a new call property transformation above or,
 - click **+** located at the bottom of the table to add a call property transformation at the end of the table.

Note: A maximum of 40 call property transformations can be created.

- 3) In the **Configure Transformation** table, in the **Name** field, enter a name for the call property transformation.
- 4) From the selection list of the **Criteria Based On** field, select the call property that must be matched to apply the Transformation.
- 5) From the selection list of the **Transformation Applies To** field, select the call property to transform.
- 6) Click **Save and Insert Rule**.
- 7) In the **Configure Transformation Rule** table, from the **Name** selection list, select the name entered at step 3.
- 8) In the **Criteria** field, indicate the call property criteria to match to apply the transformation.

- 9) In the **Transformation** field, select the transformation to apply to the call property.
- 10) Click **Save** or **Save and Insert Rule** to add another Transformation.

Result

The new Call Property Transformation is available to be used in a route.

Call Property Transformations

Transformations					
Index	Name	Criteria Based On	Transformation Applies To		
1	Name	Call Property to match	Call property to Transform		  
2					   
					

Transformation Rules					
Index	Name	Criteria Rule	Transformation Rule	Next Transformation	
1	Name	Call Property criteria to match	Transformation to apply		  
2	Name	Call Property criteria to match	Transformation to apply		   
					

Next Step

[Associating a Call Property Transformation to a Route \(p.8\)](#)

Associating a Call Property Transformation to a Route

Before you start

The [Creating a Call Property Transformation \(p.7\)](#) step must be completed.

Steps

- 1) In the **Routes** table, click  located on the same line as the route you wish to associate a call property transformation to.
- 2) From the selection list of the **Transformations** field, select the transformation you wish to associate to the route.
- 3) Click **Save**.

Result

For each incoming call from SIP or an interface, the associated call property transformation defined in the transformation will be applied. Transformations are executed in sequence, separated by commas.

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	Sip or Interface			Transformation name		Sip or Interface	   
							

Examples of Call Property Transformations

Replace 1xxx by 102

Any destination with prefix 1 will be replaced by destination 102 and send the call through the ISDN-BRI1 interface

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	sip-sip_default	None		ModCalled		ISDN-BRI1	   
							

Call Property Transformations

Transformations				
Index	Name	Criteria Based On	Transformation Applies To	
1	ModCalled	Called E164	Called E164	   
				

Transformation Rules				
Index	Name	Criteria Rule	Transformation Rule	Next Transformation
1	ModCalled	1(.+)	102	   
				

Replace the Prefix 9 by 1 800 in an Outgoing Phone Number

For every called number coming from the SIP interface and beginning with 9, replace the 9 by 1 800, then send the call through the ISDN-BRI1 interface.

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	sip-sip_default	None		ModCalled		ISDN-BRI1	   
							

Call Property Transformations

Transformations				
Index	Name	Criteria Based On	Transformation Applies To	
1	ModCalled	Called E164	Called E164	   
				

Transformation Rules				
Index	Name	Criteria Rule	Transformation Rule	Next Transformation
1	ModCalled	9(.+)	1800\1	   
				

Add the 1 450 Prefix to an Outgoing Phone Number

For every called number coming from the SIP interface add 1 450 in front of the number and then send the call through the ISDN-BRI1 interface

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	sip-sip_default	None		ModCalled		ISDN-BRI1	   
							

Call Property Transformations

Transformations				
Index	Name	Criteria Based On	Transformation Applies To	
1	ModCalled	Called E164	Called E164	   
				

Transformation Rules				
Index	Name	Criteria Rule	Transformation Rule	Next Transformation
1	ModCalled	.+	1450\0	   
				

Send last 3 Digits

For every called number coming from a SIP interface, only keep the 3 last digits of the called number and send the call through the ISDN-BRI1 interface.

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	sip-default	None		stripforDDI		ISDN-BRI1	    
							

Call Property Transformations

Transformations				
Index	Name	Criteria Based On	Transformation Applies To	
1	stripforDDI	Called E164	Called E164	    
				

Transformation Rules				
Index	Name	Criteria Rule	Transformation Rule	Next Transformation
1	stripforDDI	.*(...)	\1	    
				

Replacing the Entire Source Phone Number by 1800 123 4567

Routes						
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination
1	sip-sip_default	None		ModCalling		ISDN-BR11

Call Property Transformations

Transformations				
Index	Name	Criteria Based On	Transformation Applies To	
1	ModCalling	Calling E164	Calling E164	

Transformation Rules				
Index	Name	Criteria Rule	Transformation Rule	Next Transformation
1	ModCalling	.+	18001234567	

Multiple Called URI Transformations

For all outgoing calls, send the 3 last digits of the called URI in the INVITE, display the U037098000 number in the **From** field, and forward to the SIP server all the 2-digit numbers beginning with 2.

