

*Webex Calling Configuration Guide: VoIP
SIP/Multicast Speaker*

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Revision Information

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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 VOIP SIP/MULTICAST CEILING MOUNT SPEAKER	011511	20.0.1
CYBERDATA VOIP SIP/MULTICAST WALL MOUNT SPEAKER	011512	20.0.1
CYBERDATA SIP OFFICE RINGER	011216	20.4.1

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 VoIP SIP/Multicast Speaker 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 speaker to use:

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

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

The speaker'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 speaker's product webpage:

SIP VoIP SIP/Multicast Ceiling Mount Speaker:

<https://www.cyberdata.net/collections/sip/products/011511>

SIP VoIP SIP/Multicast Wall Mount Speaker:

<https://www.cyberdata.net/collections/sip/products/011512>

SIP Office Ringer:

<https://www.cyberdata.net/collections/sip/products/011216>

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.

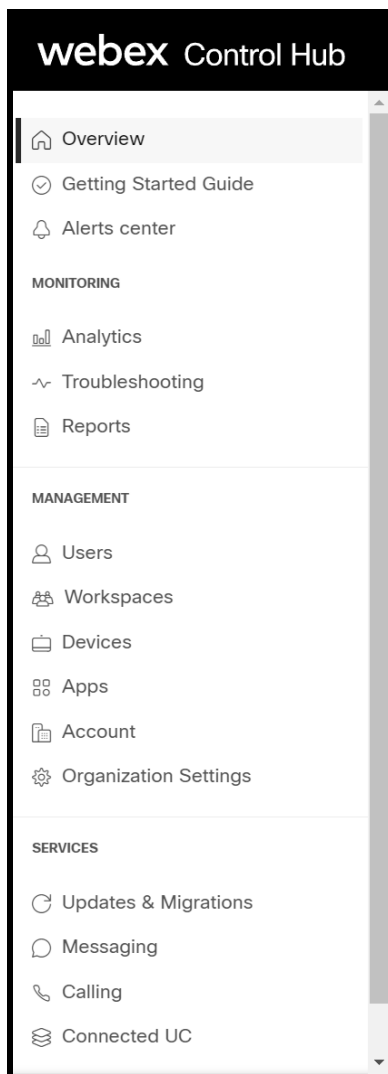
3.0 Setting up a Workspace in Webex Calling

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.](#)

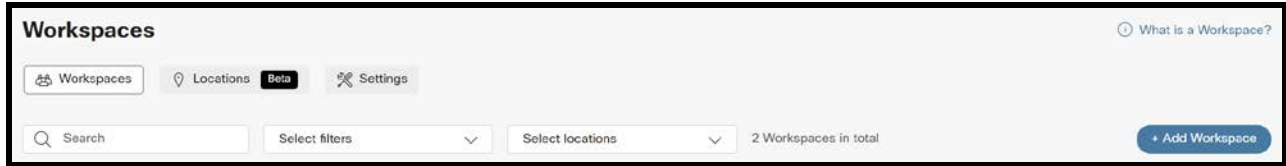
1. Login to [Webex Control Hub as the administrator](#).
2. From the overview page select **Workspaces**.

