CyberData
The IP Endpoint Company

Zoom Configuration Guide: SIP IP66 Outdoor Horn

Document Part # 931709E

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Revision Information

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

Table of Contents

1.0 Devices Covered

This section describes the products configured following this document.

Table 1-1: Setup Equipment

EQUIPMENT	MODEL or PART NUMBER	FIRMWARE VERSION
CYBERDATA SIP IP66 OUTDOOR HORN	011457	20.5.2 or later

2.0 Before You Start

This configuration guide documents the integration process of a CyberData SIP IP66 Outdoor Horn.

Network Advisories

Zoom uses a Fully Qualified Domain Name (FQDN) for the SIP server and Outbound Proxy addresses. The CyberData SIP IP66 Outdoor Horn 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 intercom to use:

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

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

The horn'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.

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.*

Product Documentation and Utilities

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

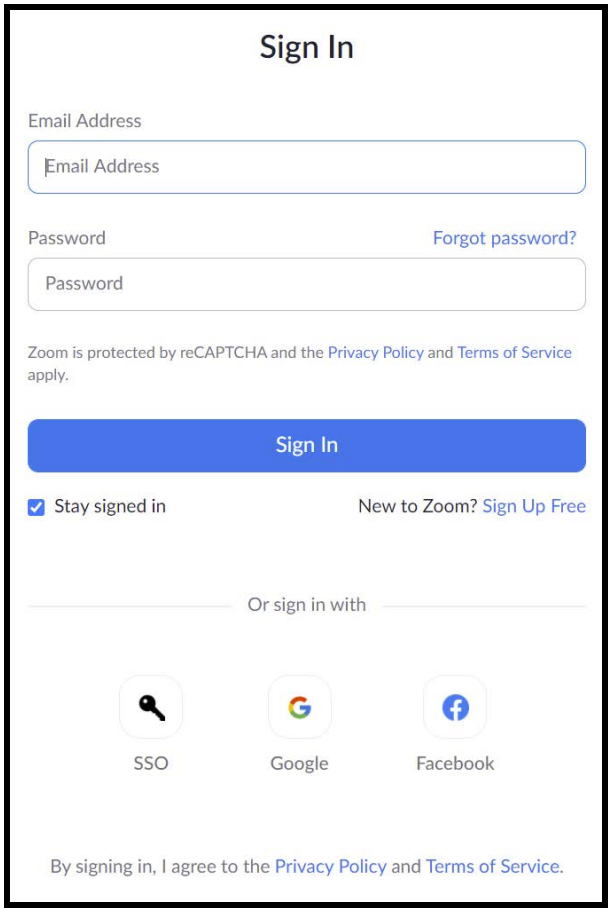
SIP IP66 Outdoor Horn (011457)
https://www.cyberdata.net/collections/sip/products/011457

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 SIP IP66 Outdoor Horn as an Intercom/Paging Device. See Zoom documentation for more details.

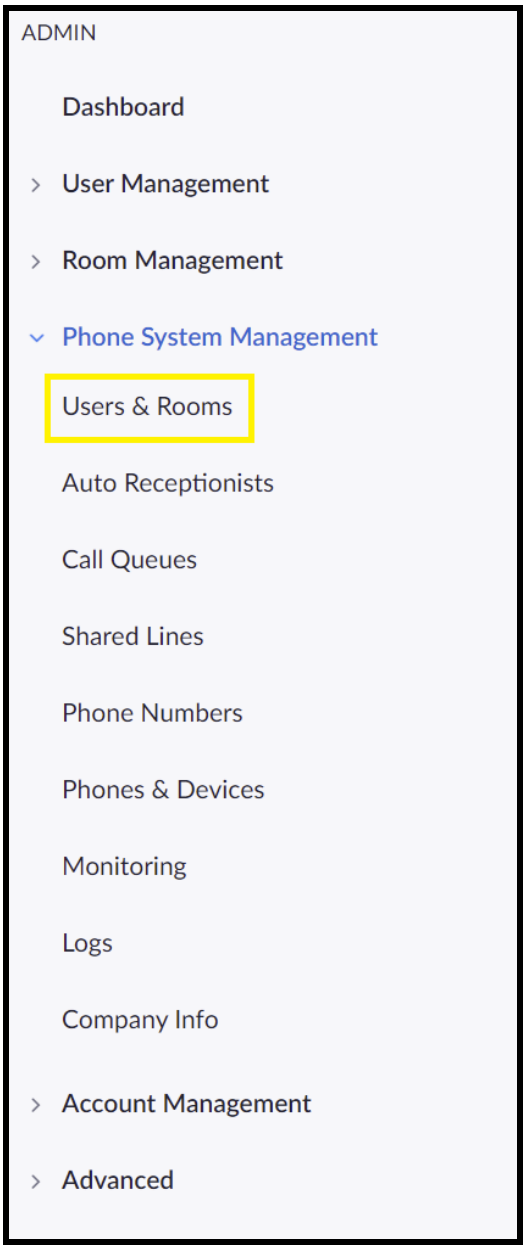
1. Log into Zoom. https://zoom.us/signin

Figure 3-1: Log into Zoom



2. From the Profile page select the "Phone System Management" section and the 'Users & Rooms' subsection.

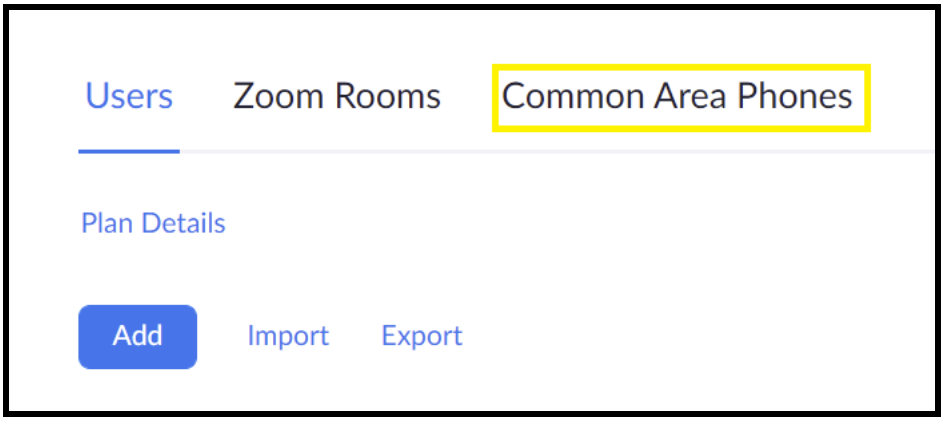
Figure 3-2: Profile Landing Page



3. From the "Users & Rooms" page navigate to the common area phones tab.

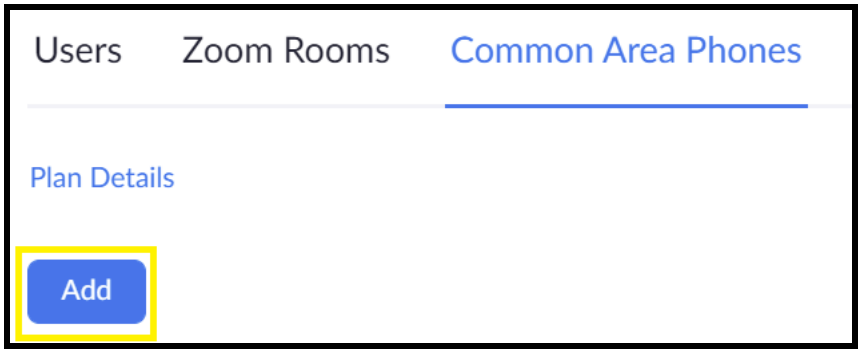
Note: The MAC address of the IP66 Horn will be required to create the phone.

