CyberData
The IP Endpoint Company

Zoom Configuration Guide: SIP Speaker

Document Part # 931707D

CyberData Corporation
3 Justin Court
Monterey, CA 93940
(831) 373-2601

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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.

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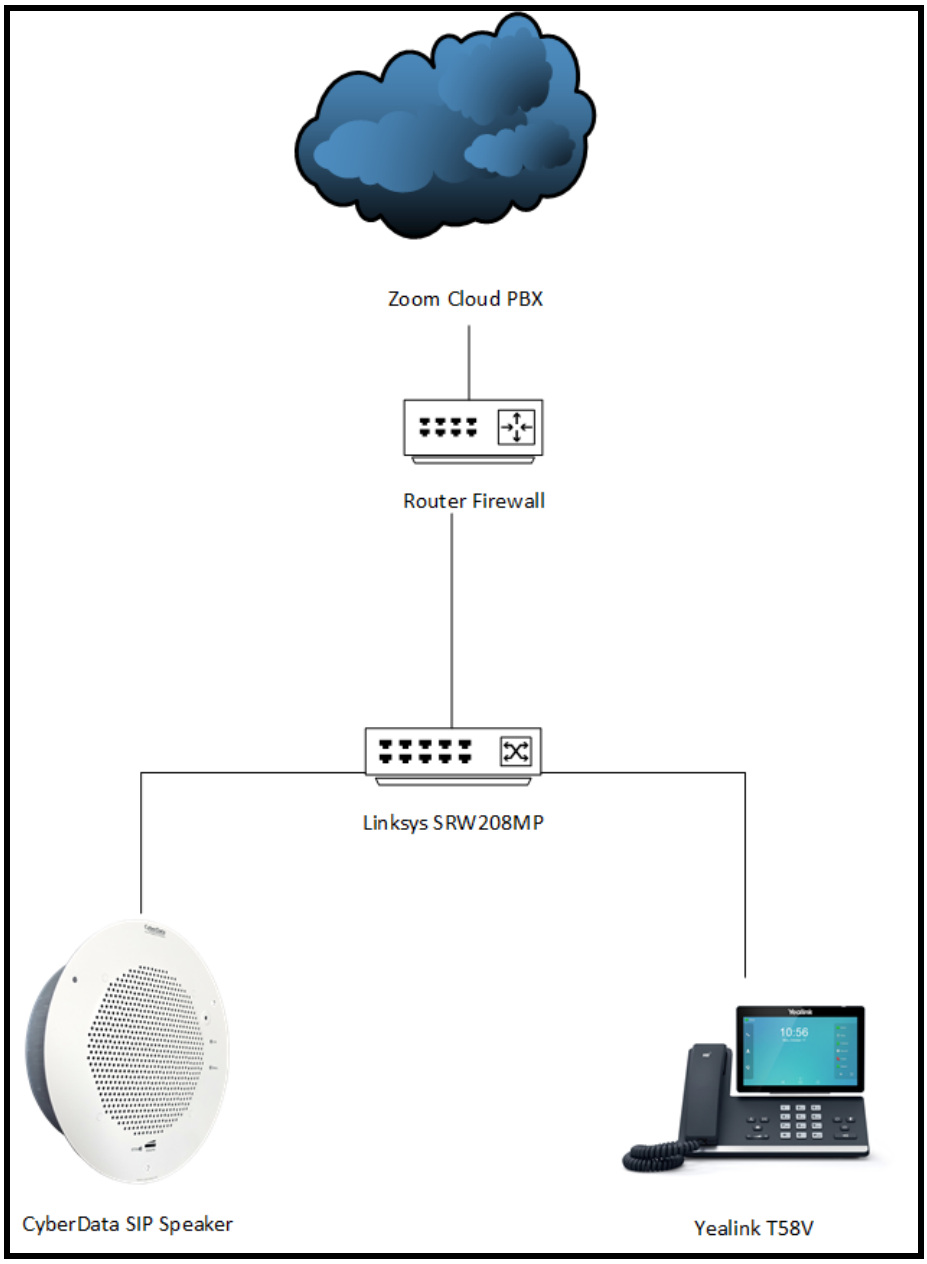


2.0 Test Setup Equipment

This section describes the products used for interoperability testing with Zoom.

Table 2-1: Setup Equipment

EQUIPMENT	MODEL or PART NUMBER	FIRMWARE VERSION
CYBERDATA SIP SPEAKER	011394/011393	12.1.1
CYBERDATA SIP TALKBACK SPEAKER	011398/011397	12.1.1
YEALINK	T58A	58.83.3.6
LINKSYS SWITCH	SRW208MP	

3.0 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:
https://www.cyberdata.net/collections/sip/products/011393-011394

SIP Talkback Speaker:
https://www.cyberdata.net/collections/sip/products/011397-011398

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.*

4.0 Configuration Procedure: Intercom/Paging Device

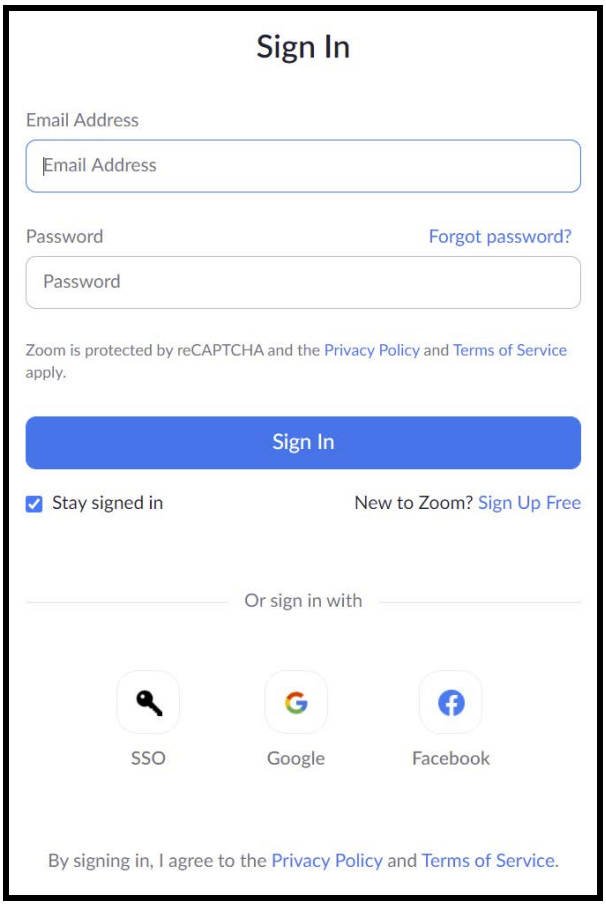
There are several different extension types that can be used on the Zoom platform. This guide provides instructions to register the CyberData Speaker as an Intercom/Paging Device.

As of 9/26/2021 Zoom has released an update that changes how CyberData products register with Zoom as Zoom has moved to an auto provisioning process. This changes the "CyberData" brand of products for Common Area Phones. Products like the SIP Speaker will continue to be manually provisioned, which is a very simple process. Contact your Zoom account manager and request they enable "Other/Generic" common area phone type. This will allow manual configuration of the CyberData device. Please follow the steps below to configure the device.

If you run into issues please contact our support department.

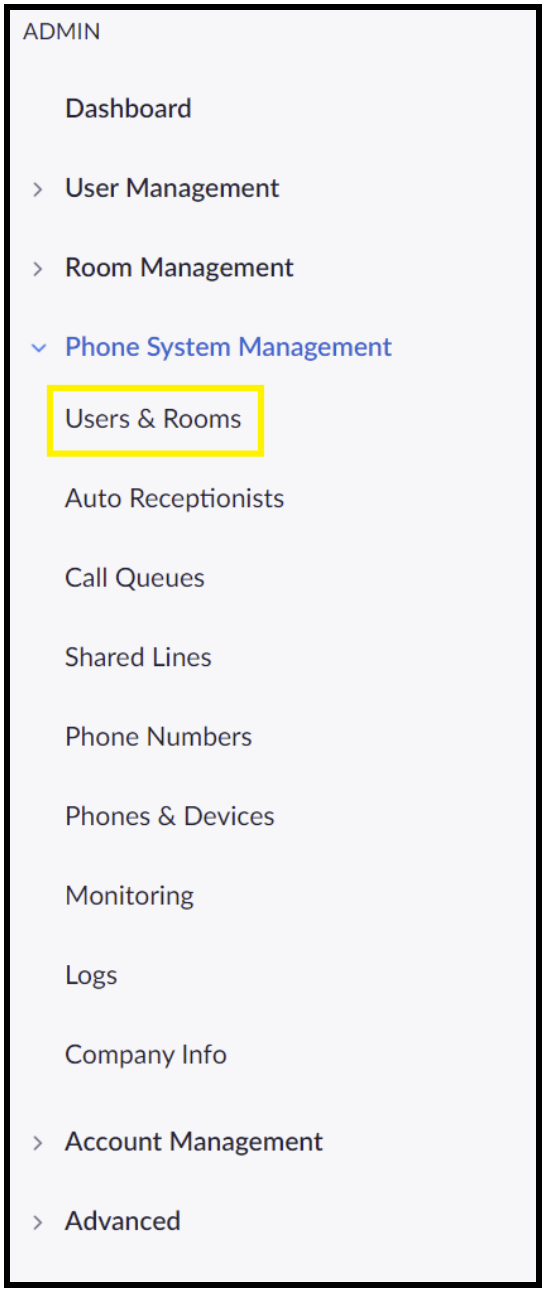
1. Log into Zoom. https://zoom.us/signin

