



PYRA RoIP/VoIP Interface User Guide

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1 Initial Setup

1.1 Package Contents

- One Power Cable and Power Adapter
- One Mini Blade with VoIP Module (47800A-003-V or 47800D-003-V)
OR
- One 8-Port Blade with VoIP Module (47800A-XXXV or 47800D-XXXV)

1.2 Connecting to the VoIP Interface

To configure a Blade that has a VoIP interface in it, you will need the power supply sent with the unit as well as a CAT 5 ethernet cable that is connected to your network. Figure 1-1 shows the front view of an 8-port Blade and Figure 1-2 shows the front view of a 2-port Mini Blade.

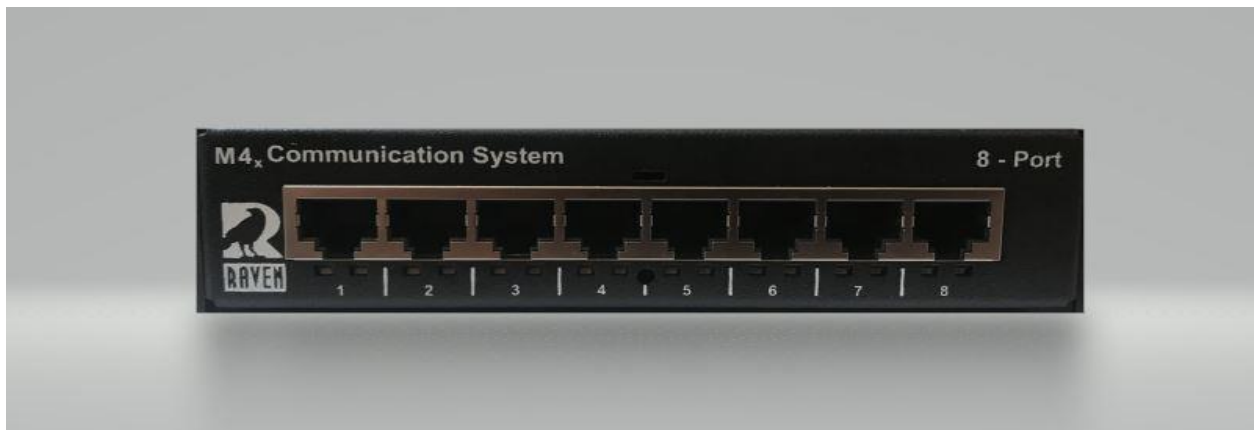


Figure 1-1: Front view of the 8-port Blade.

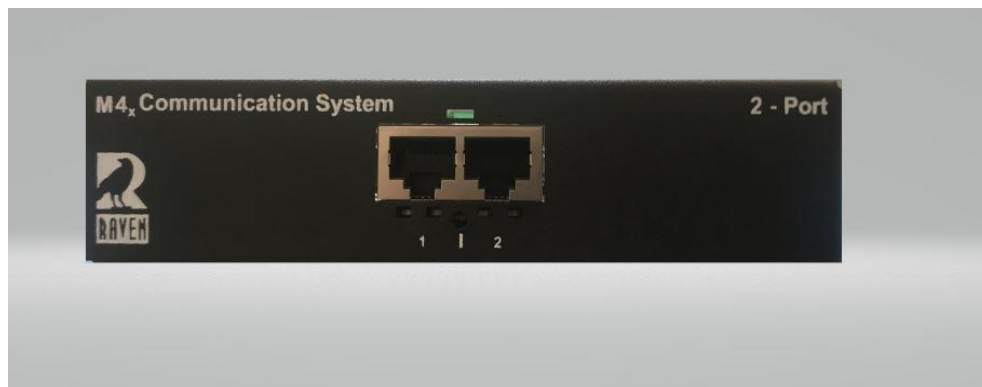


Figure 1-2: Front view of the 2-port Mini Blade.

1. Power up the Blade by plugging in the power supply to the back of the unit.
2. Plug in a CAT 5 Ethernet cable that is on your network into Port 7 (8-port Blade) or into Port 1 (2-port Mini Blade). Refer to Figure 1-1 and 1-2 that shows the numbering of the ports. ***If you have multiple new blades to configure, connect only one at a time since it has the same static IP of 192.168.50.65***
3. Confirm that once connected, a Link Status (Solid Green) and Link Activity (Blinking Red) LEDs will begin to turn on.
4. On the PC used to connect to the VoIP interface, navigate to **Control Panel > Network and Internet > Network Connections**. Choose the Ethernet adapter that is on your network and go to **Properties > Internet Protocol Version 4 (TCP/IPv4) > Properties**.
5. Configure your network adapter with the following parameters. **Please take note of your current settings so that you can revert them after VoIP provisioning is finished.**
IPv4 Address: 192.168.50.100
Subnet mask: 255.255.255.0
Default Gateway: [Leave Blank]
Preferred DNS server: [Leave Blank]
Secondary DNS server: [Leave Blank]
6. Open a web browser and type <http://192.168.50.65/index.html> in the Address bar to access the PYRA Web Configuration. ***Make sure it is html and not just htm when trying to connect***
7. A pop up will appear where you can type in the username and password that will look similar to Figure 1-3 depending on the browser being used.

Sign in

<http://192.168.50.65>

Your connection to this site is not private

Username

Password

Figure 1-3: The pop up that will appear after successfully accessing 192.168.50.65 on the web browser.

8. Enter the default Username: **Admin** and Password: **Admin**.
9. Figure 1-4 shows the “System Information” page that will be brought up once entering the correct username and password.

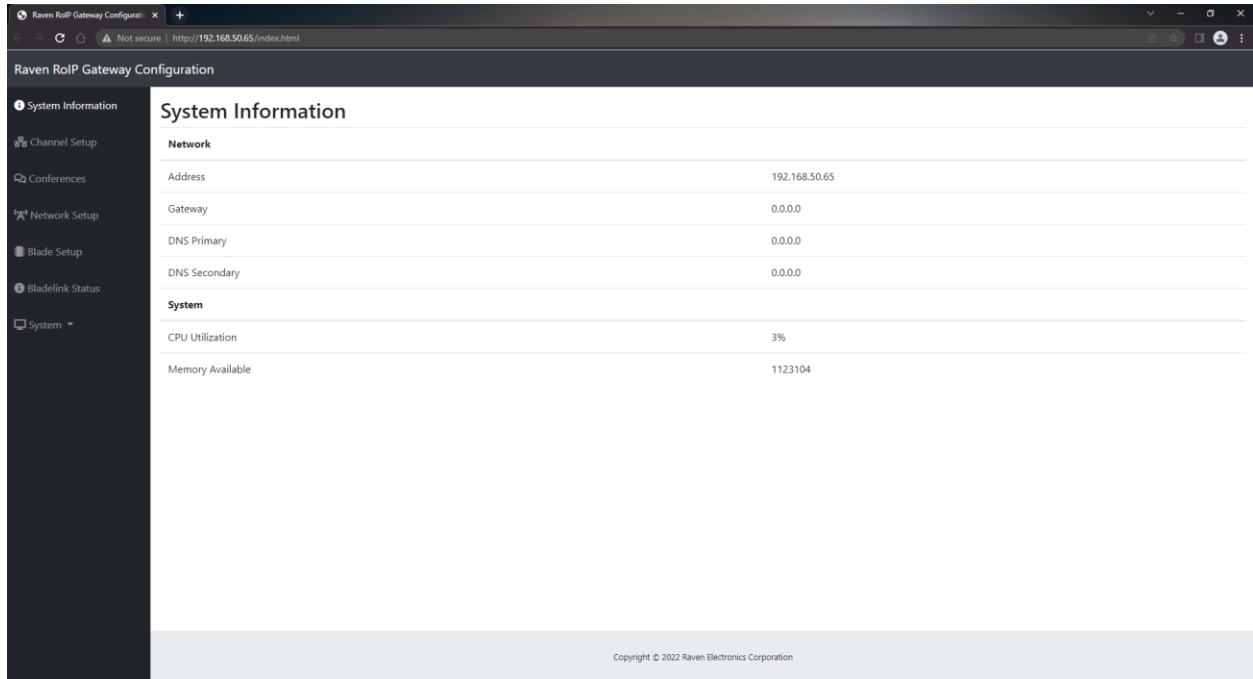


Figure 1-4: The “System Information” page that will pop up once correctly connecting to 192.168.50.65 and entering the correct credentials.