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	isdn-Bri1	Calling E164	2.\$	internal		sip-default	
2	isdn-Bri1	None			fix_from_number	sip-default	 
3	sip-default	None		to_PBX	fix_from_number	hunt-hunt_PBX	 

Call Property Transformations

Transformations			
Index	Name	Criteria Based On	Transformation Applies To
1	to_PBX	Called URI	Called E164
2	internal	None	Called E164

Transformation Rules				
Index	Name	Criteria Rule	Transformation Rule	Next Transformation
1	to_PBX	sip:u.+(..)@	\1	
2	internal		u037098001	

Signaling Properties

Signaling Properties									
Index	Name	Early Connect	Early Disconnect	Destination Host	Allow 180 with SDP	Allow 183 without SDP	Privacy	SIP Header Translation Overrides	Call Property Translation Overrides
1	fix_from_number	Disable	Disable		Enable	Enable	Disable	fix_from_number	

SIP Header Translation Overrides				
Index	Name	SIP Header	Based On	Fixed Value
1	fix_from_number	From Header (User Part)	Fixed Value	u037098001

Setting called numbers NPI and TON ISDN properties

Setting called numbers NPI and TON ISDN properties on SIP to ISDN calls.

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	sip-default	None		TON,NPI		fxs-Port1	    
							

Call Property Transformations

Transformations				
Index	Name	Criteria Based On	Transformation Applies To	
1	TON	None	Calling TON	    
2	NPI	None	NPI	    
				

Transformation Rules				
Index	Name	Criteria Rule	Transformation Rule	Next Transformation
1	TON		national	    
2	NPI		isdn	    
				

SIP to Two Destinations

For every called number coming from the SIP interface, two destinations are possible.

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	sip-default	Called E164	5(.+)	pri1		fxs-Port1	   
2	sip-default	Called E164	7(.+)	pri2		fxs-Port2	   
							

Call Property Transformations

Transformations				
Index	Name	Criteria Based On	Transformation Applies To	
1	pri1	Called E164	Called E164	   
2	pri2	Called E164	Called E164	   
				

Transformation Rules				
Index	Name	Criteria Rule	Transformation Rule	Next Transformation
1	pri1	5(.+)	\1	   
2	pri2	7(.+)	\1	   
				

Send Specific Host to FXS phone1

On a Mediatrix 4102S, send all calls coming from the **somewhere.com** host to FXS phone 1.

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	sip-default	Calling Host	somewhere\com			fxs-phone-Fax1	  
							

Allow Specific Number Range

Allow outgoing Sip calls only for users with an extension number ranging from 76610 to 76619, 76650 to 76659, and 76660 to 76669.

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	sip-default		766([156][0-9])			ISDN	   
2	ISDN		766([156][0-9])			sip-default	   
							

Remove the Prefix 9

For every called number coming from the SIP interface and beginning with 9, remove the 9 from the number and send the call through the ISDN-BRI1 interface.

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	sip-default	None		ModCalled		ISDN-BRI1	    
							

Call Property Transformations

Transformations				
Index	Name	Criteria Based On	Transformation Applies To	
1	ModCalled	Called E164	Called E164	    
				

Transformation Rules				
Index	Name	Criteria Rule	Transformation Rule	Next Transformation
1	ModCalled	9(.+)	\1	    
				

Add CLIR Feature

Add the CLIR feature to every outgoing call coming from a SIP interface going through an FXS interface.

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	sip-default	Called E164		Restric_num		fxs-Phone-Fax1	    
							

Call Property Transformations

Transformations				
Index	Name	Criteria Based On	Transformation Applies To	
1	Restric_num	Called E164	Calling PI	    
				

Transformation Rules				
Index	Name	Criteria Rule	Transformation Rule	Next Transformation
1	Restric_num		restricted	    
				

Block Incoming International Call

Block all incoming international calls (i.e. numbers starting with 00) by sending the calls to a dead-end destination.

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	sip-default	Called E164	00(.+)			Block_Call	    
							

Block Outgoing International Call

Block all outgoing international calls (i.e. numbers starting with 00) by sending the call to a dead-end destination.

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	sip-default	Calling E164	00(.+)			Block_Call	    
							

Anonymous Call Rejection

Reject any anonymous calls from a Sip interface to a Sip interface.

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	sip-default	Calling SIP Username	[Aa][Nn][Oo][Nn][Yy][Mm] [Oo][Uu][Ss][Rr][Ee][Ss][Tt] [Rr][Ii][Cc][Tt][Ee][Dd]			sip-default	    
							

Calling E164 Transformations

Modify the calling E164 number with the user ID and for incoming calls send to the PBX the user ID present in the "To" string of the INVITE.

Routes							
Index	Sources	Criteria Property	Criteria Rule	Transformations	Signaling Properties	Destination	
1	sip-default	None			changed called E164	hunt-hunt_PBX	   
2	isdn-Bri1	None		username from		sip-default	   
							

Call Property Transformations

Transformations				
Index	Name	Criteria Based On	Transformation Applies To	
1	username from	None	Calling E164	   
				

Transformation Rules				
Index	Name	Criteria Rule	Transformation Rule	Next Transformation
1	username from		100-000199-01-011	   
				

Signaling Properties

Signaling Properties										
Index	Name	Early Connect	Early Disconnect	Destination Host	Allow 180 with SDP	Allow 183 without SDP	Privacy	SIP Header Translation Overrides	Call Property Translation Overrides	
1	change called E164	Disable	Disable		Enable	Enable	Disable		change called E164	   
										

SIP Header Translation Overrides				
Index	Name	SIP Header	Based On	Fixed Value
				

Call Property Translation Overrides				
Index	Name	Call Property	Based On	Fixed Value
1	change called E164	Called E164	To Header (User Part)	   
				

Information on Regular Expressions

For more information on Regular Expressions (RegEx) refer to:

- <https://regex101.com/>
- <http://www.regular-expressions.info/>
- http://www.w3schools.com/jsref/jsref_obj_regexp.asp

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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