Figure 4-1: Log into Zoom



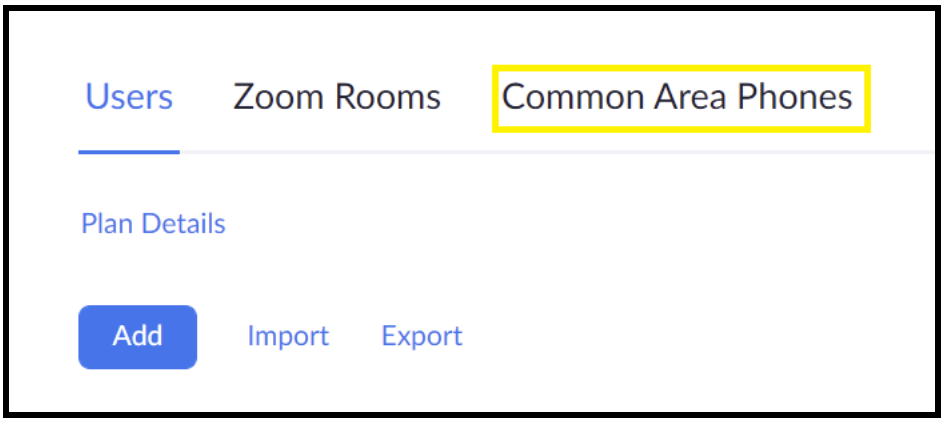
2. From the Profile page select the “Phone System Management” section and the ‘Users & Rooms’ subsection.

Figure 4-2: Profile Landing Page



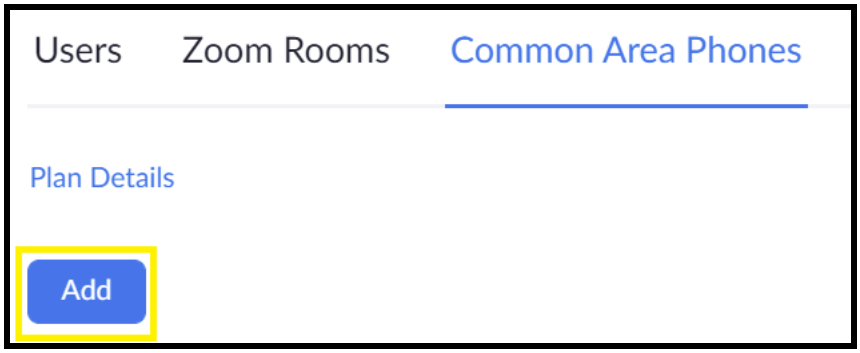
3. From the "Users & Rooms" Page navigate to the Common Area Phones tab.

Figure 4-3: Users & Rooms



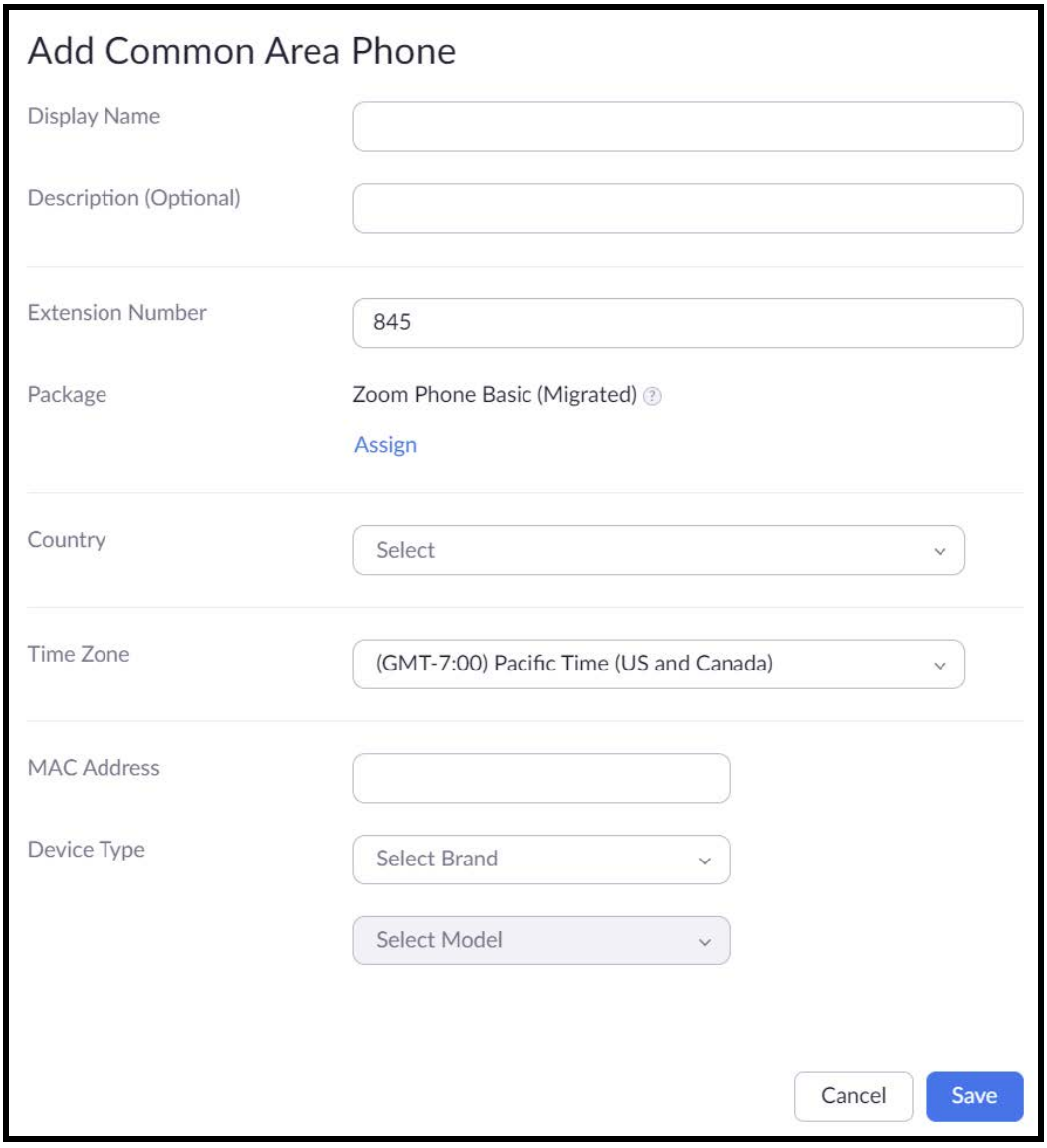
4. Press the 'Add' Button to create a common area phone to be used by the speaker.

Figure 4-4: Add Common Area Phone



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

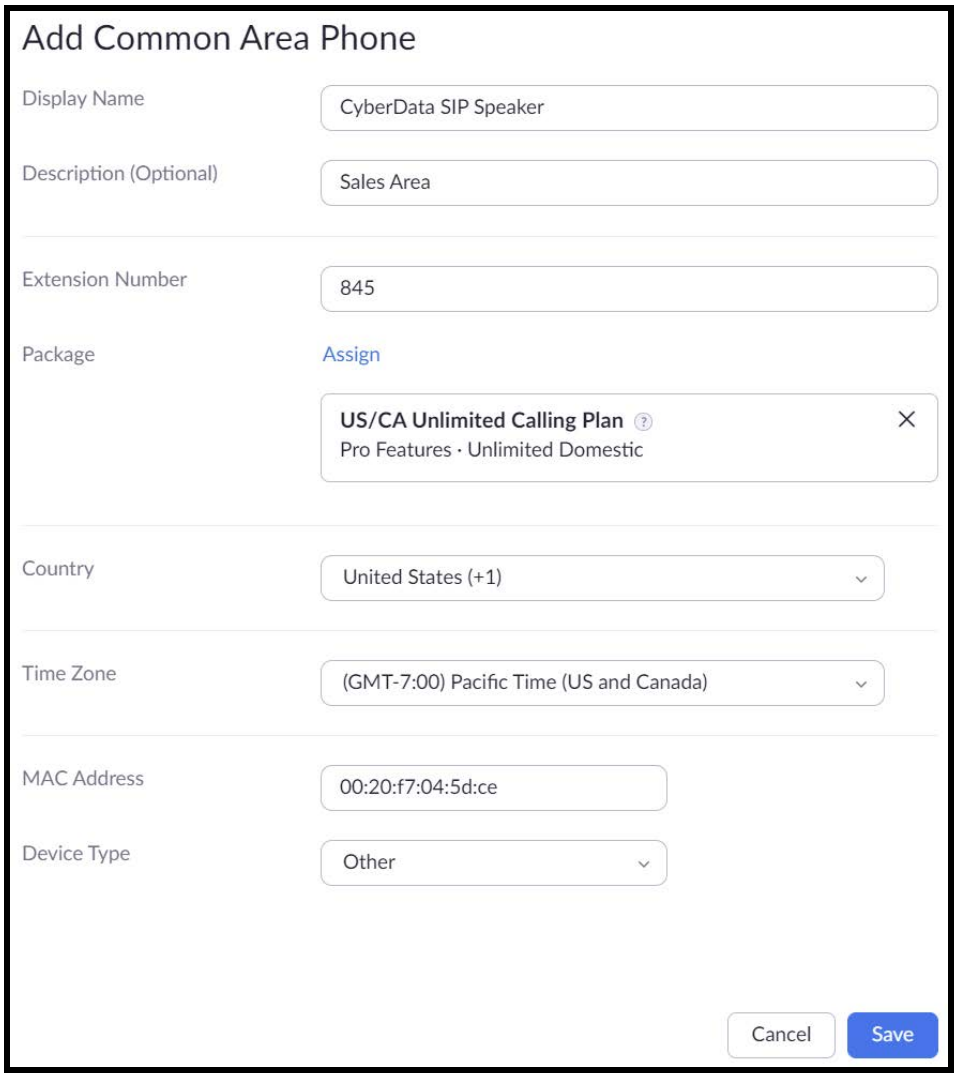
Figure 4-5: Phone Pop-up



6. Set the **Display Name** of the phone.
7. Set the **Description** to the location of the speaker.
8. Adjust the extension number as necessary.
9. Set the **MAC address** of the device.
10. Make sure to select **Other** for the device type.