Figure 3-4: Common Area Phones



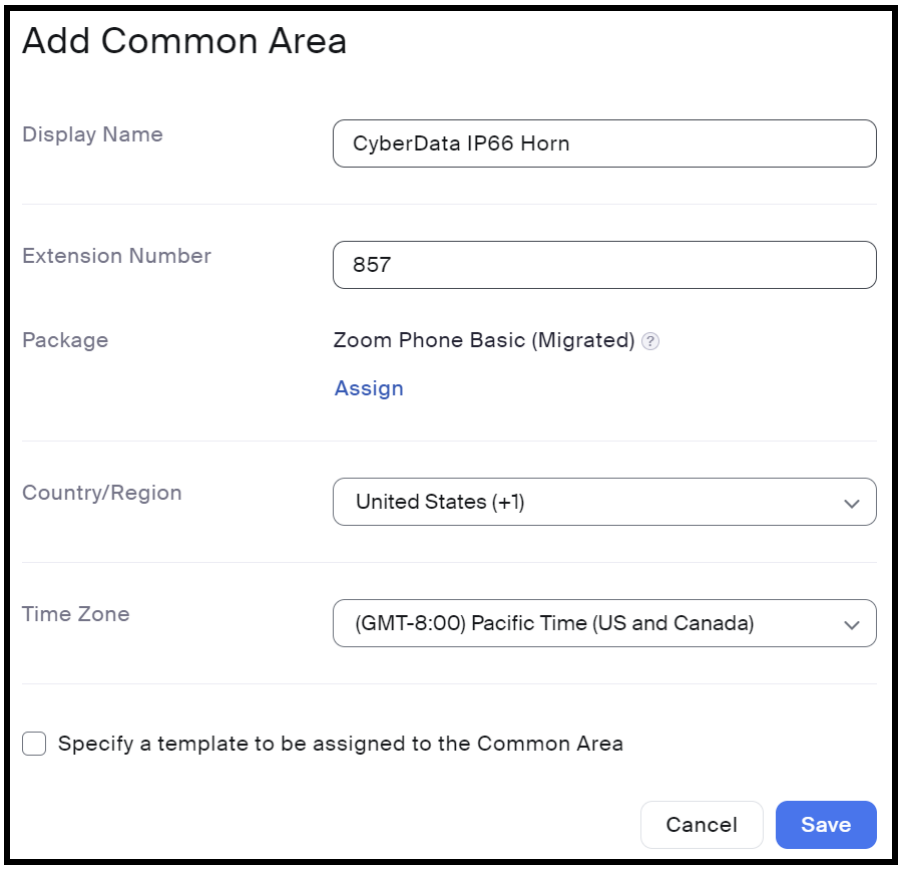
4. From the Common Area Phones press the 'Add' Button to create a new phone to be used by the device.

Figure 3-5: Add Common Area Phone



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

Figure 3-6: Add Common Area Phone Pop-up

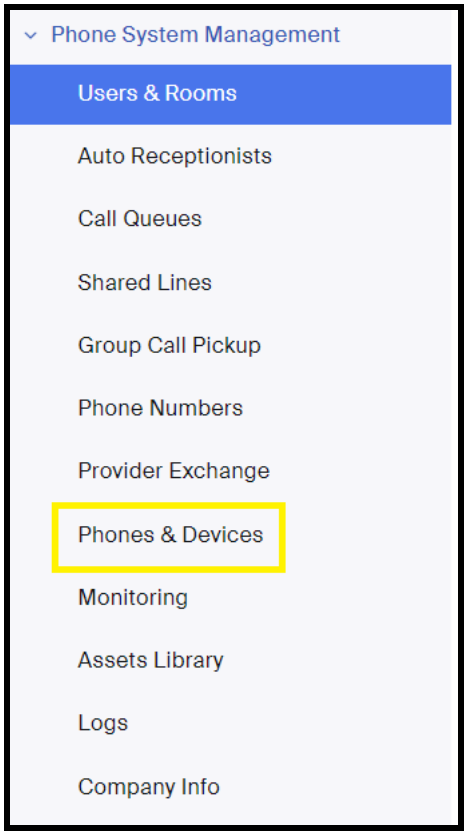


6. Set the **Display Name** to the name of the intercom.
7. Adjust the **Extension Number** as necessary.
8. Select the desired **Package**.
9. Adjust the **Country/Region** as necessary
10. Adjust the Time Zone if required.
11. Press **Save**.

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

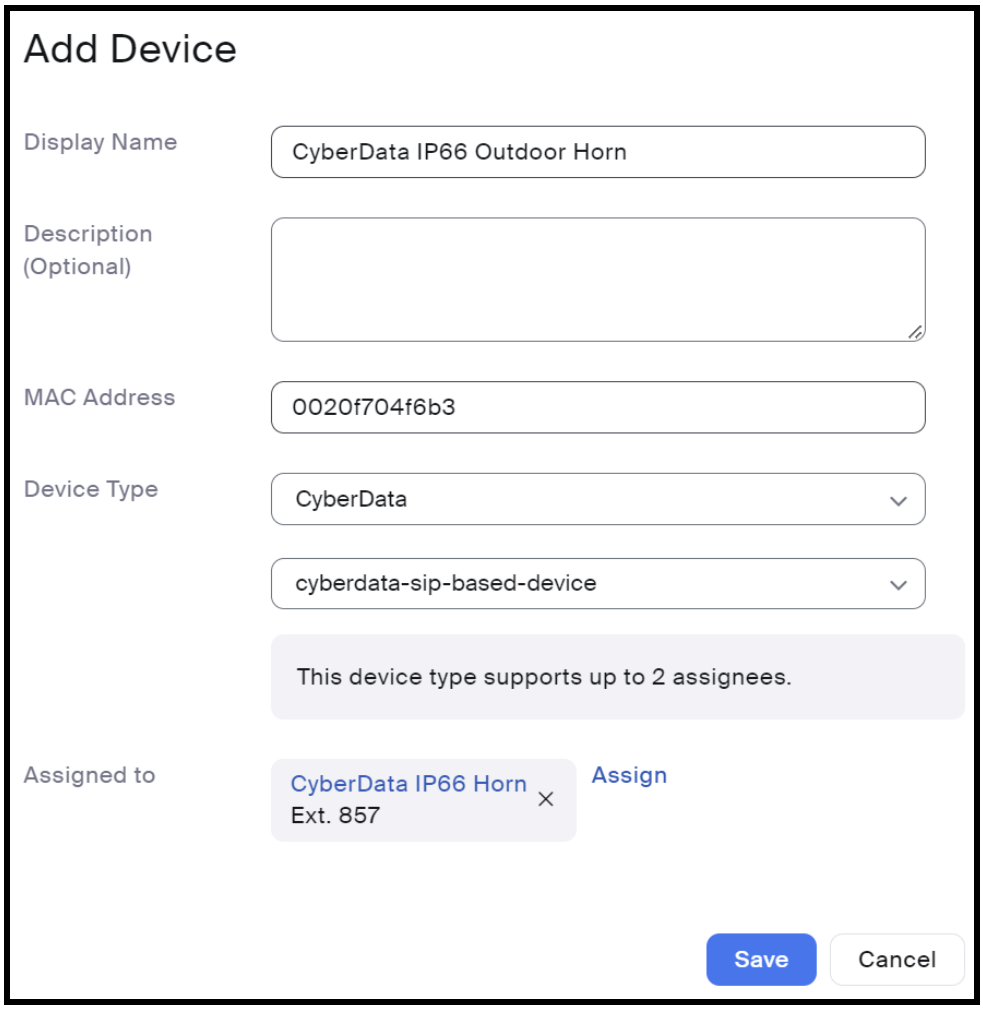
12. From the side tool bar select **Phones & Devices**.

