



## *Zoom Configuration Guide: SIP Paging Adapter*

Document Part # 931712E

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## **Zoom Configuration Guide: SIP Paging Adapter Document #931712E**

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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
- 9-16-21 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 PAGING ADAPTER	011233	v20.2.2 or later

## 2.0 Before You Start

This configuration guide documents the integration process of a CyberData SIP Paging Adapter.

### Network Advisories

Zoom uses a Fully Qualified Domain Name (FQDN) for the SIP server and Outbound Proxy addresses. The CyberData SIP Paging Adapter 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 paging adapter to use:

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

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

The adapter'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 adapter's product webpage:

SIP Paging Adapter (011233)

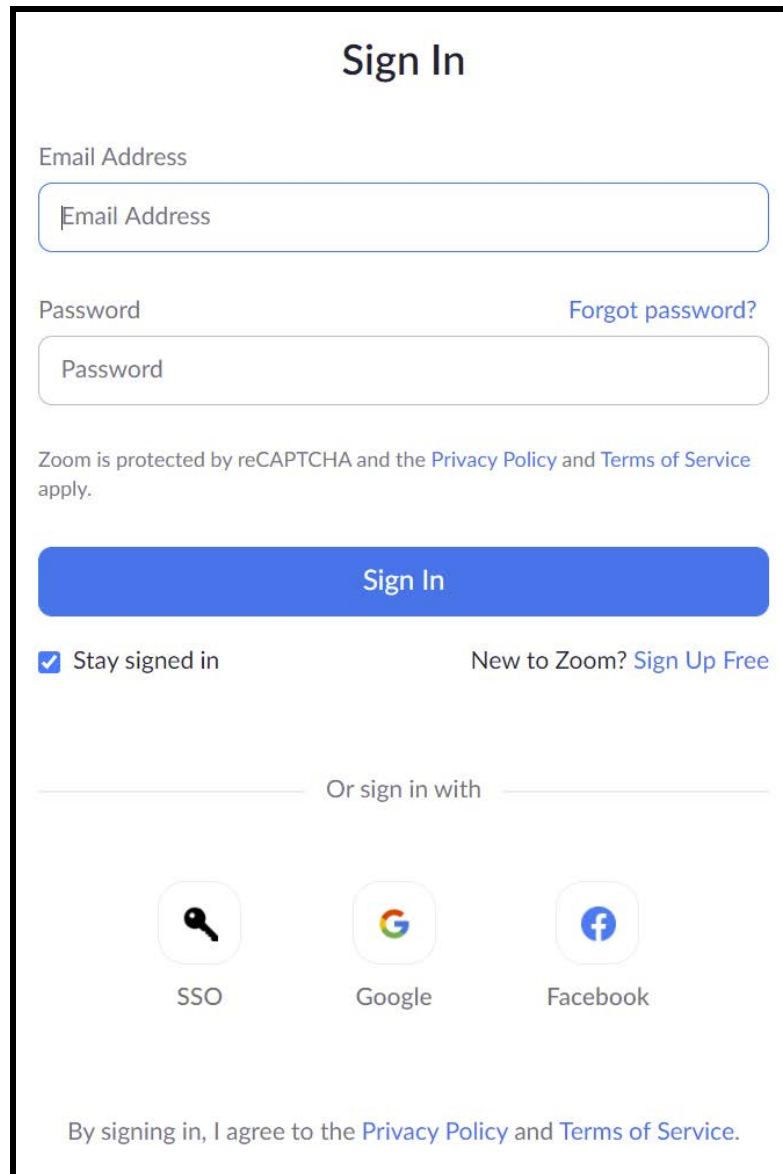
<https://www.cyberdata.net/collections/sip/products/011233>

### 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 Intercom as an Intercom/Paging Device.

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

**Figure 3-1: Log into Zoom**

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

Sign In

Email Address

Email Address

Password

[Forgot password?](#)

Zoom is protected by reCAPTCHA and the [Privacy Policy](#) and [Terms of Service](#) apply.

