



## *RING CENTRAL CONFIGURATION GUIDE: SIP-ENABLED IP SPEAKERS*

Document Part #931039E

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**RingCentral Configuration Guide: SIP-Enabled IP Speakers**  
**Document #931039E**

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## Document Revision Information

Revision 931039A was released on January 23<sup>rd</sup>, 2015.

- Initial release

Revision 931039B was released on September 18<sup>th</sup>, 2017.

- This revision features new device screenshots and updated configuration steps.

Revision 931039C was released on May 3<sup>rd</sup>, 2019.

- Updated extension creation process on RingCentral side

Revision 931039D was released on June 8<sup>th</sup>, 2020

- Corrected nomenclature inconsistencies.

Revision 931039E was released on April 28, 2021

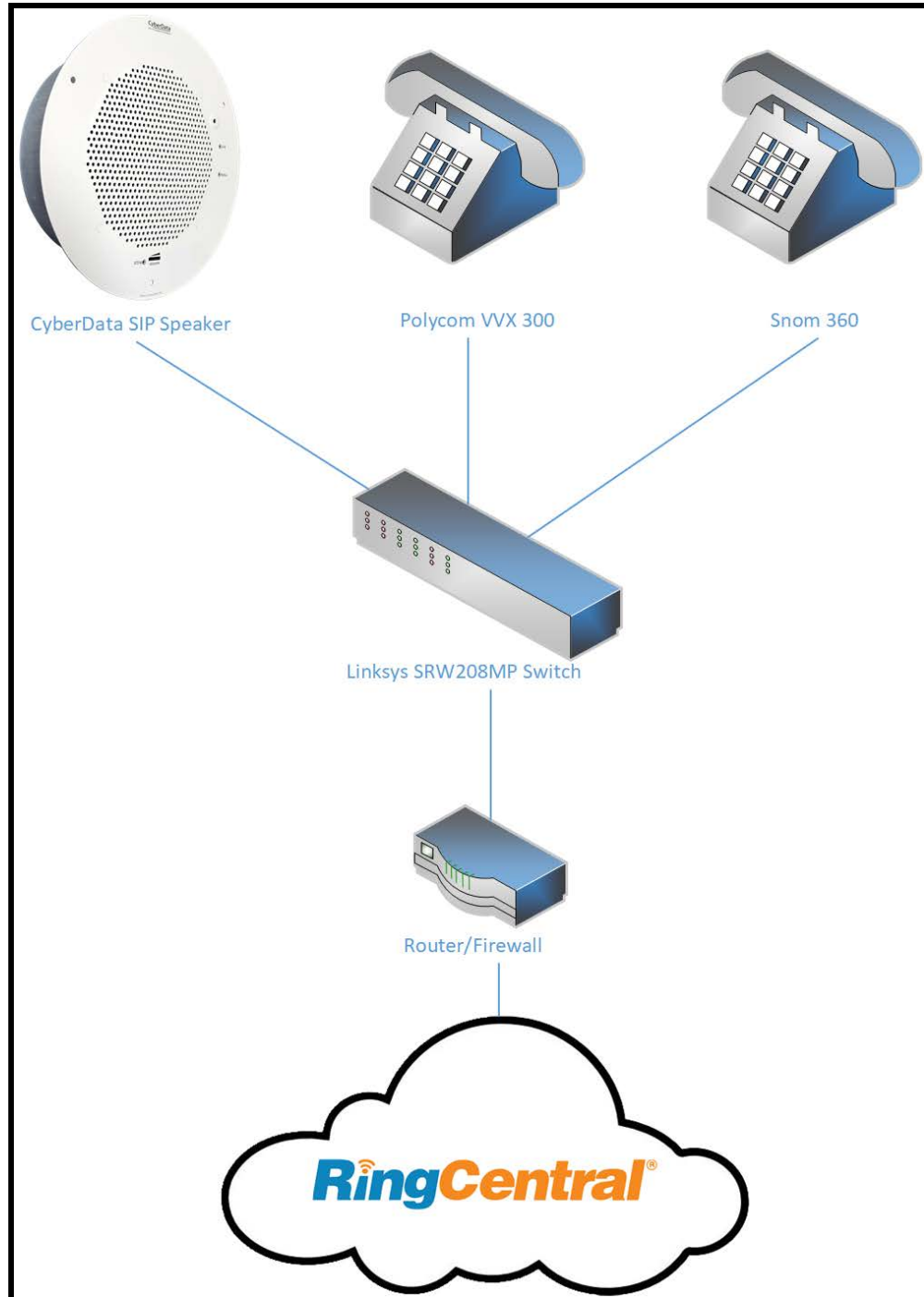
- Added new steps to enable TLS and SRTP

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## 1.0 Setup Diagram

**Figure 1-1: Interoperability Test Infrastructure**



## 2.0 Test Setup Equipment

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

**Table 2-1: Setup Equipment**

EQUIPMENT	MODEL or PART NUMBER	FIRMWARE VERSION
CYBERDATA SIP SPEAKER	011393 011394	v12.1.1
CYBERDATA SIP TALKBACK SPEAKER	011397 011398	v12.1.1
POLYCOM	VVX 300	5.2.0.8330
SNOM	360	snom360-SIP 8.4.31
LINKSYS	SRW208MP	1.0.4

## 3.0 Before You Start

This configuration guide documents the integration process of a CyberData SIP-enabled IP Speaker.

### Network Advisories

RingCentral uses a Fully Qualified Domain Name (FQDN) for the SIP server and Outbound Proxy addresses. The CyberData speakers need to perform a DNS A query to resolve the IP address of RingCentral'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 speakers to use:

- UDP 5060-5061, 5090 (SIP)
- TCP 5060, 5096 (SIP)
- UDP 10500 (RTP)

The speaker will need to traverse the public internet to operate with RingCentral in the cloud. The speaker's primary 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 5090, the port used by RingCentral's Outbound Proxy. If the speaker is using TLS for SIP transport all SIP messages will be sent to TCP port 5096.

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

Alternatively, SIP ports for the primary and Nightringer extensions 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 starting, download the Operation and Quick Start guides from the speaker's product webpage:

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

The CyberData Discovery Utility can be used to locate CyberData devices on the local network. The tool may be download it from the following web address:

<http://www.cyberdata.net/assets/common/discovery.zip>

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

## 4.0 Configuration Procedure: TLS and SRTP

RingCentral has been recently updated and added support for TLS and SRTP for SIP and RTP transmission to better protect conversations. TLS and SRTP use encryption to protect the call setup process and audio from those that may wish to intercept traffic and spy on conversations. Therefore, using TLS and SRTP is recommended when all VoIP equipment supports both features.

This section will extension creation (Auto-Answer Paging and Voice Prompted Paging) and how to setup the CyberData SIP Speaker for use with TLS and SRTP.

### 4.1 TLS and SRTP: Auto-Answer Paging

The RingCentral Paging feature delivers real-time broadcasts to desk phones and/or paging devices. CyberData speakers can be added to *Paging Only* groups supporting a combination of CyberData paging endpoints and RingCentral Polycom and Cisco desk phones.

CyberData SIP Speakers are ideal for one-way, auto-answer paging in indoor environments and offer external or digital volume control.