Note: *Adding the MAC Address will switch the device type to "CyberData" make sure the device type is set to "Other".*

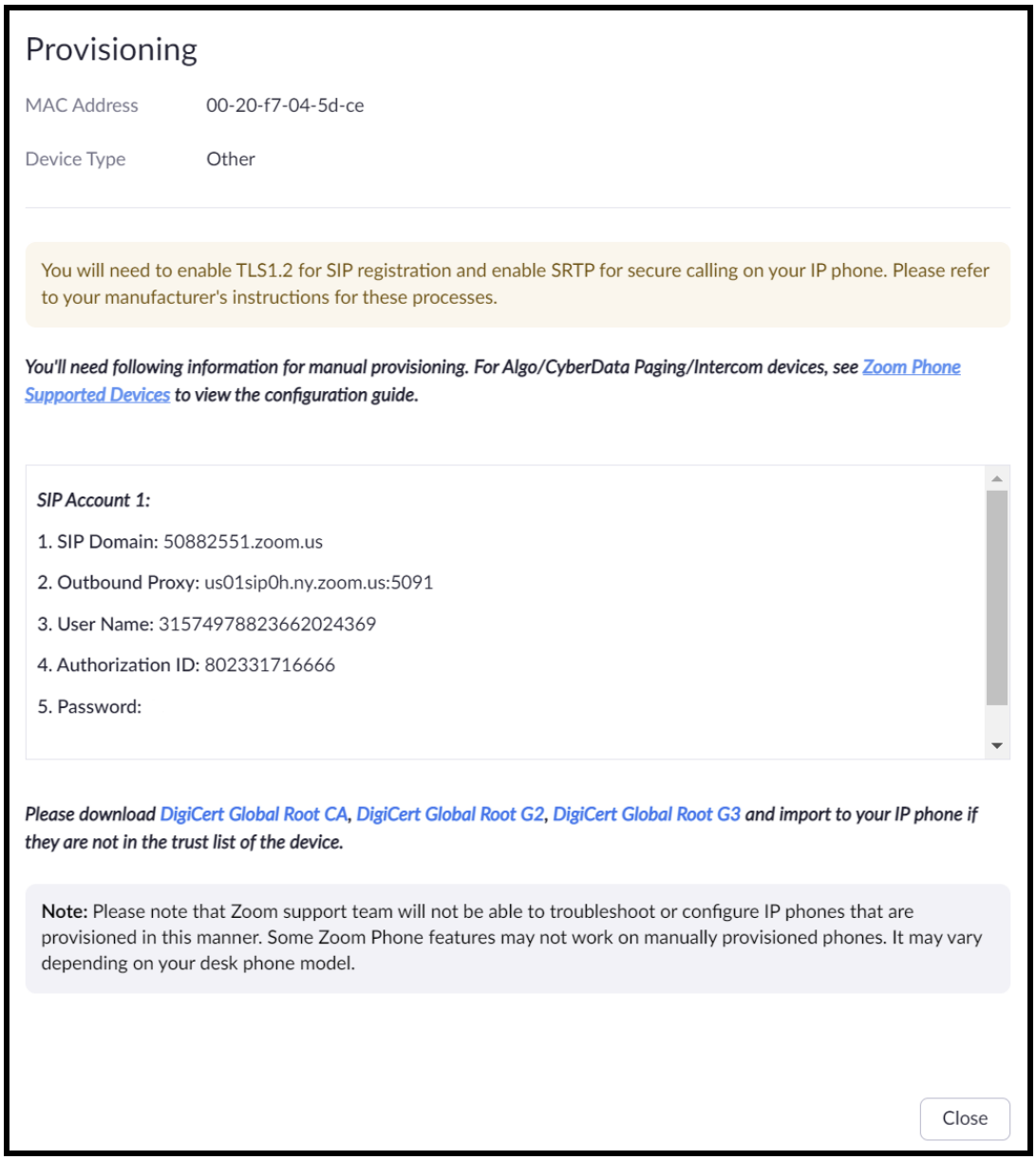
Figure 4-6: Phone Pop-up – Filled



11. Click the **Save** button to create the Phone.
12. Once created, the browser will redirect to the newly created extension's page.
13. Click on the Provision button at the bottom of the device's page.

Figure 4-7: Provision

Figure 4-8: Provisioning Pop-up



14. A popup will appear with manual provisioning information to setup the CyberData Speaker. Keep this popup open.

15. Make sure to download all the certificates listed which will be needed for device configuration.

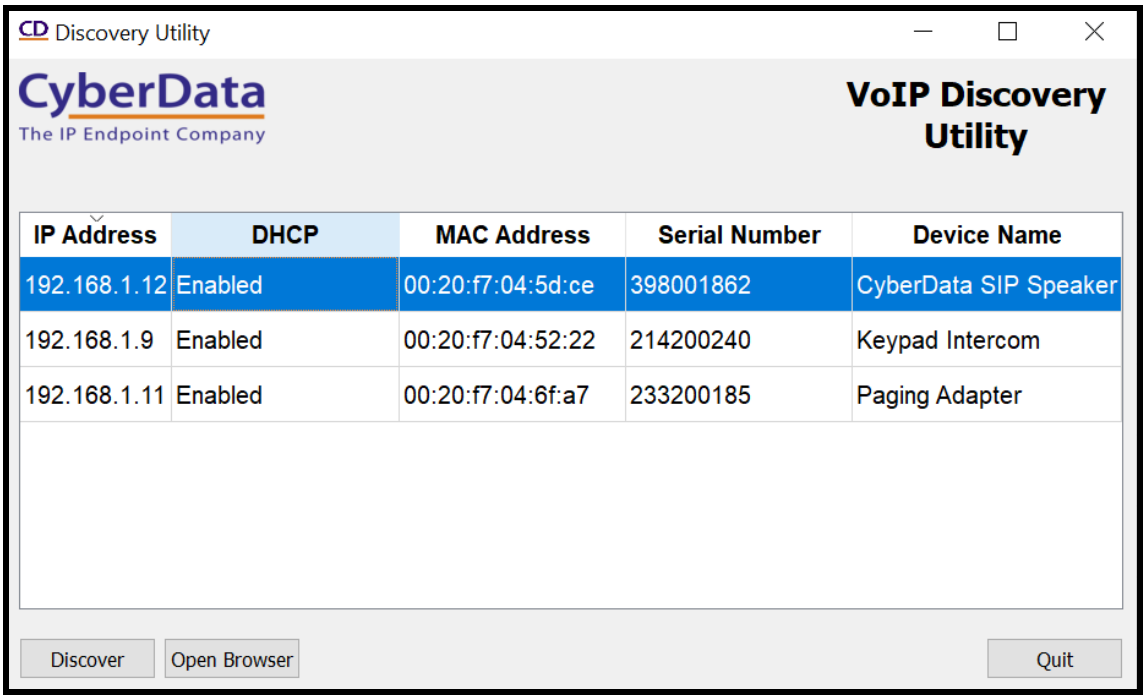
5.0 Configuration Procedure: Setting up the Paging Extension

If you are configuring through the web interface, use the following steps to login to the web interface of your CyberData device.

CyberData Setting	Zoom Provisioning Pop-up
Primary SIP Server	SIP Domain
Outbound Proxy Outbound Proxy Port	Outbound Proxy
Primary SIP User ID	User Name
Primary SIP Auth ID	Authorization ID
Primary SIP Auth Password	Password

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 5-1: CyberData Discovery Utility



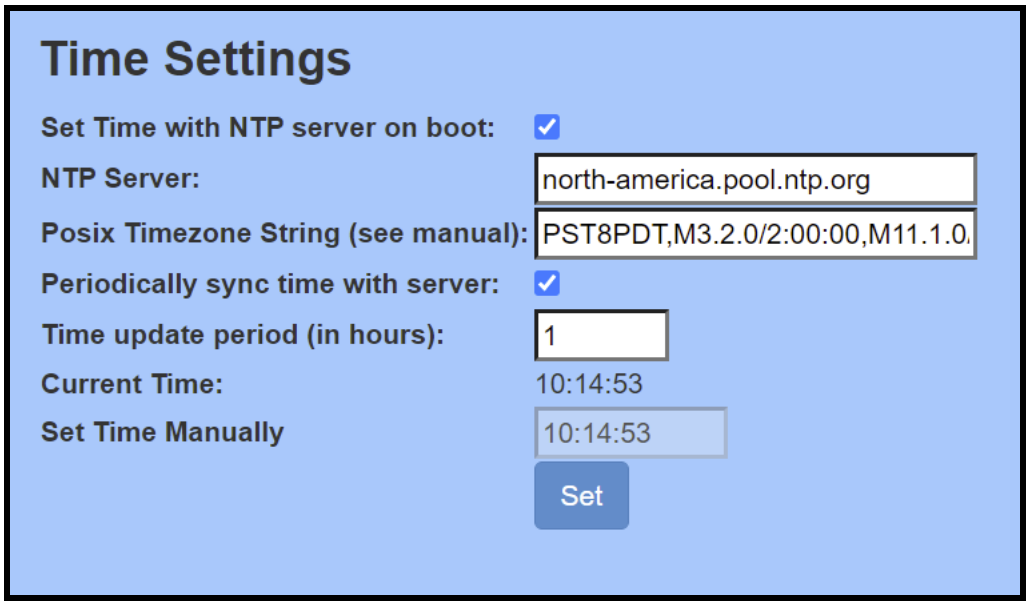
2. Enter the default credentials when prompted and click the **Log In** button.