Figure 3-1: Overview Side Bar



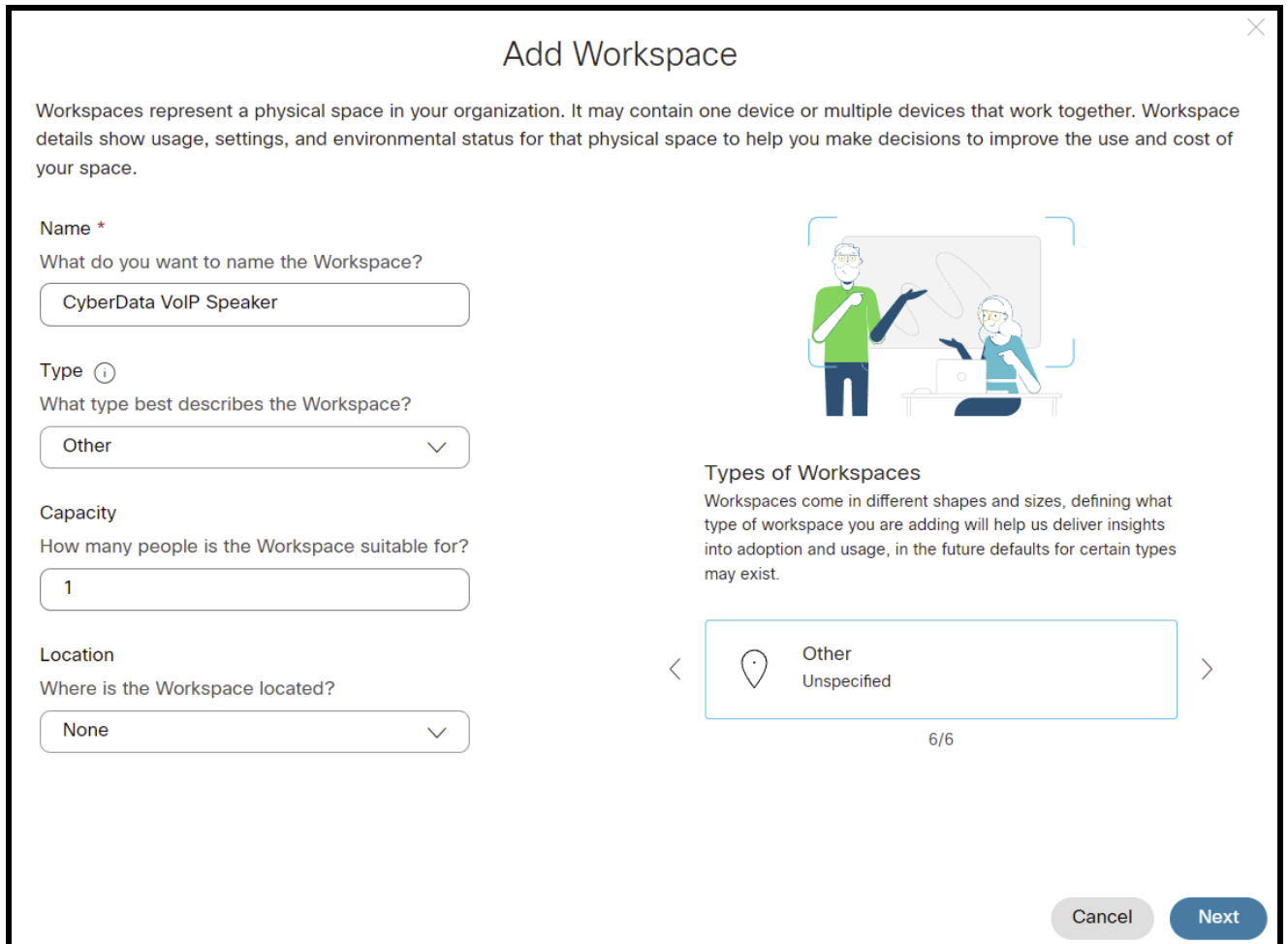
- From the Workspaces page select the **Add Workspace** button.

Figure 3-2: Workspaces Page



- On the Add Workspace popup create a Workspace for the speaker.

Figure 3-3: Create a Workspace



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

Figure 3-4: Pick a device

Add Workspace

What kind of device do you want to set up in this workspace?

Room, Board or Desk series
e.g. Cisco Webex Board, Room, and Desk series, and Webex Share.