Sign In

☒ Stay signed in

New to Zoom? [Sign Up Free](#)

Or sign in with

SSO

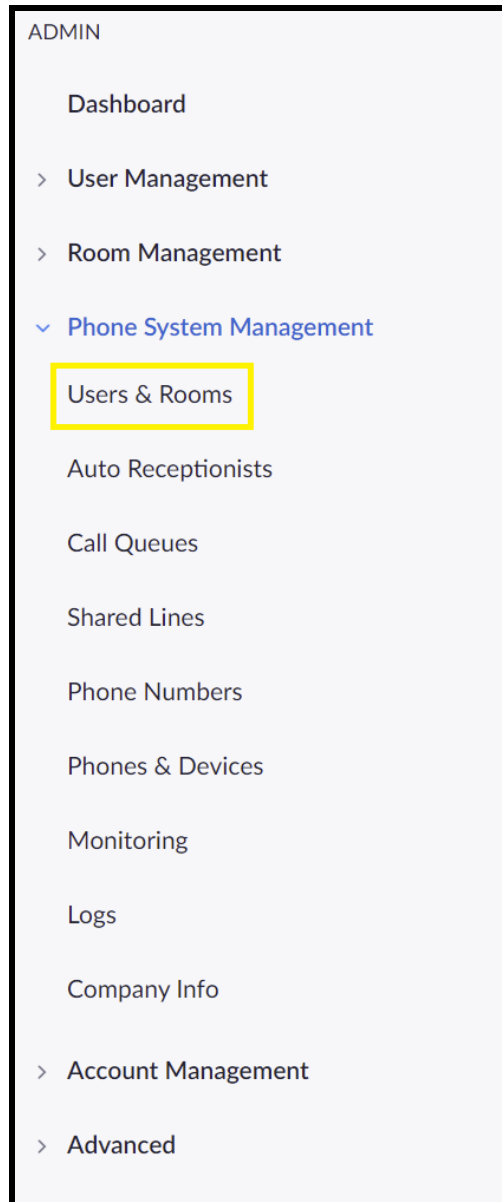
Google

Facebook

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.