Figure 3-7: Phones & Devices



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

Figure 3-8: Add Device



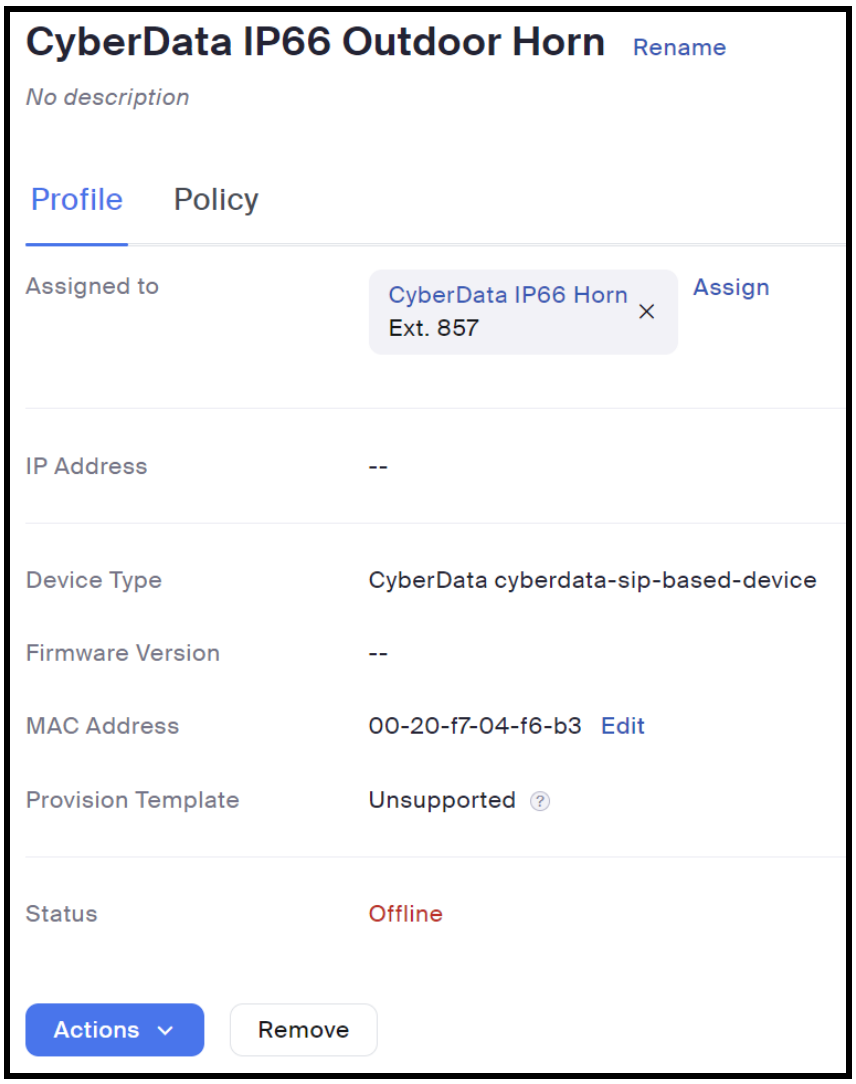
14. Set the **Display Name**.
15. Set an optional **Description**.
16. Set the **MAC Address** to that of the device

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 3-9: Device Created



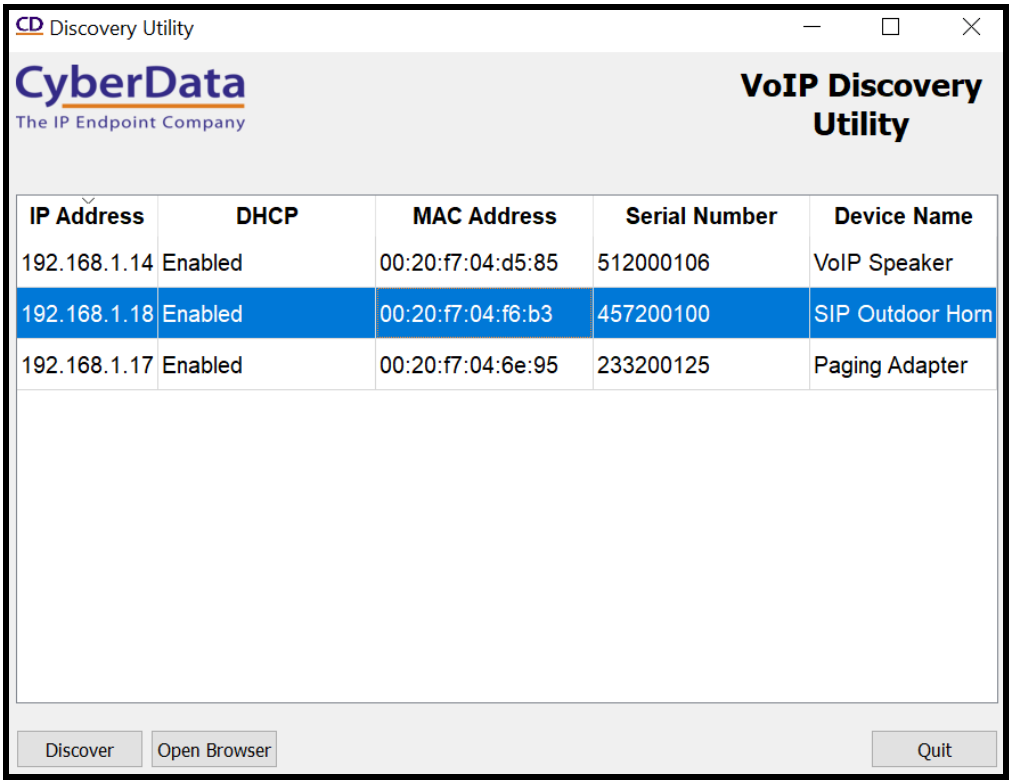
21. In the provisioning pop-up click the **Copy to Clipboard** button to copy the provisioning URL.

4.0 Configuration Procedure: Setting up the Paging Extension

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

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.