1.3 Changing the Username and Password

1. Navigate to the “System” tab on the left panel, click the “Administration” in the drop down, and it will look like Figure 1-5.



The screenshot shows the 'Administration' page. On the left is a vertical sidebar with a menu. The main content area has the following elements:

- Reboot Module**: A button in the top right corner.
- Authentication**: A section header.
- Username**: A text input field containing 'admin'.
- Password**: A text input field containing '....'.
- Confirm**: An empty text input field.
- Syslog**: A section header.
- Enabled**: A checkbox that is currently unchecked.
- Report To**: A text input field containing '514'.
- Save Changes**: A button at the bottom left of the form.

Figure 1-5: The “Administration” page where the username and password can be changed

2. Type in the new username, password, and the password again to confirm. Click the “Save Changes” button to apply the new credentials.
3. If the username and password are changed, a pop will appear looking like Figure 1-6. If the passwords do not match, it will look like Figure 1-7.

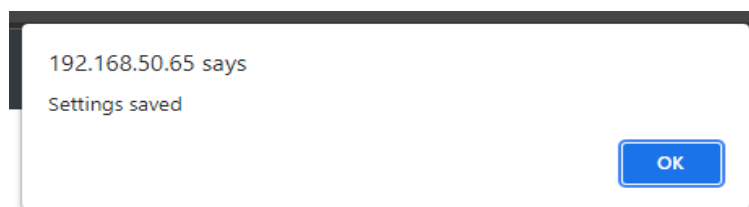


Figure 1-6: The popup that will appear confirming that the username and password was changed.

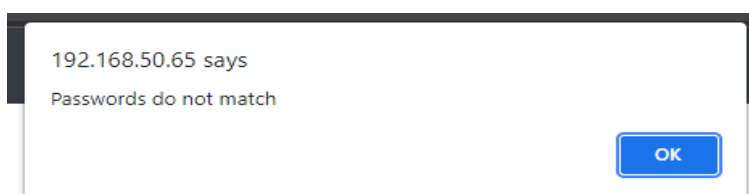


Figure 1-7: The popup that will appear when the passwords typed in do does not match.

2 Changing the IP Address of the VoIP Interface

2.1 How to Change the Network Settings

1. Navigate to the “Network Setup” page on the left side panel and it will look like Figure 2-1.

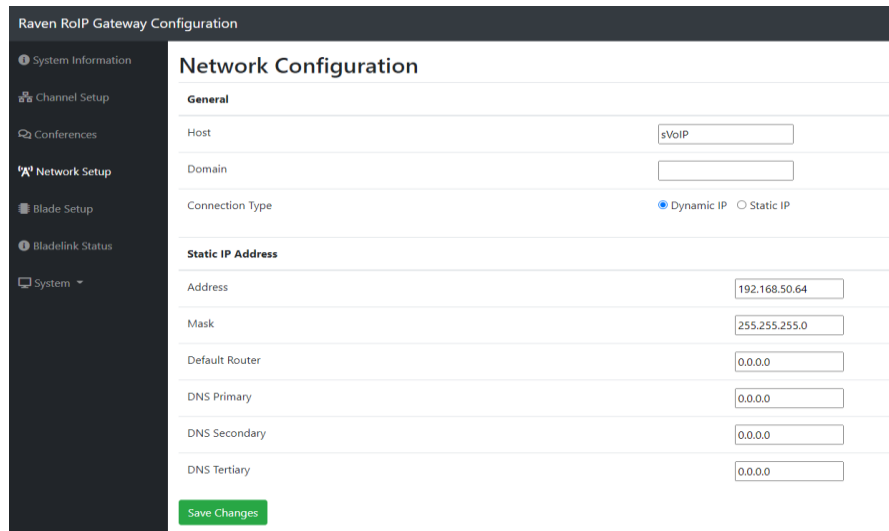


Figure 2-1: “Network Setup” web interface.

2. Enter in the network settings:

General:

Host: The host name can be changed to whatever you want. This name will be used when configuring VoIP interfaces with Blade-Link that will be described later in the document.

Domain: This field is not required. If you have a registered domain name that you want to link to this VoIP interface, enter it here.

Connection Type: By default, it is set to the Static IP so you can choose the IP address on your own. If you want the DHCP to find an address for you, choose Dynamic IP and click the “Save Changes” button.

Static IP Address

Address: The new IP Address desired for the VoIP interface

Mask: Subnet mask

Default Router: The main Router/Gateway of your network

DNS Primary: The primary DNS server for you network if needed

DNS Secondary: The secondary DNS server for you network if needed

DNS Tertiary: The tertiary DNS server for you network if needed

3. Click the “Save Changes” Button at the bottom of the page once done. A pop-up will appear asking if you want to restart the blade. Click “Yes”.
4. Once the Blade is restarted, wait 10-30 seconds for it to reboot, and enter the new IP into your browser to make sure you are able to reach the webpage again.

3 Blade Setup

3.1 How to Change Individual Port Settings

1. Navigate to the “Blade Setup” page on the left side panel and it will look like Figure 3-1.
2. Change the Individual Port Settings:

Port Configuration:

Select Existing Port: This is the port you are making changes to

Port Type: This auto populates. If you have a 2 channel 2-wire/4-wire module, it will say 476-153

Module #: This auto populates when chosen the “Select Existing Port”

Port #: This auto populates when chosen the “Select Existing Port”

Port Name: This is where you can change the name of a port to have a specific name (site name, equipment name, repeater name, etc).

Transmit Level (dB): The amount of gain that will be transmitted out of this port

Receive Level (dB): The amount of gain that will be adjusted to the Receive audio on this port

Impedance 600 Ohm: By default, the receive impedance is set to 600 Ohm. Unchecking the box will make it high impedance.

Audio Interface Type: Changes between 2-wire and 4-wire mechanisms. Defaulted to 4-wire.

PTT Polarity: This defines the PTT polarity. This is defaulted to normally open when unactive and makes a switch closure when active. Unchecking the box will reverse this.

COR Polarity: This defines the COR input polarity. This is defaulted to normally open when unactive and detects a switch closure when COR is inputted. Unchecking the box will reverse this.

Dtmf Detect: Makes it so the M4x channel can detect DTMF and use those numbers to dial out or patch interfaces together for special applications

Muting: Mutes either the Transmit or Receive audio when clicked.

Transmit Audio Delay (ms): The amount of time in ms that the audio will be delayed when transmitting out this port. Max amount is 1000 ms.

PTT Hold-On (ms): The amount of time the PTT circuit is held-on for. Max amount is 1000ms.

Channel Select Position: Used for special applications. Not required.

API Provides Ringback: Used for special applications. Not required.

Blade-Link IP and Associated Port: This is used for Blade-Link which is described in Section 6.1 *How to Connect Blades with Blade-Link Using Pyra Firmware*

3. Click the “Save Changes” button, wait until the page refreshes, and move onto the next port if needed.

Blade/Port Configuration

Blade Configuration

Blade DTMF Address

Enter Remote Gateway Address

Gateway Address List

Add >>><< Remove

Save IPs

Port Configurations

Select Existing Port

Port Type

Module #

Port #

Port Name

Transmit Level (dB)

Receive Level (dB)

Impedance 600 Ohm ☒ Enable

Audio Interface Type

PTT Polarity ☒ Active Closed

COR Polarity ☒ Active Closed

Dtmf Detect ☐ Enabled

Muting ☐ Transmit ☐ Receive

Transmit Audio Delay (ms)

PTT Hold-On (ms)

Channel Select position

API Provides Ringback ☐ API Provides Ringback

Blade-Link IP and Associated Port

Save Changes

Figure 3-1: “Blade Setup” web interface.

3.2 Pinout for the Analog 2-wire/4-wire Ports

Refer to Figure 3-2 and Figure 3-3 for the pinouts for the 153 modules. Note the E-Lead is COR input, and the M-Lead is PTT output.

