



Zoom Configuration Guide: Speakers

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**Zoom Configuration Guide: SIP Speaker
Document #931707E**

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Revision Information

- 9-27-19 Initial Release.
- 1-31-20 Updated Device Type Creation.
- 3-11-21 Update for Zoom phone security update.
- 9-21-21 Update for new provisioning process.
- 1-12-23 Update for Primary and Nightringer Extension usage.

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1.0 Test Setup Equipment

This section describes the products configured following this document.

Table 1-1: Setup Equipment

EQUIPMENT	MODEL or PART NUMBER	FIRMWARE VERSION
CYBERDATA SIP SPEAKER	011394	20.5.1 or later
CYBERDATA VOIP SIP/MULTICAST CEILING MOUNT SPEAKER	011511	20.0.1 or later
CYBERDATA VOIP SIP/MULTICAST WALL MOUNT SPEAKER	011512	20.0.1 or later

2.0 Before You Start

Network Advisories

Zoom uses a Fully Qualified Domain Name (FQDN) for the SIP server and Outbound Proxy addresses. The CyberData speaker needs to perform a DNS A query to resolve the IP address of Zoom's Outbound Proxy FQDN. It is necessary to ensure the configured DNS server(s) have an A record for the Outbound Proxy address.

In addition, be sure to verify the following ports are available for the speaker to use:

- TCP 5060-5061, 5091 (SIP)
- UDP 10500 (RTP)

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

The speaker's paging extension uses SIP port 5060 to receive SIP messages. The Nightringer extension uses SIP port 5061 to receive SIP messages. Both extensions will send SIP messages to port 5091, the port used by Zoom's Outbound Proxy.

SIP ports 5060-5061 and RTP port 10500 are the default values on all noted firmware levels.

Alternatively, SIP ports for the paging and Nightringer extension 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 Speaker (011394):

<https://www.cyberdata.net/collections/sip/products/011394>

VoIP SIP/Multicast Ceiling Mount Speaker (011511):

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

VoIP SIP/Multicast Wall Mount Speaker (011512):

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

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>

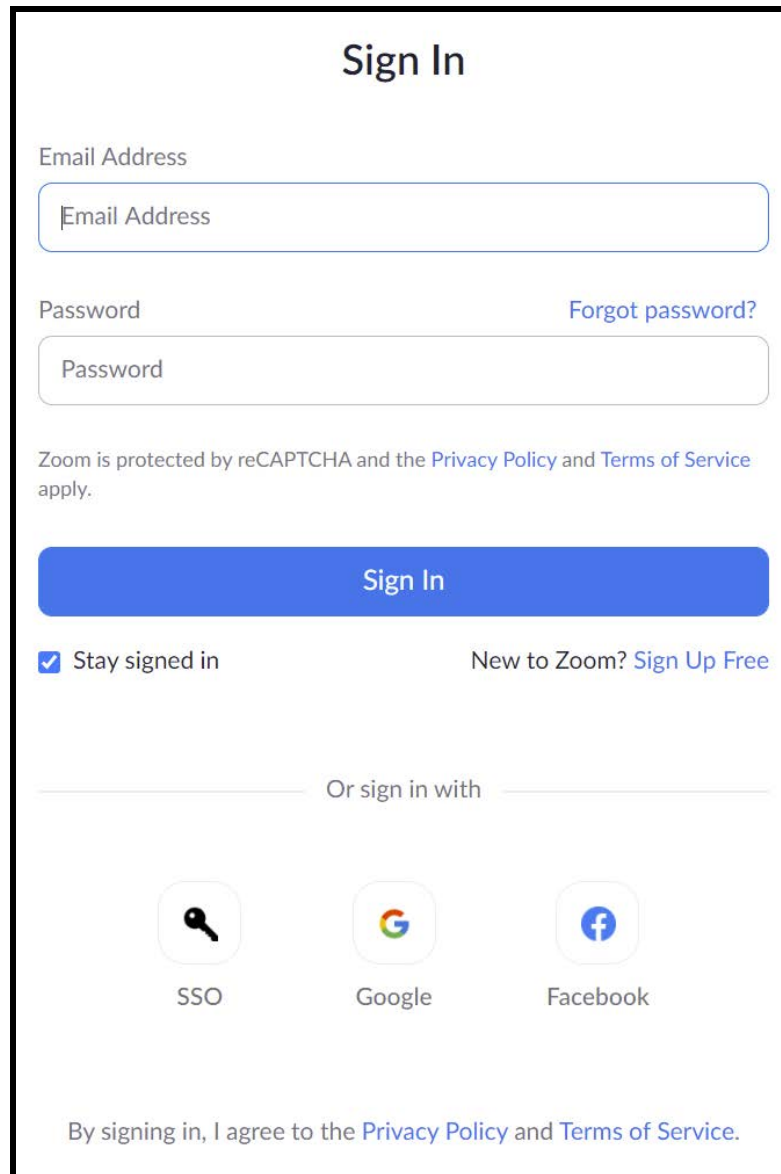
Note: DHCP addressing mode is enabled on default on all noted firmware levels.

3.0 Configuration Procedure: Intercom/Paging Device

There are several different extension types that can be used on the Zoom platform. This guide provides instructions to register the CyberData Speaker as an Intercom/Paging Device.

