Webex Calling Configuration Guide: IP to Analog Devices

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Revision Information

6/29/2022 – Initial Release
1/1/2025 – Updated nomenclature

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CyberData
The IP Endpoint Company

1.0 Supported CyberData Products

This section describes the products used for interoperability testing with Webex Calling.

Table 1-1: Supported CyberData Products

EQUIPMENT	MODEL or PART NUMBER	FIRMWARE VERSION
CYBERDATA SIP PAGING ADAPTER	011233	20.2.0 or later
CYBERDATA SIP PAGING SERVER	011146	20.1.0 or later

2.0 Before You Start

Network Advisories

Webex Calling uses a Fully Qualified Domain Name (FQDN) for the SIP server and Outbound Proxy addresses. The CyberData IP to Analog device needs to perform a DNS query to resolve the IP address of Webex's Outbound Proxy FQDN. In addition, be sure to verify the following ports are available for the device to use:

- TCP 5060, 5061 (SIP)
- UDP 10500 (RTP)

The device will need to traverse the public internet in order to operate with Webex Calling in the cloud.

The device's paging and Nightringer extension uses SIP port 5060 to send and receive SIP messages.

SIP ports 5060 and RTP port 10500 are the default values on all noted firmware levels. Alternatively, SIP ports are configurable on the **SIP** page of the web interface. The RTP port setting on the **SIP** page is used for both extensions.

Product Documentation and Utilities

Before you start, download the Operation and Quick Start guides from the device's product webpage:

SIP Paging Adapter:
https://www.cyberdata.net/collections/sip/products/011233

SIP Paging Server:
https://www.cyberdata.net/collections/sip/products/011146

The CyberData Discovery Utility can be used to locate CyberData devices on your network. You may download it from the following web address:
https://www.cyberdata.net/pages/discovery

> *Note*: DHCP addressing mode is enabled on default on all noted firmware levels.

3.0 Setting up a Workspace in Webex Calling

This section outlines how to create a Webex Calling user in the Webex Control Hub (CH). This will provide the credentials to then setup the CyberData device.