#### Add a Paging Extension

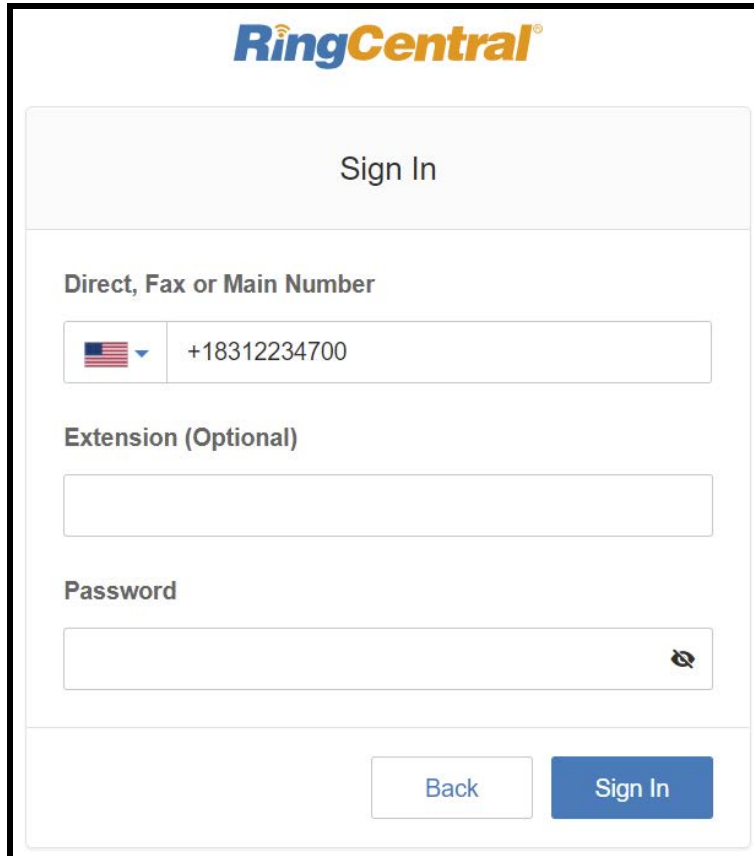
This section describes the process of creating a user, provisioning a paging device, and registering the paging extension that will be used for paging with RingCentral. First, a user must be created for the speaker.

Use the following steps to create a user and provision a paging device for the speaker's primary extension through the RingCentral Admin Portal.



1. Login to the RingCentral Admin Portal at <https://service.ringcentral.com>.

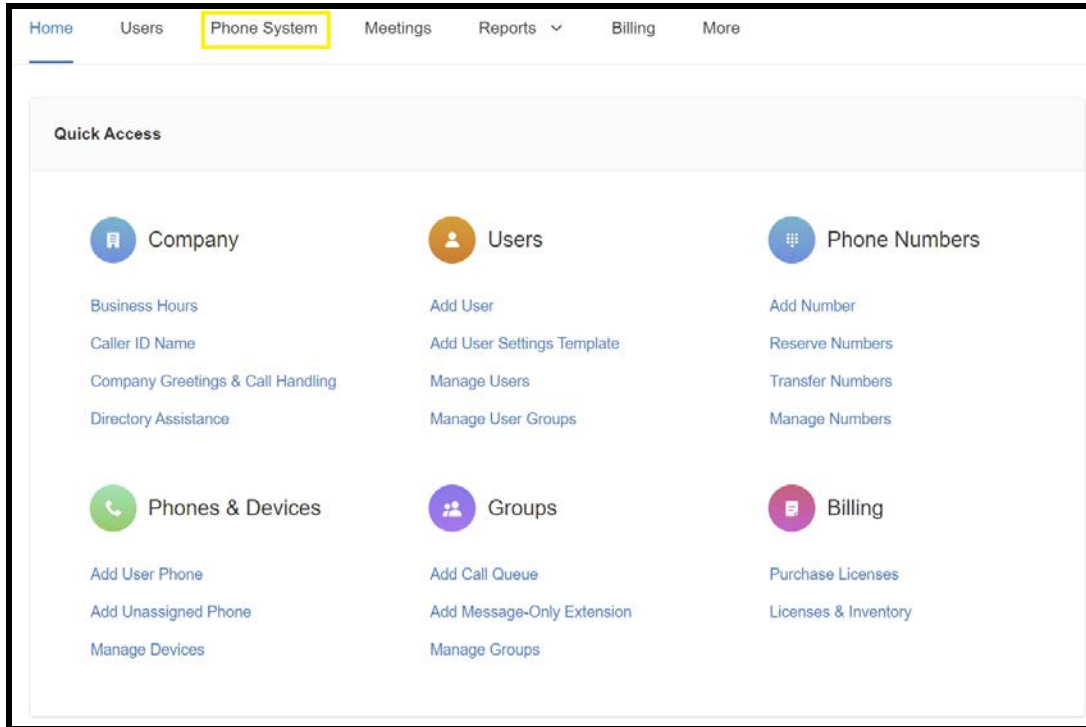
**Figure 4-1.** RingCentral Admin Portal Login



The screenshot shows the RingCentral Admin Portal Sign In page. At the top is the RingCentral logo. Below it is a 'Sign In' header. The form contains three main sections: 'Direct, Fax or Main Number' with a country dropdown (USA) and a text field containing '+18312234700'; 'Extension (Optional)' with an empty text field; and 'Password' with an empty text field and a toggle icon. At the bottom are 'Back' and 'Sign In' buttons.

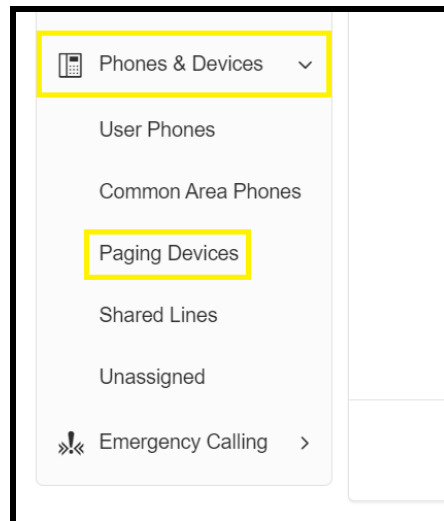
2. From the login page select **Phone System**.

**Figure 4-2** Phone System



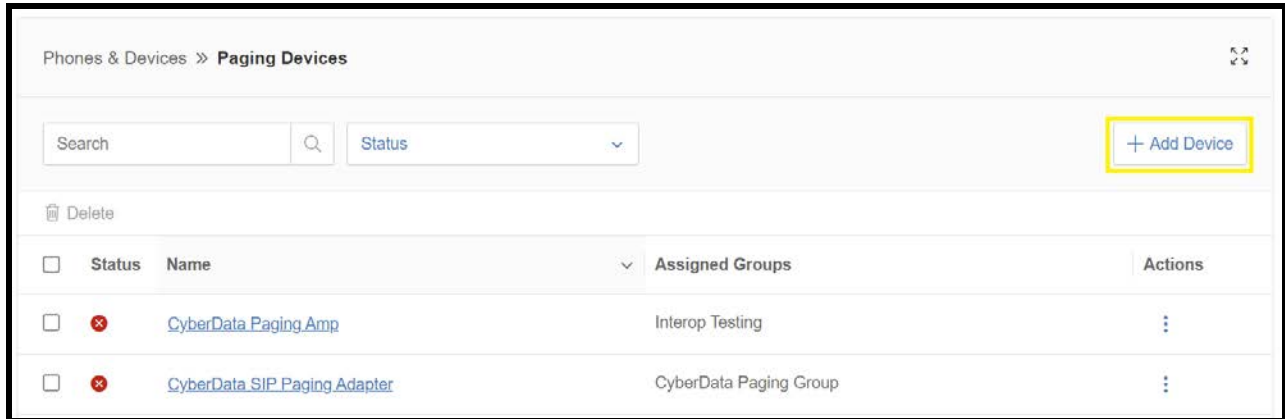
3. From the Phone System page select **Phones & Devices** and then **Paging Devices**.

**Figure 4-3.** Phones & Devices → Paging devices



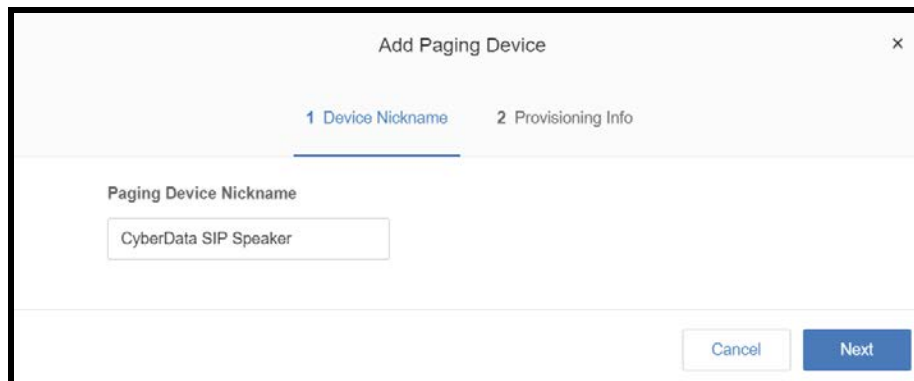
4. From the Paging Device page press **Add Device** to make a new paging device.