1. Log into Zoom. <https://zoom.us/signin>

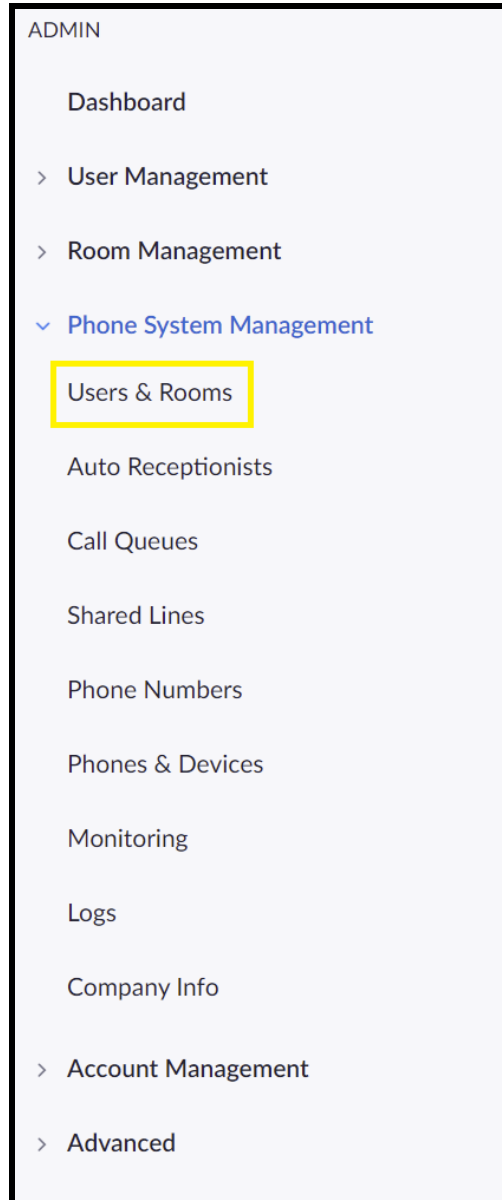
Figure 3-1: Log into Zoom



The image shows a screenshot of the Zoom Sign In page. At the top, it says "Sign In". Below that are two input fields: "Email Address" and "Password". To the right of the password field is a link for "Forgot password?". Below the input fields is a blue "Sign In" button. Underneath the button, there is a checkbox labeled "Stay signed in" which is checked, and a link "New to Zoom? Sign Up Free". Below this is a section titled "Or sign in with" with three icons: a key icon for "SSO", the Google logo for "Google", and the Facebook logo for "Facebook". At the bottom, there is a line of text: "By signing in, I agree to the Privacy Policy and Terms of Service."

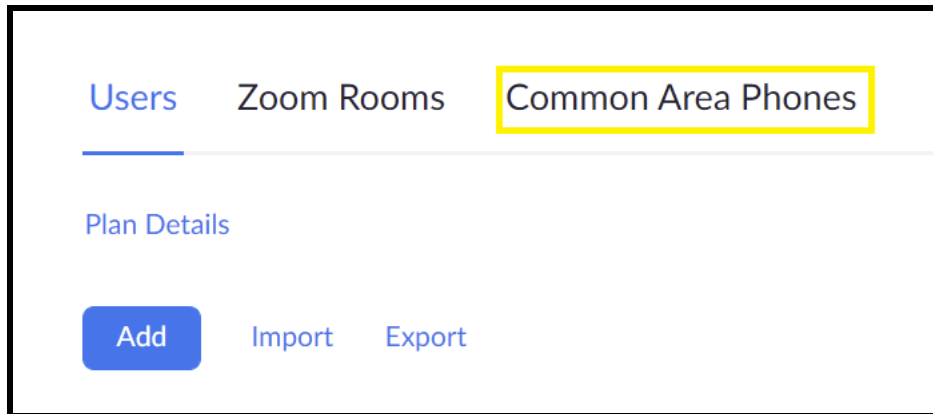
2. From the Profile page select the “Phone System Management” section and the ‘Users & Rooms’ subsection.

Figure 3-2: Profile Landing Page



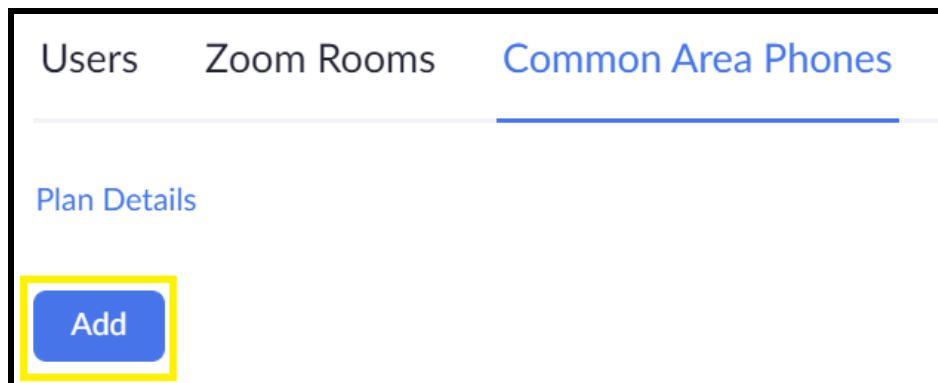
3. From “Users & Rooms” navigate to the Common Area Phones tab.