Cisco has detailed instructions in the Cisco Webex Help Center in the Add your customer managed device article.
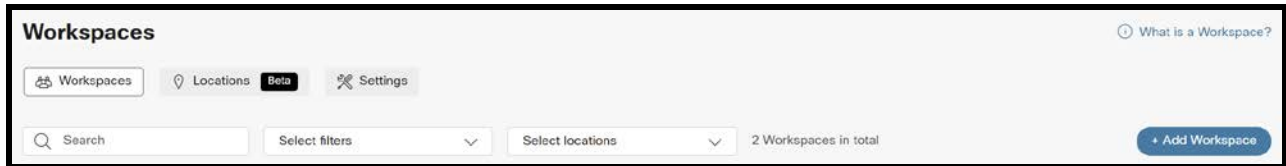
1. Login to Webex Control Hub as the administrator.
2. From the overview page select **Workspaces**.
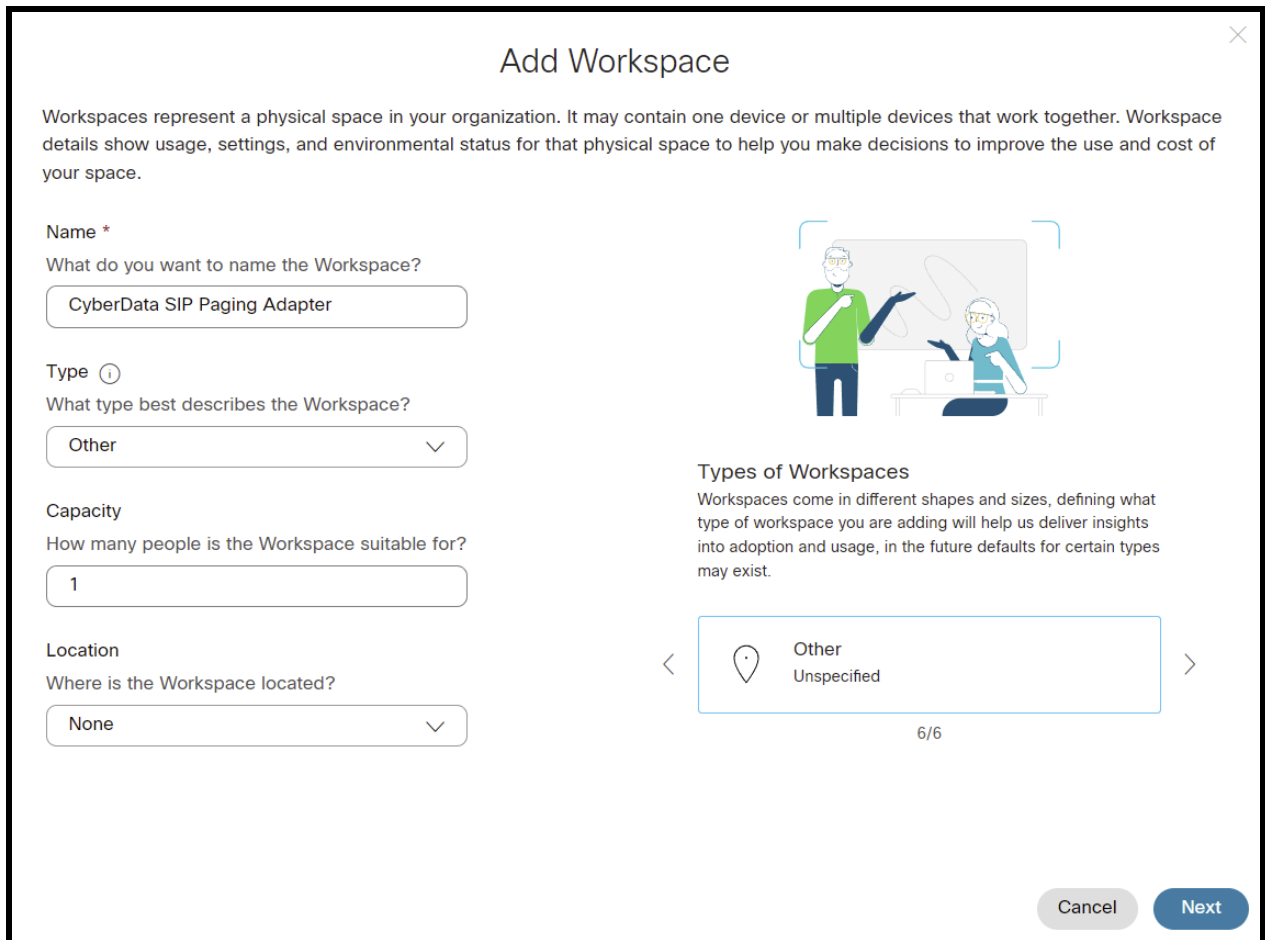
Figure 3-1: Overview Side Bar
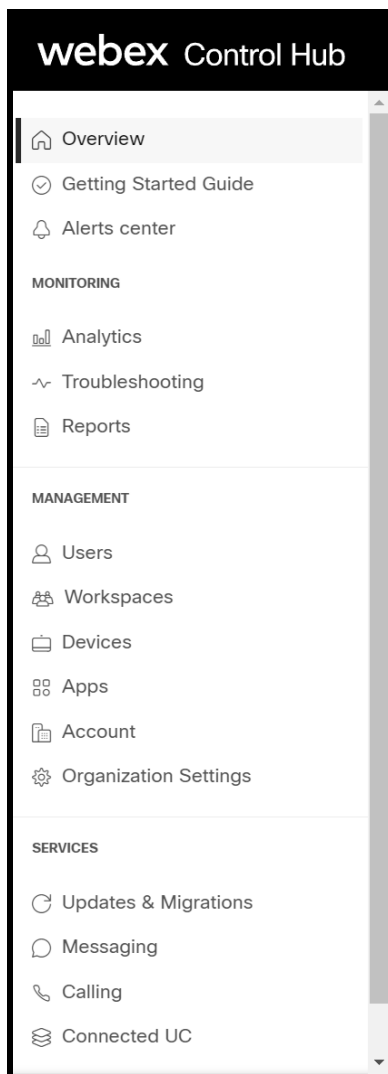
3. From the Workspaces page select the **Add Workspace** button.

Figure 3-2: Workspaces Page

4. On the Add Workspace popup create a Workspace for the adapter.

Figure 3-3: Create a Workspace

5. After creating the workspace select **Cisco IP Phone**.

Figure 3-4: Pick a device

6. Set the device to **Customer Managed Device**.
7. Select **CyberData Customer Managed** as the Device Vender.
8. Enter the MAC address of the CyberData device.
9. Check the box to confirm authorization.
10. Press **Next** to continue.