Username: admin
Password: admin

Figure 5-2: Web Interface Login

3. From the Home tab press the 'Device' Tab.

Figure 5-3: Device Tab

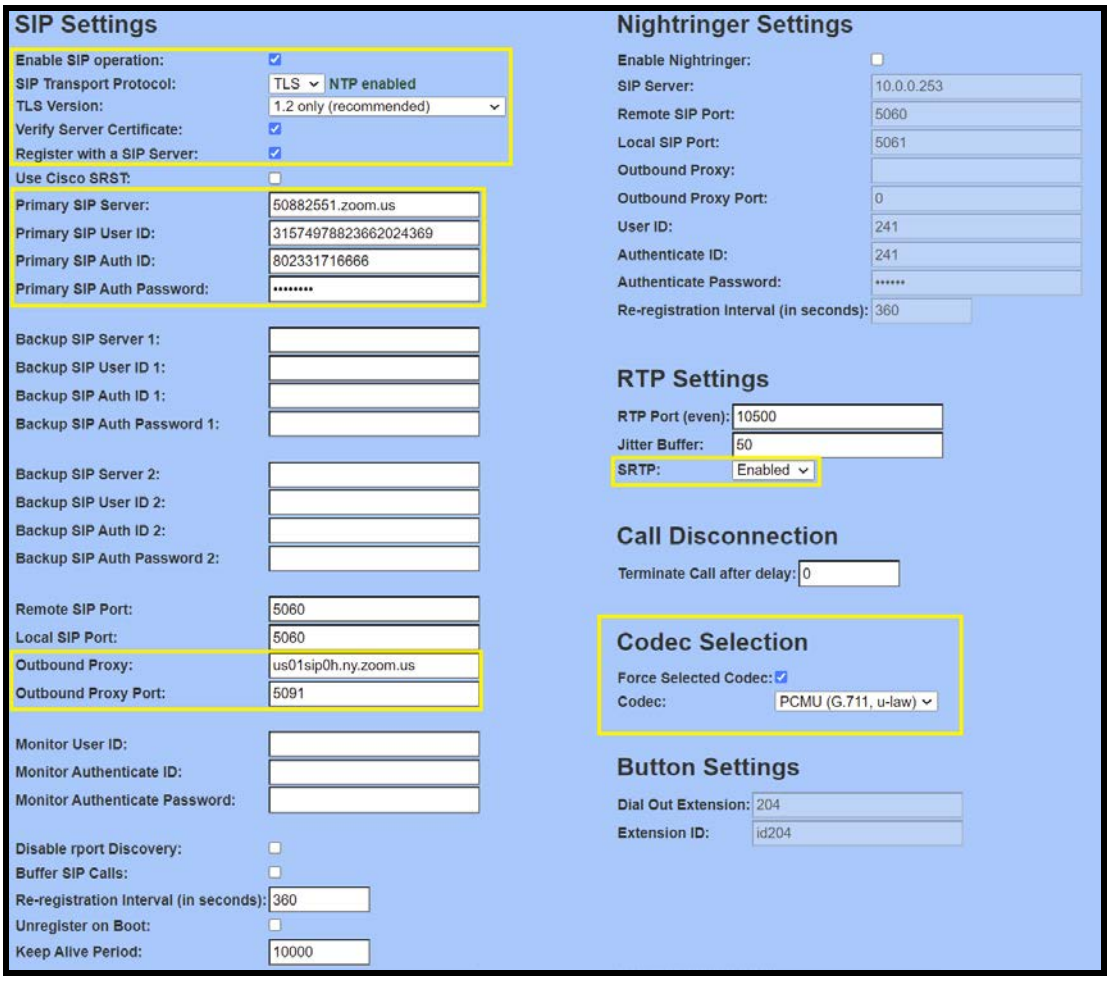


4. Check the box for "**Set Time with NTP Server on Boot**".
5. Change the **NTP server** if necessary.
6. Set the **Posix Timezone String** to the local area.

Note: See the operations manual for other time zone strings.

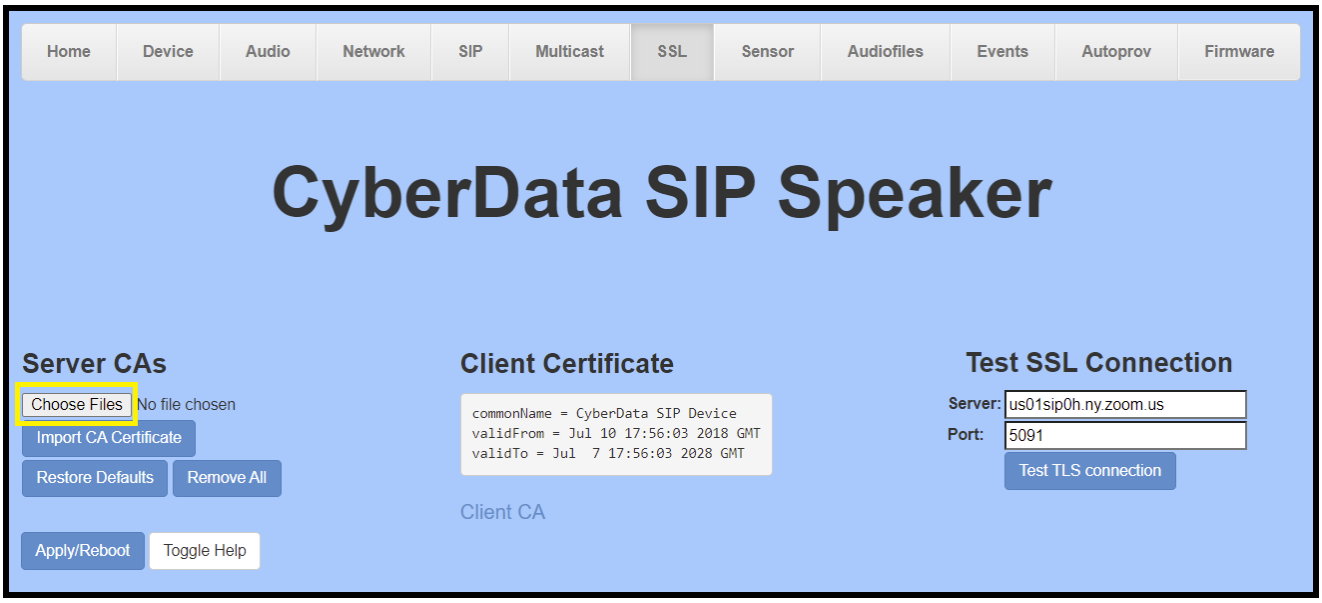
7. Check the box for "**Periodically sync time with server**".
8. Set the "**Time update period (in hours)**" to 1.
9. **Save.**
10. Go to the SIP Tab.