**Figure 4-4.** Add Device



5. A pop-up will appear that allows the Paging Device to be named.

**Figure 4-5:** Name Paging Device



6. After naming the device press **Next**.

7. The pop-up will now display configuration information to setup the CyberData device. Make sure to select an Outbound Proxy in your area.

**Figure 4-6. Configuration details**

×

✓ Device Nickname    2 Provisioning Info

📄 Copy

Provisioning Information  
Paging devices need to be programmed with the information given below to make them fully functional when assigned to paging group. Configuration for each device may vary, please check with your device's manufacturer for specific instructions.

**Step 1: Will you be using secure voice transport on this device?**

Yes - The device must support Transport Protocol version TLS 1.2 [Learn More](#)

No

**Step 2: Set TLS on your device's Transport Protocol**

**Step 3: Enable Offer and Answer on the device's SRTP (Secure Real-Time Transport Protocol)**

**Step 4: Configure SIP information**

Field	Value
SIP Domain	sip.ringcentral.com:5060
Remote SIP port	5060
Local SIP port	5060
Outbound Proxy	<input type="text" value="sip10.ringcentral.com:5096"/>
Outbound Proxy Port	5096
User Name	18312234700*803836507011
Password	
Authorization ID	803836507011

Done

*Note: For the purposes of this document the password has been obscured.*

### Configure SIP Parameters

One may feel more comfortable with web-based configuration or provisioning using templates. Both methods are documented in this configuration guide. Be sure to review the SIP Speaker’s operation guide for complete information on configuration through the web interface and CyberData’s “autoprovisioning” method using templates via HTTP, HTTPS, and TFTP protocols.

**Table 4-1: CyberData Configuration Settings**

<b>Primary SIP Server</b> field	From the Paging Device Provisioning Information popup: <b>SIP Server/SIP Domain</b>
<b>Primary SIP User ID</b> field	From the Paging Device Provisioning Information popup: <b>User Name</b>
<b>Primary SIP Auth ID</b> field	From the Paging Device Provisioning Information popup: <b>Authorization ID</b>
<b>Primary SIP Auth Password</b> field	From the Paging Device Provisioning Information popup: <b>Password</b>
<b>Outbound Proxy</b> field	From the Paging Device Provisioning Information popup: <b>Outbound Proxy</b>
<b>Outbound Proxy Port</b> field	From the Paging Device Provisioning Information popup: <b>Outbound Proxy Port</b>
<b>Re-registration Interval (in seconds)</b> field	<b>30</b>
<b>Keep Alive Period</b> field	<b>0</b>
<b>Force Selected Codec</b> checkbox	<b>Yes</b>
<b>Codec</b> dropdown	<b>PCMU (G.711, u-law)</b>
<b>SIP Transport Protocol</b>	<b>TLS</b>
<b>TLS Version</b>	<b>1.2 only (recommended)</b>
<b>Verify Server Certificate</b>	<b>Enabled</b>
<b>Set Time with NTP Server on boot</b>	<b>Enabled</b>
<b>SRTP</b>	<b>Enabled</b>

*Web Configuration*

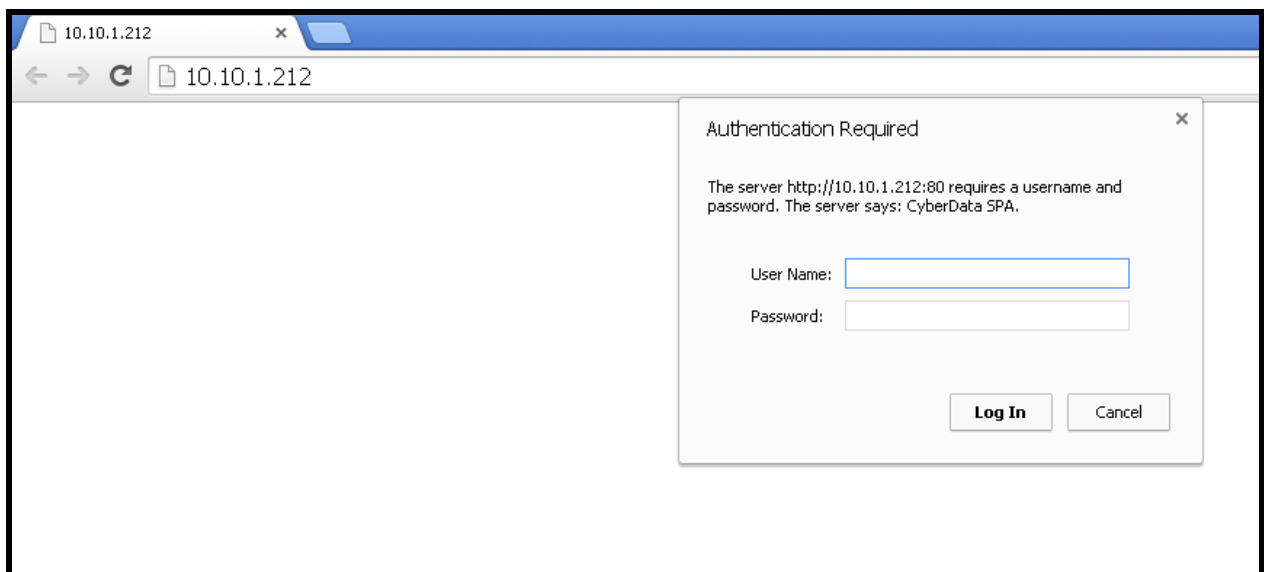
If configuring through the web interface, use the following steps to login to the web interface of the CyberData device.

1. Click **Launch Browser** from the CyberData Discovery Utility or point a browser to the CyberData device's IP address to access the Home Page of the web interface.
2. Enter the default credentials when prompted and click the **Log In** button.

**Username: admin**

**Password: admin**

**Figure 4-7: Web Interface Login**



**Figure 4-8:** Home Page of Speaker Web Interface



*Note: The firmware version and registration status for the paging extension and Nightringer extensions appear here.*

3. On the Home Page, click **Device** on the top toolbar to access the Device page.

4. On the **Device** page scroll to the **Time Settings** section.

**Figure 4-9:** NTP Settings

**Time Settings**

Set Time with NTP server on boot:

NTP Server:

Posix Timezone String (see manual):

Periodically sync time with server:

Time update period (in hours):

Current Time:

Set Time Manually

4. Check the box for **Set Time with NTP server on boot**.
5. Adjust the **NTP Server** as necessary.
6. Select a **Posix Timezone String** for the local area.

**Note:** CyberData's Technical support department has a knowledge base entry with a Posix Timezone string for every timezone. [Posix Timezone Strings Knowledge Base Entry](#)

7. Check the box for **Periodically Sync Time with Server**.
8. Set **Time update period (in hours)** to 1.
9. **Save**.
10. Press **SIP** to navigate to the SIP configuration page.
11. Set the **SIP Transport Protocol** to **TLS**.

**Note:** NTP enabled should appear in green.

12. Verify that **TLS Version** is set to **1.2** and **Verify Server Certificate** is checked.
13. Enter the provisioning information from the **Generic Paging Device Provisioning** popup window.
14. Set the **Re-registration interval** to **30**.
15. Set the **Keep Alive Period** to **0**.
16. Set **SRTP** to **Enabled**.
17. **Save and Reboot**.