Cisco IP Phone
e.g. Cisco 8845, 8865, 8800 and Analog Telephone Adapter ports

Select Device
Customer Managed Device

Device Vendor
Cyberdata Customer Managed

Enter MAC Address
Enter the MAC address of the IP phone you want to add.
0020f704d585

*I confirm that creating this device profile will expose sensitive device credentials that could be misused and exploited by users with unauthorized access. You are responsible for securing and recycling these credentials. You agree that Cisco is not responsible for any fraudulent charges or phone calls that result from the exposure of these device credentials. Cisco offers limited support for third-party devices connected via this interface. Cisco will only investigate basic issues for third-party devices that are actively registered to the Webex Calling platform. Any other third-party device-related support issues should be directed to the third-party device vendor, including issues related to onboarding, deployment, configuration, or connectivity.

Back Next

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: Set an Extension Number

The screenshot shows a web interface titled "Add Workspace" with a close button in the top right corner. Below the title, there is a section "Assign numbers" with the instruction: "Choose from the available phone numbers and extensions in the drop-down lists. These will become the primary line which you can use to reach this place." A "Reset" link is located below the instruction. The main configuration area contains a table with the following structure:

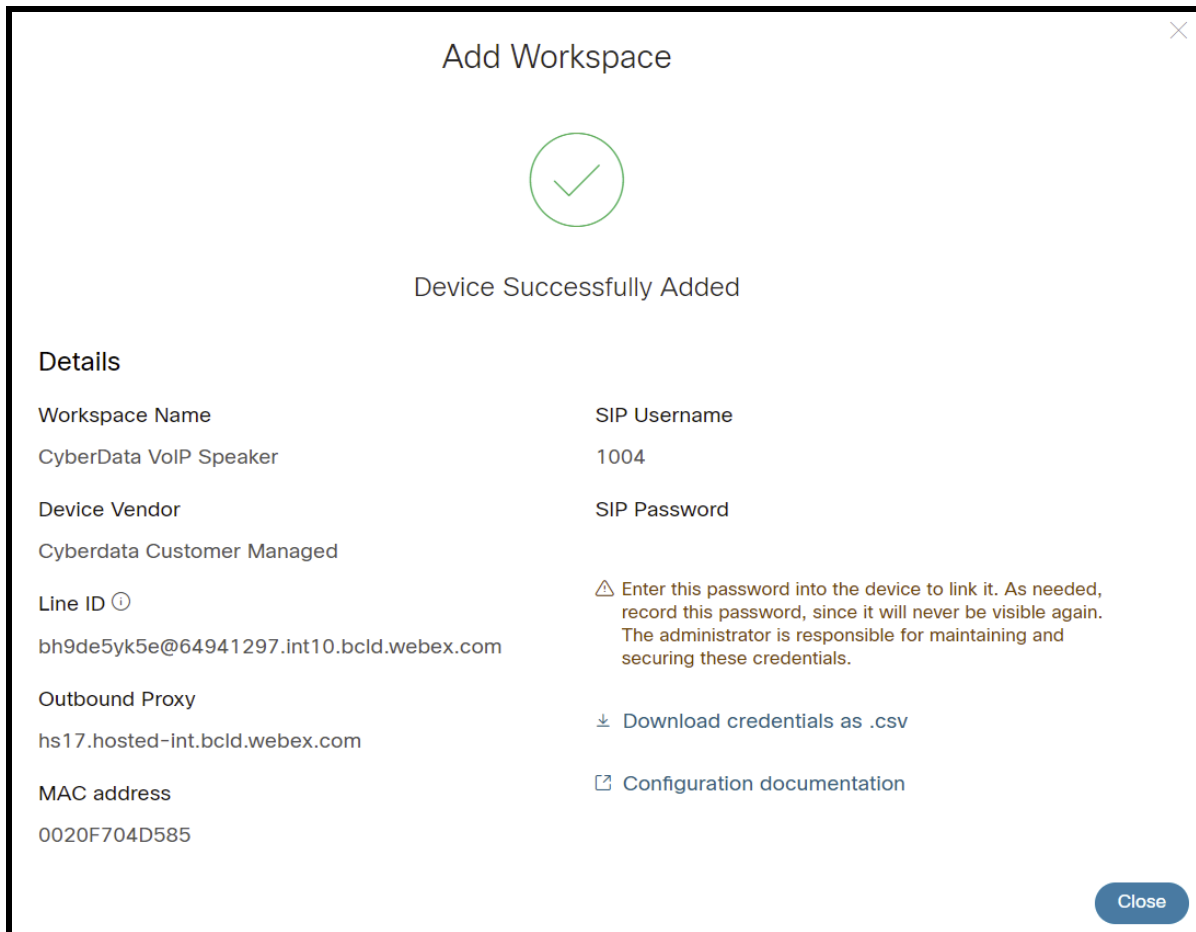
User	Location	Phone Number	Extension	Calling Plan
CyberData VoIP Speaker	CyberData_Test	None	1004	

