Branch Office Survivability - Mediatrix SBC on the Edge with Broadsoft Corporate Cloud Services

Mediatrix Sentinel

DGW 49.2.2941

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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 bedisplayed.

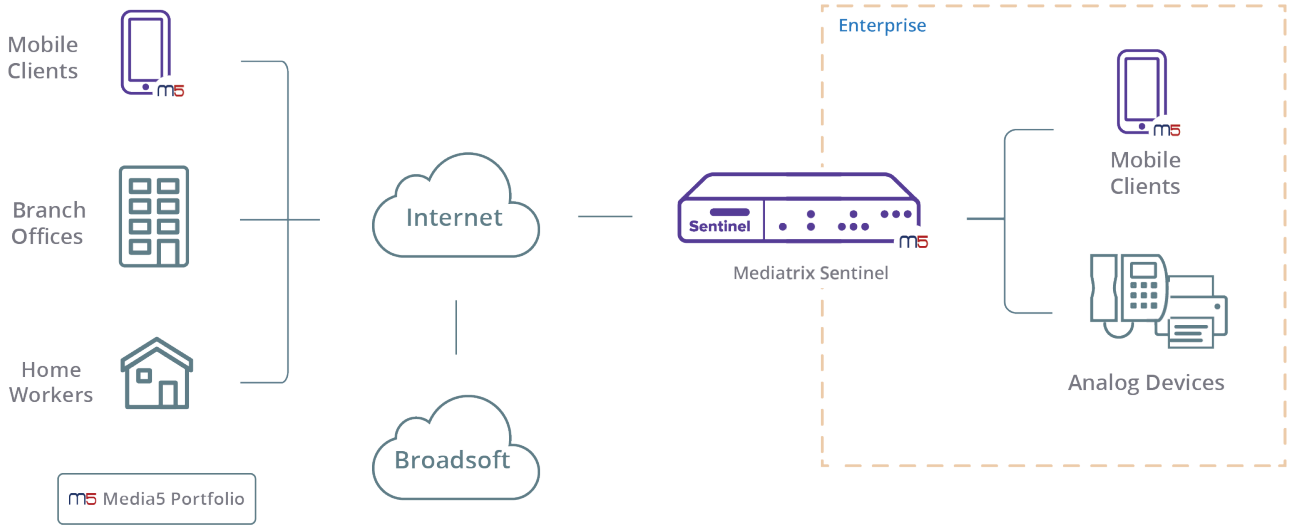
Note: The Mediatrix unit must be reinitialised to its factory default settings to make sure the configuration can be successfully executed.

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)
• If your Mediatrix unit is configured to use the IPv6 Link Local	Locate the IP Link Local label underneath your Mediatrix unit.	Logging on to the Mediatrix Unit Web Interface (p.5)
LAN Static IP address as defined in your network address range.		Configuring the Lan1 Network Interface (p.6)
WAN Static IP address as defined in your network address range.		Configuring the Uplink Network Interface to a static IP address (p.7)
Static Default Router IP address of the Uplink Network Interface		Configuring the Default Network Gateway to a Static IP Address (p.8)
IP address of each DNS server		Configuring the Domain Name Server (DNS) (p.9)
IP address of each SNTP server		Configuring the SNTP Server to a Static IP Address (p.10)
Default gateway Ip address		Configuring the Uplink Network Interface to a static IP address (p.7)
IP address or FQDN of the service provider server		Configuring the wan_ip_trunk_ca Call Agent (p.14)
LAN subnet (subnet/netmask length)		Configuring the local_users_ca Call Agent (p.15)

Branch Office Survivability Using the Mediatrix SBC with Broadsoft Corporate Cloud Services - Mediatrix SBC on the Edge

Typically, the Sentinel is deployed as a premise-based Session Border Controller.

Located on the edge of a corporate network, it handles all SIP-based traffic between IP phones, Faxes, IP PBX, soft clients, ATA and the BroadSoft core switch. It provides SIP mediation for interoperability and security, as well as local service survivability during WAN failure.