**Figure 4-10: SIP Configuration**

### SIP Settings

Enable SIP operation:  
 SIP Transport Protocol: TLS  NTP enabled  
 TLS Version: 1.2 only (recommended)  
 Verify Server Certificate:  
 Register with a SIP Server:  
 Use Cisco SRST:

Primary SIP Server:   
 Primary SIP User ID:   
 Primary SIP Auth ID:   
 Primary SIP Auth Password:

Backup SIP Server 1:   
 Backup SIP User ID 1:   
 Backup SIP Auth ID 1:   
 Backup SIP Auth Password 1:

Backup SIP Server 2:   
 Backup SIP User ID 2:   
 Backup SIP Auth ID 2:   
 Backup SIP Auth Password 2:

Remote SIP Port:   
 Local SIP Port:   
 Outbound Proxy:   
 Outbound Proxy Port:

Monitor User ID:   
 Monitor Authenticate ID:   
 Monitor Authenticate Password:

Disable rport Discovery:  
 Buffer SIP Calls:  
 Re-registration Interval (in seconds):   
 Unregister on Boot:  
 Keep Alive Period:

### Nightringer Settings

Enable Nightringer:  
 SIP Server:   
 Remote SIP Port:   
 Local SIP Port:   
 Outbound Proxy:   
 Outbound Proxy Port:   
 User ID:   
 Authenticate ID:   
 Authenticate Password:   
 Re-registration Interval (in seconds):

### RTP Settings

RTP Port (even):   
 Jitter Buffer:   
 SRTP: Enabled

### Call Disconnection

Terminate Call after delay:

### Codec Selection

Force Selected Codec:  
 Codec: PCMU (G.711, u-law)

### Button Settings

Dial Out Extension:   
 Extension ID:

## Autoprovisioning

If autoprovisioning the device, use the SIP Settings in the autoprovisioning template to register with RingCentral. An autoprovisioning template is provided in the respective firmware folder available on the **Downloads** tab of the product webpage here:

<https://www.cyberdata.net/collections/sip/products/011393>

Be sure to use the autoprovisioning template for the firmware version running on the device. The firmware version can be verified on the **Home** page of the web interface. Refer to the Operations Guide for instructions on autoprovisioning configuration.

**Figure 4-11:** Autoprovisioning Template Example – SIP Settings

```
<SIPSettings>
  <EnableSIPOperation>Yes</EnableSIPOperation>
  <SIPTransportProtocol>TLS</SIPTransportProtocol>
  <SIPTLSVersion>TLsv1.2</SIPTLSVersion>
  <VerifyServerCert>Yes</VerifyServerCert>
  <SIPServer>sip.ringcentral.com</SIPServer>
  <SIPUserID>18312234700*803836507011</SIPUserID>
  <SIPAuthID>803836507011</SIPAuthID>
  <SIPAuthPassword>*****</SIPAuthPassword>

  <UseCiscoSRST>No</UseCiscoSRST>
  <RemoteSIPPort>5060</RemoteSIPPort>
  <LocalSIPPort>5060</LocalSIPPort>
  <OutboundProxy>sip10.ringcentral.com</OutboundProxy>
  <OutboundProxyPort>5096</OutboundProxyPort>

  <SIPRegisterOnBoot>Yes</SIPRegisterOnBoot>
  <SIPRegistrationTimeout>30</SIPRegistrationTimeout>
  <SIPUnregisterOnBoot>No</SIPUnregisterOnBoot>
  <NatPingOptions>No</NatPingOptions>

  <CallTimeout>0</CallTimeout>

  <DisableRportDiscovery>No</DisableRportDiscovery>
  <BufferSIPCalls>No</BufferSIPCalls>
  <RTPPort>10500</RTPPort>
  <JitterBuffer>50</JitterBuffer>
  <KeepAlive>0</KeepAlive>
  <DefaultCodec>0</DefaultCodec>
  <!-- DefaultCodec:
  0 - use default list
  1 - G711Ulaw only
  2 - G711Alaw only
  3 - G722 only
  4 - G729 only -->

  <SIPRTPEncryption>1</SIPRTPEncryption>
  <!--SIPRTPEncryption:0 - disabled, 1 - enabled-->
</SIPSettings>

<ClockSettings>
  <NTPServer>north-america.pool.ntp.org</NTPServer>
  <NTPTimezone>PST8PDT,M3.2.0/2:00:00,M11.1.0/2:00:01</NTPTimezone>
  <NTPOnBoot>Yes</NTPOnBoot>
  <NTPAutoupdate>Yes</NTPAutoupdate>
  <NTPAutoupdateDelay>1</NTPAutoupdateDelay>
</ClockSettings>
```

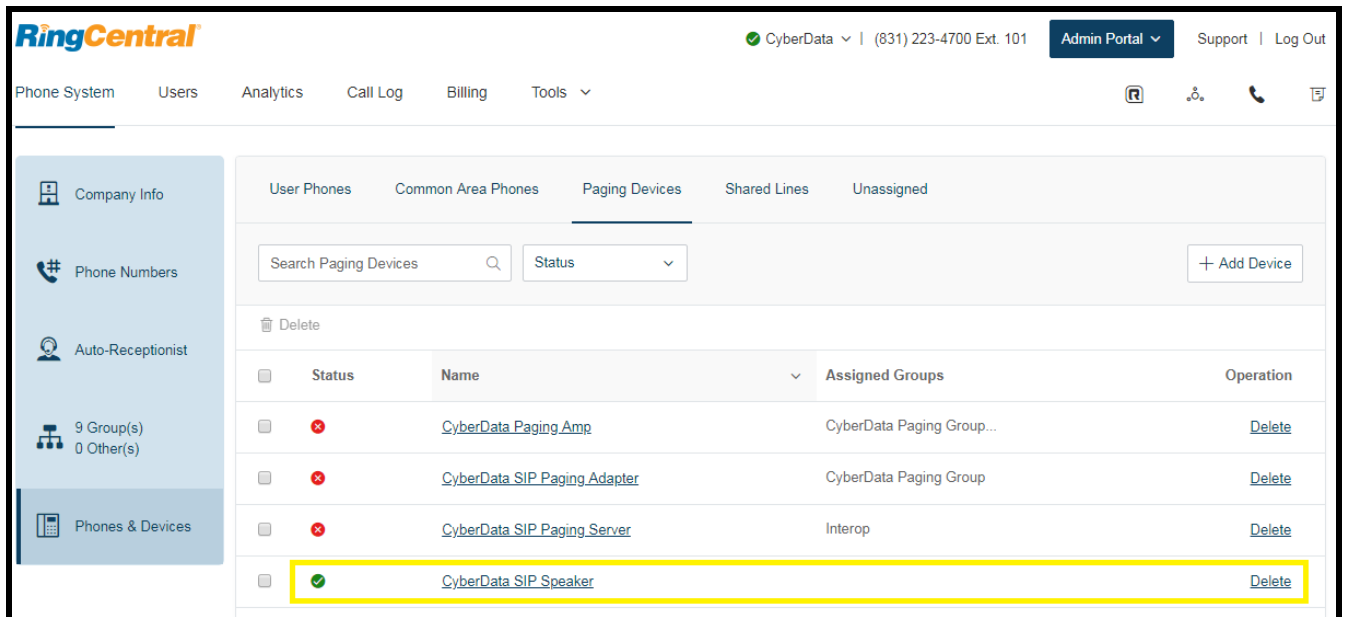
**Note:** These example values are published only for reference. The SIPAuthPassword value should be the actual value from the **Generic Paging Device Provisioning** popup window.

### Verify the Paging Extension is Registered

After the Speaker has rebooted and initialized to store changes, refresh the Home page of the web interface. The device should show as **[Registered with SIP Server]** in green text on the bottom of the Home Page of the web interface.

Additionally, the registration status can be verified with RingCentral through the Admin Portal. From the **Phones & Devices** menu, select **Devices** and the Paging Device just created for the Speaker. The status should show as “online” in the **Device Details**.

**Figure 4-12: Device Details – Status**



### Make a Test Call

Once the device has registered with RingCentral, use a phone associated with an [Allowed User](#) to dial the extension of the paging group. Refer to [RingCentral Article Number 5983](#) for instructions on paging a group from an IP phone.