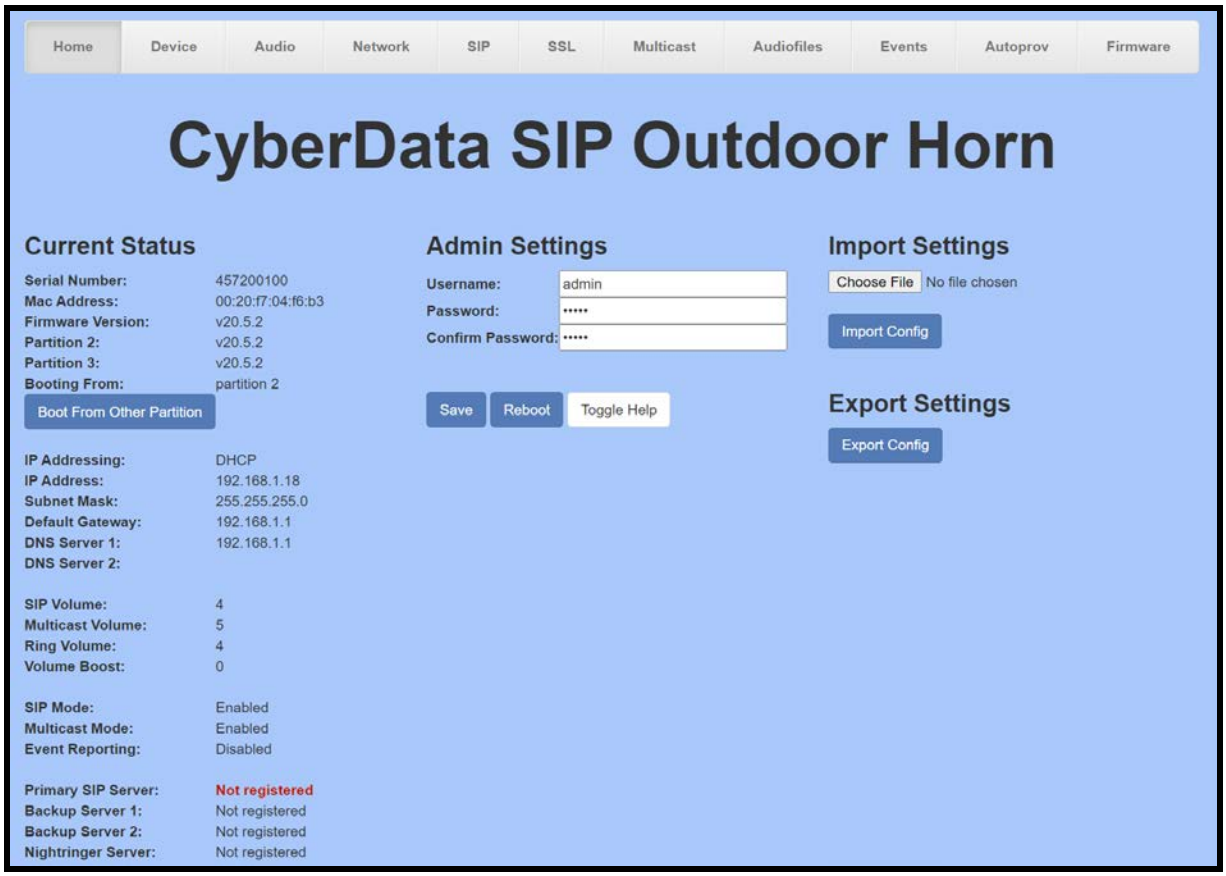
Figure 4-1: CyberData Discovery Utility



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

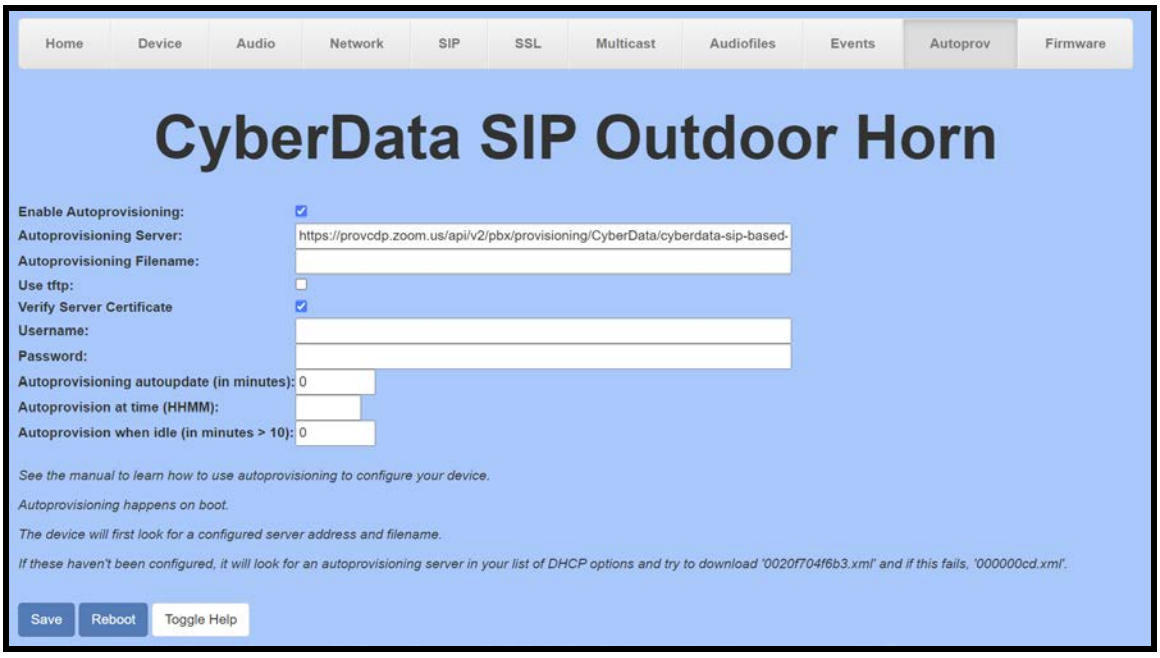
Username: admin
Password: admin

Figure 4-2: Web Interface Login



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

Figure 4-4: Autoprov Tab



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 device and through the Zoom provisioning popup.