At the bottom right of the window, there are two buttons: "Back" and "Save".

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 VoIP SIP/Multicast Speaker

This section outlines the required sections for the CyberData device and how the credentials supplied from Webex correlate to the CyberData settings.

Table 4-1: SIP Credential Explanation

Webex Calling Credential	CyberData Setting
2 nd Half of Line ID	Primary SIP Server
1 st 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.

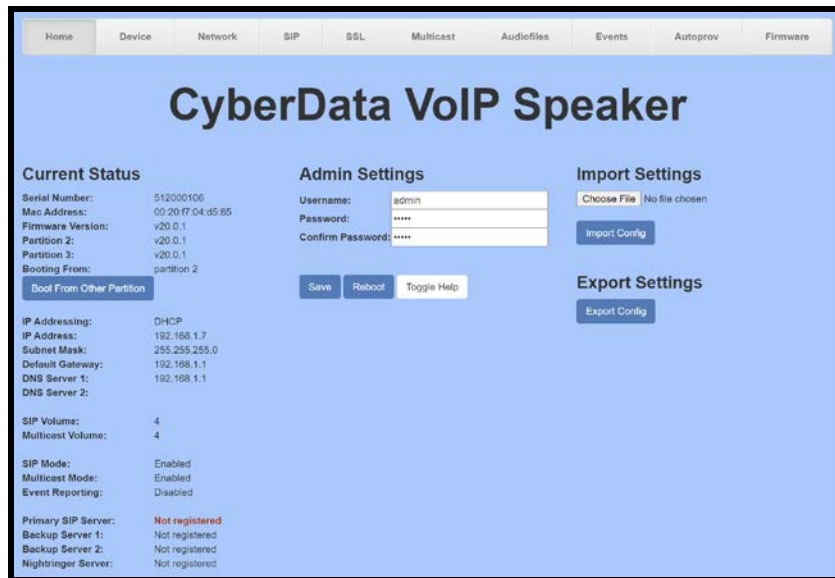
CyberData’s default login credentials are:

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 Extension Number.
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

The screenshot displays the 'CyberData VoIP Speaker' configuration page. It is divided into several sections:

- SIP Settings:** Includes checkboxes for 'Enable SIP operation' and 'Register with a SIP Server', both checked. Fields for 'Primary SIP Server' (64941297.int10.bclid.webex.com), 'Primary SIP User ID' (bh9de5yk5e), 'Primary SIP Auth ID' (1004), and 'Primary SIP Auth Password' (masked with dots) are present. A 'Re-registration Interval' of 360 seconds is set. Backup settings for three servers are also visible, each with a 360-second interval. Remote SIP Port is 5060 and Local SIP Port is 5060. 'SIP Transport Protocol' is set to TLS with 'NTP enabled'. 'TLS Version' is set to '1.2 only (recommended)'. 'Verify Server Certificate' is unchecked. 'Outbound Proxy' is hs17.hosted-int.bclid.webex.com and 'Outbound Proxy Port' is 0. 'Use Cisco SRST' and 'Disable rport Discovery' are unchecked. 'Keep Alive Period' is 10000.
- Nighthringer Settings:** Fields for 'SIP Server', 'SIP User ID', 'SIP Auth ID', and 'SIP Auth Password' are present, with the first three having input boxes and the last one a password field. 'Re-registration Interval (in seconds)' is set to 360.
- Call Disconnection:** 'Terminate Call after delay' is set to 0.
- Audio Codec Selection:** 'Codec' is set to 'Auto Select'.
- RTP Settings:** 'RTP Port (even)' is 10500, 'Asymmetric RTP' is unchecked, 'Jitter Buffer' is 50, and 'RTP Encryption (SRTP)' is set to 'Mandatory'.