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 Lan1 Network Interface (p.6)

Configuring the **Lan1** Network Interface

Steps

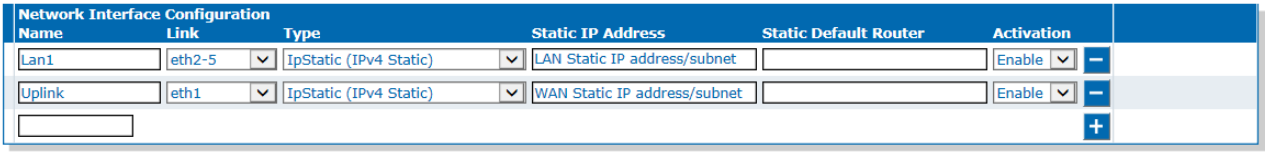
1) Go to **Network/Interfaces**.
2) From the **Link** list located next to **Lan1**, leave the default value.
3) In the **Static IP Address** field, enter the LAN static IP address as defined in your network address range.
4) Click **Apply** to apply all changes to the configuration.

   Note: A Warning message is displayed, but this is normal.

5) Click **Apply**.

Result

The **Lan1** Network Interface will be available in all the lists of the Management Interface where a Network Interface needs to be selected. For example, in the Local Firewall, and Configuration pages.



Next Step

Configuring the Uplink Network Interface to a static IP address (p.7)

Link Default Values for the Lan1 Network Interface

Unit Type	Link Default Value
Sentinel 400	eth2-5
Sentinel 100	eth2-5
Mediatrix G7 series	eth2-5
Mediatrix S7 series	eth2-5
Mediatrix C7 series	eth2
Mediatrix 4102	lan

Configuring the **Uplink** Network Interface to a static IP address

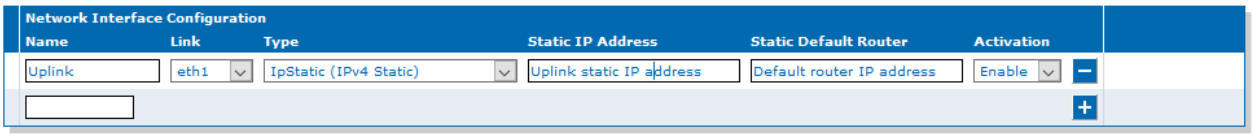
Steps

1) Go to **Network/Interfaces**.
2) In the **Network Interface Configuration** table, from the **Link** selection list located next to **Uplink**, leave the default value, i.e. ETH1.
3) From the **Type** selection list, select **IpStatic (IPv4 Static)**.
4) In the **Static IP Address** field enter the assigned static IP address.
5) From the **Activation** selection list, select **Enable**.
6) Click **Apply** to apply all changes to the configuration.

Note: Once the changes are applied, the connection with the unit might be lost. You may need to reconnect to the Web page using the new address.

Result

The unit can be reached (via the Web) through the Uplink static IP address



Next Step

Configuring the Default Network Gateway to a Static IP Address (p.8)

Link Default Values for the Uplink Network Interface

Unit Type	Link Default Value
Sentinel 400	eth1
Sentinel 100	eth1
Mediatrix G7	eth1
Mediatrix S7	eth1
Mediatrix C7 series	eth1
Mediatrix 4102S	Wan

Configuring the Default Network Gateway to a Static IP Address

Steps

1) Go to /**Host**.
2) In the **Default Gateway Configuration** table, from the **IPv4/Configuration Source** selection list, select **Static**.
3) In the **IPv4/Default Gateway** field, enter the IP address used as the **Static Default Router** for the Uplink Network Interface.
4) In the **Default Gateway Configuration** table, from the **IPv6/Configuration Source** selection list, select **Static**.
5) In the **IPv6/Default Gateway** field, enter the IP address used as the **Static Default Router** for the Uplink Network Interface.
6) Click **Apply**.

Result

The specified address is used as the current default router address.