Figure 4-5: Home page - Registered

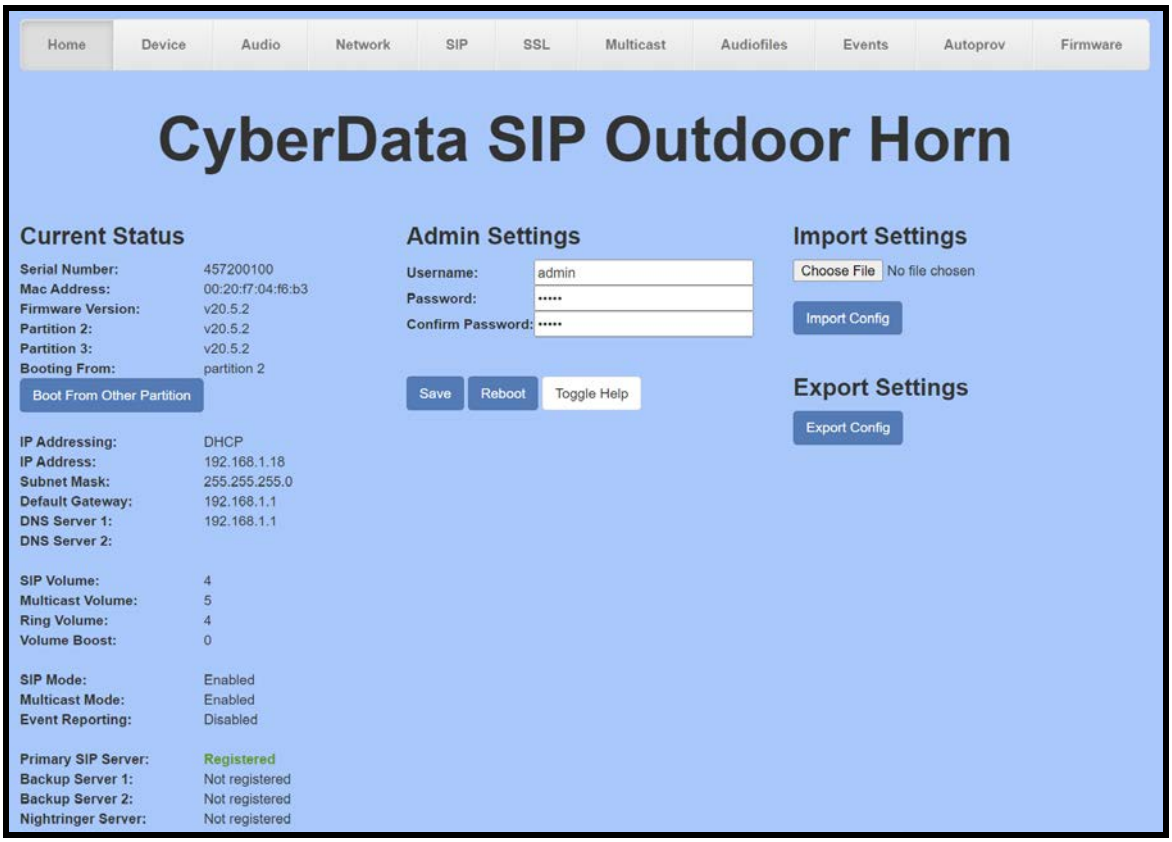


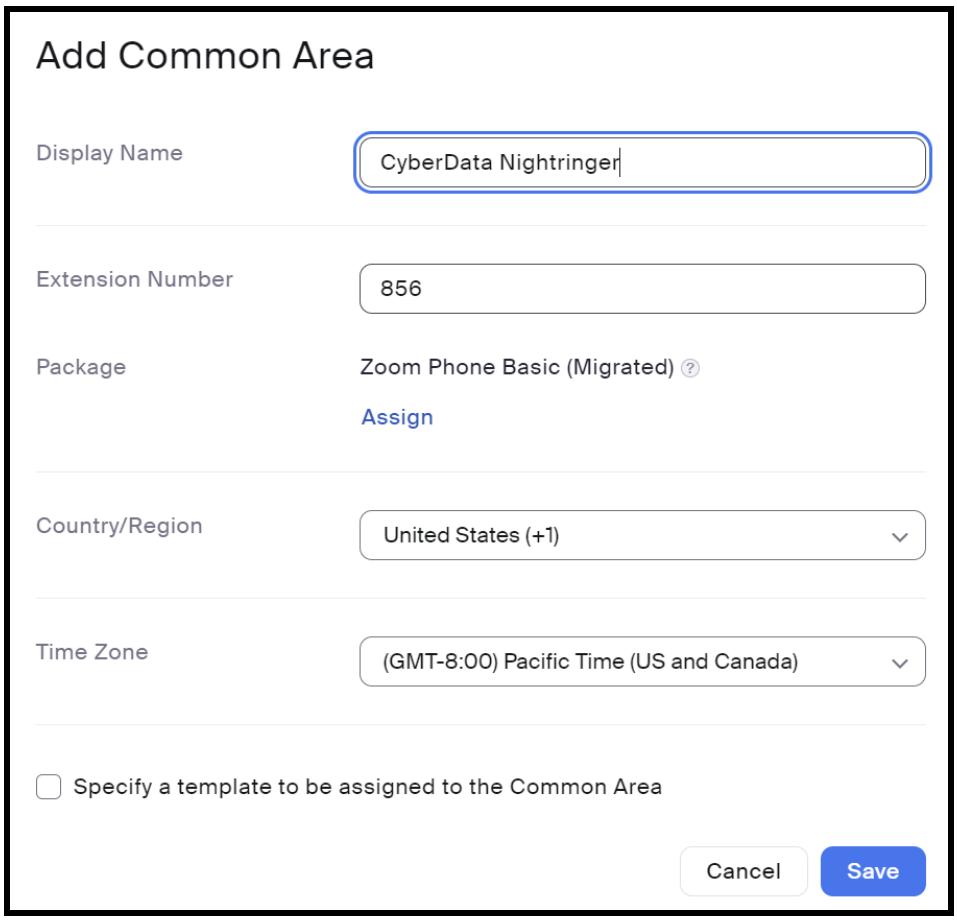
Figure 4-6: Zoom Provisioning Check

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.