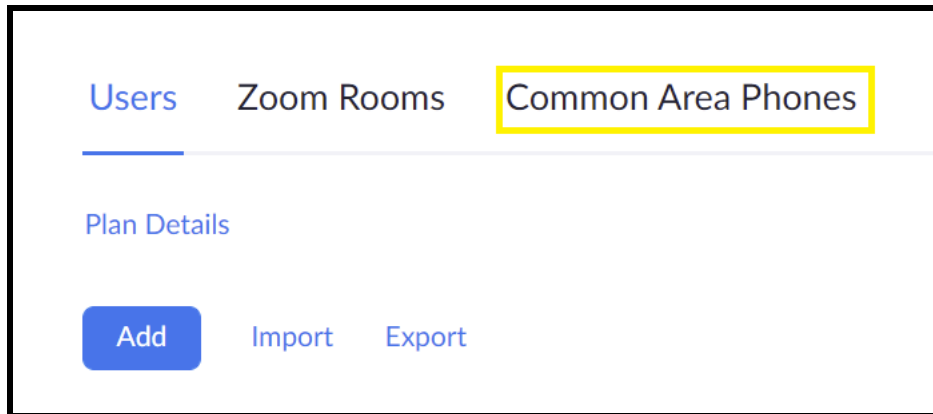
**Figure 3-2: Profile Landing Page**





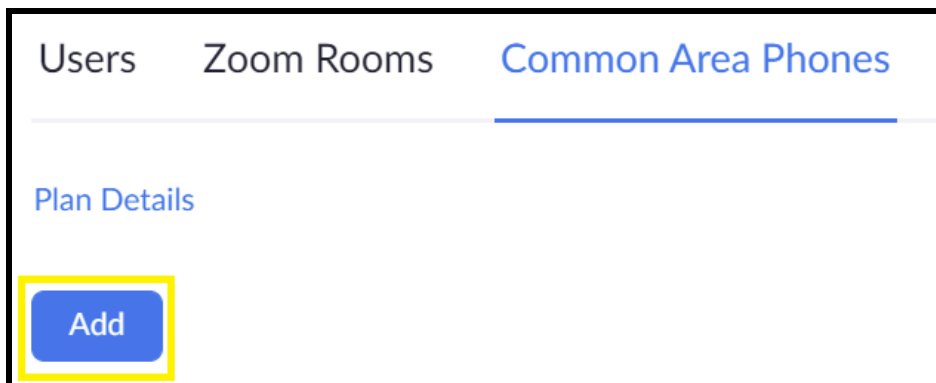
3. From “Users & Rooms” navigate to the Common Area Phones tab.

**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 Paging Adapter

Extension Number: 860

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

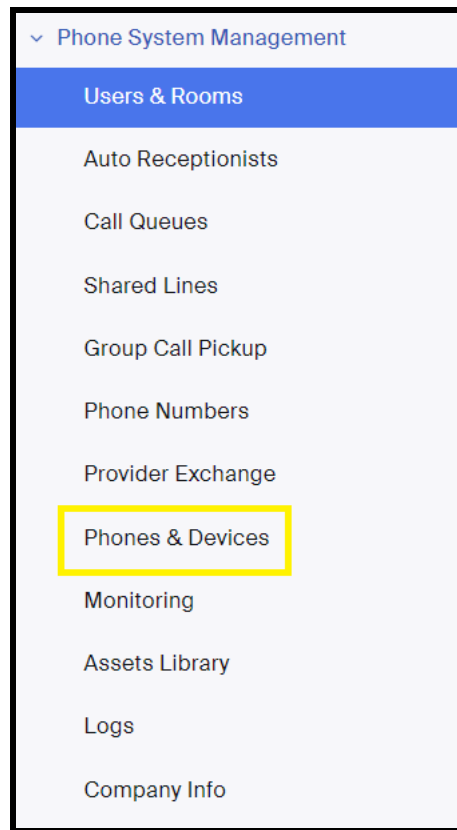
Cancel Save

6. Set the **Display Name** to the name of the 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 3-6:** 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 Paging Adapter

Description (Optional):

MAC Address: 0020f7046e95

Device Type: CyberData

cyberdata-sip-based-device

This device type supports up to 2 assignees.

Assigned to: CyberData SIP Paging Adapter Ext. 860 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

### CyberData SIP Paging Adapter [Rename](#)

*No description*

[Profile](#) [Policy](#)

---

Assigned to

CyberData SIP Paging Adapter [x](#)

[Assign](#)

---

IP Address

--

---

Device Type

CyberData cyberdata-sip-based-device

Firmware Version

--

MAC Address

00-20-f7-04-6e-95 [Edit](#)

Provision Template

Unsupported [?](#)

---

Status

Offline

[Actions](#) [Remove](#)