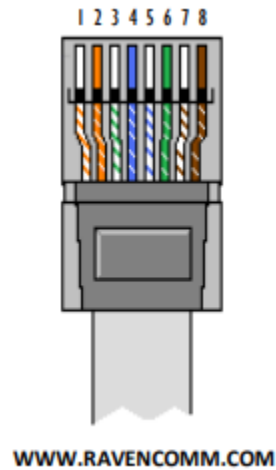


Figure 3-2: The RJ-45 connector for reference.

MODULE 476-153		2/4-WIRE INTERFACE	
PIN 1	} RCV (4W)	PIN 1	} RCV (4W)
PIN 2		PIN 2	
PIN 3	} M-LEAD	PIN 3	} M-LEAD
PIN 6		PIN 6	
PIN 4	} XHT (4W)	PIN 4	} XHT (4W)
PIN 5		PIN 5	
PIN 7	} E-LEAD	PIN 7	} E-LEAD
PIN 8		PIN 8	

Figure 3-3: The pinout for the 153 modules.

4 How to Make a Bridge Group

4.1 Bridging two or more M4x Audio Channels Together

1. Navigate to the “Conferences” page on the left side panel and it will look like Figure 4-1.

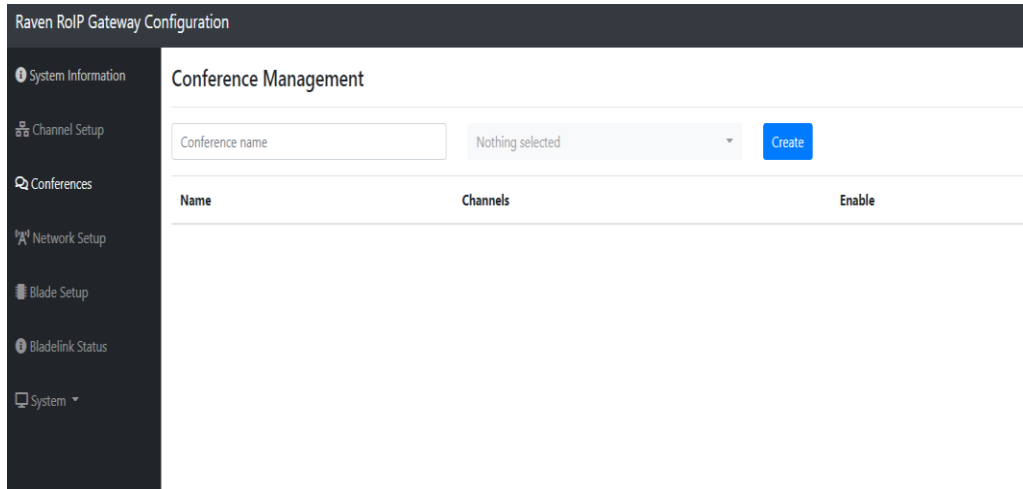


Figure 4-1: “Conferences” web interface.

2. Type the name of the bridge being configured.
3. Select the ports that need to be bridged as shown in Figure 4-2.

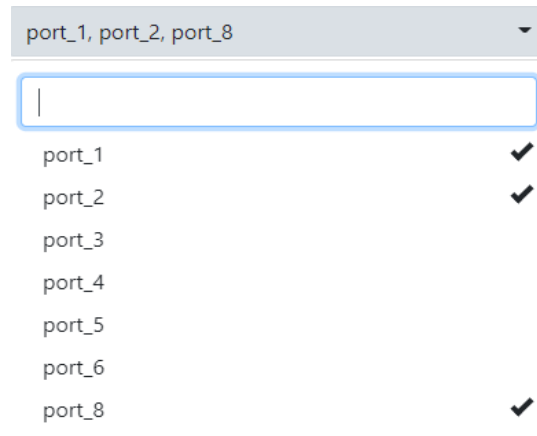


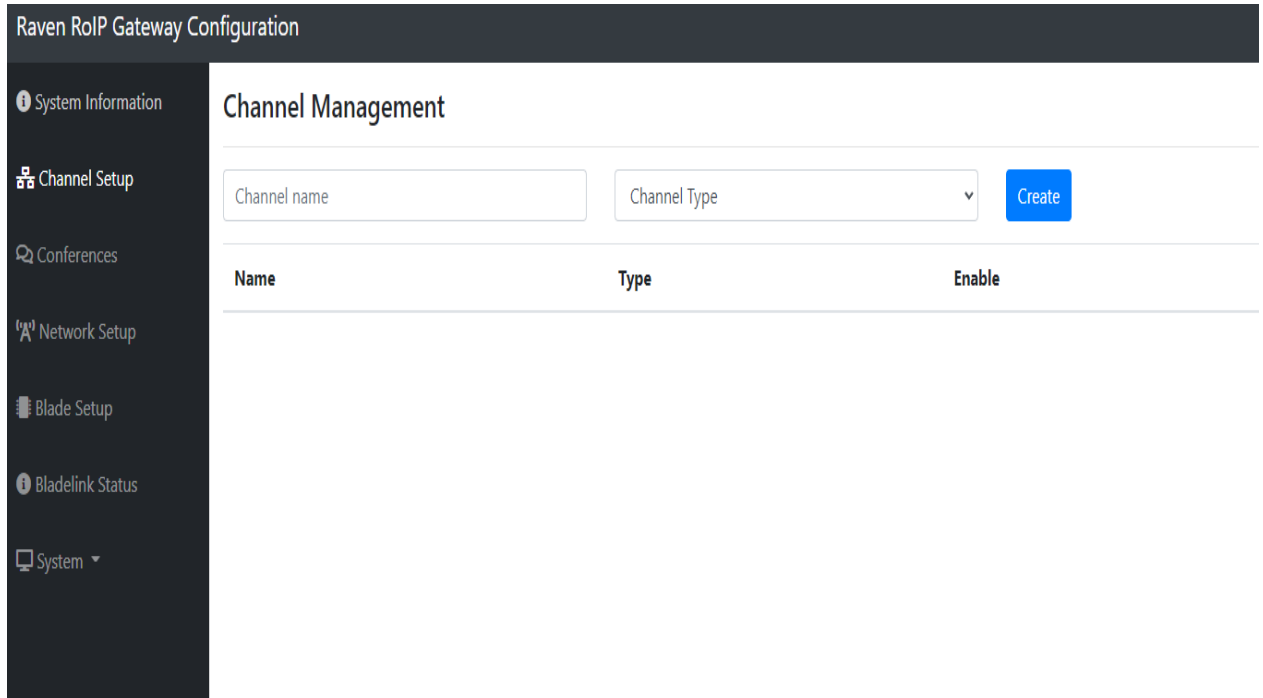
Figure 4-2: Selecting the different ports to be added to the bridge.

4. Click the “Create”.
5. Check the Box labeled “Enable”.
6. Create more bridges if needed.

5 RTP Streaming

5.1 RTP Streaming Audio from a Channel to Another RTP Device

1. Navigate to the “Channel Setup” page on the left side panel and it will look like Figure 5-1.



The screenshot shows the 'Raven RoIP Gateway Configuration' web interface. On the left is a dark sidebar with navigation links: 'System Information', 'Channel Setup' (highlighted), 'Conferences', 'Network Setup', 'Blade Setup', 'Bladelink Status', and 'System'. The main content area is titled 'Channel Management'. It features a form with a 'Channel name' text input, a 'Channel Type' dropdown menu, and a blue 'Create' button. Below the form is a table with three columns: 'Name', 'Type', and 'Enable'. The table is currently empty.

Figure 5-1: “Channel Setup” web interface.

2. Type the name of the RTP stream.
3. Select “RTP Channel” under Channel Type and click “Create”.
4. A pop-up will appear labeled “Account Configuration” as seen in Figure 5-2. Fill out the RTP settings:

Account Configuration

<p>RTP peer</p> <div style="border: 1px solid #ccc; padding: 2px; width: 100%;">RTP peer</div>	<p>Codec</p> <div style="border: 1px solid #ccc; padding: 2px; width: 100%;">G.711 μ-law ▼</div>
<p>Tx Port</p> <div style="border: 1px solid #ccc; padding: 2px; width: 100%;">Tx port</div>	<p>Rx Port</p> <div style="border: 1px solid #ccc; padding: 2px; width: 100%;">Rx port</div>
<p>Multicast</p> <div style="border: 1px solid #ccc; padding: 2px; width: 100%;">Disable ▼</div>	<p>Multicast TTL</p> <div style="border: 1px solid #ccc; padding: 2px; width: 100%;">Default value: 1</div>
<p>Silence Suppression</p> <div style="border: 1px solid #ccc; padding: 2px; width: 100%;">Enable ▼</div>	<p>Noise Suppression</p> <div style="border: 1px solid #ccc; padding: 2px; width: 100%;">Disable ▼</div>
<p>Firewall keep Alive</p> <div style="border: 1px solid #ccc; padding: 2px; width: 100%;">Disable ▼</div>	<p>Active Channel</p> <div style="border: 1px solid #ccc; padding: 2px; width: 100%;">Disable ▼</div>

Save

Figure 5-2: The “Account Configuration” pop-up for RTP Streams.