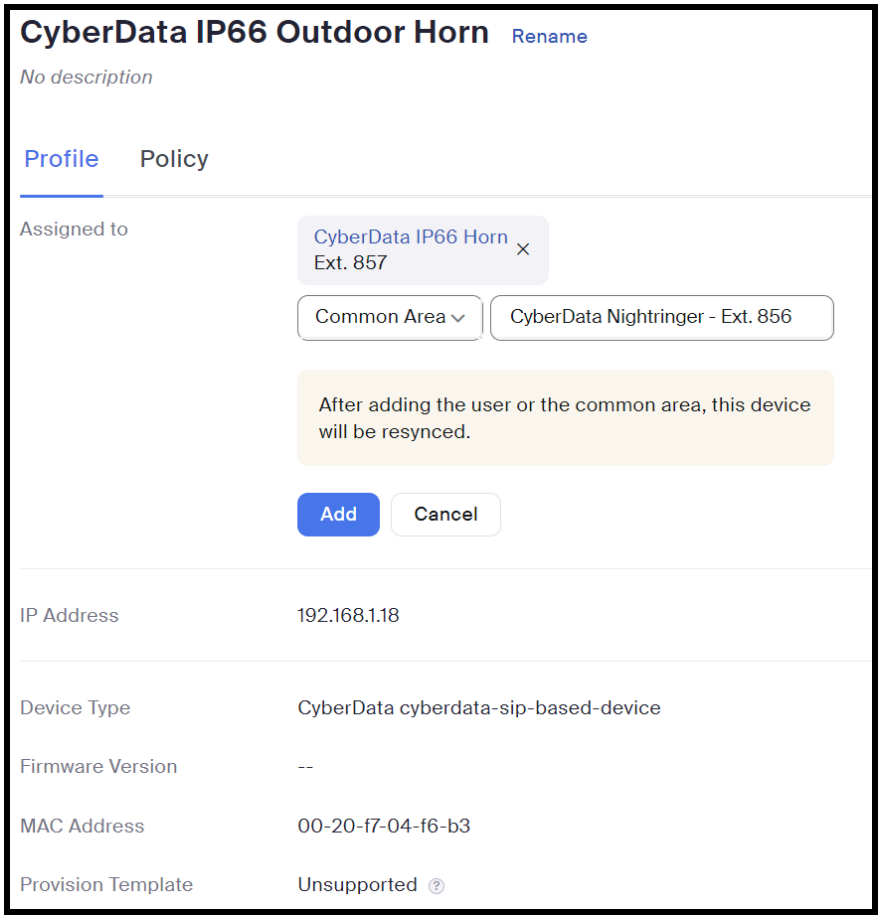
Figure 4-7: Add Nightringer



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

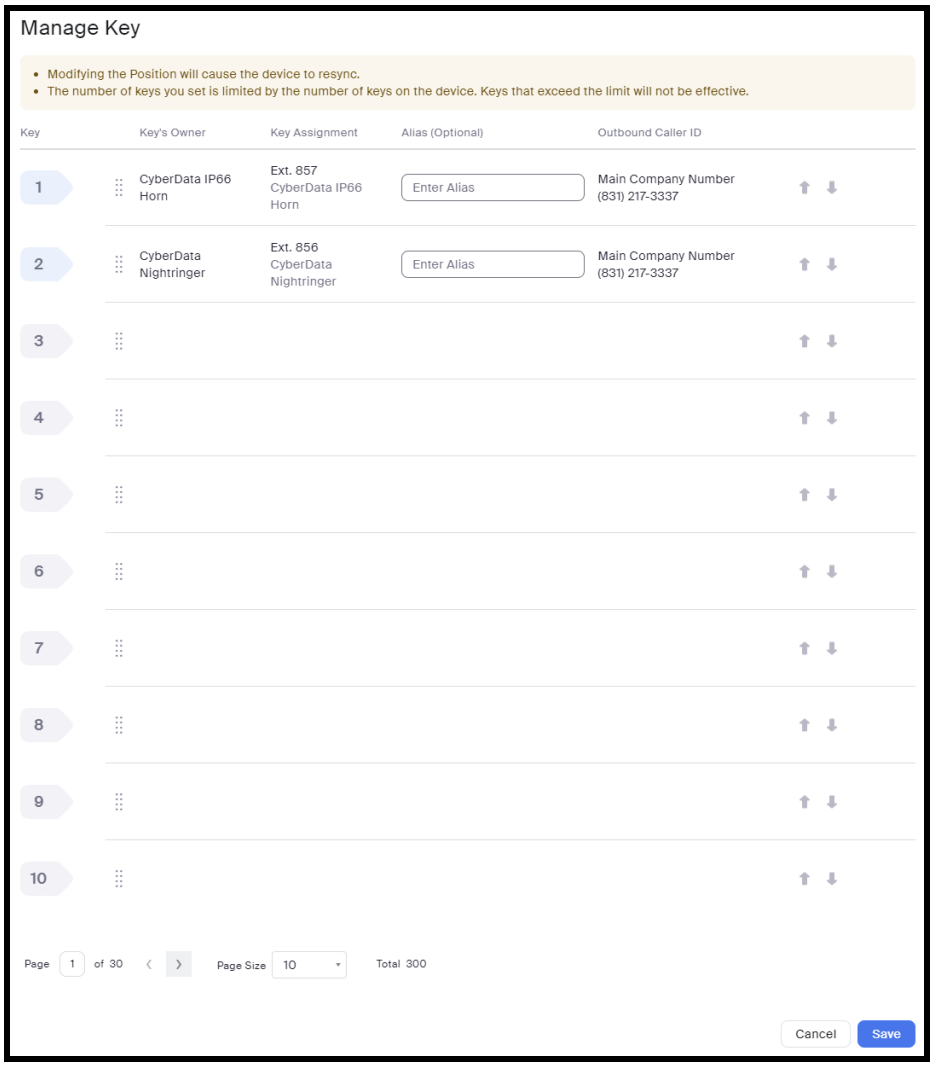
Figure 4-8: Assigning Nightringer



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 4-9: Key Positions



5.0 Using the CyberData SIP IP66 Horn in a Zoom system

Once the horn 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 devices at once.

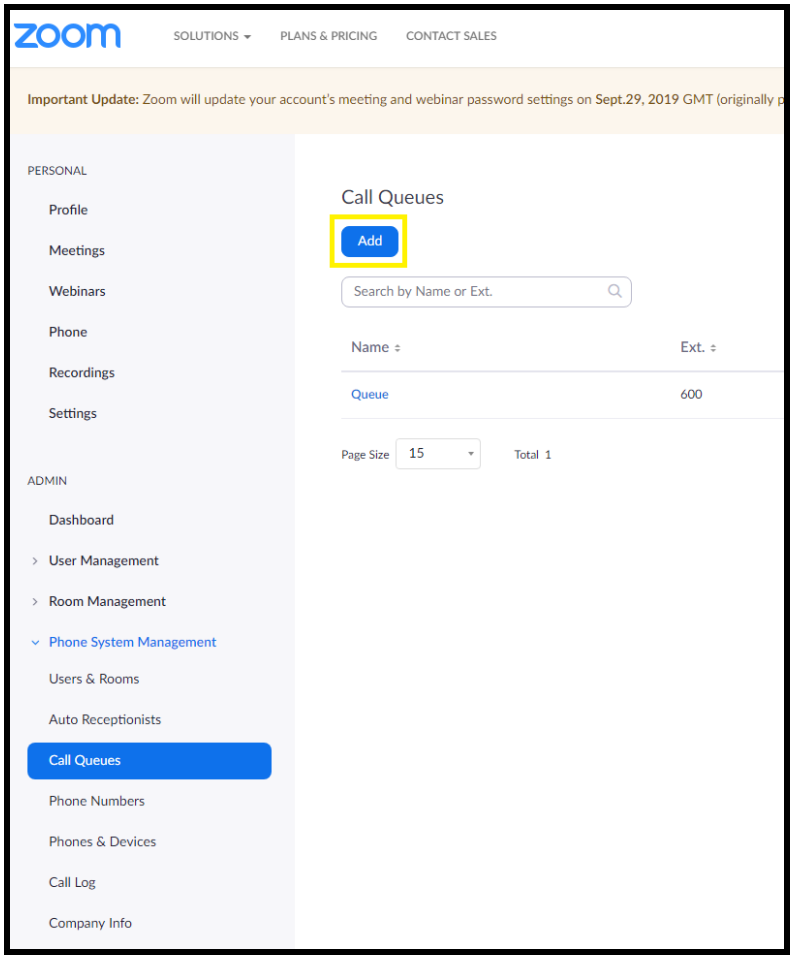
To page multiple horns simultaneously, CyberData recommends using Multicast, which can be sent from most modern SIP phones (e.g. Yealink, Poly, Snom) or a CyberData Paging Server or Multicast Microphone. (Consult your phone's documentation to enable multicast).

5.1 Creating a Call queue

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

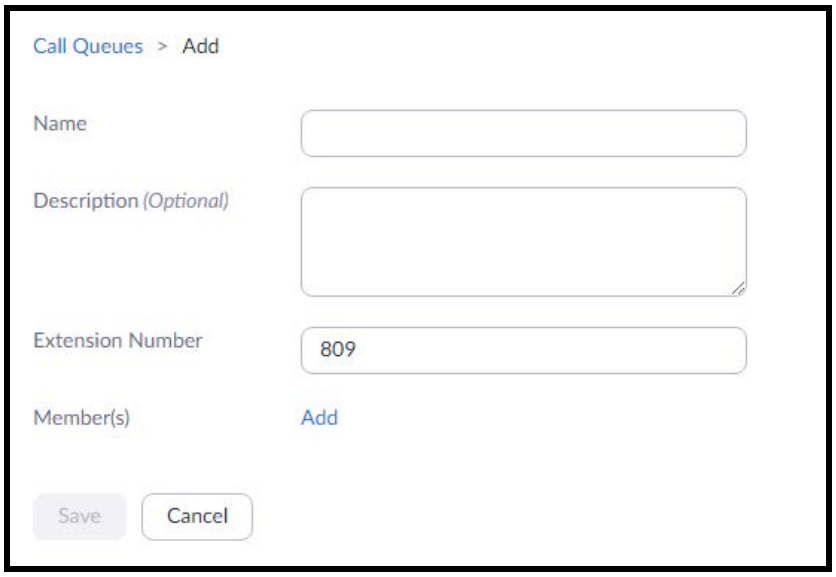
1. From the Phone System Management page select call queues and press the Add button to create a new queue.