Default Gateway Configuration	
IPv4	
Configuration Source:	Static
Default Gateway:	IP address
IPv6	
Configuration Source:	Static
Default Gateway:	IP address

Next Step

Configuring the Domain Name Server (DNS) (p.9)

Configuring the Domain Name Server (DNS)

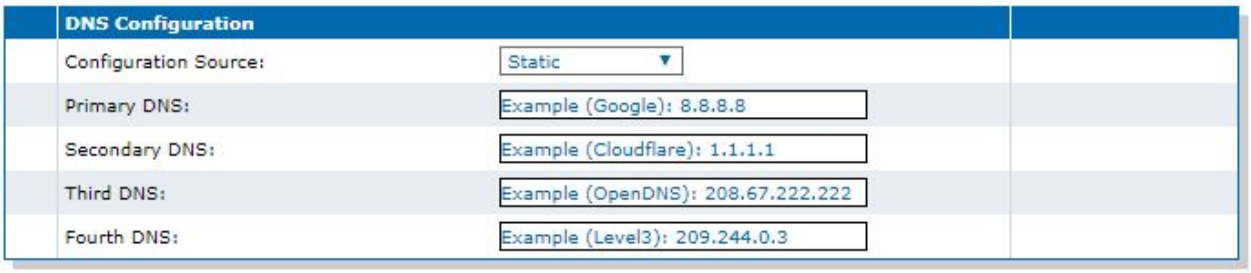
Before you start

Although it is possible to use public DNS servers you should always ask your internet service provider to provide at least the primary and secondary DNS servers.

Steps

1) Go to **Network/Host**.
2) In the **DNS Configuration** table, form the **Configuration Source** selection list, select **Static**.
3) For each DNS used, enter the IP address of the DNS.
4) Click **Apply**.

Result



Next Step

Configuring the SNTP Server to a Static IP Address (p.10)

Configuring the SNTP Server to a Static IP Address

Before you start

Make sure there is an SNTP server available.

Steps

1) Go to **Network/Host**.
2) In the **SNTP Configuration** table, from the **Configuration Source** selection list, select **Static**.
3) Provide an IP address or domain name and port numbers for each SNTP server you are using.

   Note: The best practice is to use the servers supplied by your Internet Service Provider, then complement with servers from a different network close to your geographical area. For example: time.nist.gov (USA), ntp4.sptime.se (Sweden), time1.isu.net.sa (Saudi Arabia), ntp.nict.jp (Japan), time.google.com (Worldwide), pool.ntp.org or one of their regional server pools (see https://www.ntppool.org/ for more information).

4) If necessary, change the value of the **Synchronisation Period**.
5) If necessary, change the value of the **Synchronisation Period on Error**.
6) Click **Apply**.

Result

The SNTP host name and port will be displayed in the **Host Status** table under **Network/Status**.

SNTP Configuration	
Configuration Source:	Static
Primary SNTP:	address of primary SNTP server
Secondary SNTP:	address of secondary SNTP server
Third SNTP:	address of third SNTP server
Fourth SNTP:	address of fourth SNTP server
Synchronization Period:	1440
Synchronization Period On Error:	60

Next Step

Configuring the uplink_s Signaling Interface (p.11)

Configuring the **uplink_s** Signaling Interface

Steps

1) Go to **SBC/Configuration**.
2) In the **Signaling Interface Configuration** table, from the **Network** selection list located next to **uplink_s**, make sure **Uplink** is selected.

   Note: The Network Interfaces displayed in the **Network** column, are created under the **Network/Interfaces** page.

3) In the **Port** field, set the SIP listening port for the Sbc service, if a listening port other than 5060 is required, or leave it as it is.
4) Click **Save**.
5) Click **Apply** to apply all changes to the configuration.
6) Click **restart required services**, located at the top of the page.

Result

The **Signaling Interface** will be available when configuring a Call Agent, in the **Configure Call Agent** page in the **Signaling Interface** selection list.

Next Step

Configuring the lan1_s Signaling Interface (p.12)

Configuring the **lan1_s** Signaling Interface

Before you start

Note: The **lan1_s** signaling interface is preconfigured by default. This step will only be necessary if the **lan1_s** signaling interface was deleted or modified.