At the bottom right, there are buttons for 'Save', 'Reboot', and 'Toggle Help'.

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 VoIP Speaker in a Webex Calling system.

CyberData VoIP SIP/Multicast Speakers are designed with IP Paging in mind. Supporting both SIP and Multicast that allows the speakers to work with individual addressability or mass notification scenarios.

5.1 Setting up a Multicast priority

CyberData devices support multicast that works in a priority system, where a higher priority will always supersede a lower priority. For example, a multicast page to priority 4 would play over a background music stream at priority 0. SIP Calls are treated as priority 4.5.

CyberData devices also have an Emergency Multicast Priority, priority 9, which will always play at max volume regardless of setting, by design.

Figure 5-1: Multicast Tab

Home Device Network SIP SSL **Multicast** Audiofiles Events Autoprovisioning Firmware

CyberData VoIP Speaker

Multicast Settings

Enable Multicast Operation:

Priority	Address	Port	Name	Buffer	Beep
0	239.168.3.1	2000	Background Music	<input type="checkbox"/>	<input type="checkbox"/>
1	239.168.3.2	3000	MG1	<input type="checkbox"/>	<input type="checkbox"/>
2	239.168.3.3	4000	MG2	<input type="checkbox"/>	<input type="checkbox"/>
3	224.5.5.5	5050	MG3	<input type="checkbox"/>	<input type="checkbox"/>
4	239.168.3.5	6000	General Announcements	<input type="checkbox"/>	<input type="checkbox"/>
5	239.168.3.6	7000	MG5	<input type="checkbox"/>	<input type="checkbox"/>
6	239.168.3.7	8000	MG6	<input type="checkbox"/>	<input type="checkbox"/>
7	239.168.3.8	9000	MG7	<input type="checkbox"/>	<input type="checkbox"/>
8	239.168.3.9	10000	MG8	<input type="checkbox"/>	<input type="checkbox"/>
9	239.168.3.10	11000	Emergency	<input type="checkbox"/>	<input type="checkbox"/>

Polycom Default Channel

Polycom Priority Channel

Polycom Emergency Channel

SIP calls are considered priority 4.5

Port range can be from 2000-65535

Priority 9 is the highest and 0 is the lowest

A higher priority audio stream will always supersede a lower one

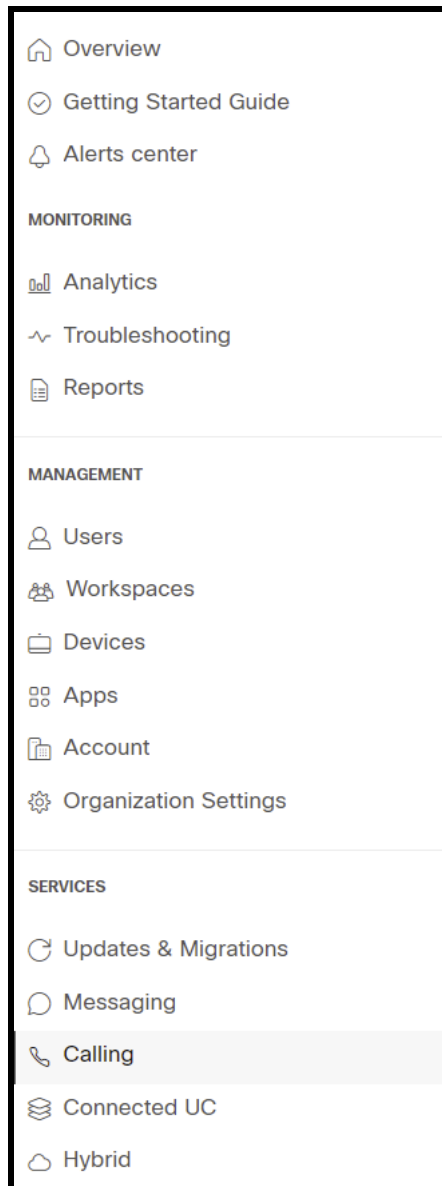
Priority 9 streams will play at maximum volume