Figure 5-1: Add call queue



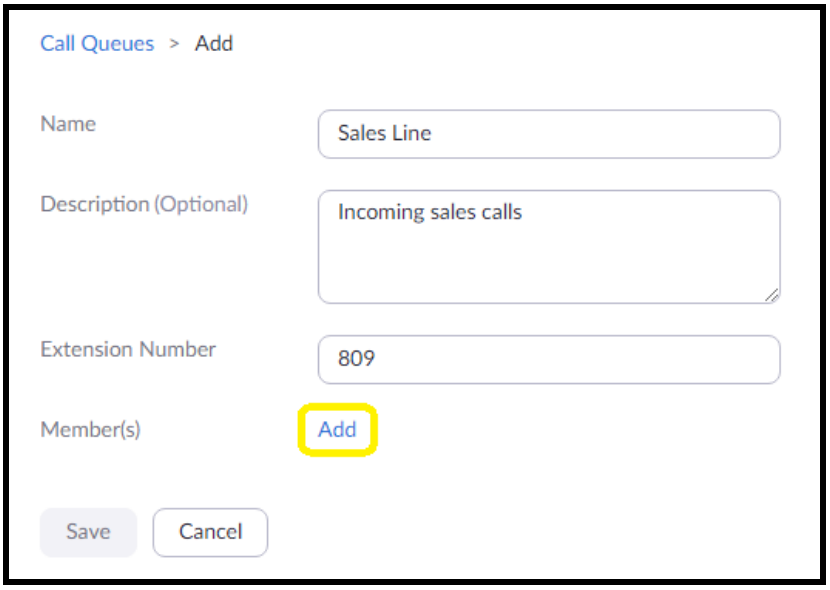
2. After clicking 'Add' a pop-up will appear that allows naming and assigning a number to the call queue.

Figure 5-2: Name the queue



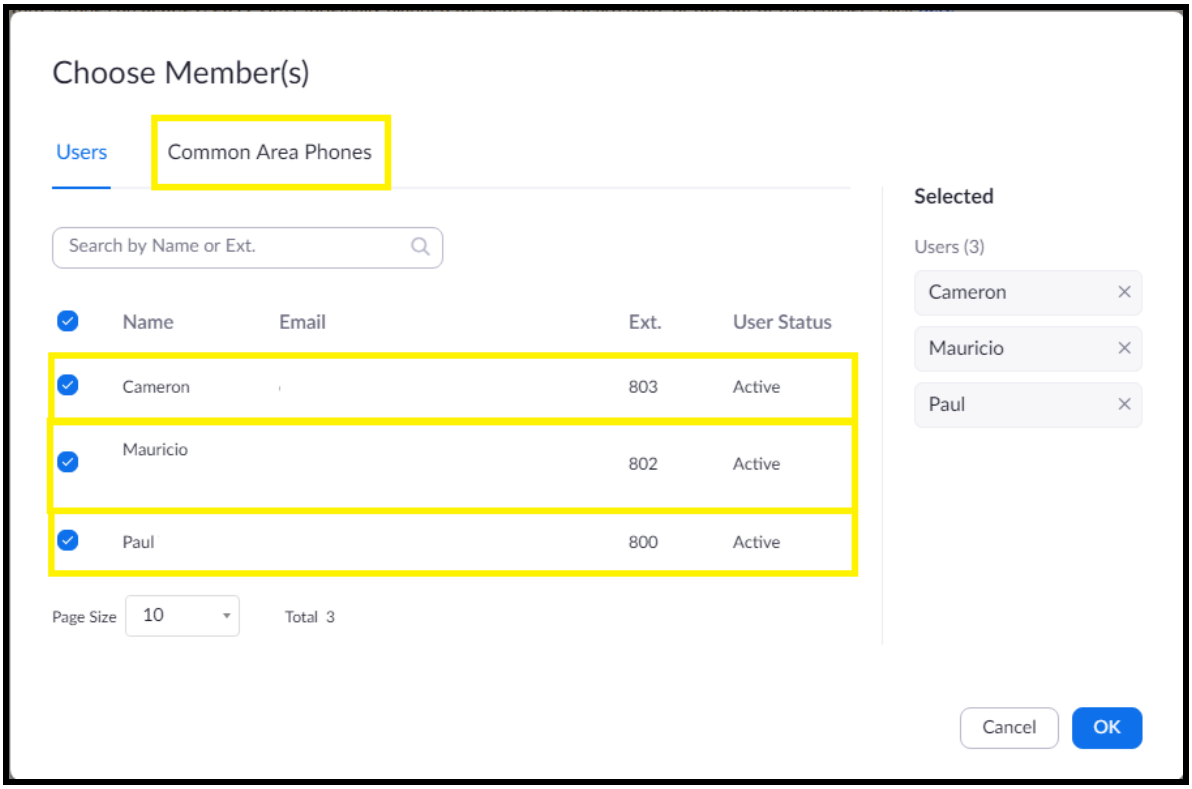
3. Name the queue, set a description and change the extension number if necessary.

Figure 5-3: Add users



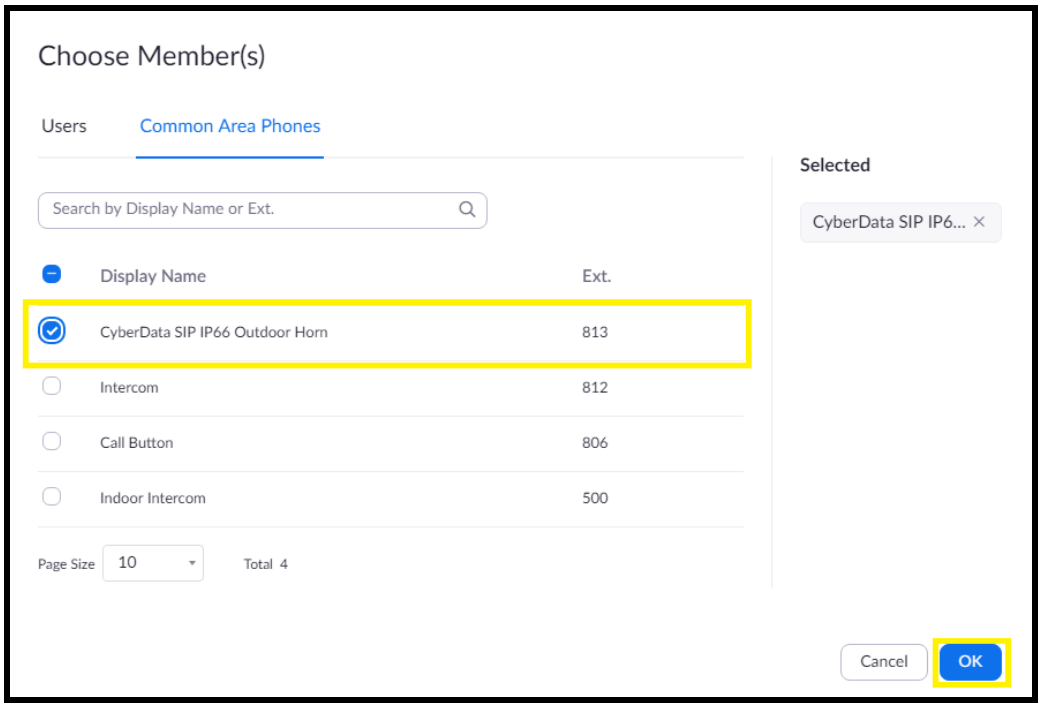
4. Press the Add button to add Users and Common Area Phones to the queue.