Steps

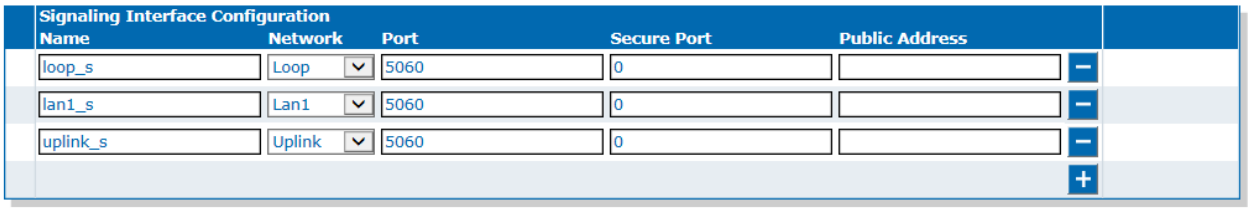
1) Go to **SBC**/**Configuration**.
2) In the **Signaling Interface Configuration** table, from the **Network** selection list located next to **lan1_s**, make sure **Lan1** is selected.

   Note: The Network Interfaces displayed in the **Network** column, are created under the **Network**/**Interfaces** page.

3) In the **Port** field, set the SIP listening port for the Sbc service, if a listening port other than 5060 is required, or leave it as it is.
4) Click **Save**.
5) Click **Apply** to apply all changes to the configuration.
6) Click **restart required services**, located at the top of the page.

Result

The **Signaling Interface** will be available when configuring a Call Agent, in the **Configure Call Agent** page in the **Signaling Interface** selection list.



Signaling Interface Configuration

Name	Network	Port	Secure Port	Public Address
loop_s	Loop	5060	0	
lan1_s	Lan1	5060	0	
uplink_s	Uplink	5060	0	

Next Step

Configuring the uplink_m Media Interface (p.13)

Configuring the **uplink_m** Media Interface

Steps

1) Go to **SBC/Configuration**.
2) In the **Media Interface Configuration** table, from the **Network** selection list located next to **uplink_m**, make sure **Uplink** is selected.

   Note: The Network Interfaces displayed in the **Network** column, are created under **Network/Interfaces** page.

3) In the **Port Range** field, set the media (RTP) port range if a port range other than 20000-20999 is required, or leave it as it is.
4) Click **Save**.
5) Click **Apply** to apply all changes to the configuration.
6) Click **restart required services**, located at the top of the page.

Result

The **Media Interface** will be available when configuring a call agent, in the **Configure Call Agent** page, in the **Media Interface** selection list.

Next Step

Configuring the lan1_m Media Interface (p.13)

Configuring the **lan1_m** Media Interface

Before you start

Note: The **lan1_m** media interface is preconfigured by default. This step will only be necessary if the **lan1_m** media interface was deleted or modified.

Steps

1) Go to **SBC/Configuration**.

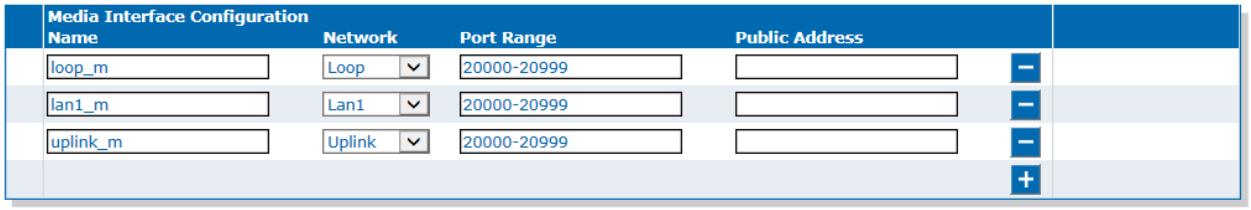
2) In the **Media Interface Configuration** table, from the **Network** selection list next to **lan1_m**, make sure **Lan1** is selected.

   Note: The Network Interfaces displayed in the **Network** column, are created under the **Network/Interfaces** page.