5.2 Creating a paging group in Webex Calling

Webex calling supports paging groups that allow one-way pages to up to 75 devices at the same time. This makes products like VoIP Speakers easy to page with in the Cisco Webex calling environment. Follow these steps to setup a paging group.

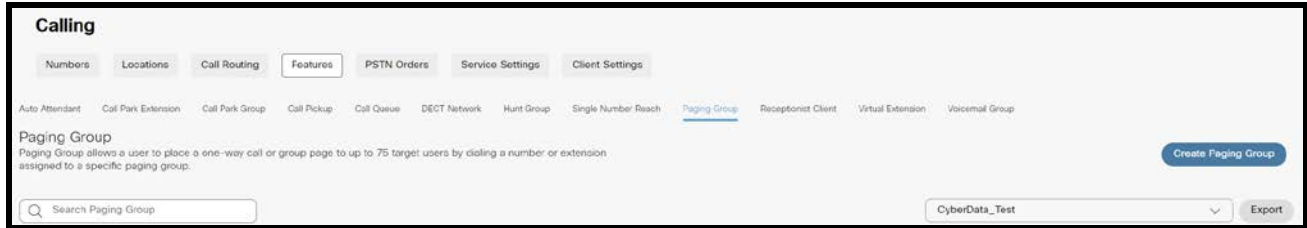
1. Select Calling from the Services sub section in the sidebar.

Figure 5-2: Select Calling



- From the Calling page select **Features** and then **Paging Group**.

Figure 5-3: Calling Settings



- Press **Create Paging Group** to begin the paging group creation process.

Figure 5-4: Naming a Paging Group

The screenshot shows the 'Create Paging Group' dialog box. At the top, there is a progress bar with four steps: 'Settings', 'Paging Targets', 'Paging Originators', and 'Review'. The 'Paging Targets' step is currently selected and highlighted with a blue circle. Below the progress bar, there are several sections for configuration:

- Location:** Assign your Paging Group to a Location. A dropdown menu shows 'CyberData_Test'.
- Paging Group Name:** The name is used to default Caller ID and reference the Paging Group later in the process. A text input field contains 'Paging Group'.
- Phone Number:** Assign the Paging Group to a Webex Calling primary line. A phone number and/or extension is required. A dropdown menu shows 'None' and a text input field contains '2000'.
- Language:** Select the Paging Group language. A dropdown menu shows 'English'.
- Calling Line ID:** This ID displays on the target user's phones when a group page is performed.
- Calling ID First Name:** A text input field contains 'Emergency'.
- Calling ID Last Name:** A text input field contains 'Paging'.
- Calling ID Label:** This determines what is shown on a paging target user's caller ID when a group page is performed. Two radio buttons are present: 'Paging Group ID' (selected) and 'Page Originator'.

At the bottom right, there are 'Cancel' and 'Next' buttons.

4. Set the location of the paging group.
5. Name the paging group.
6. Set a phone number and/or an extension number.
7. Pick the desired language for the group.
8. Set the Calling ID Name.
9. Pick if the group ID or Page Originator shows up on the caller ID.
10. Press **Next**.

Figure 5-5: Set the Paging Targets

Create Paging Group

Settings **Paging Targets** Paging Originators Review

Paging Targets ⓘ

Add Users and/or Workspaces
Search for and add up to 75 users and/or workspaces by name, phone number, or extension. Click the name to view more details.