Figure 3-3: Users & Rooms



4. Press the Add button on the Common Area Phones Tab.

Figure 3-4: Add Common Area Phone



5. After clicking the Add button a Pop-up will appear that allows common area phone creation.

Figure 3-5: Add Common Area Phone Pop-up

Add Common Area

Display Name: CyberData SIP Speaker

Extension Number: 858

Package: Zoom Phone Basic (Migrated) ?
[Assign](#)

Country/Region: United States (+1) ▾

Time Zone: (GMT-8:00) Pacific Time (US and Canada) ▾

Specify a template to be assigned to the Common Area

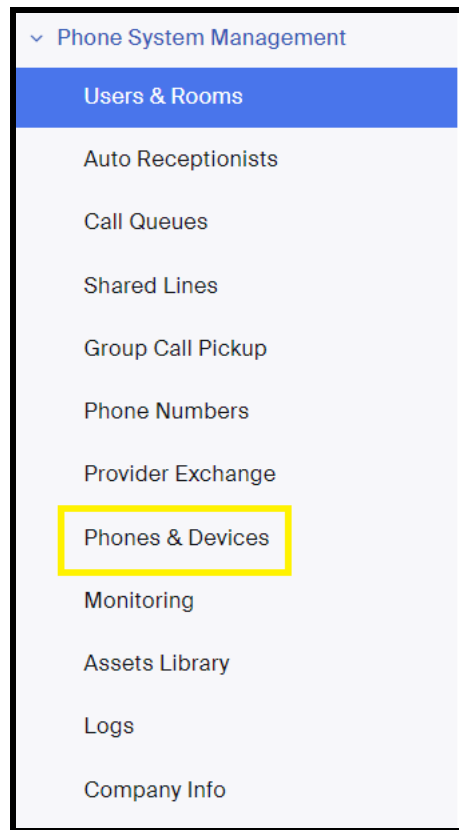
Cancel Save

6. Set the **Display Name** to the name of the device.
7. Adjust the **Extension Number** as necessary.
8. Select the desired **Package**.
9. Adjust the **Country/Region** as necessary
10. Adjust the **Time Zone** if required.
11. Press **Save**.

After creating the common area phone, a device will need to be created to add or associate with the common area phone.

12. From the side tool bar select **Phones & Devices**.

Figure 3-6: Phones & Devices



13. From the Phones & Devices page press the **Add** button to create a new phone.

Figure 3-7: Add Device

Add Device

Display Name: CyberData SIP Speaker

Description (Optional):

MAC Address: 0020f704d585

Device Type: CyberData

cyberdata-sip-based-device

This device type supports up to 2 assignees.

Assigned to: CyberData SIP Speaker Ext. 858 Assign

Save Cancel

- 14. Set the **Display Name**.
- 15. Set an optional **Description**.
- 16. Set the **MAC Address** to that of the device

Setting the MAC address should automatically select CyberData as the device type

- 17. Set the device to “cyberdata-sip-based-device”
- 18. Search for and find the Common Area Phone created in the previous step
- 19. Press **Save**.

20. The page will refresh, and the device will have been created. Press the **Actions** button and select **Provision**.

Figure 3-8: Device Created

The screenshot displays the configuration page for a 'CyberData SIP Speaker'. At the top, there is a title 'CyberData SIP Speaker' with a 'Rename' link. Below the title is the text 'No description'. There are two tabs: 'Profile' (selected) and 'Policy'. The main content area is divided into several sections:

- Assigned to:** A dropdown menu showing 'CyberData SIP Speaker Ext. 858' with an 'Assign' button and a close icon.
- IP Address:** Displayed as '--'.
- Device Type:** 'CyberData cyberdata-sip-based-device'.
- Firmware Version:** Displayed as '--'.
- MAC Address:** '00-20-f7-04-d5-85' with an 'Edit' link.
- Provision Template:** 'Unsupported' with a help icon.
- Status:** 'Offline' in red text.

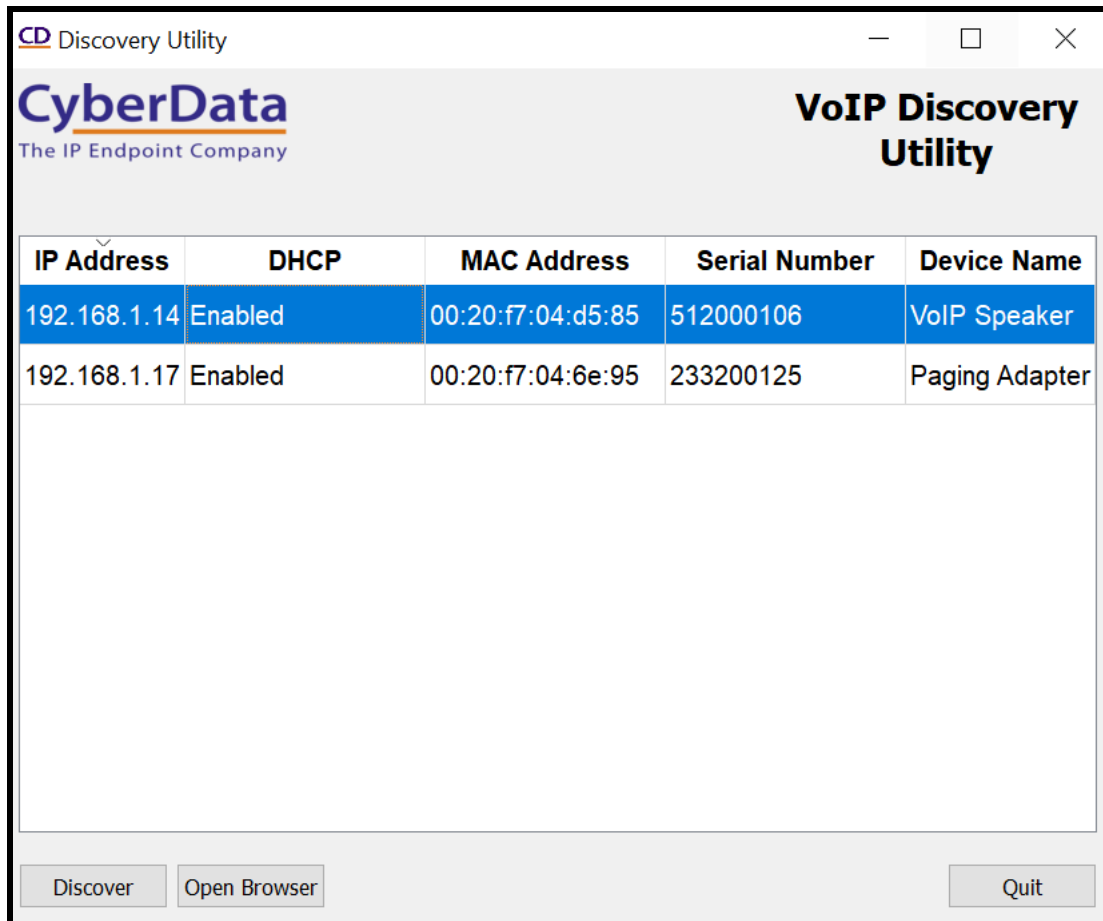
At the bottom, there are two buttons: 'Actions' (with a dropdown arrow) and 'Remove'.