## 4.2 TLS and SRTP: Voice Prompted Paging

When an installation requires more flexibility than auto-answer live paging, the SIP Speaker's primary extension can be provisioned as an IP phone associated with a user extension. Provisioning as a Paging Device does not allow the speaker to transmit audio back to the calling phone (talkback speaker) OR does not allow for sending of DTMF characters for stored message playback. Provision the Speaker's paging extension as an IP phone to enable the following features:

- Talkback
- Playing up to 9 configurable stored pages
- Security code

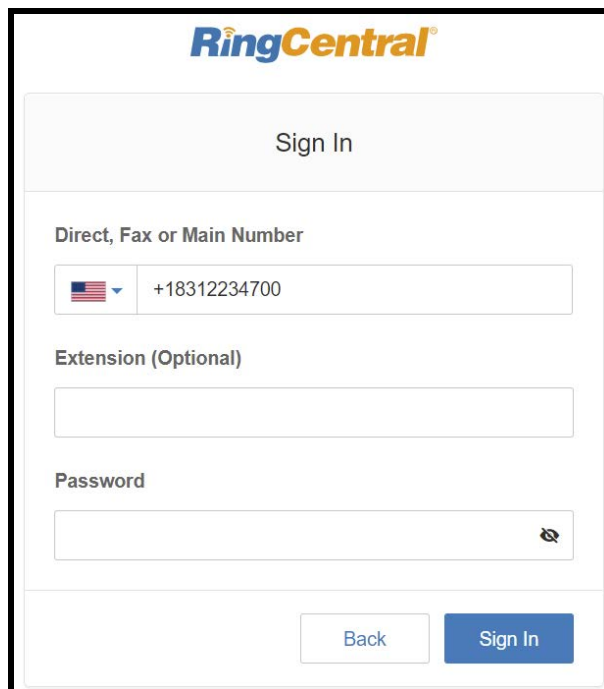
*Note: Talkback is only possible for the 011397/011398.*

### Add an IP Phone

This section describes the process of creating a user, provisioning an IP phone, and registering the primary extension that will be used for paging with RingCentral. First, a RingCentral user must be designated for the SIP Speaker. Use the following steps to create a user and provision an IP phone for the primary extension through the RingCentral Admin Portal.

1. Login to the RingCentral Admin Portal at <https://service.ringcentral.com>.

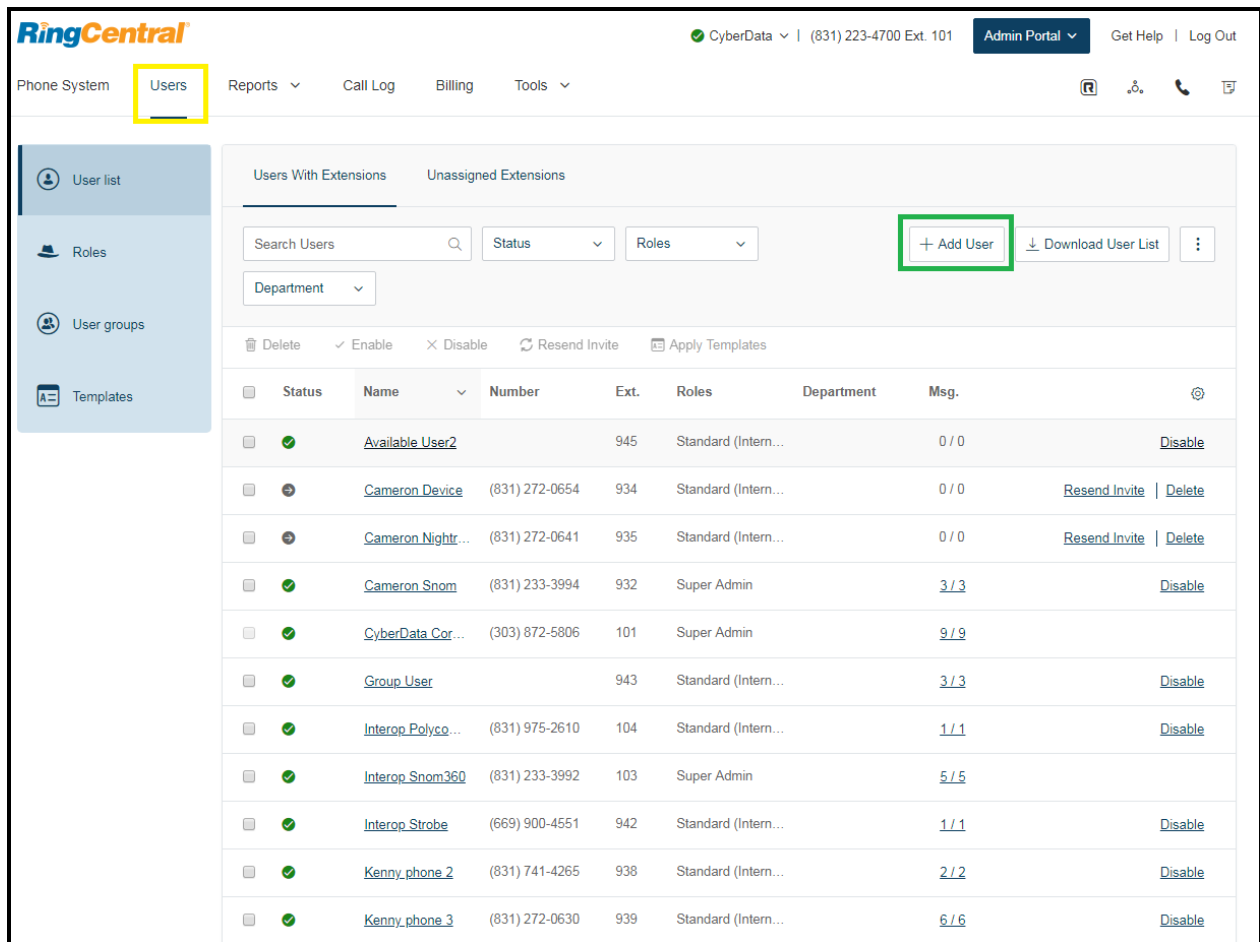
**Figure 4-13: RingCentral Admin Portal Login**



The screenshot shows the RingCentral Admin Portal Sign In page. At the top is the RingCentral logo. Below it is a 'Sign In' heading. The form contains three input fields: 'Direct, Fax or Main Number' with a country dropdown (USA) and the number '+18312234700'; 'Extension (Optional)' which is empty; and 'Password' which is empty and has a visibility toggle icon. At the bottom are 'Back' and 'Sign In' buttons.

2. Select **Users**, and then press the **Add User** button.

**Figure 4-14. Add User Button**



3. A popup window labeled **Add User** will appear. Select a location then press **Next**.

**Figure 4-15: Add User Popup**

The screenshot shows a modal window titled "Add Users" with a close button (X) in the top right corner. Below the title is a progress indicator with four steps: "1 Location", "2 Add Users", "3 Shipping Address", and "4 Confirmation". The "1 Location" step is currently active and underlined. The main content area is titled "Select a Location" and contains two radio button options: "Domestic" (which is selected) and "International". At the bottom right of the modal, there are two buttons: "Cancel" and "Next". The "Next" button is highlighted with a green border.