Figure 5-4: Add Users



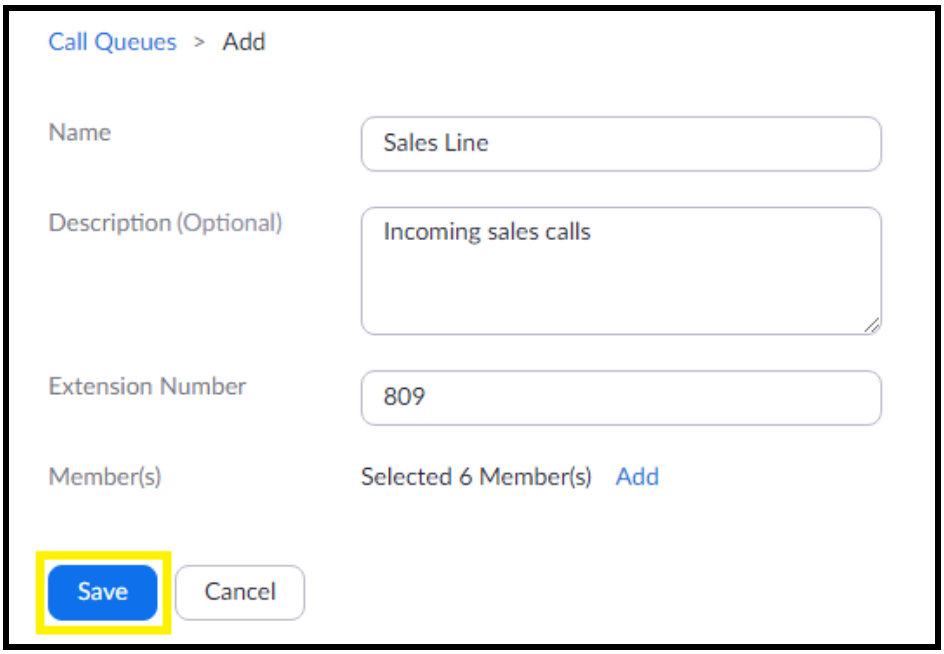
5. Select the users who will participate in the call group, then select "Common Area Phones."
6. In the "Common Area Phones" section, select the phones you wish to add to the queue.

Figure 5-5: Add Common Area Phones



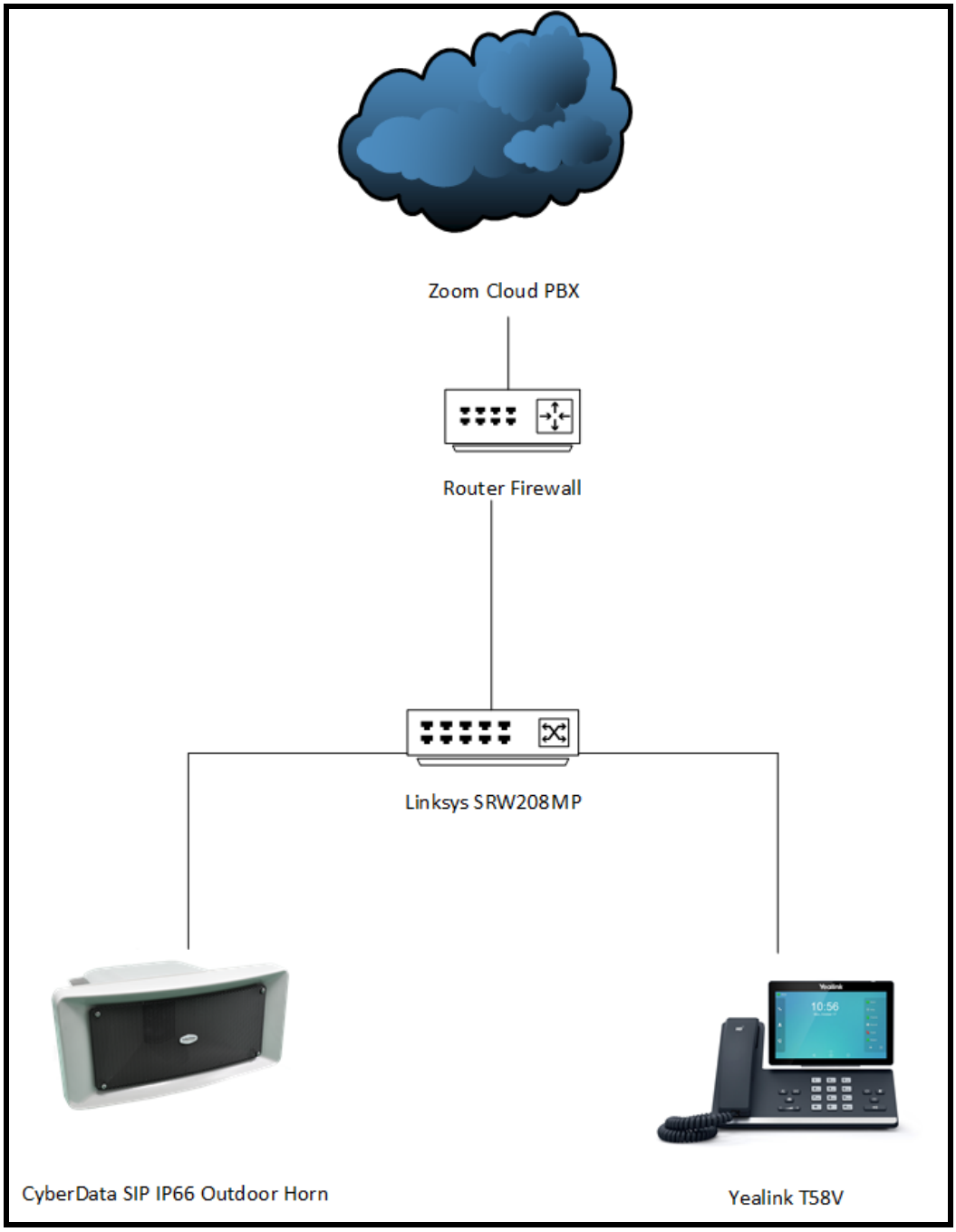
7. Click “OK” to confirm your selections.
8. Finally, press ‘Save’ to complete the queue.

Figure 5-6: Call queue complete



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.