21. In the provisioning pop-up click the **Copy to Clipboard** button to copy the provisioning URL.

4.0 Configuration Procedure: Setting up the Paging Extension

1. Click **Open Browser** from the CyberData Discovery Utility or point your browser to the CyberData device's IP address to access the Home Page of the web interface.

Figure 4-1: CyberData Discovery Utility



The screenshot shows a web browser window titled "Discovery Utility" with the CyberData logo and "VoIP Discovery Utility" header. Below the header is a table with the following data:

IP Address	DHCP	MAC Address	Serial Number	Device Name
192.168.1.14	Enabled	00:20:f7:04:d5:85	512000106	VoIP Speaker
192.168.1.17	Enabled	00:20:f7:04:6e:95	233200125	Paging Adapter

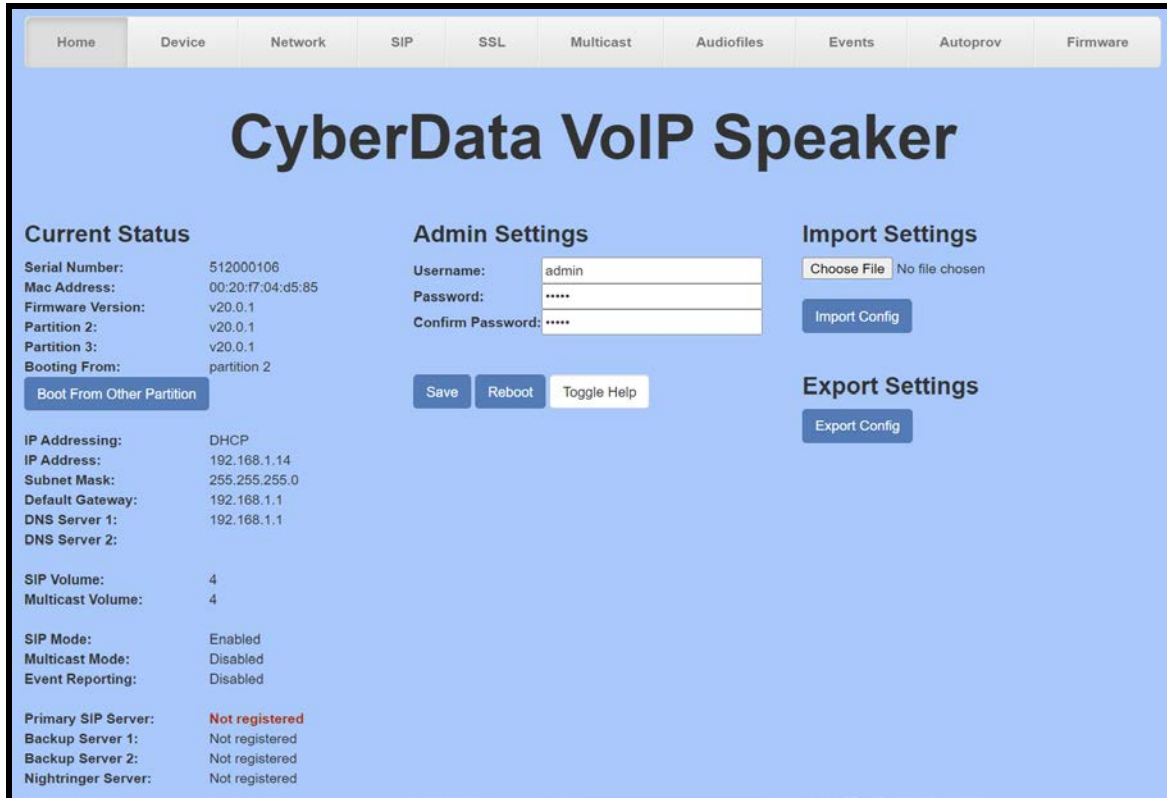
At the bottom of the window are three buttons: "Discover", "Open Browser", and "Quit".