RTP peer: IP Address of the other device in the RTP Session

Codec: The type of CODEC (G.711 μ -law should be used unless specified).

Tx/Rx Ports: An even number used for the RTP Ports (The same number can be used for both Tx/Rx. If they are different, make sure the Tx of one blade matches the Rx of the other blade and vice-versa)

Multicast This is used when there are more than two devices in the network that need to communicate with each other over IP. The RTP peer would then be pointed towards a Multicast IP Address (224.0.0.0 to 239.255.255.255).

Multicast TTL: The Multicast Time-To-Live, which is number of times the data can pass through a router. If the TTL field reaches 0 before the destination, the data is discarded. Used only for Multicast.

Silence Suppression Trigger: The Raven will only send audio packets on VOX if set to “Enable”. If set to “Disable”, packets will always be sent.

Noise Suppression: This helps with removing background noise within the signal. Not required.

Firewall Keep alive: The Raven sends out keep-alive packets when enabled. Not required.

Active Channel This activates the RTP session if clicked “Enabled” (The channel can also be enabled/disabled by the checkbox after it is created).

5. Click the “Save” button and the RTP Channel will be created.
6. Navigate to the “Conferences” page on the left side panel.
7. Name the conference that will link the RTP stream with a port.
8. Click the name of the RTP channel and one of the ports that the RTP stream will be directed towards as shown in Figure 5-3.

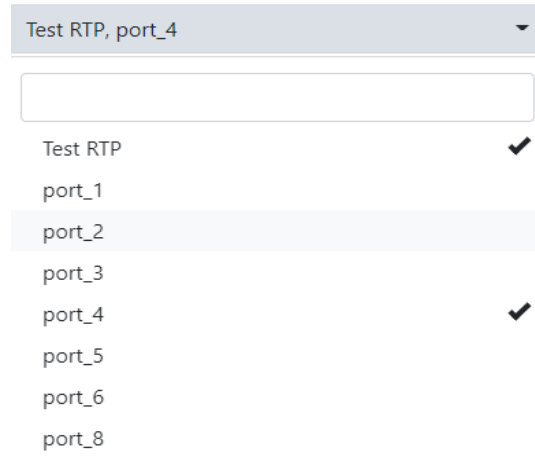


Figure 5-3: Selecting the RTP channel and one of the ports.

9. Click the “Create” button and the conference will be shown.
10. Click the “Enable” checkbox to enable the conference between the RTP stream and the port.

6 Blade-Link

6.1 How to Connect Blades with Blade-Link Using Pyra Firmware

In this example we are connecting an 8-port Blade to a 2-port mini blade. The IP Address of the 8-port Blade is 192.168.50.64 and the IP Address of the 2-port Blade is 192.168.50.80. The 8-port Blade will be the dedicated server for the Blade-Link. The same steps can be followed when connecting an 8-port to another 8-port or a 2-port to another 2-port.

1. Navigate to the “Blade Setup” page on the left side panel on the dedicated Blade-Link Server webpage (in this example it is 192.168.50.64).
2. Under “Blade Configuration” and “Enter Remote Gateway Address”, there is a spot to enter an IP Address followed by a Port number. This is shown in Figure 6-1. If there is no Port number entered, it will automatically be defaulted to Port 8676.

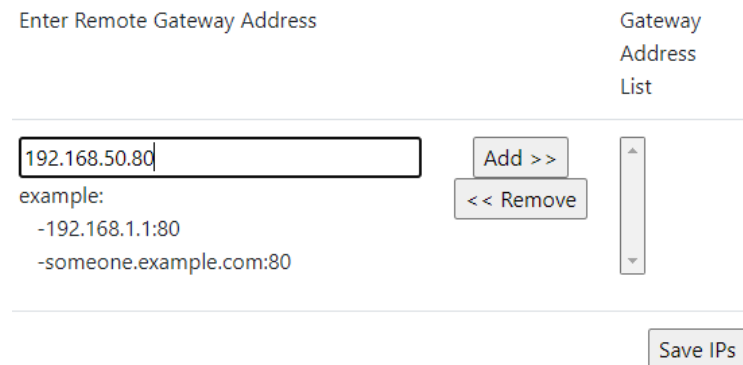


Figure 6-1: Example of entering the non-server IP address on the

3. Enter the IP Address/Port of the **non-server** Blade. In our example, the 8-port Blade is our dedicated Blade-Link Server so we will enter 192.168.50.80 for the Mini-Blade. *****Do not go onto the non-server “Blade Setup” webpage and enter the IP Address/Port for the Dedicated Server. This will not make Blade-Link work. Once the IP Address is entered for a Blade-Link, you do not need to do it on the other side.*****
4. Click the “Add >>” button and it will be populated under “Gateway Address List”.
5. Click “Save IPs” and it will restart the Blade. ****The non-server blade does not need to be restarted****
6. Once rebooted, log back in and navigate to “Blade Setup” again.
7. At the bottom of the page, the information from the non-server Blade will be populated. In our example, it would be the 2-port mini-Blade. This is shown in Figure 6-2.

Blade-Link IP and Associated Port

2_PortVoIP@192.168.50.80 ▼

port_2 ▼

Save Changes

Copyright

Figure 6-2: The information of the non-server Blade will be populated once a reboot has been performed.

8. Click the name/IP of the Blade you are connecting with Blade-Link. On the right is the physical Port of the M4x channel of that Blade. Since it is a Mini Blade, it will only have the option for Port 2 as seen in Figure 6-2.
9. Click “Save Changes”.
10. Navigate to “Blade Setup” on the non-server webpage.
11. Under “Blade-Link IP and Associated Port” the server Blade will be populated. Since it is an 8-port Blade, there will be more options for the Ports as seen in Figure 6-3. In this example, Port 1 was chosen.

PTT Hold-On (ms)

150

Channel Select position

1

API Provides Ringback

☐ API Provides Ringback

Blade-Link IP and Associated Port

8_PortVoIP@192.168.50.64 ▼

port_1 ▼

Save Changes

Figure 6-3: The information of the server Blade will be populated and will have Port 1-7 and Port 8 as options to choose from.

12. Click the “Save Changes” button.

13. Navigate to the “Bladelink Status” page on the left side panel on both the blades. The two blade’s information now should be seen under “Local Blade” and “Remote Blade”. The “Local Blade” is the blade that is associated with that webpage. The “Remote Blade” would be the other blade that is not associated with that webpage. This is reversed if you look at the other blade’s webpage. This is shown in Figure 6-4. The Green LED on the “Remote Blade” indicates that it is properly linked, and the unit is not down.