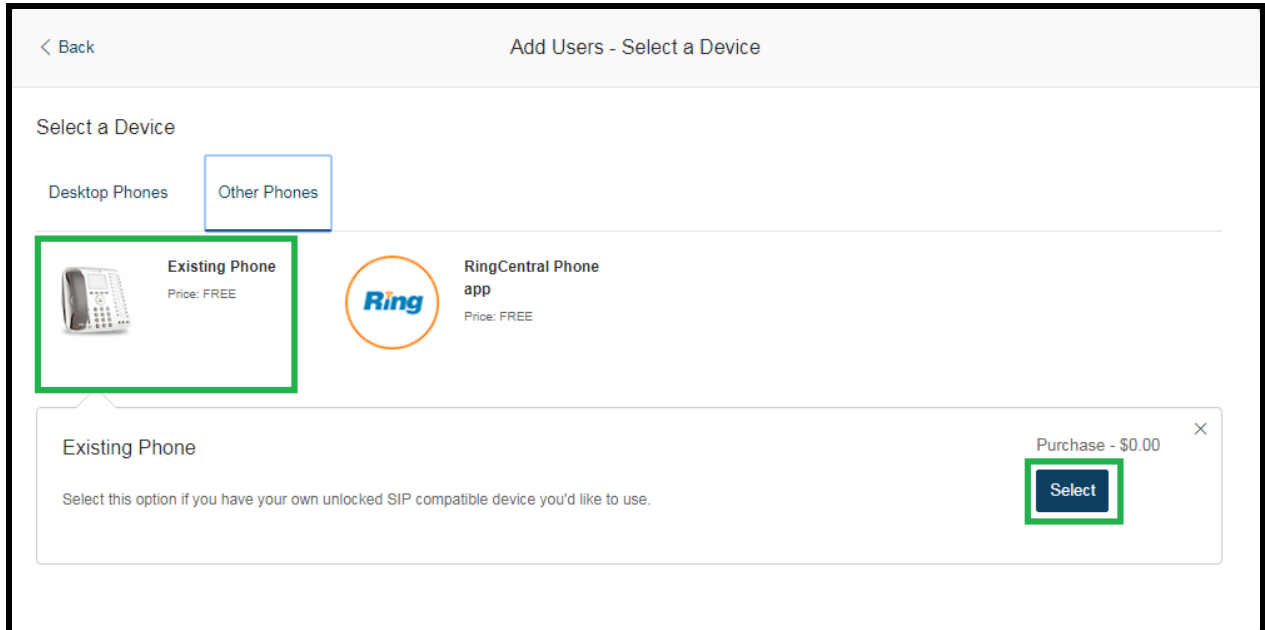
4. In the subsection **Add Users with Phones**, select the number of users, state, area code, and device.

**Figure 4-16: Pick a Phone Number**

The screenshot shows the "Add Users" modal window at step 2, "Add Users". The progress indicator shows "1 Location" as completed with a checkmark and "2 Add Users" as the current step. Below the progress bar are two tabs: "Add Users With Phones" (which is selected) and "Add Users Without Phones". Under the "Add Users With Phones" tab, there is an "Account Status" section with the following information: "Your plan: 20 - 99 Users", "Used: 25", "Available: 0", and "Available for purchase: 74". Below this is a note: "You can add multiple users at a time if they will all use the same area code. [Learn More](#)". The main form area contains four input fields: "Number of Users" (with the value "1"), "State" (a dropdown menu with "Select" visible), "Area Code" (a dropdown menu with "Select" visible), and "Device" (a dropdown menu with "Select a Device... >" visible). The "Number of Users" and "State" fields are highlighted with a yellow border, and the "Device" field is highlighted with a green border. To the right of these fields is an "Add" button. At the bottom of the modal, there are "Back" and "Next" buttons.

4. A prompt will ask to select a phone type. Choose **Other Phones**, and then make sure **Existing Phone** is selected. Press **Select**.

**Figure 4-17: Select Phone Type**



5. The process will lead through a six-step ordering process to set up a RingCentral Digital Line. Click the **Select** button to choose an **Existing Phone** and follow the steps in the ordering window to complete the order.

- From the **Phones & Devices** menu, select **User Phones** and select the user phone designated for the SIP Speaker.

**Figure 4-18. Select User**

Phones & Devices » User Phones

Search [ ] [ ] [ ] [ + Add Device ] [ ⋮ ]

Status	Device	Assigned	Phone Number	Serial No.	Actions
✖	<a href="#">Cameron Device</a>	Cameron Device	(831) 272-0654	N/A	⋮
✖	<a href="#">Cameron Nightringer</a>	Cameron Nightringer	(831) 272-0641	N/A	⋮
✖	<a href="#">Cameron Snom</a>	Cameron Snom	(831) 233-3994	N/A	⋮
✖	<a href="#">CyberData Nightringer Existing Phone</a>	Phil Lembo	(831) 609-4948	N/A	⋮
✖	<a href="#">CyberData SIP Speaker</a>	Kenny Test dev	(831) 316-9753	N/A	⋮

- From the Device’s page press the **Setup & Provision** button.

**Figure 4-19: Setup & Provision**

**Device**  
Existing Phone

[Change Phone](#) [Setup & Provision](#)

**Serial Number:** N/A ⓘ

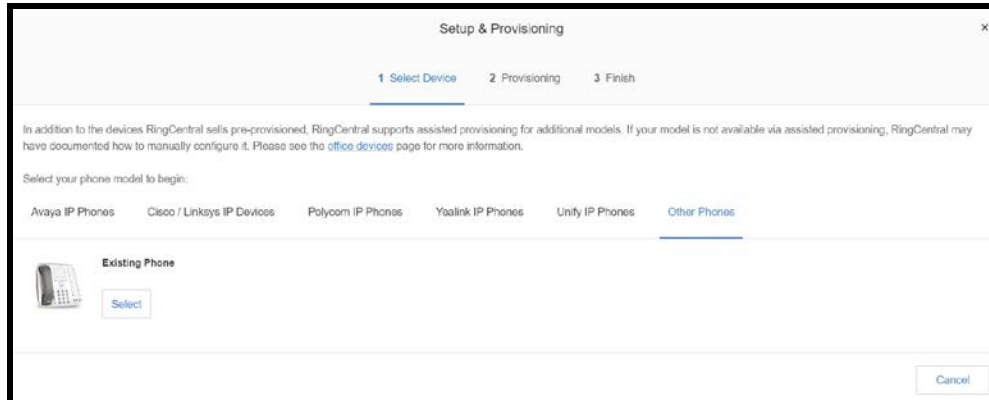
**Assigned Type:** User Phone

**Status:** Offline ⓘ

- A popup window labeled **Setup & Provisioning** will appear. Select **Other Phones** and click **Existing Phone**.

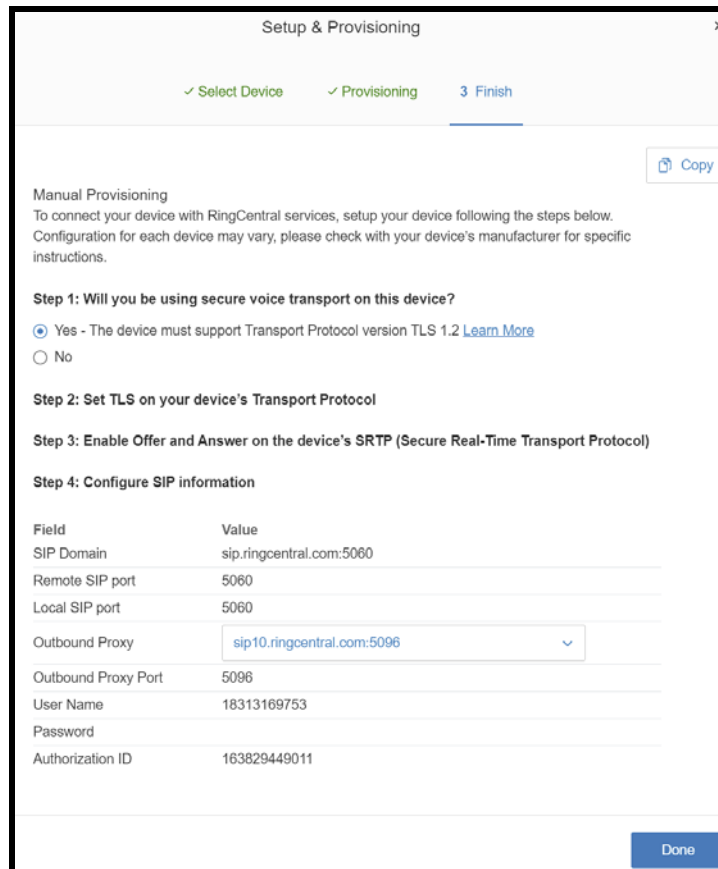


**Figure 4-20: Existing Phone**



9. A popup window labeled **Assisted Generic IP Phone/Adaptor Provisioning** will appear. The provisioning information to register the primary extension with RingCentral. Make sure to select an Outbound proxy in your area.