Figure 5-4: SIP Tab



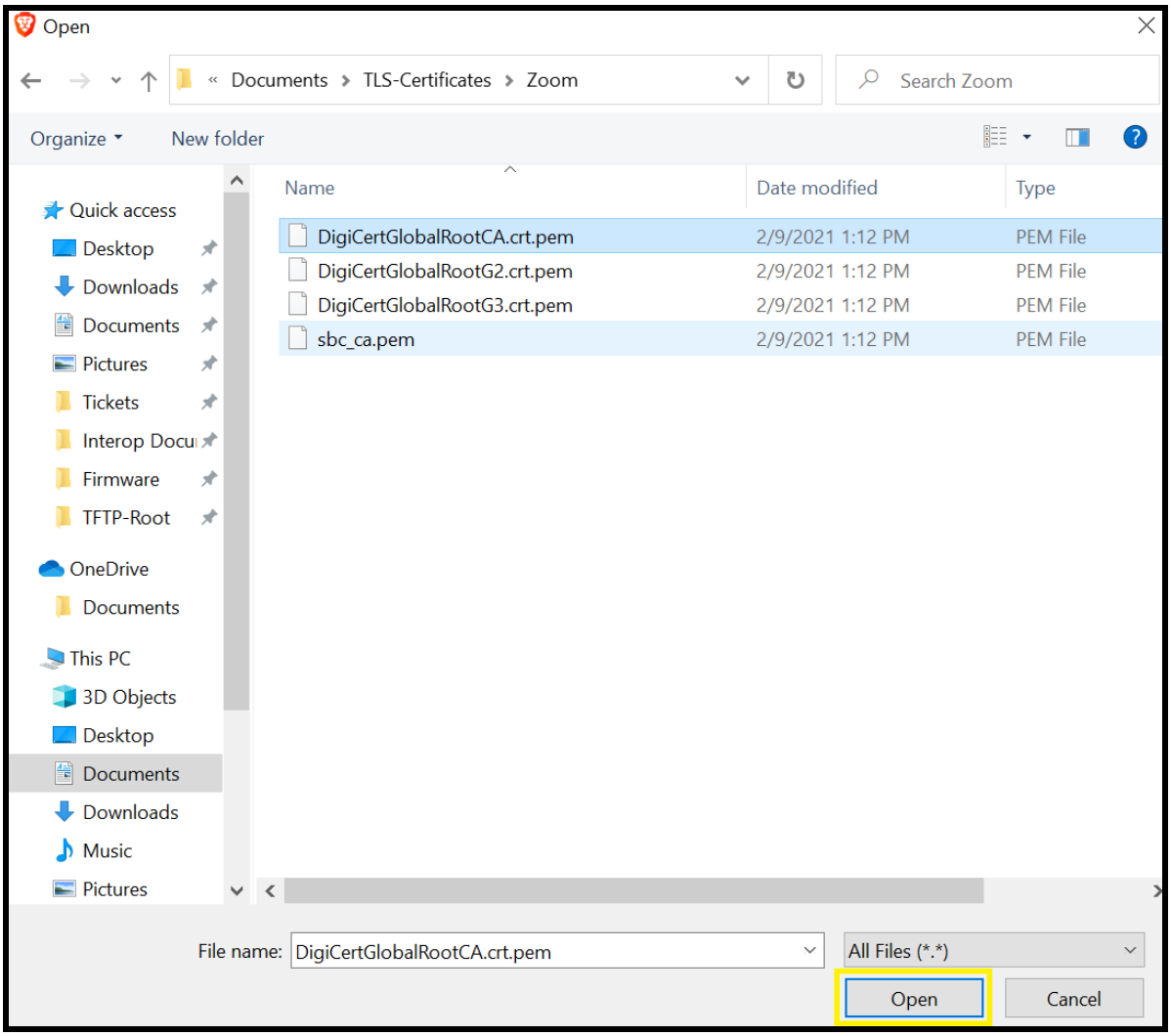
11. Set the 'SIP Transport Protocol' to **TLS**.
12. Keep TLS version set to "**1.2 Only (Recommended)**".
13. Check the box for "**Verify Server Certificate**".
14. Set the **Primary SIP Server** to the SIP Domain from the configuration Popup.
15. Set the **Primary SIP User ID** to the Username from the configuration Popup.
16. Set the **Primary SIP Auth ID** to the Authorization ID from the configuration Popup.
17. Set the **Primary SIP Auth Password** to the password provided in the configuration Popup.
18. Set the **Outbound proxy** and **Outbound Proxy port** to the address provided in the configuration Popup.
19. Check the box for "**Force Selected Codec**".
20. Set SRTP to **Enabled**.
21. **Save.**
22. Go to the '**SSL**' Tab.

Figure 5-5: SSL Tab



23. Press the 'Choose Files' button.

Figure 5-6: Choose file Pop-up



24. Select the certificate file and press the Open button.
25. Press the "Import CA Certificate" button to load the cert.

Figure 5-7: Import CA Certificate

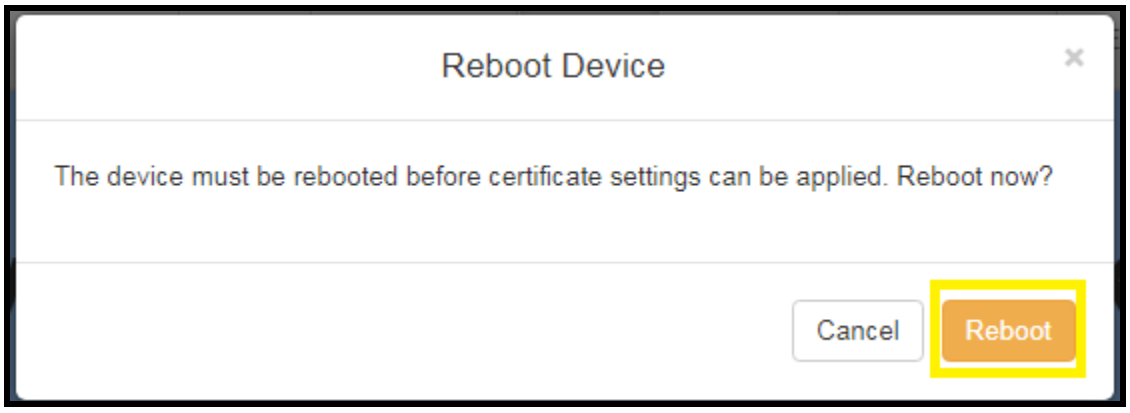
26. Repeat this process for all certificates downloaded during the extension creation process.

27. Once the certificates are loaded a reboot will be required to make the changes take effect..

28. Once the certificate is loaded a reboot will be required to make the changes take effect Use the "Apply/Reboot Button.

29. Click Reboot in the Popup.

Figure 5-8: Apply/Reboot Popup



Once rebooted, “Registered” will appear in green in the “Status” section of the Home page.

Figure 5-9: Home page – Registered

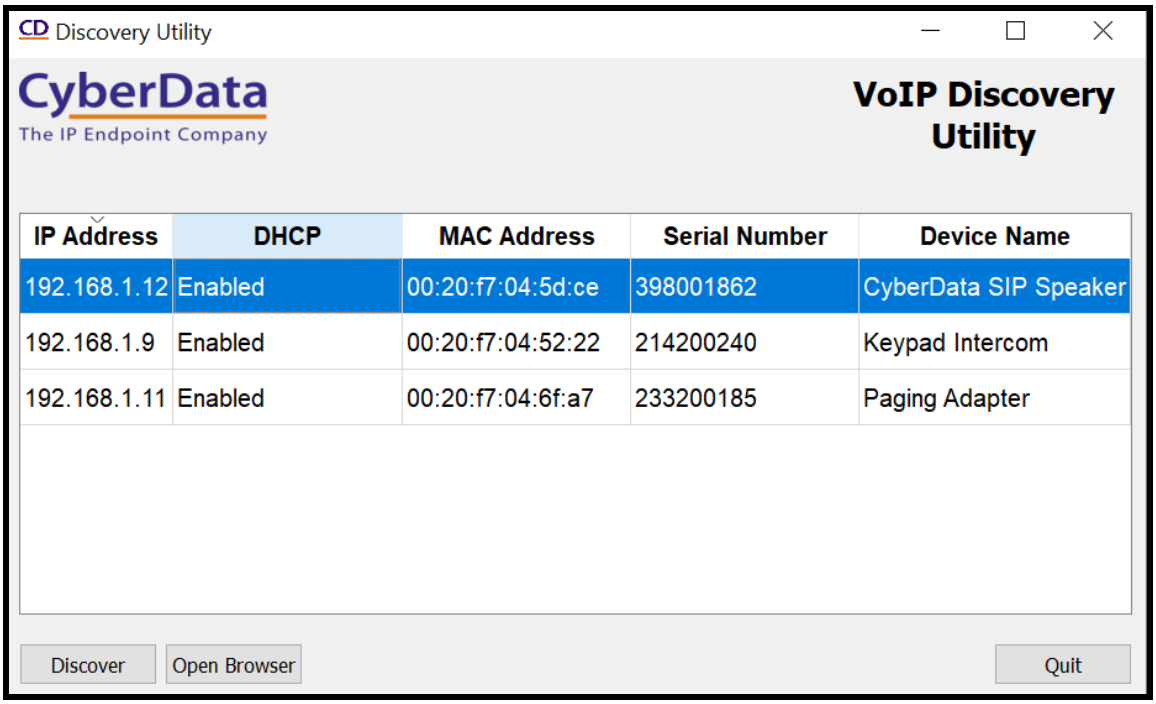
6.0 Configuration Procedure: Setting up the Nightringer extension

Table 6-1: Setting Name Correlation

CyberData Setting	Zoom Provisioning Pop-up
SIP Server	SIP Domain
Outbound Proxy Outbound Proxy Port	Outbound Proxy
User ID	User Name
Authenticate ID	Authorization ID
Authenticate Password	Password

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 6-1: CyberData Discovery Utility