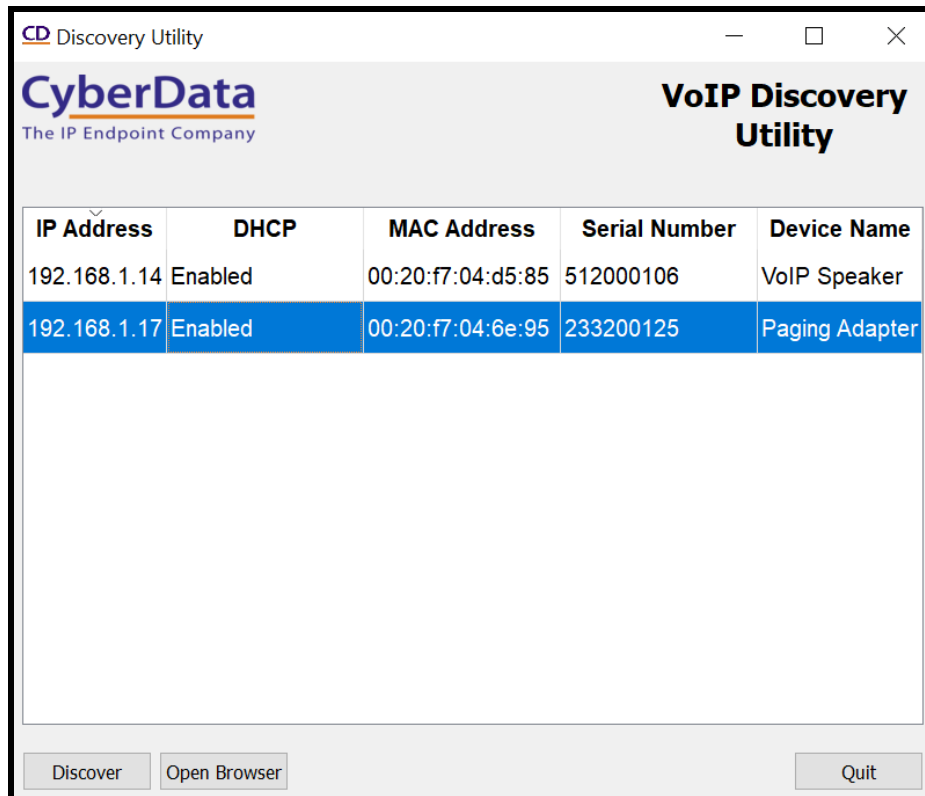
21. In the provisioning pop-up click the **Copy to Clipboard** button to copy the provisioning URL.

## 4.0 Configuration Procedure: Setting up the Paging Extension

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**

The screenshot displays the CyberData Paging Adapter web interface. At the top is a navigation bar with tabs: Home, Device, Network, SIP, SSL, Multicast, Fault, Audiofiles, Events, Autoprovisioning, and Firmware. The main content area has a light blue background and is titled "CyberData Paging Adapter".

**Current Status**

Serial Number:	233200125
Mac Address:	00:20:17:04:6e:95
Firmware Version:	v20.2.2
Partition 2:	v20.2.2
Partition 3:	v20.2.2
Booting From:	partition 2

[Boot From Other Partition](#)

**IP Addressing:** DHCP  
IP Address: 192.168.1.17  
Subnet Mask: 255.255.255.0  
Default Gateway: 192.168.1.1  
DNS Server 1: 192.168.1.1  
DNS Server 2:

**SIP Mode:** Enabled  
**Multicast Mode:** Disabled  
**Event Reporting:** Disabled

**Primary SIP Server:** Not registered  
**Backup Server 1:** Not registered  
**Backup Server 2:** Not registered  
**Nighthringer Server:** Not registered

**Admin Settings**

Username:   
Password:   
Confirm Password:

[Save](#) [Reboot](#) [Toggle Help](#)

**Import Settings**

[Choose File](#) No file chosen  
[Import Config](#)

**Export Settings**

[Export Config](#)

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

**Figure 4-4:** Autoprov Tab

The screenshot shows the 'Autoprov' tab in the CyberData Paging Adapter web interface. The interface has a navigation bar at the top with tabs: Home, Device, Network, SIP, SSL, Multicast, Fault, Audiofiles, Events, Autoprov (selected), and Firmware. The main content area has a blue header with the title 'CyberData Paging Adapter'. Below the header, there are configuration fields for autoprovisioning. The 'Enable Autoprovisioning' checkbox is checked. The 'Autoprovisioning Server' field contains the URL 'https://provcdp.zoom.us/api/v2/pbx/provisioning/CyberData/cyberdata-sip-based-'. The 'Autoprovisioning Filename' field is empty. The 'Use tftp' checkbox is unchecked. The 'Verify Server Certificate' checkbox is checked. The 'Username' and 'Password' fields are empty. There are three numeric input fields: 'Autoprovisioning autoupdate (in minutes): 0', 'Autoprovision at time (HHMM):', and 'Autoprovision when idle (in minutes > 10): 0'. Below these fields, there is a note: '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 '0020f7046e95.xml' and if this fails, '000000cd.xml'.' At the bottom, 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 paging adapter and through the Zoom provisioning popup.