**Figure 4-21: IP Phone Provisioning Information**



*Note: The Password has been obscured. These values are published only for reference.*

**SIP Fields Table**

Use the following table to determine how the RingCentral SIP field values above correlate to the CyberData SIP field values.

**Table 4-2: CyberData Configuration Settings**

<b>Primary SIP Server</b> field	From the Paging Device Provisioning Information popup: <b>SIP Server/SIP Domain</b>
<b>Primary SIP User ID</b> field	From the Paging Device Provisioning Information popup: <b>User Name</b>
<b>Primary SIP Auth ID</b> field	From the Paging Device Provisioning Information popup: <b>Authorization ID</b>
<b>Primary SIP Auth Password</b> field	From the Paging Device Provisioning Information popup: <b>Password</b>
<b>Outbound Proxy</b> field	From the Paging Device Provisioning Information popup: <b>Outbound Proxy</b>
<b>Outbound Proxy Port</b> field	From the Paging Device Provisioning Information popup: <b>Outbound Proxy Port</b>
<b>Re-registration Interval (in seconds)</b> field	<b>30</b>
<b>Keep Alive Period</b> field	<b>0</b>
<b>Force Selected Codec</b> checkbox	<b>Yes</b>
<b>Codec</b> dropdown	<b>PCMU (G.711, u-law)</b>
<b>SIP Transport Protocol</b>	<b>TLS</b>
<b>TLS Version</b>	<b>1.2 only (recommended)</b>
<b>Verify Server Certificate</b>	<b>Enabled</b>
<b>Set Time with NTP Server on boot</b>	<b>Enabled</b>
<b>S RTP</b>	<b>Enabled</b>

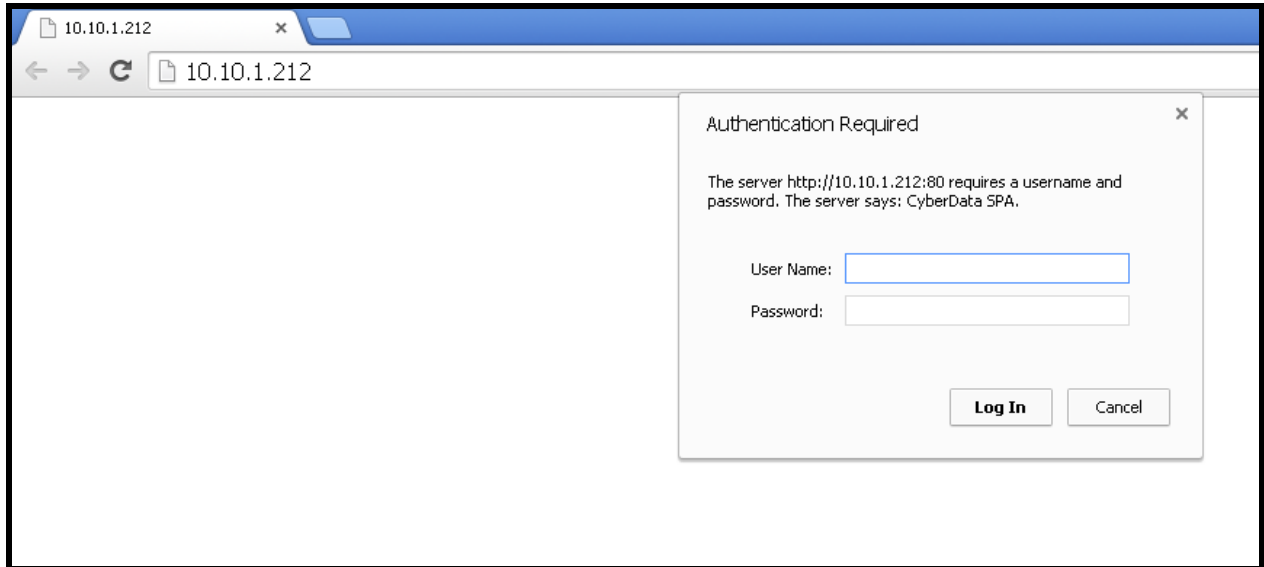
**Configure SIP Parameters**

1. Click **Launch Browser** from the CyberData Discovery Utility or point a browser to the CyberData device’s IP address to access the Home Page of the web interface.
2. Enter the default credentials when prompted and click the **Log In** button.

**Username: admin**

**Password: admin**

**Figure 4-22: Web Interface Login**



**Figure 4-23:** Home Page of Speaker Web Interface



*Note:* The firmware version and registration status for the paging extension and Nightringer extensions appear here.

3. On the Home Page, click **Device** on the top toolbar to access the Device page.

4. On the **Device** page scroll to the **Time Settings** section.

**Figure 4-24: NTP Settings**

**Time Settings**

Set Time with NTP server on boot:

NTP Server:

Posix Timezone String (see manual):

Periodically sync time with server:

Time update period (in hours):

Current Time:

Set Time Manually

**Set**

18. Check the box for **Set Time with NTP server on boot**.
19. Adjust the **NTP Server** as necessary.
20. Select a **Posix Timezone String** for the local area.

**Note:** CyberData's Technical support department has a knowledge base entry with a Posix Timezone string for every timezone. [Posix Timezone Strings Knowledge Base Entry](#)

21. Check the box for **Periodically Sync Time with Server**.
22. Set **Time update period (in hours)** to 1.
23. **Save**.
24. Press **SIP** to navigate to the SIP configuration page.
25. Set the **SIP Transport Protocol** to **TLS**.

**Note:** NTP enabled should appear in green.

26. Verify that **TLS Version** is set to **1.2** and **Verify Server Certificate** is checked.
27. Enter the provisioning information from the **Setup & Provisioning** popup window.
28. Set the **Re-registration interval** to **30**.
29. Set the **Keep Alive Period** to **0**.
30. Set **SRTP** to **Enabled**.
31. **Save and Reboot**.