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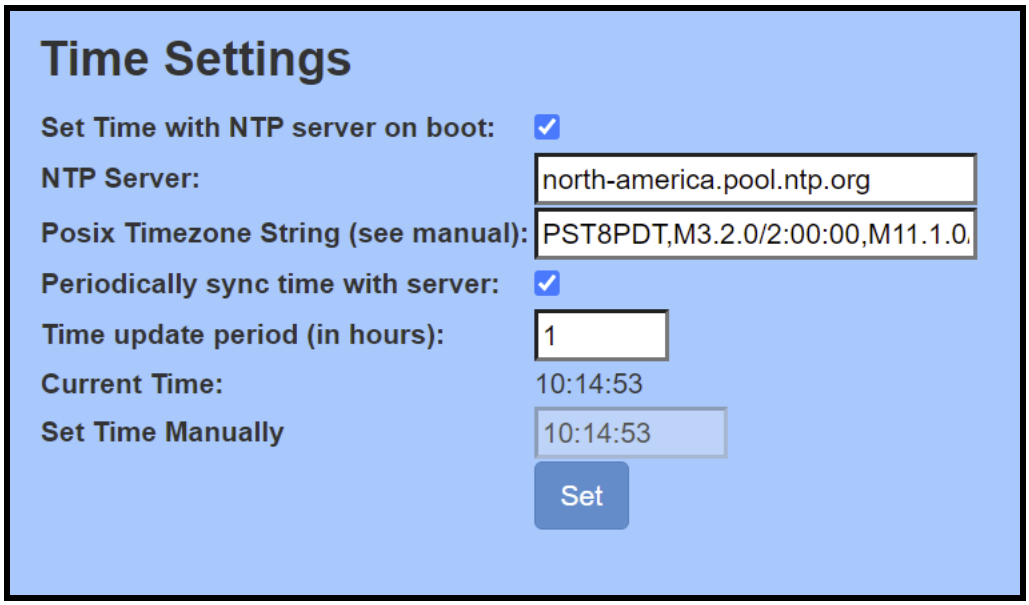
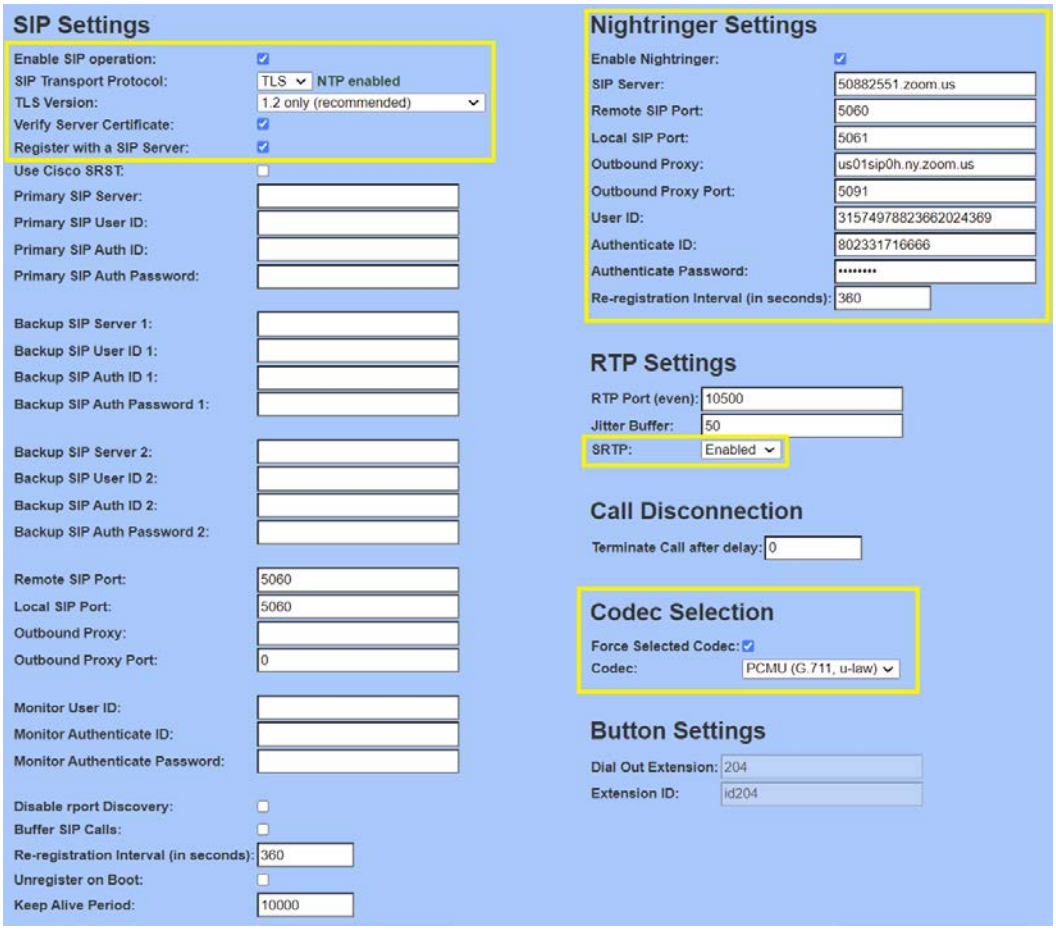


4. Check the box for "**Set Time with NTP Server on Boot**".
5. Change the **NTP server** if necessary.
6. Set the **Posix Timezone String** to the local area.

Note: See the operations manual for other time zone strings.

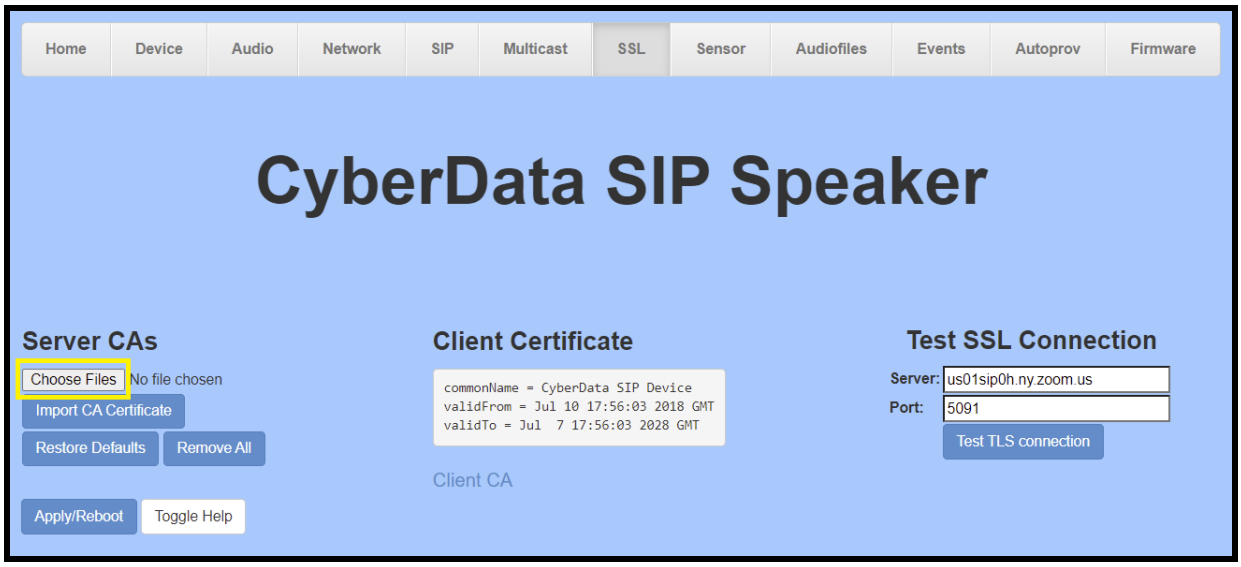
7. Check the box for "**Periodically sync time with server**".
8. Set the "**Time update period (in hours)**" to 1.
9. **Save.**
10. Go to the SIP Tab.

Figure 6-3: SIP Tab



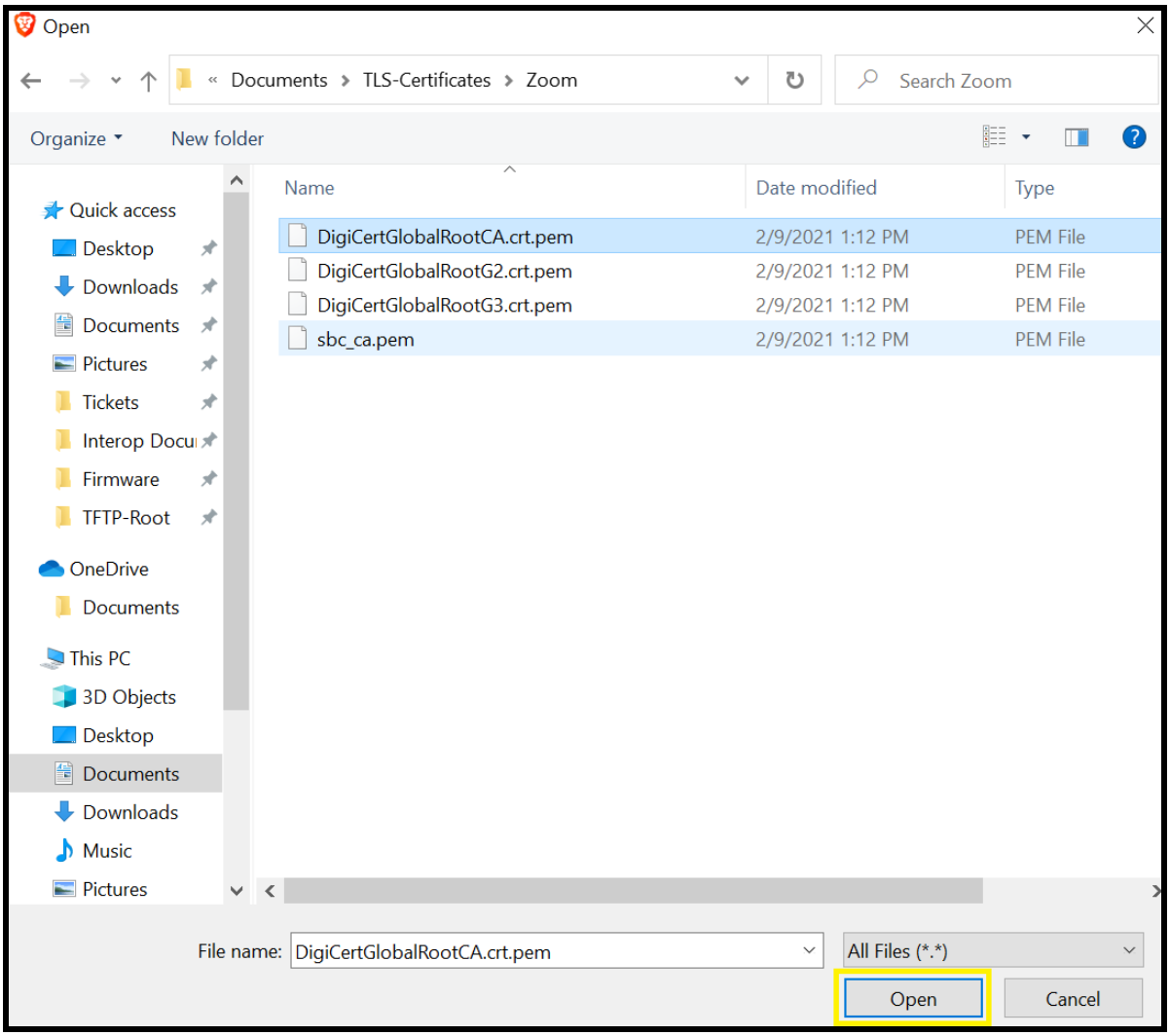
11. Set the 'SIP Transport Protocol' to **TLS**.
12. Keep TLS version set to **1.2 Only (Recommended)**.
13. Check the box for **Verify Server Certificate**.
14. Check the box for **Enable Nightringer.**
15. Set the **SIP Server** to the SIP Domain from the configuration Popup.
16. Set the **User ID** to the Username from the configuration Popup.
17. Set the **Authenticate ID** to the Authorization ID from the configuration Popup.
18. Set the **Authenticate Password** to the password provided in the configuration Popup.
19. Set the **Outbound proxy** and **Outbound Proxy port** to the address provided in the configuration Popup.
20. Set SRTP to **Enabled**.
21. Save.
22. Go to the '**SSL**' Tab.