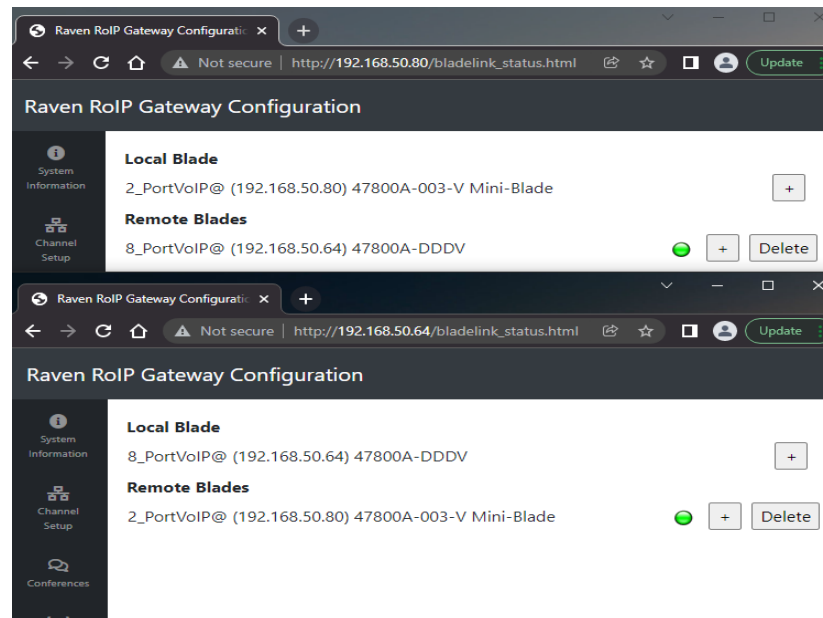


Figure 6-4: The “Bladelink Status” page showing the different Local Blades and Remote blades depending on which website you are looking at.

14. Confirm when there is a COR input in the ports chosen in steps 8 and 11, there is a PTT on the opposite side. Figures 6-5 and 6-6 shows Blade-Link properly working. ****In order for audio to send between the two blades, you need an RTP stream. This is outlined in Section 5.1 RTP Streaming Audio from a Channel to another RTP Device. ****

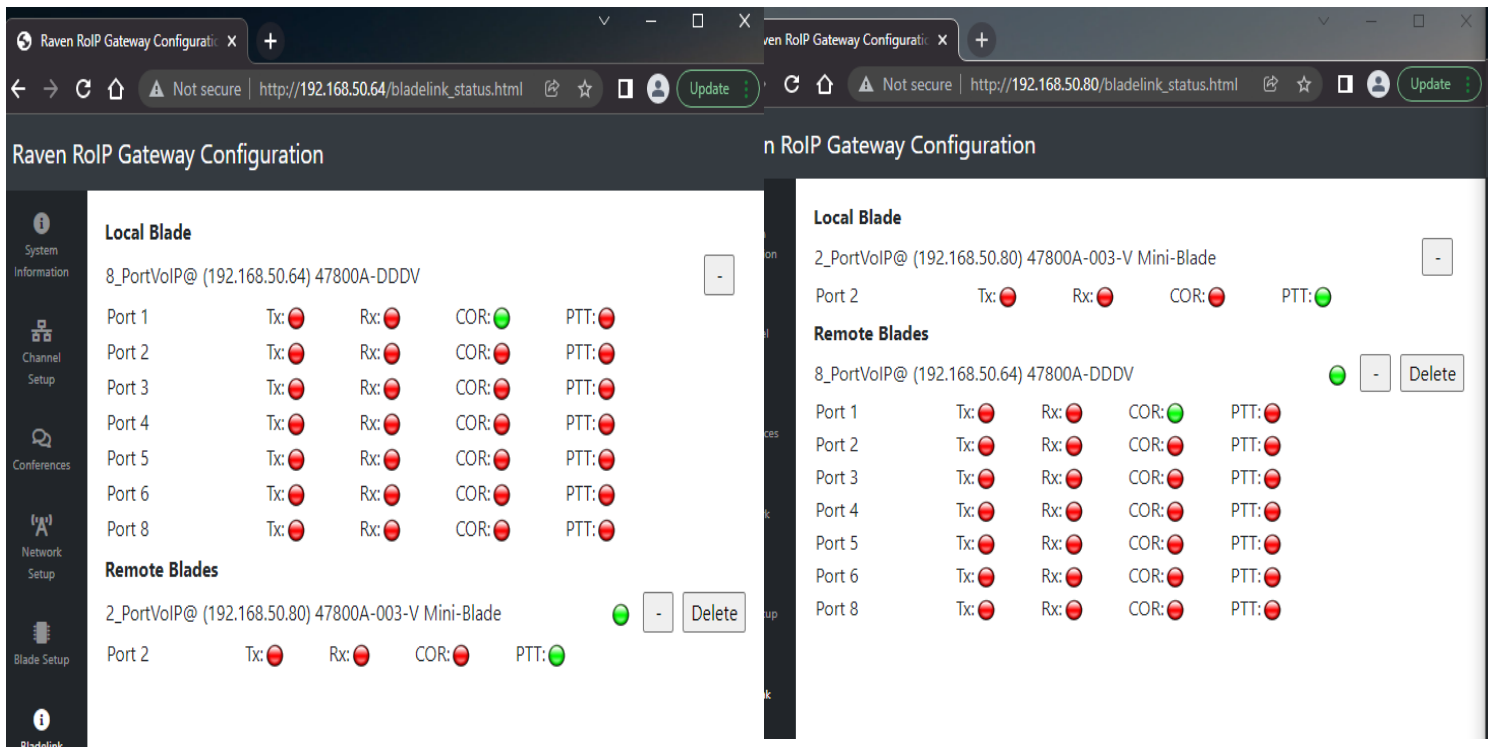


Figure 6-5: COR input on Port 1 on the sever Blade and PTT output on Port 2 on the non-server Blade indicating Blade-Link is working.

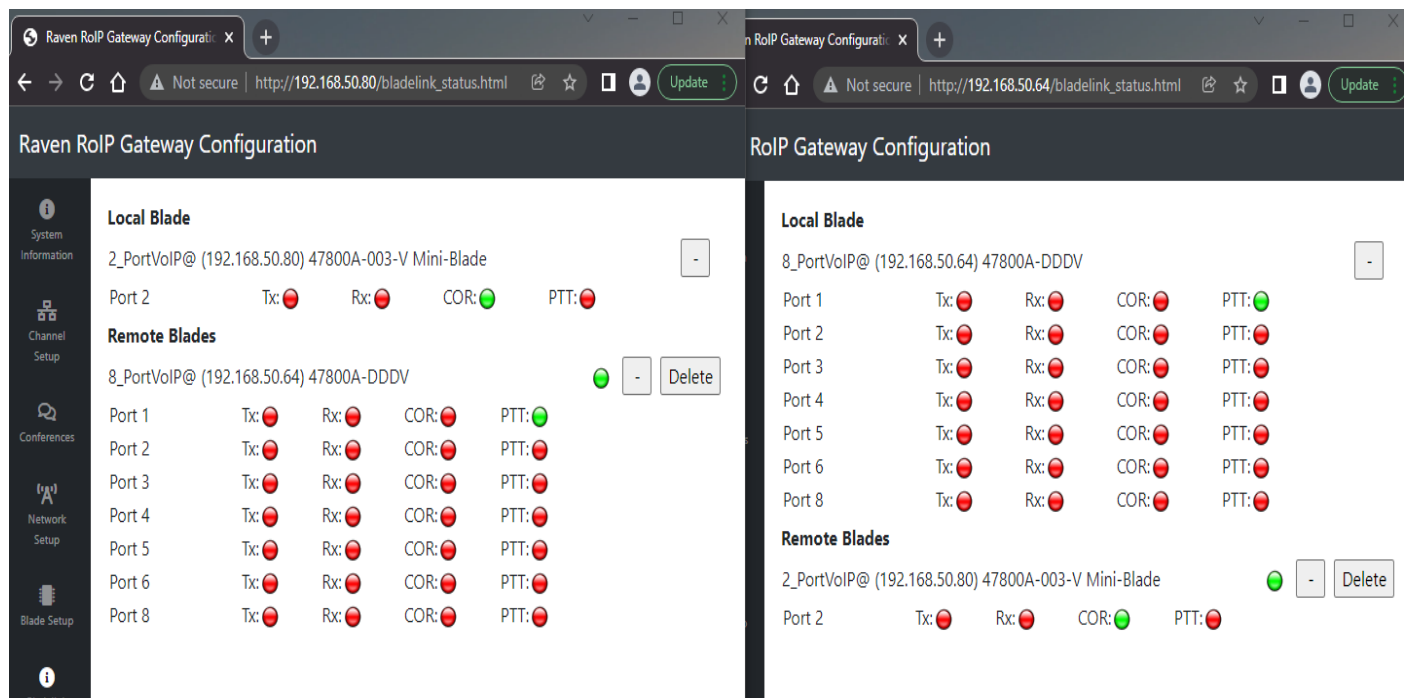


Figure 6-6: COR input on Port 2 on the non-sever Blade and PTT output on Port 1 on the server Blade indicating Blade-Link is working.