**Figure 4-5: Home page - Registered**

The screenshot shows the 'Home' page of the CyberData Paging Adapter. At the top is a navigation bar with tabs: Home, Device, Network, SIP, SSL, Multicast, Fault, Audiofiles, Events, Autoprovisioning, and Firmware. The main heading is 'CyberData Paging Adapter'. Below this are three main sections: 'Current Status', 'Admin Settings', and 'Import Settings'. The 'Current Status' section displays various system parameters like Serial Number, Mac Address, Firmware Version, and Partition information. The 'Admin Settings' section includes fields for Username, Password, and Confirm Password, along with 'Save', 'Reboot', and 'Toggle Help' buttons. The 'Import Settings' section has a 'Choose File' button and an 'Import Config' button. Below these are 'Export Settings' with an 'Export Config' button. At the bottom, there are sections for IP Addressing (DHCP, IP Address, Subnet Mask, Default Gateway, DNS Servers), SIP Mode (Enabled), Multicast Mode (Disabled), Event Reporting (Disabled), and SIP Server status (Primary: Registered, Backup: Not registered, Nighthringer: Not registered).

Section	Parameter	Value
Current Status	Serial Number:	233200125
	Mac Address:	00:20:f7:04:6e:95
	Firmware Version:	v20.2.2
	Partition 2:	v20.2.2
	Partition 3:	v20.2.2
	Booting From:	partition 2
	<a href="#">Boot From Other Partition</a>	
	IP Addressing:	DHCP
	IP Address:	192.168.1.17
	Subnet Mask:	255.255.255.0
Default Gateway:	192.168.1.1	
DNS Server 1:	192.168.1.1	
DNS Server 2:		
SIP Mode	SIP Mode:	Enabled
	Multicast Mode:	Disabled
	Event Reporting:	Disabled
SIP Server	Primary SIP Server:	Registered
	Backup Server 1:	Not registered
	Backup Server 2:	Not registered
	Nighthringer Server:	Not registered
Admin Settings	Username:	admin
	Password:	*****
	Confirm Password:	*****
<a href="#">Save</a> <a href="#">Reboot</a> <a href="#">Toggle Help</a>		
Import Settings	Choose File	No file chosen
	<a href="#">Import Config</a>	
Export Settings	<a href="#">Export Config</a>	

**Figure 4-6: Zoom Provisioning Check**

The screenshot shows a 'Provisioning' dialog box. It displays the MAC Address (00-20-f7-04-6e-95) and Device Type (CyberData cyberdata-sip-based-device). The Provisioning URL is https://provcdp.zoom.us/api/v2/pbx/provisioning/CyberData/cyberdata-sip-based-device, with a 'Copy to Clipboard' link. Below this, it shows 'Step 1' with a green checkmark and the message 'Provisioning completed successfully'. A 'Close' button is at the bottom right.

**Provisioning**

MAC Address: 00-20-f7-04-6e-95

Device Type: CyberData cyberdata-sip-based-device

Provisioning URL: <https://provcdp.zoom.us/api/v2/pbx/provisioning/CyberData/cyberdata-sip-based-device> [Copy to Clipboard](#)

**1 Step 1**

✓ Provisioning completed successfully

[Close](#)

## 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**

**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 4-8: Assigning Nightringer**

## CyberData SIP Paging Adapter Rename

No description

Profile
Policy

---

Assigned to

CyberData SIP Paging Adapter  
Ext. 860
×

Common Area ▾
CyberData Nightringer - Ext. 856 (

After adding the user or the common area, this device will be resynced.

Add Cancel

---

IP Address	192.168.1.17
Device Type	CyberData cyberdata-sip-based-device
Firmware Version	--
MAC Address	00-20-f7-04-6e-95
Provision Template	Unsupported ?

**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**

### 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 Paging Adapter	Ext. 860 CyberData SIP Paging Adapter	<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  of 30 < > Page Size  Total 300

## 5.0 Using the CyberData SIP Paging Adapter in a Zoom system.

Once the adapter 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.

To page multiple devices 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).