2. Enter the default credentials when prompted and click the **Log In** button.

Username: admin

Password: admin

Figure 4-2: Web Interface Login



3. From the Home tab navigate to the Autopro Tab.

Figure 4-3: Autoprov Tab

The screenshot shows the 'Autoprov' configuration page for a CyberData VoIP Speaker. The page has a blue header with the title 'CyberData VoIP Speaker'. Below the header, there is a navigation bar with tabs for Home, Device, Network, SIP, SSL, Multicast, Audiofiles, Events, Autoprov (selected), and Firmware. The main content area contains the following configuration options:

- Enable Autoprovisioning:
- Autoprovisioning Server:
- Autoprovisioning Filename:
- Use tftp:
- Verify Server Certificate:
- Username:
- Password:
- Autoprovisioning autoupdate (in minutes):
- Autoprovision at time (HHMM):
- Autoprovision when idle (in minutes > 10):

Below the form, there are three lines of instructional text:

- See the manual to learn how to use autoprovisioning to configure your device.
- Autoprovisioning happens on boot.
- The device will first look for a configured server address and filename.
- If these haven't been configured, it will look for an autoprovisioning server in your list of DHCP options and try to download '0020f704d585.xml' and if this fails, '000000cd.xml'.

At the bottom of the page, there are three buttons: Save, Reboot, and Toggle Help.

4. Paste the URL copied from the provisioning popup in the **Autoprovisioning Server**.
5. Check the box for **Verify Server Certificate**.
6. Save.
7. Reboot.

Once the unit reboots it will attempt to download the provisioning file from Zoom, which should succeed. This can be verified on the Home tab of the speaker and through the Zoom provisioning popup.

Figure 4-4: Home page - Registered

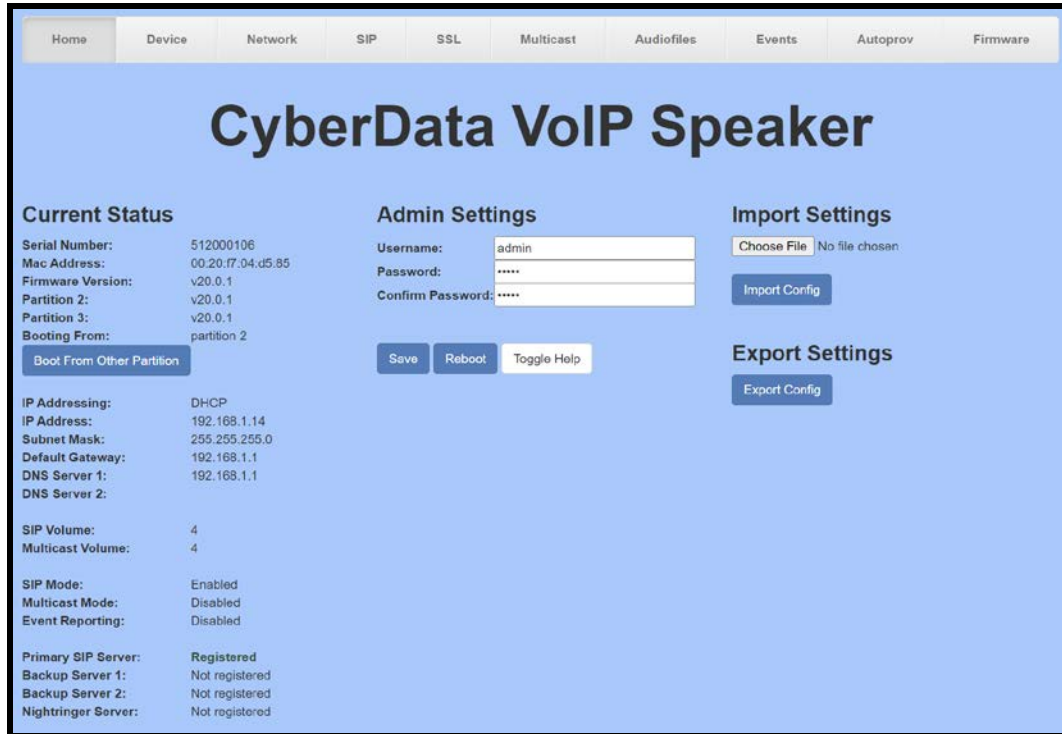
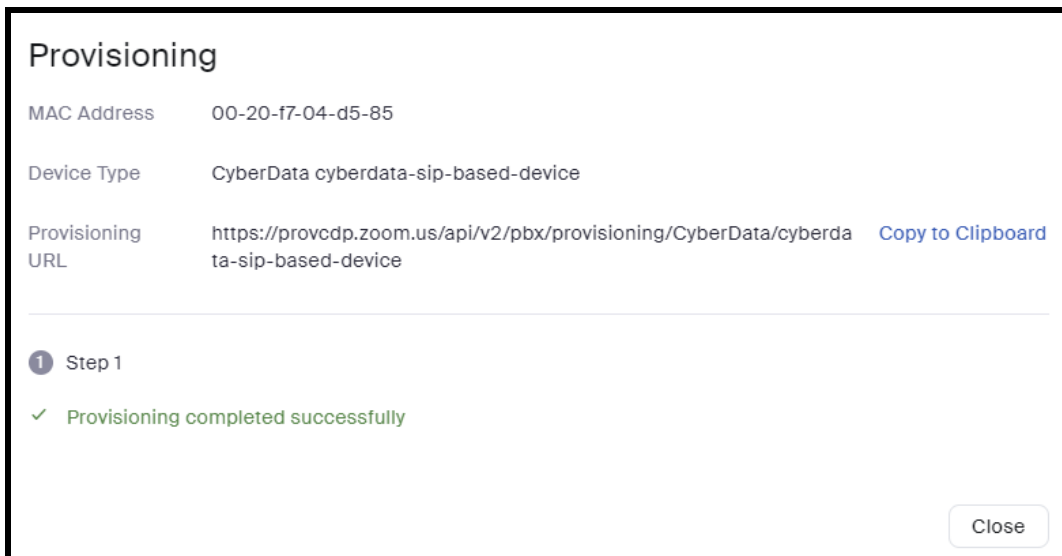