6.2 How to Connect Blades with a FlexGate Using Blade-Link

In this example we are connecting a FlexGate to an 8-port Blade. The IP Address of the 8-port Blade is 192.168.50.64 and the IP Address of the FlexGate 192.168.50.82. The FlexGate needs to be the dedicated server for the Blade-Link. It is assumed that the user configuring this type of Blade-Link has knowledge of how the FlexGate already works and has the FlexGate setup. If not, please refer to the Raven FlexGate Comprehensive Guide in the manual section first. ***The blade-link will not show up under the VoIP's interface webpage as a "Remote Blade". It also will not show up under a selection when configuring the individual ports under "Blade Setup". The conference for the RTP channel will determine where the blade-link signaling will be directed towards***

1. Navigate to the FlexGates webpage and log in.
2. Click on the "Blade Link" section on the left side panel to create the new interface and will look like Figure 6-7.

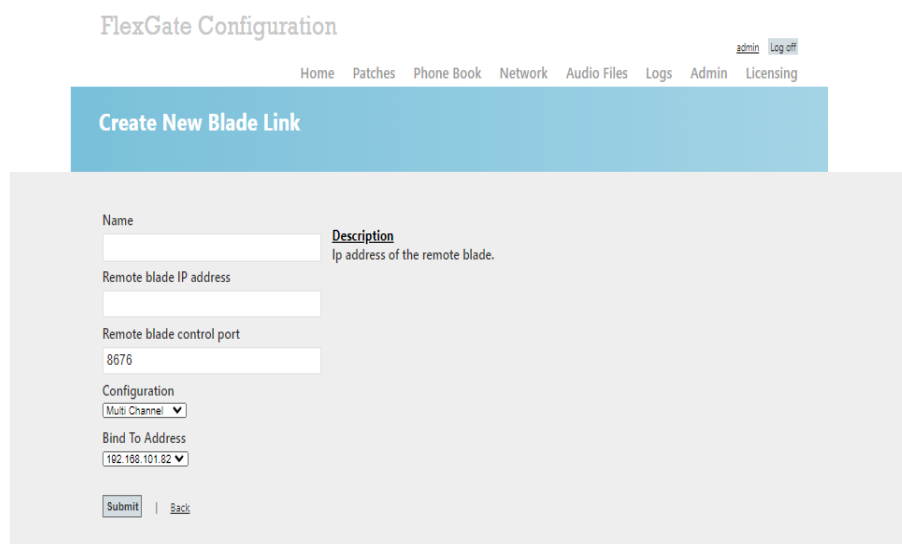


Figure 6-7: The FlexGate configuration page for Blade-Link.

3. Fill out the Blade-Link settings:
Name: This will be the name of the Blade-Link that will show up under the endpoints listings.

Remote blade IP address: The IP Address of the blade that has a VoIP module and the Pyra firmware

Remote blade control port: The control port that will be associated with this blade-link. The same port number needs to match the remote blade's port number.

Configuration: Single Channel is for 2-port Mini Blades and Multi Channel is for 8-port Blades.

Bind To Address: The FlexGate can have multiple IP addresses, so choose the IP address that is on the same network that can reach the remote Blade.

- Click the “Submit” button and the page will refresh to look like Figure 6-8.

FlexGate Configuration

[admin](#) [Log off](#)

[Home](#)
[Patches](#)
[Phone Book](#)
[Network](#)
[Audio Files](#)
[Logs](#)
[Admin](#)
[Licensing](#)

Edit Blade Link

Name

Remote blade IP address

Remote blade control port

Configuration

Bind To Address

Description
 Receive port of the channel

Channels	Name	Rx Port	Tx Port	Use COR	Enabled
Channel 1:	Blade-Link RTP 1	<input type="text" value="64002"/>	<input type="text" value="64002"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Channel 2:	Blade-Link RTP 2	<input type="text" value="64004"/>	<input type="text" value="64004"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Channel 3:	Blade-Link RTP 3	<input type="text" value="64006"/>	<input type="text" value="64006"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Channel 4:	Channel 4	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="checkbox"/>	<input type="checkbox"/>
Channel 5:	Channel 5	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="checkbox"/>	<input type="checkbox"/>
Channel 6:	Channel 6	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="checkbox"/>	<input type="checkbox"/>
Channel 7:	Channel 7	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="checkbox"/>	<input type="checkbox"/>

| [Back](#)

Figure 6-8: Once the “Submit” button is clicked, the webpage will be refreshed to show the different channels that can be selected for an RTP stream.

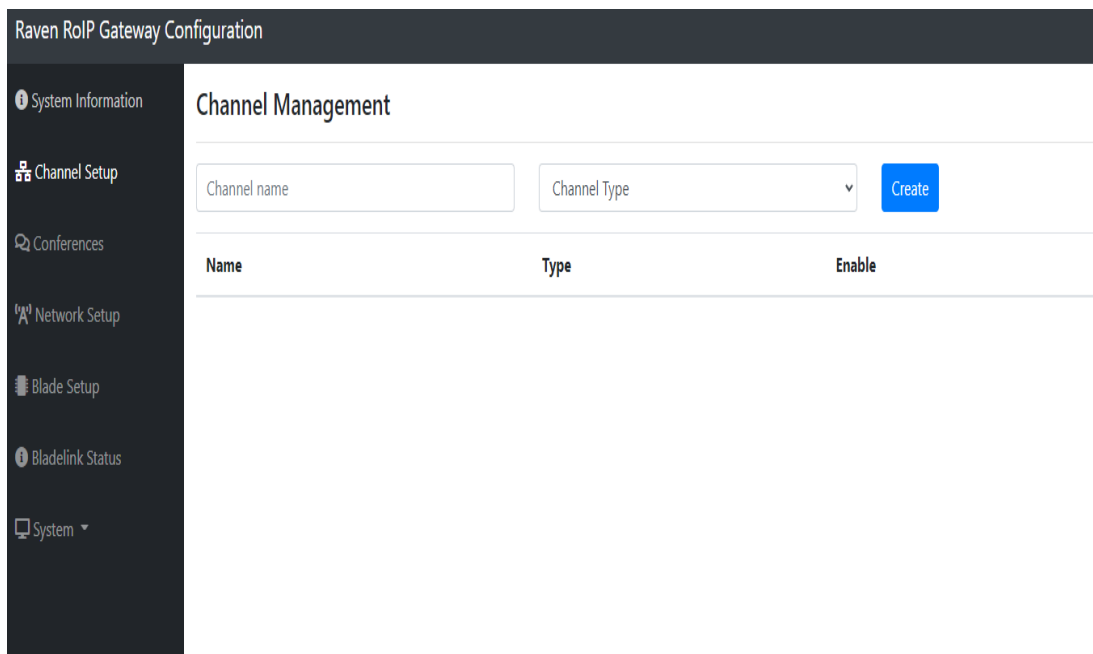
- Create the RTP channels associated with the Blade-Link by entering a name, the Rx and Tx Ports to match with the Tx and Rx ports on the VoIP interface, checking the box if COR is required for the blade-link, and clicking the enable button. ***The RTP Channels does not correspond to the individual ports. Do not skip unused channels since it can cause problems loading in the settings during FlexGate restarts. If the checkbox for COR is not checked, it will operate in VOX mode. This is good for radios that do not provide the COR on the input side of the VoIP interface, but do require a PTT for the output ***
- Navigate to the “Patches” page on the FlexGate webpage and add the RTP channel names created with the M4x Blade Audio Channels. ***If you do not have your M4x audio channels already setup, refer to the FlexGate Comprehensive Guide***

7 SIP Channel

7.1 How to Associate an Analog Channel with a SIP Account

In this example we will have an 8-port blade using the Pyra firmware and a dedicated SIP server. The 8-port blade will have an IP address of 192.168.101.65 and the SIP server will have the 192.168.101.100 IP address. The blade and the SIP server need to be on the same network in order for it to register. The EXT for this SIP will be 1234.* **It is assumed the EXT 1234 under the SIP server is already setup and is ready to connect to this blade. The analog channel will be unable to initiate a SIP call, but an external device connected to the same SIP server such as a SIP phone or Raven's IP Deskset can start a call*.**

1. Navigate to the "Channel Setup" page on the left side panel and it will look like Figure 7-1.



Name	Type	Enable
------	------	--------

Figure 7-1: "Channel Setup" web interface.