Figure 3-5: <u>Set an Extension Number</u>

11. Set a location for the device.
12. If desired set a phone number for the device.
13. Set an Extension Number for the device

Note: *It is possible to create a workspace with both a phone number and extension number, or just one or the other. Depending on the nature of the use case set the numbers accordingly.*

Figure 3-6: Device Successfully Added
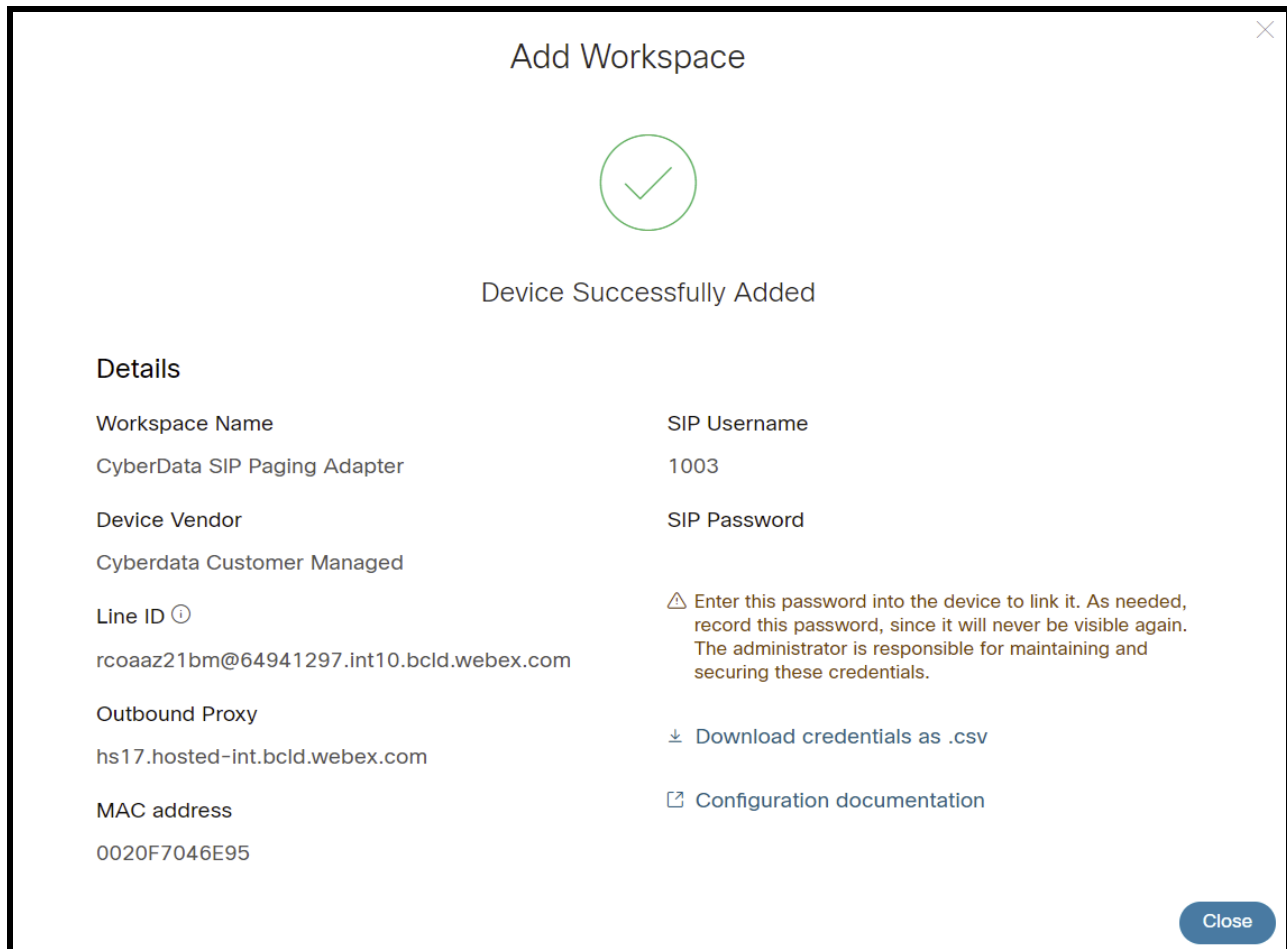
Note: The password has been obscured.

11. Make sure to press **Download credentials as .csv** because this page is only shown once.

4.0 Setting up the CyberData IP to Analog Device

This section outlines the required sections for the CyberData device and how the credentials supplied from Webex correlate to the CyberData settings. For the purposes of the document the SIP Paging Adapter is used to illustrate how to setup the device. There is no difference in configuration for the SIP Paging Adapter or SIP Paging Server.