Figure 4-5: Zoom Provisioning Check



4.1 Adding Nightringer

CyberData products have a second extension called “Nightringer” that when called the device will ring. This makes the Nightringer extension perfect for use in ring groups. This is easy to add in a Zoom environment.

1. After logging into Zoom a new common area phone will need to be created that will correspond with the Nightringer Extension.
2. From Phone System Management select Users & Rooms and then Common Areas. Finally Press **Add** to create a new Common Area Phone.

Figure 4-6: Add Nightringer

Add Common Area

Display Name

Extension Number

Package Zoom Phone Basic (Migrated) [?](#)
[Assign](#)

Country/Region

Time Zone

Specify a template to be assigned to the Common Area

3. Once configured press **Save** to create the common area phone.
4. After creating the phone navigate to Phones & Devices and select the device where the Nightringer extension will be configured.
5. After selecting the device press **Assign** in the ‘Assigned to’ section.

6. Change the User selection to **Common Area** then find the newly created Nightringer Common Area Phone.
7. Press **Add** to add the second extension

Figure 4-7: Assigning Nightringer

The screenshot shows the configuration page for a 'CyberData SIP Speaker'. At the top, there is a 'Rename' link. Below that, it says 'No description'. There are two tabs: 'Profile' (selected) and 'Policy'. Under the 'Assigned to' section, there is a dropdown menu currently set to 'Common Area'. To the right of this dropdown is a button labeled 'CyberData Nightringer - Ext. 856'. Below these elements is a yellow informational box that reads: 'After adding the user or the common area, this device will be resynced.' At the bottom of this section are two buttons: 'Add' and 'Cancel'. Below the 'Assigned to' section is a table of device details:

IP Address	192.168.1.14
Device Type	CyberData cyberdata-sip-based-device
Firmware Version	--
MAC Address	00-20-f7-04-d5-85
Provision Template	Unsupported ?
Status	Online

At the bottom of the page, there are two buttons: 'Actions' with a dropdown arrow and 'Remove'.

Note: After adding the Nightringer Extension Zoom should have the device Resync its config file and this will have the device reboot. It is possible that when the new extension is created it will be assigned to the Primary Extension. Confirm the Nightringer extension is assigned to the correct line key. Line Key 1 is for the Primary Extension and Line Key 2 is for the Nightringer Extension.

8. To reassign the extensions, select Keys & Positions, then press Manage Key.
9. Drag and drop the extensions to the correct Key positions. Key 1 for Primary Extension and Key 2 for Nightringer Extension.
10. Save to confirm the change.

Figure 4-8: Key Positions

Manage Key

- Modifying the Position will cause the device to resync.
- The number of keys you set is limited by the number of keys on the device. Keys that exceed the limit will not be effective.

Key	Key's Owner	Key Assignment	Alias (Optional)	Outbound Caller ID	
1	⋮ CyberData SIP Speaker	Ext. 858 CyberData SIP Speaker	<input type="text" value="Enter Alias"/>	Main Company Number (831) 217-3337	↑ ↓
2	⋮ CyberData Nightringer	Ext. 856 CyberData Nightringer	<input type="text" value="Enter Alias"/>	Main Company Number (831) 217-3337	↑ ↓
3	⋮				↑ ↓
4	⋮				↑ ↓
5	⋮				↑ ↓
6	⋮				↑ ↓
7	⋮				↑ ↓
8	⋮				↑ ↓
9	⋮				↑ ↓
10	⋮				↑ ↓

Page 1 of 30 < > Page Size 10 Total 300

5.0 Using the CyberData Speaker in a Zoom system.

Once the speaker is registered with Zoom, it can be used in several ways. The unit can be directly called by dialing the extension number of the unit. It is also possible to add the unit to a call queue to reach multiple endpoints simultaneously. Keep in mind that with a call queue, multiple devices will ring, but only one device may answer. Due to this operation, it is not possible to page to multiple speakers at once.