Add User or Workspace

Name ▲	Phone Number	Extension	
CyberData VoIP Speaker .		1004	

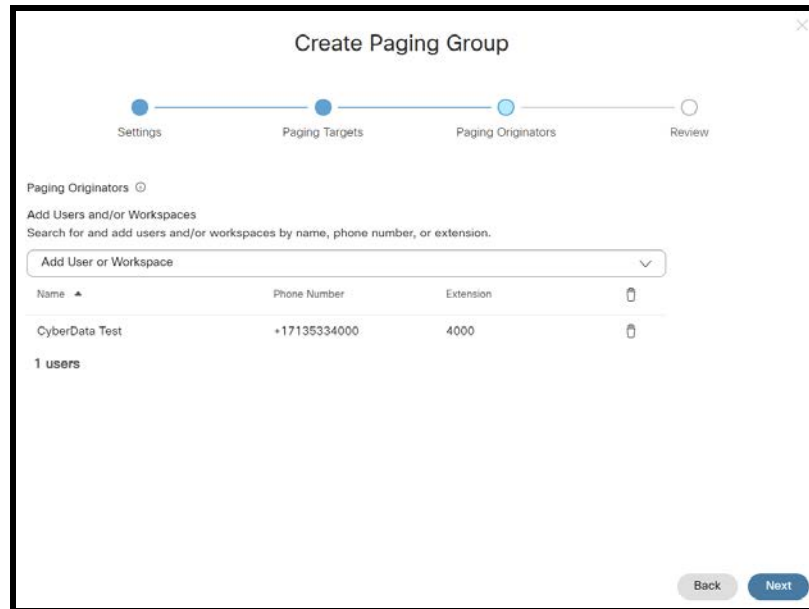
1/75 users

Copy my paging targets to my paging originators

Back Next

11. Choose which devices are in the paging group.
12. Press **Next**.

Figure 5-6: Paging Originators

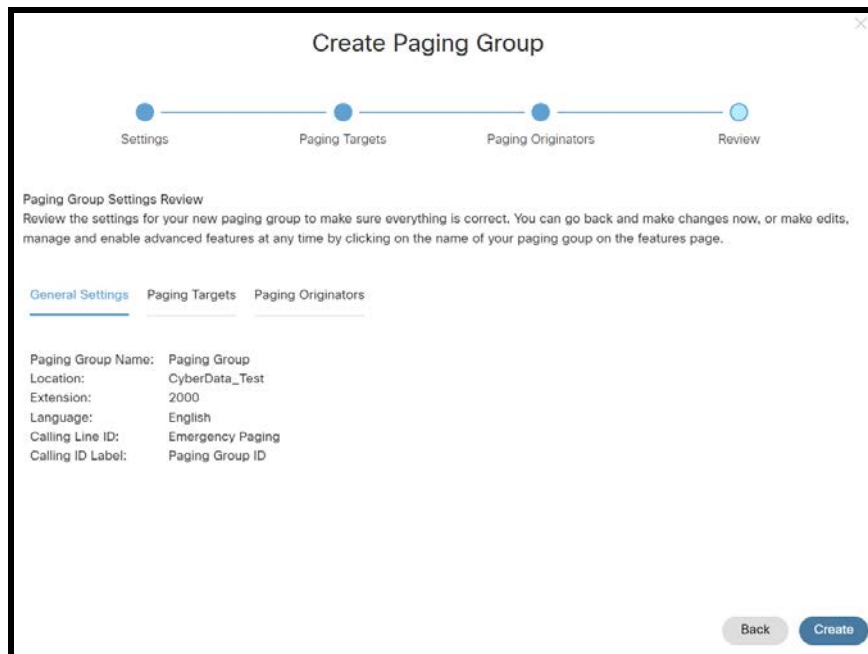


13. Choose which numbers can page to the paging group.