Table 4-1: SIP Credential Explanation

Webex Calling Credential	CyberData Setting
2nd Half of Line ID	Primary SIP Server
1st Half of Line ID	Primary SIP User ID
SIP Username	Primary SIP Auth ID
SIP Password	Primary SIP Auth Password
Outbound Proxy	Outbound Proxy

Note: CyberData devices do not support 'Line IDs' and the ID provided by Webex must be broken up to be used by the CyberData device. Webex provides the line ID in the following format: "UserID@SIP_Server_Address". Everything before the @ symbol is used as CyberData's Primary SIP User ID and everything after the @ symbol is used as the Primary SIP Server.

CyberData's default login credentials are:
Username: admin
Password: admin

1. Log into the web interface of the CyberData device.

Figure 4-1: Home Tab

2. Navigate to the SIP tab.
3. Set the **Primary SIP Server** field to the 2nd half of the Line ID.
4. Set the **Primary SIP User ID** to the 1st half of the Line ID.

Note: Do not add an @ to SIP Server or User ID.

5. Set the **Primary SIP Auth ID** to the SIP Username.
6. Set the **Primary SIP Auth Password** to the SIP Password.
7. Set the **Outbound Proxy** to the Outbound Proxy.
8. Leave the **Outbound Proxy port** set to 0.
9. Set the **SIP Transport** to **TLS**.
10. Ensure **TLS Version** is set to **1.2 Only (Recommended)**.
11. Set RTP Encryption to **Mandatory**.
12. Save and Reboot.

Figure 4-2: SIP Tab

If the credentials have been entered correctly the device should now be registered with Webex. This can be verified on the home tab of the web interface or on the Webex site.

Figure 4-3: Home Tab – Registered

5.0 Using the CyberData SIP Paging Adapter in a Webex Calling system.

CyberData SIP Paging Adapters are designed as an interface to an existing analog paging system. Connecting to the analog speaker system is crucial and CyberData has a matrix of different compatible amplifiers available on our website. If your amplifier is not on our website please reach out to our support department to see if and how to connect to the amplifier.

5.1 Setting up stored messages

Once the adapter has been registered with Webex Calling it is possible to either make a live announcement or play a stored message. Follow these steps to setup a stored message.

5.1.1 Creating the Audiofile

CyberData devices require audio files to be in a specific format. CyberData recommends using a free tool like Audacity to convert an audio file into the specific required format.

- RIFF (little-endian) data,
- WAVE audio, Microsoft PCM
- 16 bit, mono 8000 Hz

5.1.2 Uploading the Audiofile

Once the audiofile is created it must then be uploaded to the CyberData device.

1. Navigate to the **Audiofiles** tab.

Figure 5-1: Audiofiles Tab
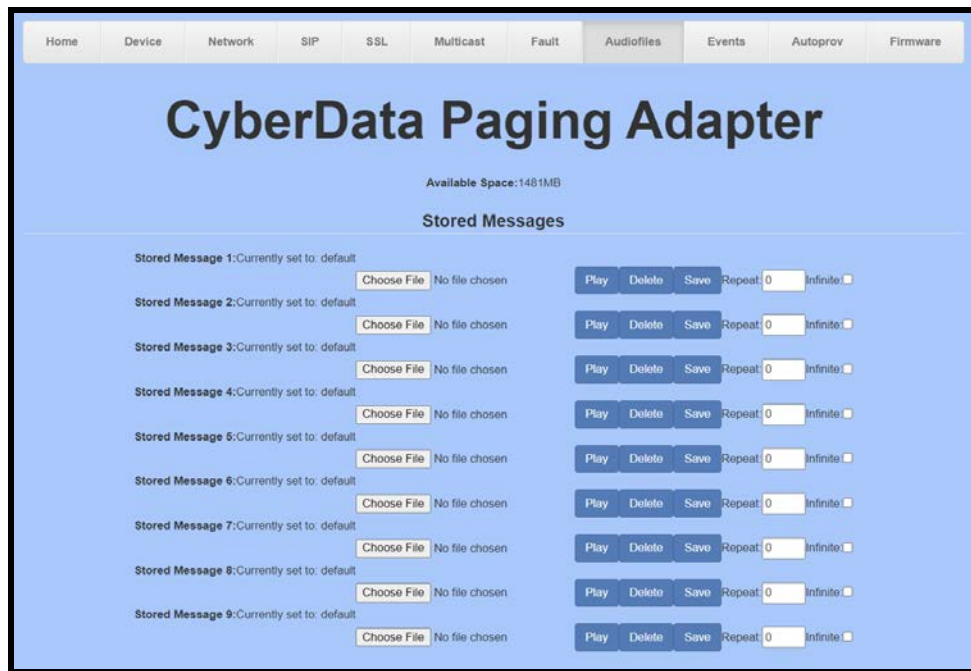
2. Upload the audiofile to one of the 9 stored message options by pressing **Choose File**.
3. Select the desired audiofile and press **open.**
4. Click **Save** to upload the audiofile.