Figure 6-4: SSL Tab



23. Press the 'Choose Files' button.

Figure 6-5: Choose file Pop-up



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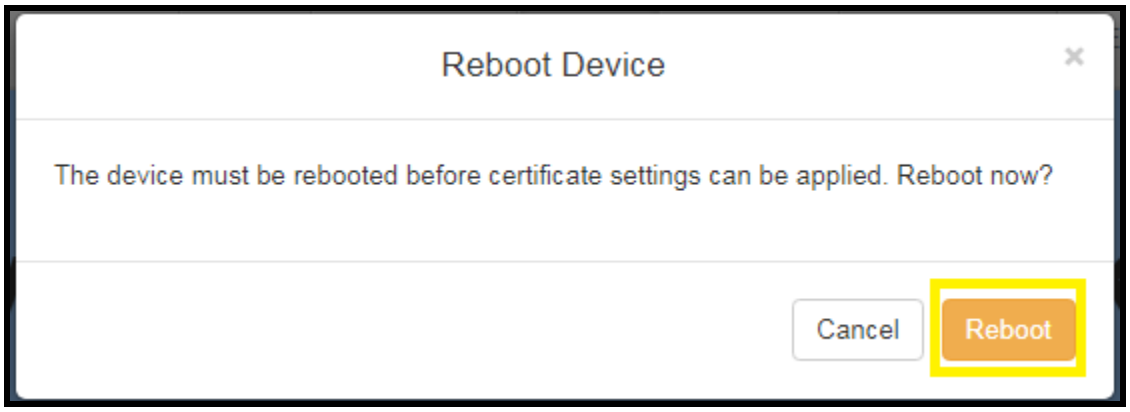


Once rebooted, “Registered” will appear in green in the “Status” section of the Home page.

Figure 6-8: Home page – Registered

7.0 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.

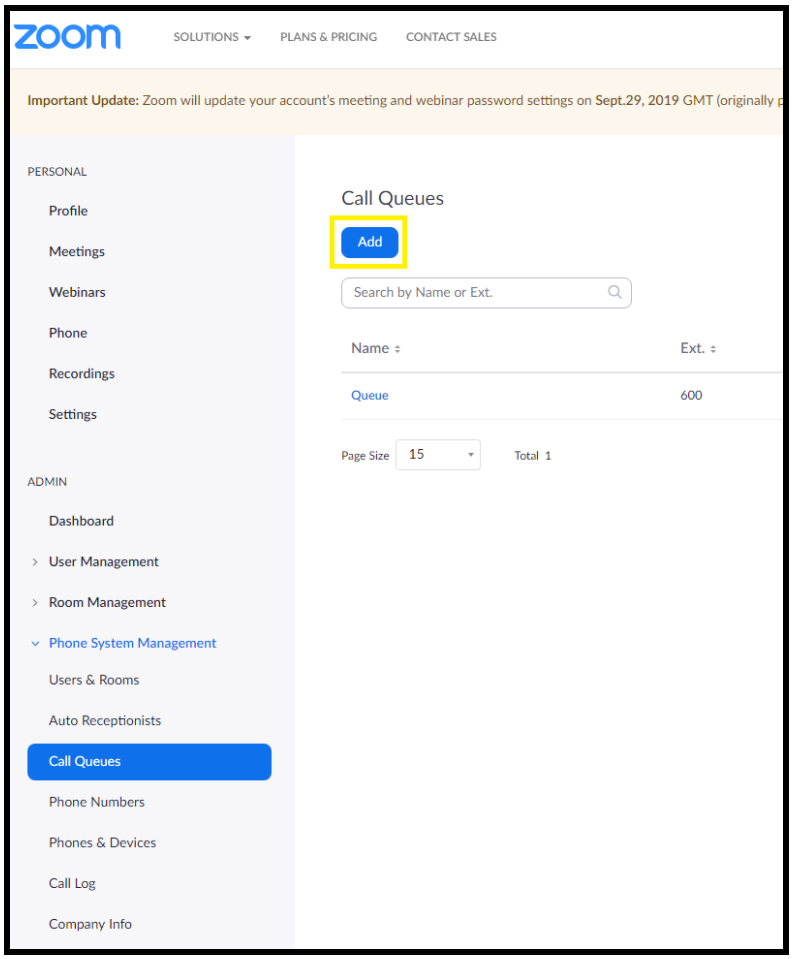
To page multiple speakers simultaneously, CyberData recommends using Multicast, which can be sent from most modern SIP phones (e.g. Yealink, Poly, Snom) or a CyberData Paging Server or Multicast Microphone. (Consult your phone's documentation to enable multicast).

7.1 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.

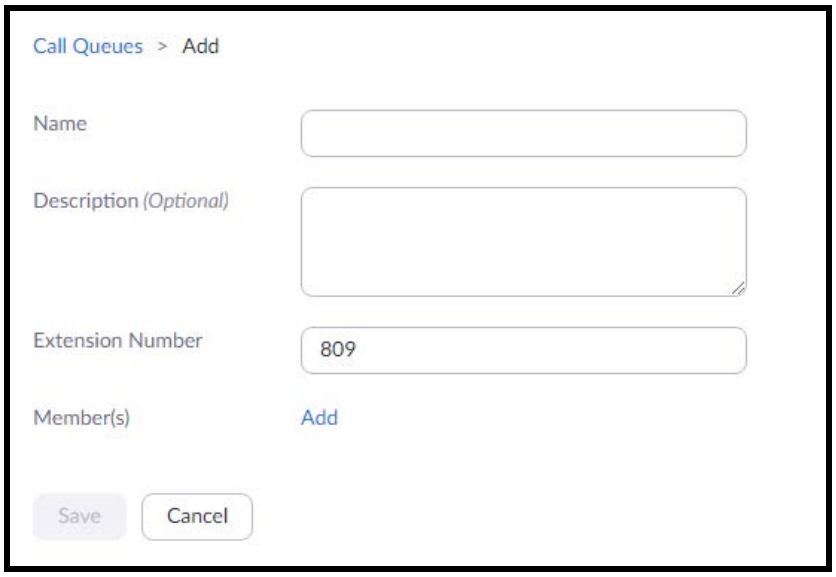
1. From the Phone System Management page select call queues and press the Add button to create a new queue.

Figure 7-1: Add call queue



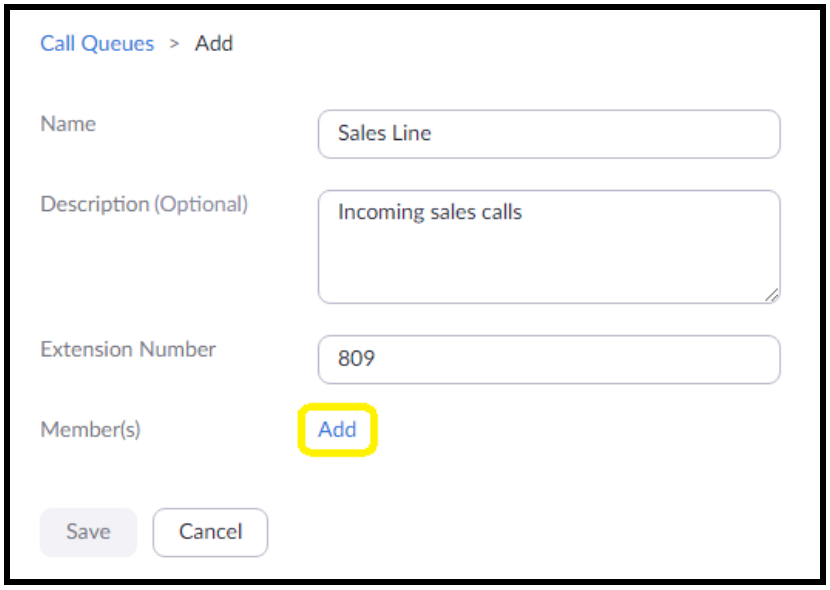
2. After clicking ‘Add’ a pop-up will appear that allows naming and assigning a number to the call queue.