14. Press **Next**.

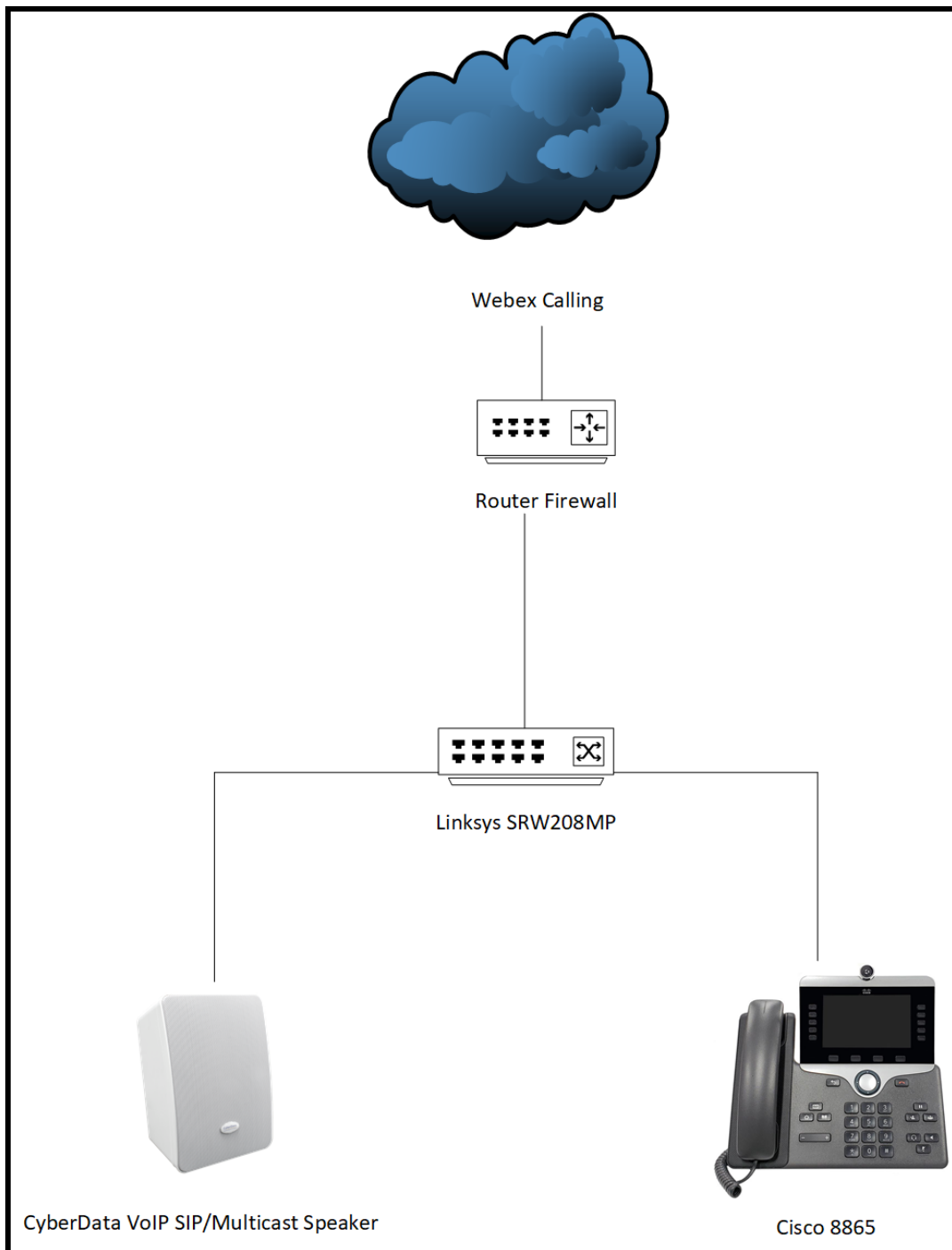
15. Review the settings and press **Create**.

Figure 5-7: Review Settings



6.0 Setup Diagram

Figure 6-1: Interoperability Test Infrastructure



7.0 FAQ

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

CyberData device's 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.

8.0 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.