3) In the **Port Range** field, set the media (RTP) port range, if a port range other than 20000-20999 is required, or leave it as it is.
4) Click **Save**.
5) Click **Apply** to apply all changes to the configuration.
6) Click **restart required services**, located at the top of the page.

Result

The **Media Interface** will be available when configuring a call agent, in the **Configure Call Agent** page in the **Media Interface** selection list.



Next Step

Configuring the wan_ip_trunk_ca Call Agent (p.14)

Configuring the **wan_ip_trunk_ca** Call Agent

Steps

1) Go to **SBC/Configuration**.
2) Select the **Enable** check box, located next to **wan_ip_trunk_ca**.
3) In the **Call Agent Configuration** table, click ✎ next to **wan_ip_trunk_ca**.
4) In the **Configure Call Agent** table, complete the following fields:
   a) From the **Signaling Interface** selection list, select **uplink_s**.
   b) From the **Media Interface** selection list, select **uplink_m**.
   c) Set the **Peer Host** to the IP address of the service provider server or FQDN.
5) Click **Save**.
6) Click **Apply** to apply all changes to the configuration.

Result

No will be displayed in the **Config.Modified** field, indicating that the configuration that was modified is now applied to the system. When the Mediatrix SBC will use the selected Call Agent for a communication, the selected parameters will be applied.

Configure Call Agent	Value
Call Agent Parameters	
Name	wan_ip_trunk_ca
Enable	☑
Gateway	
Signaling Interface	uplink_s
Media Interface	uplink_m
Peer Host	Service Provider IP Address
Peer Network	
Force Transport	None
Monitoring Parameters	
Keep-Alive Interval	0
Blacklisting Duration	0
Blacklisting Delay	0
Blacklisting Error Codes	

Next Step

Configuring the local_users_ca Call Agent (p.15)

Configuring the **local_users_ca** Call Agent

Steps

1) Go to **SBC/Configuration**.
2) Select the **Enable** check box, located next to **local_users_ca**.
3) In the **Call Agent Configuration** table, click ✎ next to **local_users_ca**.
4) In the **Configure Call Agent** table, complete the following fields:
   a) From the **Signaling Interface** selection list, select **lan1_s**.
   b) From the **Media Interface** selection list, select **lan1_m**.
   c) Set the **Peer Network** field to the LAN subnet (subnet/netmask length).
   d) You may also configure monitoring parameters.
5) Click **Save**.
6) Click **Apply** to apply all changes to the configuration.

Result

No will be displayed in the **Config.Modified** field, indicating that the configuration that was modified is now applied to the system. When the Mediatrix SBC will use the selected Call Agent for a communication, the selected parameters will be applied.

Configure Call Agent	Value
Call Agent Parameters	
Name	local_users_ca
Enable	☑
Gateway	
Signaling Interface	lan1_s
Media Interface	lan1_m
Peer Host	
Peer Network	LAN subnet
Force Transport	None
Monitoring Parameters	
Keep-Alive Interval	0
Blacklisting Duration	0
Blacklisting Delay	0
Blacklisting Error Codes	

Next Step

Configuring the trunk_lines_ca Call Agent (p.16)

Configuring the **trunk_lines_ca** Call Agent

Before you start

A gateway must first be created and configured under **SIP/Gateways**.

Steps

1) Go to **SBC/Configuration**.
2) Select the **Enable** check box located next to **trunk_lines_ca**.
3) In the **Call Agent Configuration** table, click ✎ next to **trunk_lines_ca**.
4) In the **Configure Call Agent** table, complete the fields as follows:
   a) From the **Gateway** selection list, choose **trunk_lines_gw**.
   b) From the **Signaling Interface** selection list, choose **loop_s** .
   c) From the **Media Interface** selection list, select **loop_m**.
5) Click **Save**.
6) Click **Apply** to apply all changes to the configuration.

Result

No will be displayed in the **Config.Modified** field, indicating that the configuration that was modified is now applied to the system. When the Mediatrix SBC will use the selected Call Agent for a communication, the selected parameters will be applied.