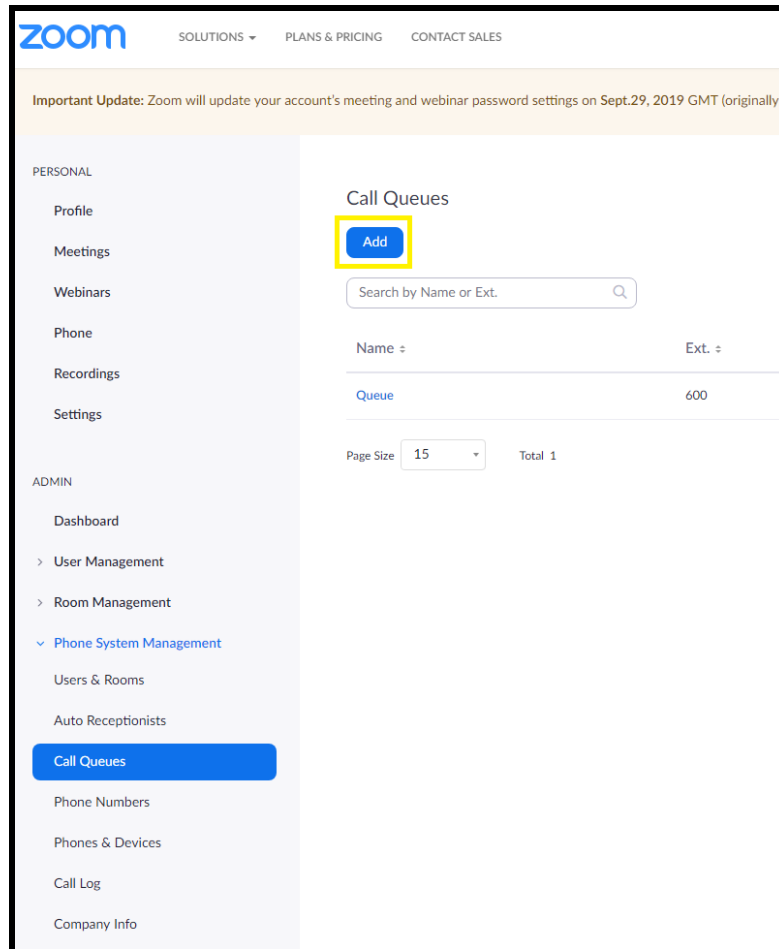
To page multiple speakers simultaneously, CyberData recommends using Multicast, which can be sent from most modern SIP phones (e.g. Yealink, Poly, Snom) or a [CyberData Paging Server](#) or [Multicast Microphone](#). (Consult your phone's documentation to enable multicast).

5.1 Creating a Call queue

CyberData recommends using the Nightringer extension as part of a call queue, allowing the speaker to also serve as an additional notification for incoming calls.

1. From the Phone System Management page select call queues and press the Add button to create a new queue.

Figure 5-1: Add call queue



2. After clicking 'Add' a pop-up will appear that allows naming and assigning a number to the call queue.

Figure 5-2: Name the queue

Call Queues > Add

Name

Description (Optional)

Extension Number

Member(s) [Add](#)

3. Name the queue, set a description and change the extension number if necessary.

Figure 5-3: Add users

Call Queues > Add

Name

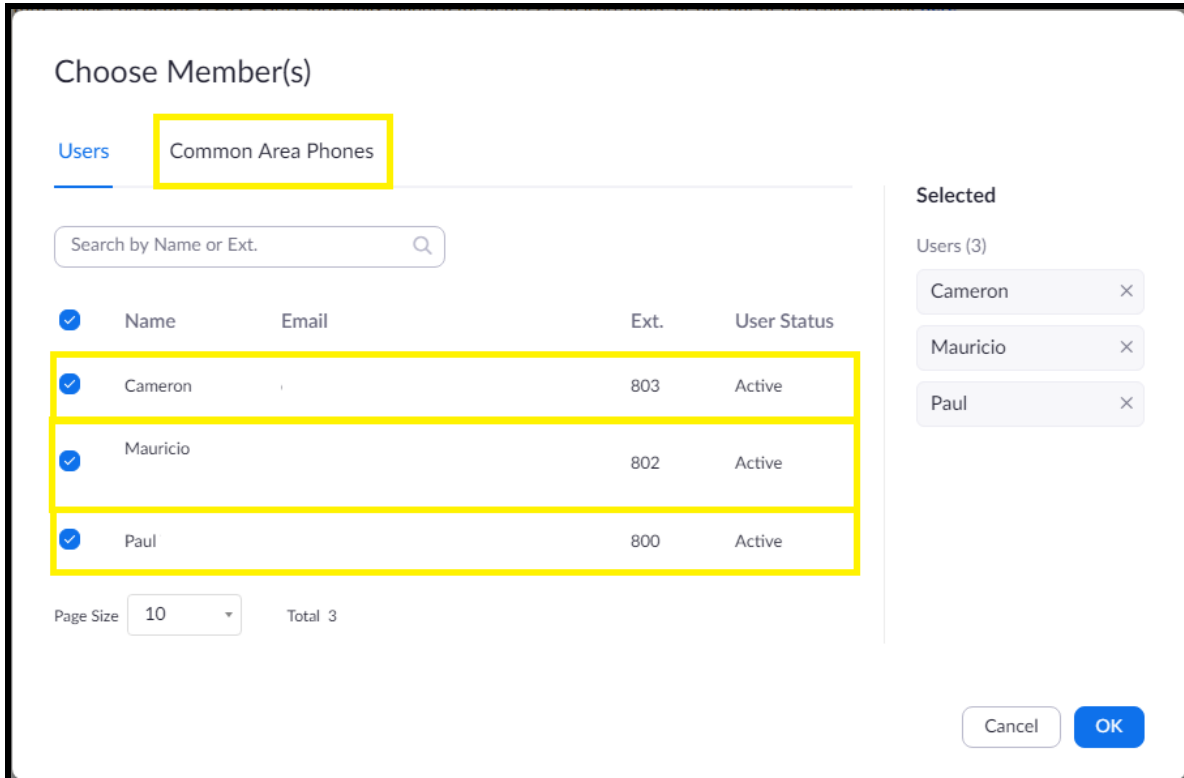
Description (Optional)

Extension Number

Member(s) [Add](#)

4. Press the Add button to add Users and Common Area Phones to the queue.

Figure 5-4: Add Users



5. Select the users who will participate in the call group, then select "Common Area Phones."
6. In the "Common Area Phones" section, select the phones you wish to add to the queue.