2. Type the name of the SIP channel.
3. Select "SIP Channel" under Channel Type and click "Create".
4. A pop-up will appear labeled "Account Configuration" as seen in Figure 7-2. Fill out the SIP settings:

Account Configuration:

Username/number: The EXT number that is associated with that endpoint under the SIP server

Display Name: The display name for this channel

Description: The description of the SIP channel.
Not required

SIP Domain/IP Address: The SIP server IP address.

Register domain: When enabled it will register to the SIP server domain

Auto Answer: Choose Enable for this field.
Disable setting if for special applications

Active Channel: This activates the SIP session if clicked “Enabled” (The channel can also be enabled/disabled by the checkbox after it is created)

Proxy Settings:

Proxy username: The EXT number that is associated with that endpoint under the SIP server.

Proxy password: The password for this endpoint. This should match the password setup under the SIP account

Proxy address: Not required if registering with the SIP Server domain

Proxy port: The port associated with the SIP server. Placing a “0” in the field will automatically search for the port

TCP/IP port: The port number associated with the TCP/IP connection. Typically, this is left at 5060

Additional Settings:

Transport type: UDP is set to default. If you SIP server supports TCP, you can change it here.

The image shows a web interface for configuring SIP channels. It is divided into two main sections: 'Account Configuration' and 'Proxy Settings', followed by 'Additional Settings'.

Account Configuration:

- User name/number:** Text input field containing '1234'.
- Display Name:** Text input field containing 'TestSIP'.
- Description:** Text input field containing 'This is a demonstration for a SIP channel'.
- SIP Domain/IP address:** Text input field containing '192.168.101.100'.
- Register domain:** Dropdown menu with 'Enable' selected.
- Auto Answer:** Dropdown menu with 'Enable' selected.
- Active Channel:** Dropdown menu with 'Enable' selected.

Proxy Settings:

- Proxy username:** Text input field containing '1234'.
- Proxy password:** Text input field containing '....'.
- Proxy address:** Text input field containing 'Leave blank to register with domain'.
- Proxy port:** Text input field containing '0'.
- TCP/IP port:** Text input field containing '5060'.

Additional Settings:

- Transport type:** Dropdown menu with 'UDP' selected.

A green 'Save' button is located at the bottom right of the form.

Figure 7-2: The “Account Configuration” pop-up for SIP Channels.

5. Click the “Save” button and the SIP Channel will be created. Refresh the page and confirm that it says “PROXY_REGISTERED”.
6. Navigate to the “Conferences” page on the left side panel.
7. Name the conference that will link the SIP channel with an analog port.
8. Click the name of the SIP channel and one of the ports you want the SIP account associated with as shown in Figure 7-3. In this example we are associating Port 4 with the 1234 SIP account.

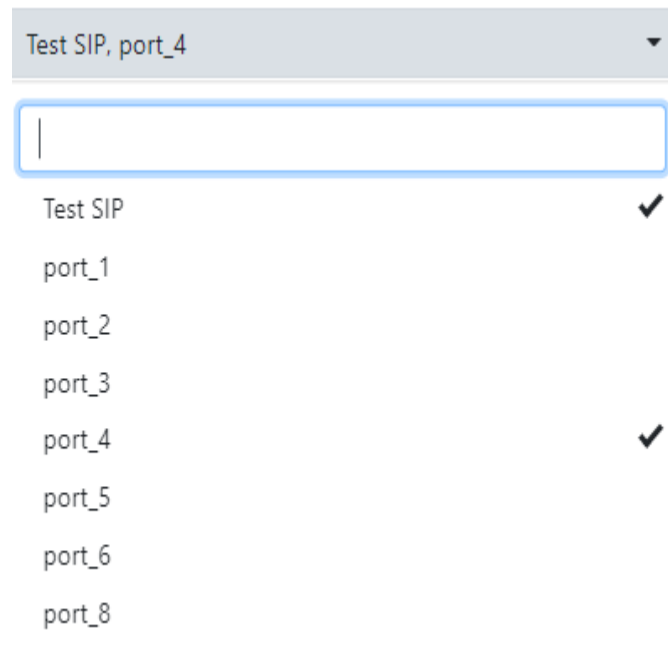


Figure 7-3: Selecting the SIP channel and one port that will be linked to the SIP EXT.

9. Click the “Create” button and the conference will be shown.
10. Click the “Enable” checkbox to enable the conference between the SIP channel and the port. A person using a SIP phone or IP Deskset can now call Port 4.

8 Saving the Configuration

8.1 How to Save the Configuration of the VoIP Interface for Future Restores

1. Navigate to the “System” tab on the left panel and click the “Backup/Restore” in the drop down. The webpage will look like Figure 8-1.

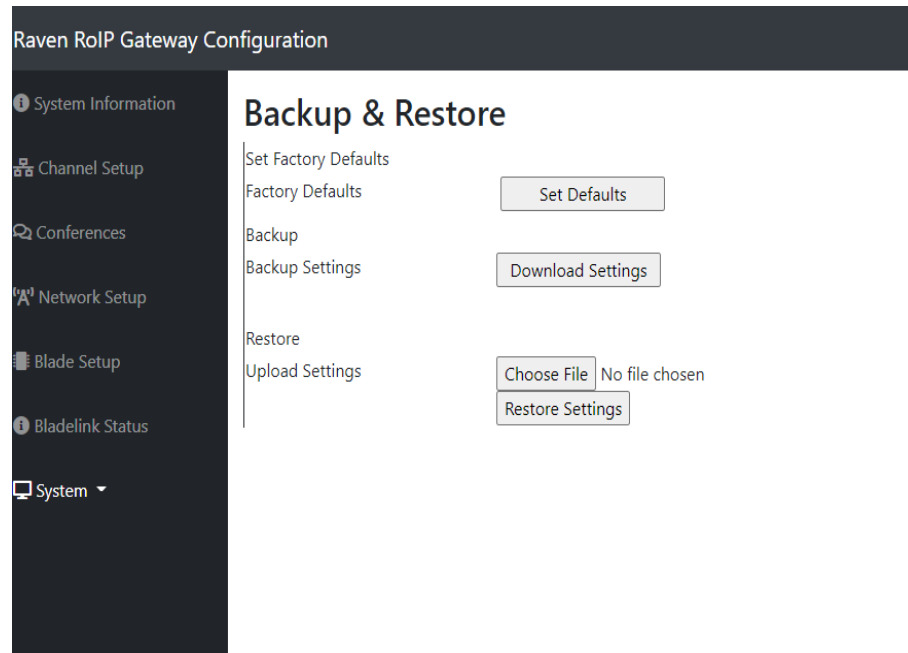


Figure 8-1: “Backup/Restore” web interface.

2. Click the “Download Settings” button. The settings will then be downloaded as a .json file.
3. To upload the .json file to get the same configuration on a blade, navigate to the same webpage.
4. Click the “Choose File” button, find the .json that was downloaded/saved, and click the “Restore Settings” button. The blade will perform a restart and will have the saved settings applied to the blade.