Please reference our [Connecting to Compatible Analog Amplifiers](#) page for wiring diagrams for many different amplifiers that can be used with the paging adapter.

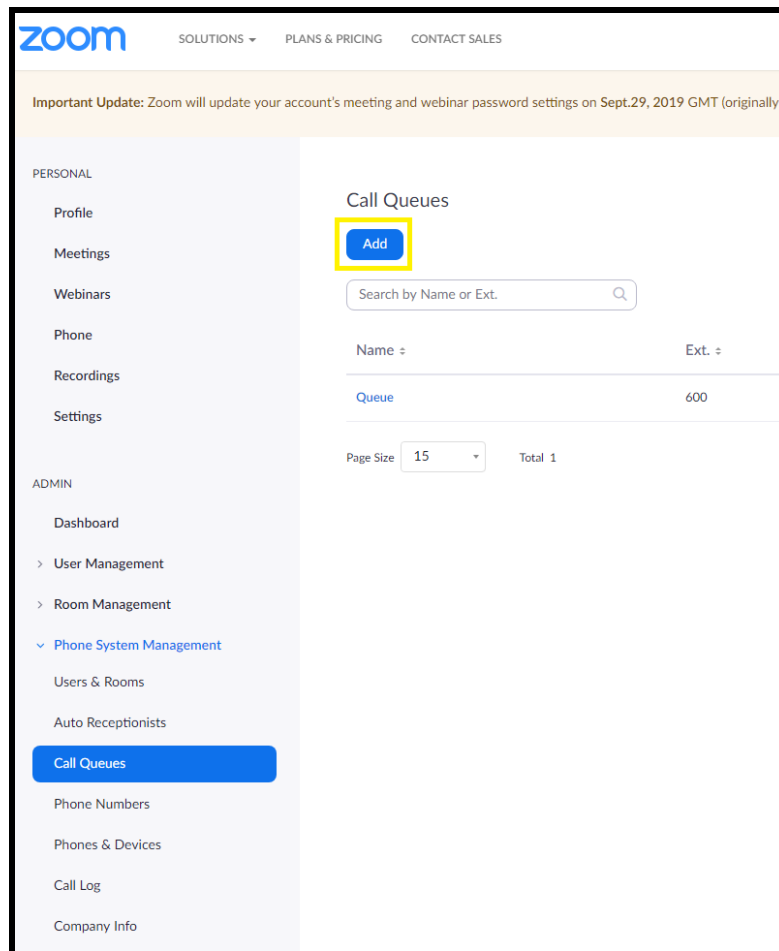
*Note: If the amplifier used in your system is not on our list please reach out to our [Support department](#) to see if it is compatible. If so, a connection diagram will be created.*

## 5.1 Creating a Call queue

CyberData recommends using the Nightringer extension as part of a call queue, allowing the adapter 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**

Choose Member(s)

Users Common Area Phones

Search by Name or Ext.

<input checked="" type="checkbox"/>	Name	Email	Ext.	User Status
<input checked="" type="checkbox"/>	Cameron		803	Active
<input checked="" type="checkbox"/>	Mauricio		802	Active
<input checked="" type="checkbox"/>	Paul		800	Active

Page Size 10 Total 3

Selected

Users (3)

Cameron X

Mauricio X

Paul X

Cancel OK

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 checked="" type="checkbox"/>	Display Name	Ext.
<input checked="" type="checkbox"/>	CyberData SIP Paging Adapter	816
<input type="checkbox"/>	Intercom	812
<input type="checkbox"/>	CyberData SIP Call Button	815
<input type="checkbox"/>	Indoor Intercom	500