Figure 5-5: Add Common Area Phones

Choose Member(s)

Users **Common Area Phones**

Search by Display Name or Ext.

<input type="checkbox"/>	Display Name	Ext.
<input type="checkbox"/>	Call Button	806
<input checked="" type="checkbox"/>	CyberData SIP Speaker	808
<input type="checkbox"/>	Indoor Intercom	500
<input type="checkbox"/>	Indoor Keypad Intercom	505
<input checked="" type="checkbox"/>	IP66 Horn	804
<input checked="" type="checkbox"/>	Office Ringer	506
<input type="checkbox"/>	SIP Strobe	805
<input type="checkbox"/>	Video Keypad	807

Page Size Total 8

Selected

Users (3)

- Cameron ×
- Mauricio ×
- Paul ×

Common Area Phones (3)

- CyberData SIP Sp... ×
- IP66 Horn ×
- Office Ringer ×

Cancel **OK**

7. Click “OK” to confirm your selections.
8. Finally, press ‘Save’ to complete the queue.

Figure 5-6: Call queue complete

Call Queues > Add

Name

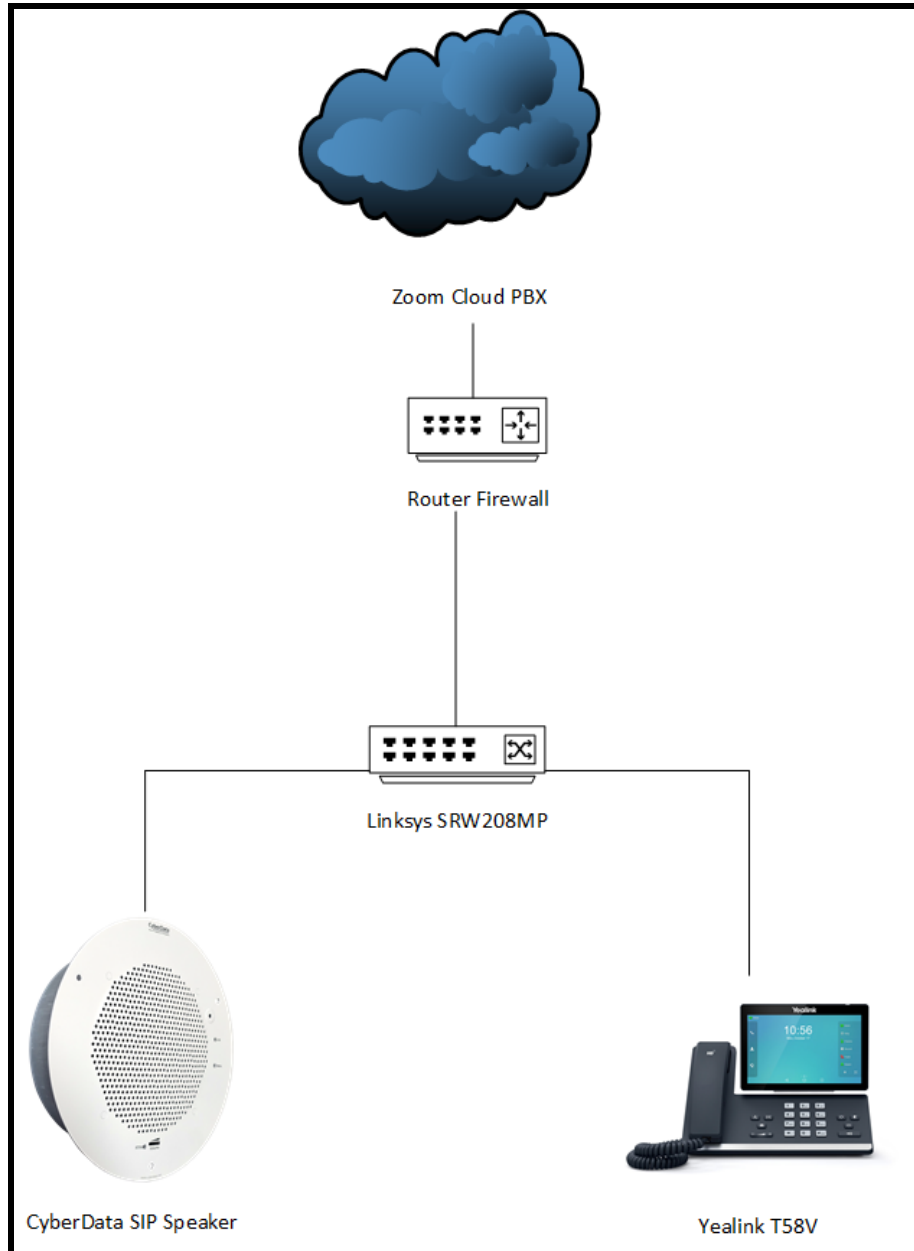
Description (Optional)

Extension Number

Member(s) Selected 6 Member(s) [Add](#)

6.0 Setup Diagram

Figure 6-1: Interoperability Test Infrastructure



7.0 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 Zoom PBX solution may render this document obsolete. We welcome and encourage documentation feedback to ensure continued applicability.