Figure 5-2: Audiofile Uploaded

5.2 Manual DTMF for Analog Zone
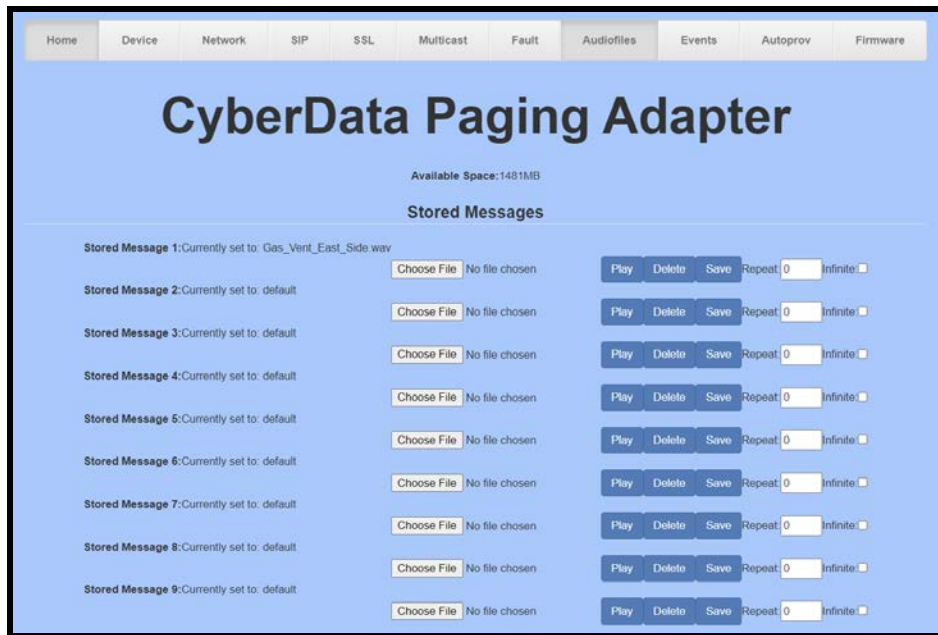
Some analog amplifiers require a DTMF pattern to select a physical zone. In those situations, the setting "Manual DTMF Entry for Analog Zone" is required. Follow these steps to enable the setting.

1. Navigate to the **Device** tab.
2. Check the box for "**Manual DTMF Entry for Analog Zone**" located in the DTMF settings section (Bottom Right).
3. Save.

Figure 5-3: Device Tab

6.0 Using the CyberData SIP Paging Server in a Webex Calling system.

CyberData's SIP Paging Server is designed as a SIP to Multicast style device that can receive a SIP call and convert the audio to Multicast to send across the local area network. The SIP Paging Server supports up to 100 Multicast Groups or Zones, CyberData refers to these as 'PGroups'.

6.1 Setting up a PGroup.

Once the SIP Paging Server is registered with the platform, use the PGroups tab to configure the Paging Group.

1. After Logging into the Paging Server go to the **PGroups** Tab.
2. On the PGroups Tab press **edit** on the group to be configured, for the purpose of this document group 0 will be edited.

Figure 6-1: PGroups Tab

3. Adjust the Multicast Address if necessary.
4. Adjust the Multicast Port if necessary.
5. Name the PGroup.
6. If required set a security code for the group.
7. Press **OK** to finish editing.