Configure Call Agent	Value
Call Agent Parameters	
Name	trunk_lines_ca
Enable	☑
Gateway	trunk_lines_gw
Signaling Interface	loop_s
Media Interface	loop_m
Peer Host	
Peer Network	
Force Transport	None
Monitoring Parameters	
Keep-Alive Interval	0
Blacklisting Duration	0
Blacklisting Delay	0
Blacklisting Error Codes	

Next Step

Importing Rulesets (p.17)

Importing Rulesets

Before you start

Rulesets must be imported. The latest Ruleset package can be found on the https://media5.secure.force.com/supportportal (you will be required to supply a user name and password).

Information

This procedure is valid for Call Agent and Routing Rulesets.

Steps

1) Go to **Management/File**.

   Note: Required Rulesets depend on the scenario being configured. Refer to the Call Agent and Routing Ruleset sections of the configuration notes for details on Rulesets needed to complete the configuration.

   Note: Step 2 is only required when importing the first Ruleset and if you are not using a secure connexion to access the Management Interface (http://).

2) Click **Activate unsecure file importation from the Web browser**.
3) From the **Path** field, select sbc/rulesets/.
4) Click **Browse**, and navigate to the Ruleset you wish to import.

   Note: Ruleset file extension must be *.crs for Call Agent Rulesets or *.rrs for Routing Rulesets.

5) Click **Import**.

Result

The imported Ruleset will appear in the **Internal files** table, with the selected path in front of the name. The Ruleset will be available in the tables of the **SBC/Rulesets** page.

Next Step

Associating Call Agent Rulesets to a Call Agent (p.18)

Associating Call Agent Rulesets to a Call Agent

Before you start

- The Call Agents must be configured.
- Importing Rulesets (p.17) must be completed.

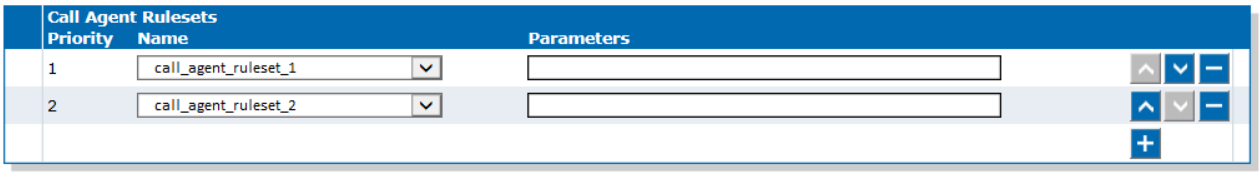
Steps

1) Go to **SBC/Configuration**.

   Note: Refer to the Call Agents section to identify which Rulesets are associated with the Call Agents used in this Use Case.

2) From the **Call Agent Configuration** table, click located on the same row as the Call Agent to which you wish to associate a Ruleset.
3) In the **Call Agent Rulesets** table, click .
4) From the **Name** selection list, select a Ruleset.
5) To add other Rulesets, click .
6) Click **Save**.
7) In the **Configure Call Agent** page, click **Save**.
8) Click **Apply** to apply all changes to the configuration.

Result



Next Step

Associating Routing Rulesets to Your Configuration (p.19)

Call Agent Rulesets

wan_ip_trunk_ca

- bw_core_side_generic

local_users_ca

- bw_local_reg_users_with_generic_survivability

Associating Routing Rulesets to Your Configuration

Before you start

Importing Rulesets (p.17) must be completed for Routing Rulesets to be available.

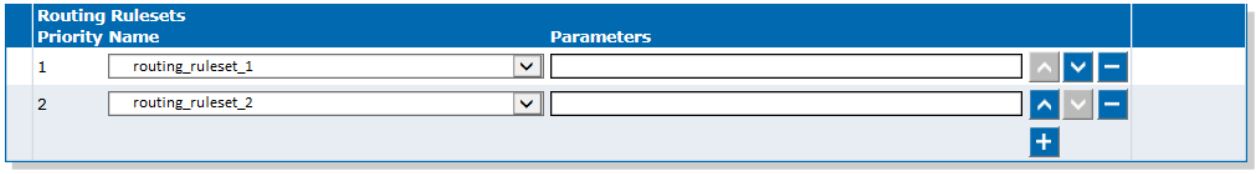
Steps

1) Go to **SBC/Configuration**
2) In the **Routing Rulesets** table click ➕ to add the first route.
3) From the **Name** selection list, select the Routing Ruleset you wish to apply to the configuration.