Page Size  Total 4

Selected

CyberData SIP Pag... ×

Cancel **OK**

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

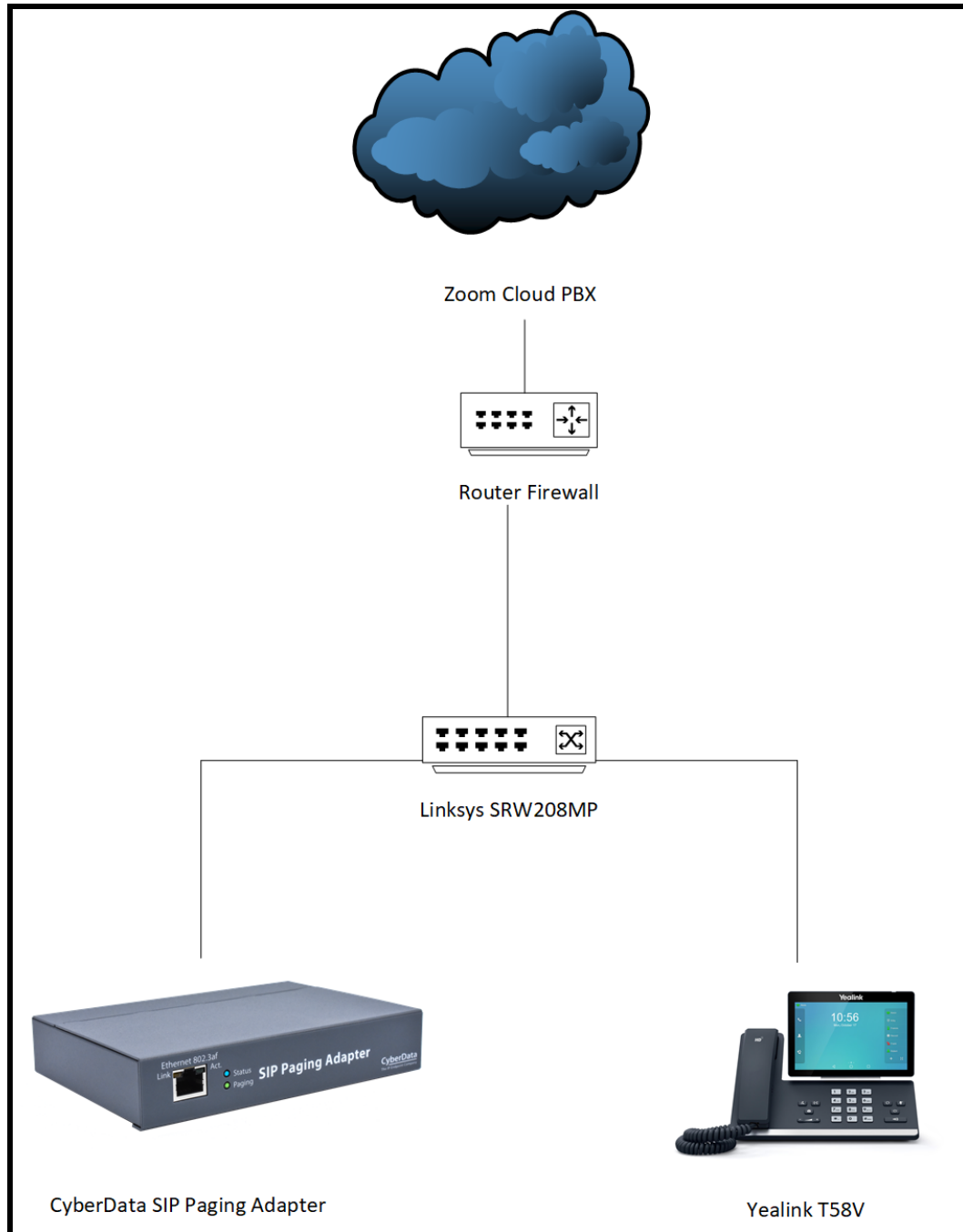
**Figure 5-6:** Call queue complete

The screenshot shows a web form titled "Call Queues > Add". It contains the following fields and controls:

- Name:** A text input field containing "Sales Line".
- Description (Optional):** A text area containing "Incoming sales calls".
- Extension Number:** A text input field containing "809".
- Member(s):** A section showing "Selected 6 Member(s)" followed by a blue "Add" link.
- Buttons:** At the bottom left, there is a blue "Save" button highlighted with a yellow rectangle, and a grey "Cancel" button to its right.

## 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.