Figure 7-2: Name the queue



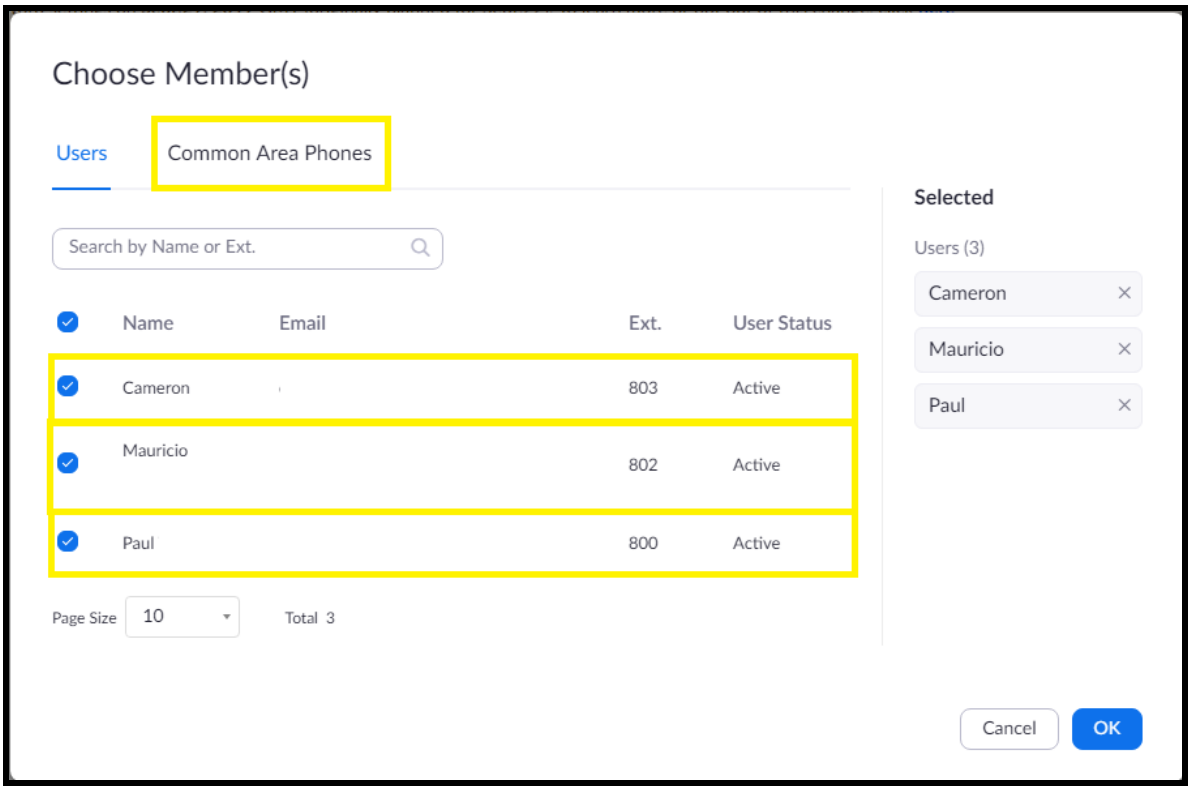
3. Name the queue, set a description and change the extension number if necessary.

Figure 7-3: Add users



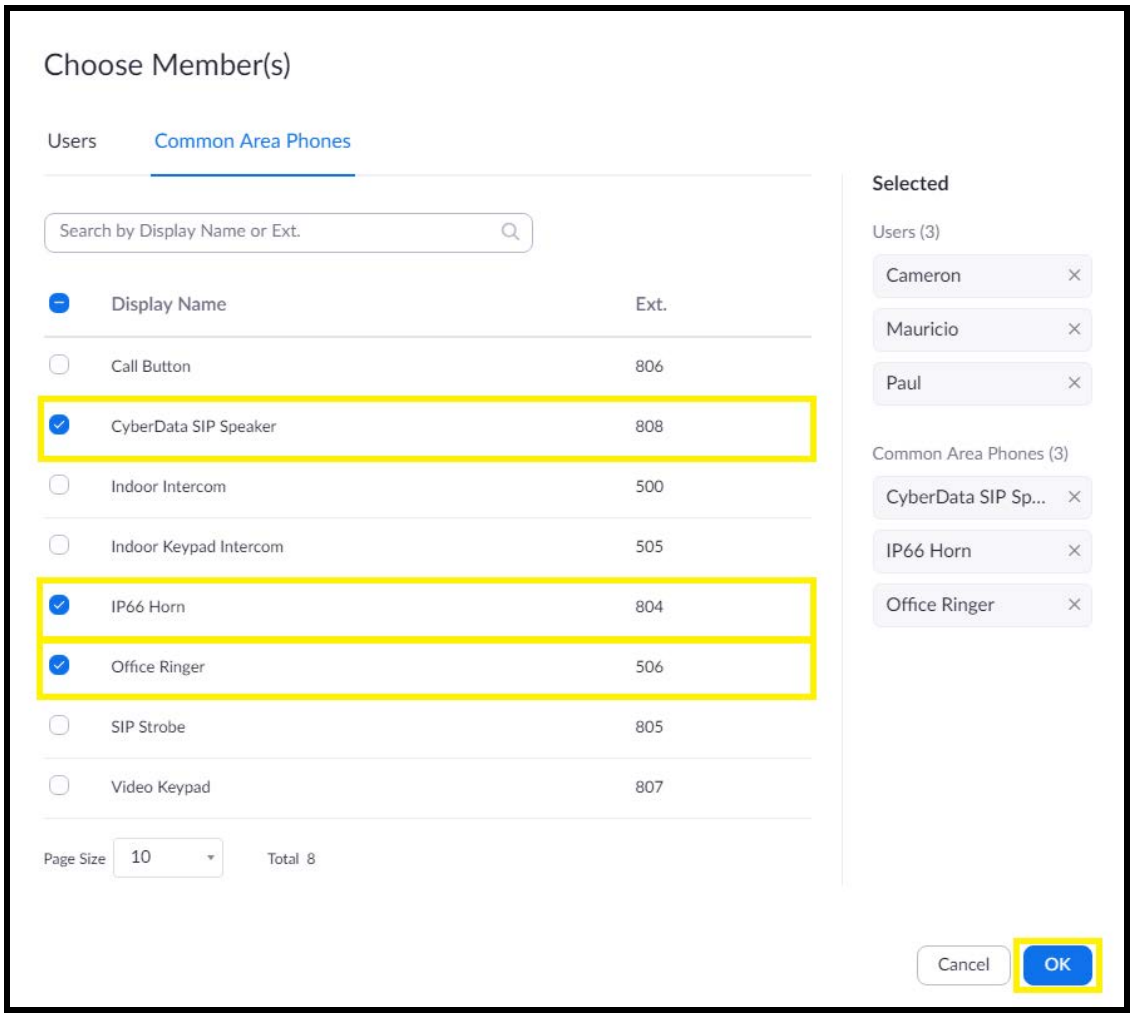
4. Press the Add button to add Users and Common Area Phones to the queue.

Figure 7-4: Add Users



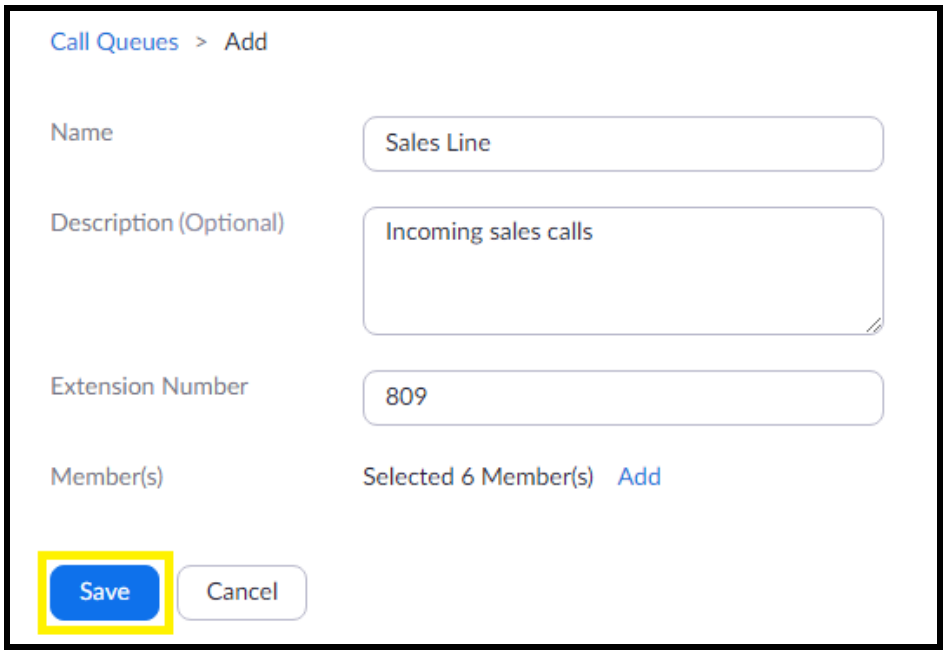
5. Select the users who will participate in the call group, then select "Common Area Phones."
6. In the "Common Area Phones" section, select the phones you wish to add to the queue.

Figure 7-5: Add Common Area Phones



7. Click "OK" to confirm your selections.
8. Finally, press 'Save' to complete the queue.

Figure 7-6: Call queue complete



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