   Note: Refer to the Routing Rulesets section to identify the Rulesets that apply to this Use Case.

4) Repeat steps 2 and 3 for each Routing Ruleset you wish to associate to your configuration.
5) If necessary, in the **Parameters** field enter the required parameters for each route.
6) Click **Save**.
7) Click **Apply** to apply all changes to the configuration.

Result



Next Step

Configuring the Call Agent Penalty Box (p.20)

Routing Rulesets

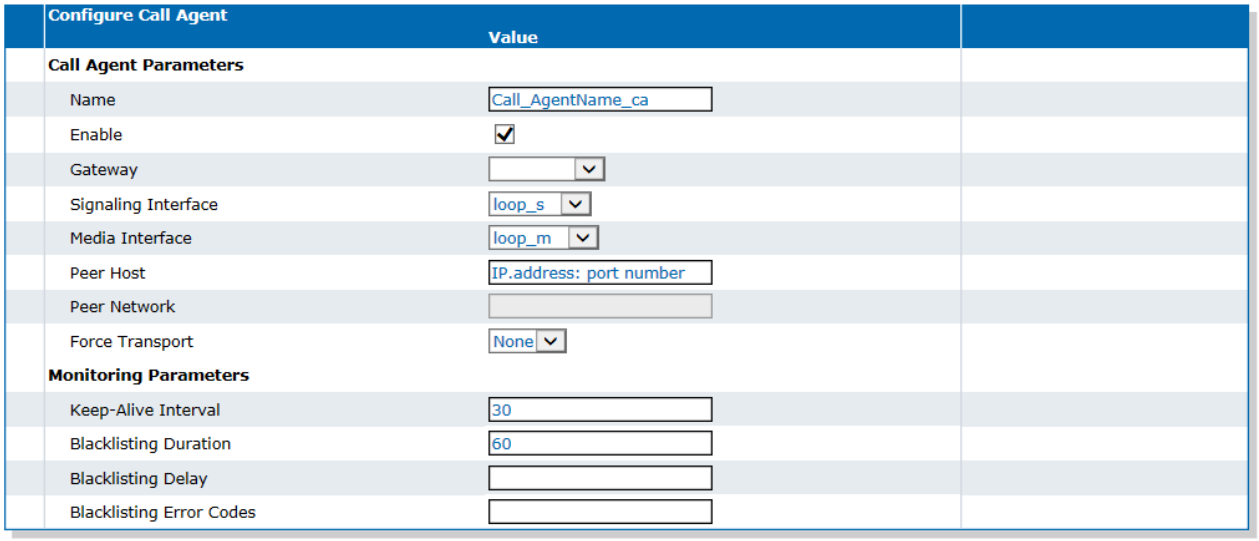
- bw_route_with_basic_local_survivability with the following parameters for short extension dialing:
  - LOCAL_EXT_PREFIX
  - EXT_DIGIT_LEN
- local_users_to_trunk_lines_survivability
  - EXT_DIGIT_LEN

Configuring the Call Agent Penalty Box

Steps

1) Go to **SBC/Configuration**.
2) Click ✎ next to the Call Agent you wish to configure.
3) In the **Configure Call Agent** table, set the **Keep-Alive** field to 30.
4) Set the **Blacklisting Duration** to 60.
5) Click **Save**.

Result



Configure Call Agent	Value
Call Agent Parameters	
Name	Call_AgentName_ca
Enable	☑
Gateway	
Signaling Interface	loop_s
Media Interface	loop_m
Peer Host	IP.address: port number
Peer Network	
Force Transport	None
Monitoring Parameters	
Keep-Alive Interval	30
Blacklisting Duration	60
Blacklisting Delay	
Blacklisting Error Codes	

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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