Figure 6-2: Edit PGroup

8. Save the changes.

7.0 Setup Diagram

Figure 7-1: Interoperability Test Infrastructure
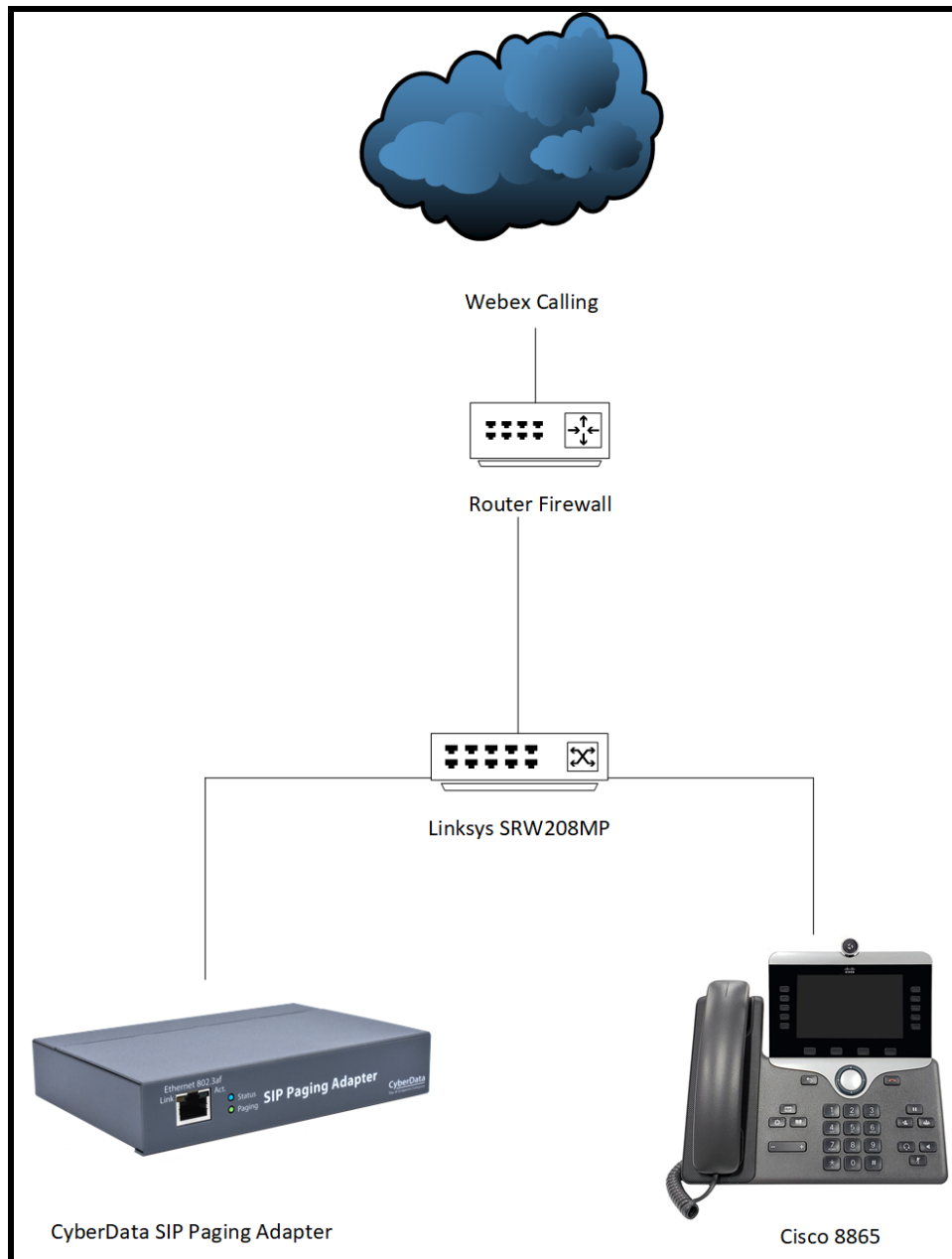
8.0 FAQ

Why is the device registering to a backup server and not the primary server listed in the SRV record?

CyberData devices have a bug where they will not fall back to the primary server listed in the SRV record in the event it switches to a backup server. To resolve this issue simply reboot the device. This will be fixed in a future release.

9.0 Contact CyberData Corporation

Sales

For sales-related questions, please visit our Contact CyberData Sales web page for more information.

Technical Support

For CyberData Technical Support, please submit a Contact CyberData VoIP Technical Support form on our website.

The CyberData VoIP Technical Support Contact form initiates a troubleshooting ticket which CyberData uses for quality assurance purposes.

Additionally, the Contact VoIP Tech Support form tells us which phone system you are using, the make and model of the network switch, and other essential troubleshooting information we need to efficiently assist with a resolution. Please also include as much detail as possible in the Describe Problem section of the form. Your installation is extremely important to us.

Documentation Feedback

We realize changes to the software or hardware of the Webex solution may render this document obsolete. We welcome and encourage documentation feedback to ensure continued applicability.