9 Resetting the VoIP

9.1 How to Reset the VoIP to Have Default Settings through Hardware

1. Take the lid off the blade. There will be a total of 8 screws if it is an 8-port blade or a total of 4 screws if it is a 2-port mini blade.
2. Locate the 476-777 VoIP module that is in the fourth module slot closet to the back of the 8-port blade. If it is the 2-port mini blade, it will be the only module in there.
3. There is a white jumper that is currently on “MEM” and “NORM”. This can be seen in the Figure 9-1. Move the jumper to “ERASE” and “MEM”. ****Some older modules were made without the jumper pins. If you have one that does not have a jumper, refer to Section 9.2 How to Reset the VoIP Interface to Have Default Settings through the Webpage to reset to default settings.****

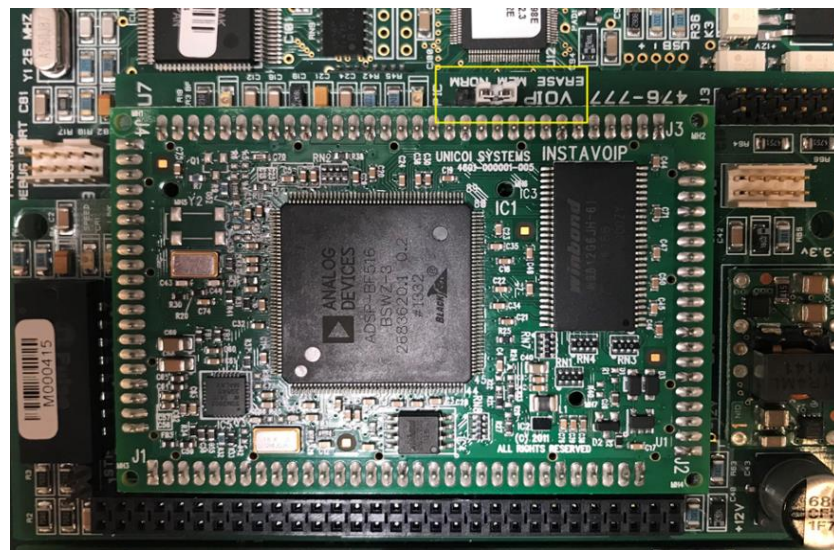


Figure 9-1: Location of reset jumper on VoIP module.

4. Power cycle the blade by disconnecting it from power and reconnecting.
5. After ~10-15 seconds the front LEDs in the front should bounce back and forth switching between Green and Red. Once all ports turn Red, the reset is complete.
6. Move jumper back to “MEM” And “NORM”.
7. Power cycle the blade again.
8. The blade is now set to default settings and can be reached at the 192.168.50.65 address.

9.2 How to Reset the VoIP Interface to Have Default Settings through the Webpage

1. Navigate to the “System” tab on the left panel and click the “Backup/Restore” in the drop down.
2. Click the “Set Defaults” button. A pop up will appear asking if you want to reset to default settings as shown in Figure 9-2. Click the “OK” button to continue.

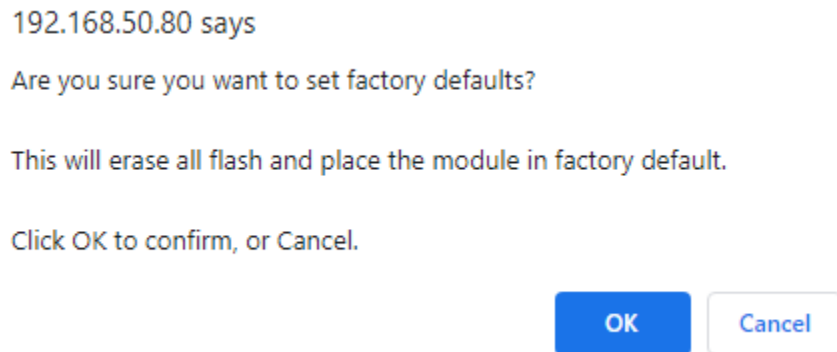


Figure 9-2: The pop up prompting you to confirm defaulting the VoIP interface settings.

3. The blade will restart and will have the IP address of 192.168.50.65 once booted back up.

10 Firmware Updates

10.1 How to Apply a New Firmware Update

1. Navigate to the “System” tab on the left panel, click the “Upgrade Firmware ” in the drop down, and it will look like Figure 10-1.

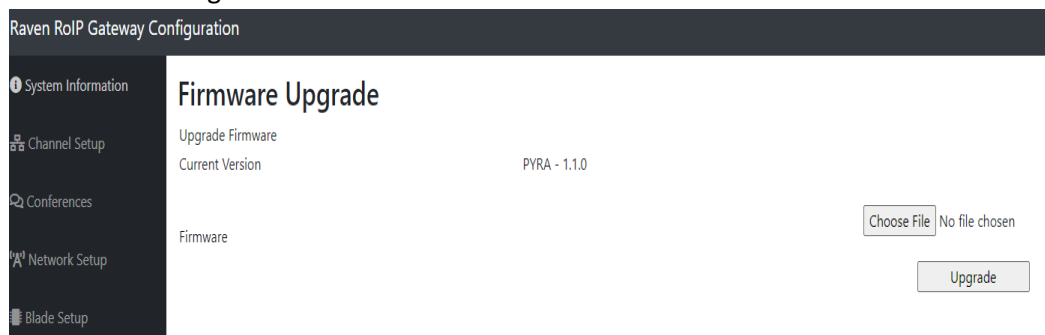


Figure 10-1: The “Upgrade Firmware” page where a new firmware file can be loaded onto the VoIP interface.

2. Click the “Choose File” button, find the .bin file, and the name will appear to the right of the button.
3. Click the “Upgrade” button. A message will appear on the same webpage notifying it may take a couple of minutes. It will look like Figure 10-2.

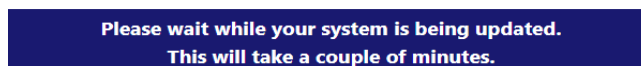


Figure 10-2: The message that will be shown when the uploading process has begun.

4. The page will be redirected to look like Figure 10-3 to inform the user the process of the update. Once complete, the username and password login popup will appear indicating the update is complete.

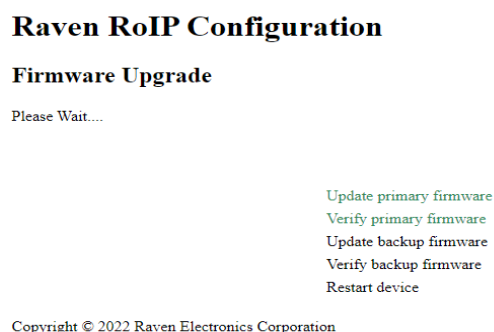


Figure 10-3: The firmware upgrade progress page when applying a new PYRA firmware.

11 Troubleshooting the VoIP Interface

11.1 Why Can't I Reach the Webpage?

Step 1: Make sure the ethernet cable is connected to the correct Port and the right power supply is being used. The link lights are a good indicator it is connected to a network.

Step 2: Check to see if the computer trying to reach the webpage is on the same network as 192.168.50.X. You can use the command prompt to ping the blade.

Step 3: Update your internet browser.

Step 4: Check to see if you have a html at the end of the URL. If it is only htm, it will look like Figure 11-1.

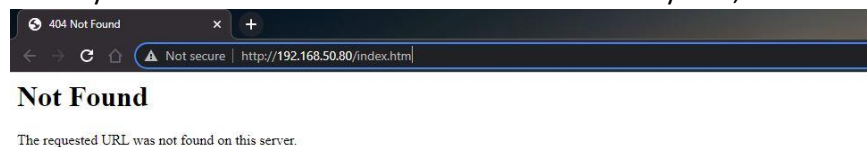


Figure 11-1: The webpage will display this message if the URL is not ending in HTML.

Step 5: If you applied the PYRA firmware to a blade that had different firmware, perform a reset to ensure the .json file is properly formatted.

Step 6: Make sure there isn't two blades plugged in with the same IP address, especially when configuring multiple new blades at once.

11.2 Why Am I Getting E&M Signaling One Direction but Not the Other Direction when Using Blade-Link?

Step 1: Check to see if both ports are being pointed towards each other under "Blade Setup" when using Blade-Link between two blades. If using a FlexGate as the dedicated Blade-Link server, it will not show up under "Blade Setup, so make sure the RTP session is setup properly.

Step 2: Check the firewall settings to make sure the Tx and Rx ports are not disabled when using a FlexGate Blade-Link.

Step 3: Check that the cabling is correct for that port. Refer to *Section 3.2 Pinout for the Analog 2-wire/4-wire Ports* for reference.

Step 4: Use Wireshark to make sure TCP signals are being sent back to each other to rule out a misconfiguration or cabling issue.

Step 5: Make sure the dedicated Blade-Link server's IP was not added to the non-dedicated server's Blade-Link setting under "Blade Setup".

11.3 Why is my Blade restarting in a Constant Boot-Loop?

Step 1: If you applied the PYRA firmware to a blade that had different/older firmware, perform a reset to ensure the .json file is properly formatted

Step 2: If you applied an old .json file from an older VoIP firmware to restore settings will cause a boot-loop. Perform a reset on the VoIP interface.