Figure 4-25: SIP Configuration

<h3>SIP Settings</h3> <p>Enable SIP operation: <input checked="" type="checkbox"/></p> <p>SIP Transport Protocol: <span>TLS</span> <input type="button" value="v"/> NTP enabled</p> <p>TLS Version: <span>1.2 only (recommended)</span> <input type="button" value="v"/></p> <p>Verify Server Certificate: <input checked="" type="checkbox"/></p> <p>Register with a SIP Server: <input checked="" type="checkbox"/></p> <p>Use Cisco SRST: <input type="checkbox"/></p> <p>Primary SIP Server: <input type="text" value="sip.ringcentral.com"/></p> <p>Primary SIP User ID: <input type="text" value="18313169753"/></p> <p>Primary SIP Auth ID: <input type="text" value="163829449011"/></p> <p>Primary SIP Auth Password: <input type="password" value="*****"/></p> <p>Backup SIP Server 1: <input type="text"/></p> <p>Backup SIP User ID 1: <input type="text"/></p> <p>Backup SIP Auth ID 1: <input type="text"/></p> <p>Backup SIP Auth Password 1: <input type="password"/></p> <p>Backup SIP Server 2: <input type="text"/></p> <p>Backup SIP User ID 2: <input type="text"/></p> <p>Backup SIP Auth ID 2: <input type="text"/></p> <p>Backup SIP Auth Password 2: <input type="password"/></p> <p>Remote SIP Port: <input type="text" value="5060"/></p> <p>Local SIP Port: <input type="text" value="5060"/></p> <p>Outbound Proxy: <input type="text" value="sip10.ringcentral.com"/></p> <p>Outbound Proxy Port: <input type="text" value="5096"/></p> <p>Monitor User ID: <input type="text"/></p> <p>Monitor Authenticate ID: <input type="text"/></p> <p>Monitor Authenticate Password: <input type="password"/></p> <p>Disable rport Discovery: <input type="checkbox"/></p> <p>Buffer SIP Calls: <input type="checkbox"/></p> <p>Re-registration Interval (in seconds): <input type="text" value="30"/></p> <p>Unregister on Boot: <input type="checkbox"/></p> <p>Keep Alive Period: <input type="text" value="0"/></p>	<h3>Nightringer Settings</h3> <p>Enable Nightringer: <input type="checkbox"/></p> <p>SIP Server: <input type="text" value="10.0.0.253"/></p> <p>Remote SIP Port: <input type="text" value="5060"/></p> <p>Local SIP Port: <input type="text" value="5061"/></p> <p>Outbound Proxy: <input type="text"/></p> <p>Outbound Proxy Port: <input type="text" value="0"/></p> <p>User ID: <input type="text" value="241"/></p> <p>Authenticate ID: <input type="text" value="241"/></p> <p>Authenticate Password: <input type="password" value="*****"/></p> <p>Re-registration Interval (in seconds): <input type="text" value="360"/></p>
	<h3>RTP Settings</h3> <p>RTP Port (even): <input type="text" value="10500"/></p> <p>Jitter Buffer: <input type="text" value="50"/></p> <p>SRTP: <span>Enabled</span> <input type="button" value="v"/></p>
	<h3>Call Disconnection</h3> <p>Terminate Call after delay: <input type="text" value="0"/></p>
	<h3>Codec Selection</h3> <p>Force Selected Codec: <input type="checkbox"/></p> <p>Codec: <span>PCMU (G.711, u-law)</span> <input type="button" value="v"/></p>
	<h3>Button Settings</h3> <p>Dial Out Extension: <input type="text" value="204"/></p> <p>Extension ID: <input type="text" value="id204"/></p>
<p><input type="button" value="Save"/> <input type="button" value="Reboot"/> <input type="button" value="Toggle Help"/></p>	

## Autoprovisioning

If autoprovisioning the device, use the SIP Settings in the autoprovisioning template to register with RingCentral. An autoprovisioning template is provided in the respective firmware folder available on the **Downloads** tab of the product webpage here:

<https://www.cyberdata.net/collections/sip/products/011393>

Be sure to use the autoprovisioning template for the firmware version running on the device. The firmware version can be verified on the **Home** page of the web interface. Refer to the Operations Guide for instructions on autoprovisioning configuration.

**Figure 4-26:** Autoprovisioning Template Example – SIP Settings

```
<SIPSettings>
  <EnableSIPOperation>Yes</EnableSIPOperation>
  <SIPTransportProtocol>TLS</SIPTransportProtocol>
  <SIPTLSVersion>TLSv1.2</SIPTLSVersion>
  <VerifyServerCert>Yes</VerifyServerCert>
  <SIPServer>sip.ringcentral.com</SIPServer>
  <SIPUserID>18313169753</SIPUserID>
  <SIPAuthID>163829449011</SIPAuthID>
  <SIPAuthPassword>*****</SIPAuthPassword>

  <UseCiscoSRST>No</UseCiscoSRST>
  <RemoteSIPPort>5060</RemoteSIPPort>
  <LocalSIPPort>5060</LocalSIPPort>
  <OutboundProxy>sip10.ringcentral.com</OutboundProxy>
  <OutboundProxyPort>5096</OutboundProxyPort>

  <SIPRegisterOnBoot>Yes</SIPRegisterOnBoot>
  <SIPRegistrationTimeout>30</SIPRegistrationTimeout>
  <SIPUnregisterOnBoot>No</SIPUnregisterOnBoot>
  <NatPingOptions>No</NatPingOptions>

  <CallTimeout>0</CallTimeout>

  <DisableRportDiscovery>No</DisableRportDiscovery>
  <BufferSIPCalls>No</BufferSIPCalls>
  <RTPPort>10500</RTPPort>
  <JitterBuffer>50</JitterBuffer>
  <KeepAlive>0</KeepAlive>
  <DefaultCodec>0</DefaultCodec>
  <!-- DefaultCodec:
  0 - use default list
  1 - G711Ulaw only
  2 - G711Alaw only
  3 - G722 only
  4 - G729 only -->

  <SIPRTPEncryption>1</SIPRTPEncryption>
  <!--SIPRTPEncryption:0 - disabled, 1 - enabled-->
</SIPSettings>

<ClockSettings>
  <NTPServer>north-america.pool.ntp.org</NTPServer>
  <NTPTimezone>PST8PDT,M3.2.0/2:00:00,M11.1.0/2:00:01</NTPTimezone>
  <NTPOnBoot>Yes</NTPOnBoot>
  <NTPAutoupdate>Yes</NTPAutoupdate>
  <NTPAutoupdateDelay>1</NTPAutoupdateDelay>
</ClockSettings>
```

**Note:** These example values are published only for reference. The SIPAuthPassword value should be the actual value from the **Setup & Provisioning** popup window.

### Verify the Extension is Registered

After the Speaker has rebooted and initialized to store changes, refresh the Home page of the web interface. The device should show as **[Registered with SIP Server]** in green text on the bottom of the Home Page of the web interface.

**Figure 4-27: Phone Details – Status**



Once the Primary extension has registered with RingCentral and has been configured with the appropriate Device settings for the installation, a RingCentral phone may be used to dial the extension.



## 5.0 Configuration Procedure: UDP Auto-Answer Paging

The RingCentral Paging feature delivers real-time broadcasts to desk phones and/or paging devices. CyberData speakers can be added to *Paging Only* groups supporting a combination of CyberData paging endpoints and RingCentral Polycom and Cisco desk phones.

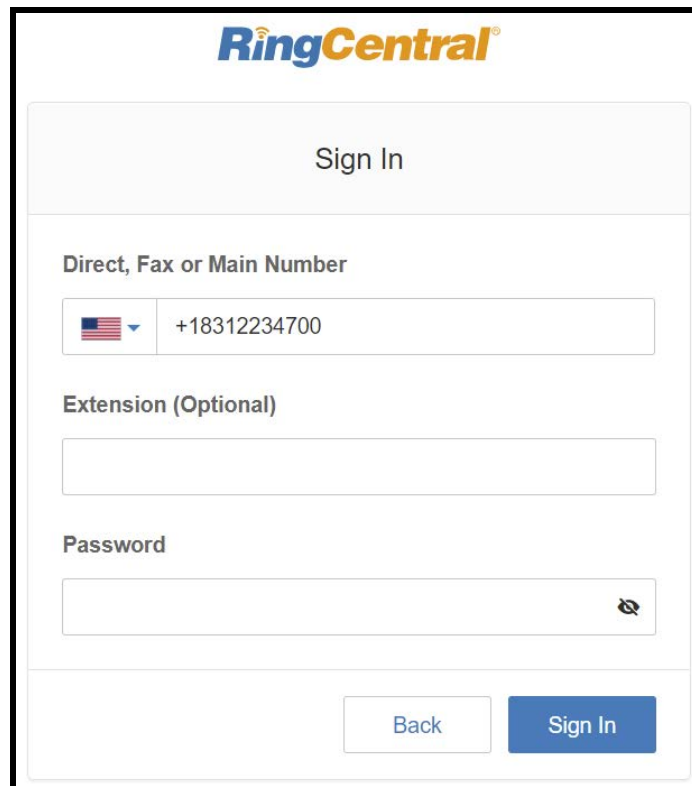
CyberData SIP Speakers are ideal for one-way, auto-answer paging in indoor environments and offer external or digital volume control.

### Add a Paging Extension

This section describes the process of creating a user, provisioning a paging device, and registering the paging extension that will be used for paging with RingCentral. First, a user must be created for the speaker. Use the following steps to create a user and provision a paging device for the speaker's primary extension through the RingCentral Admin Portal.

1. Login to the RingCentral Admin Portal at <https://service.ringcentral.com>.

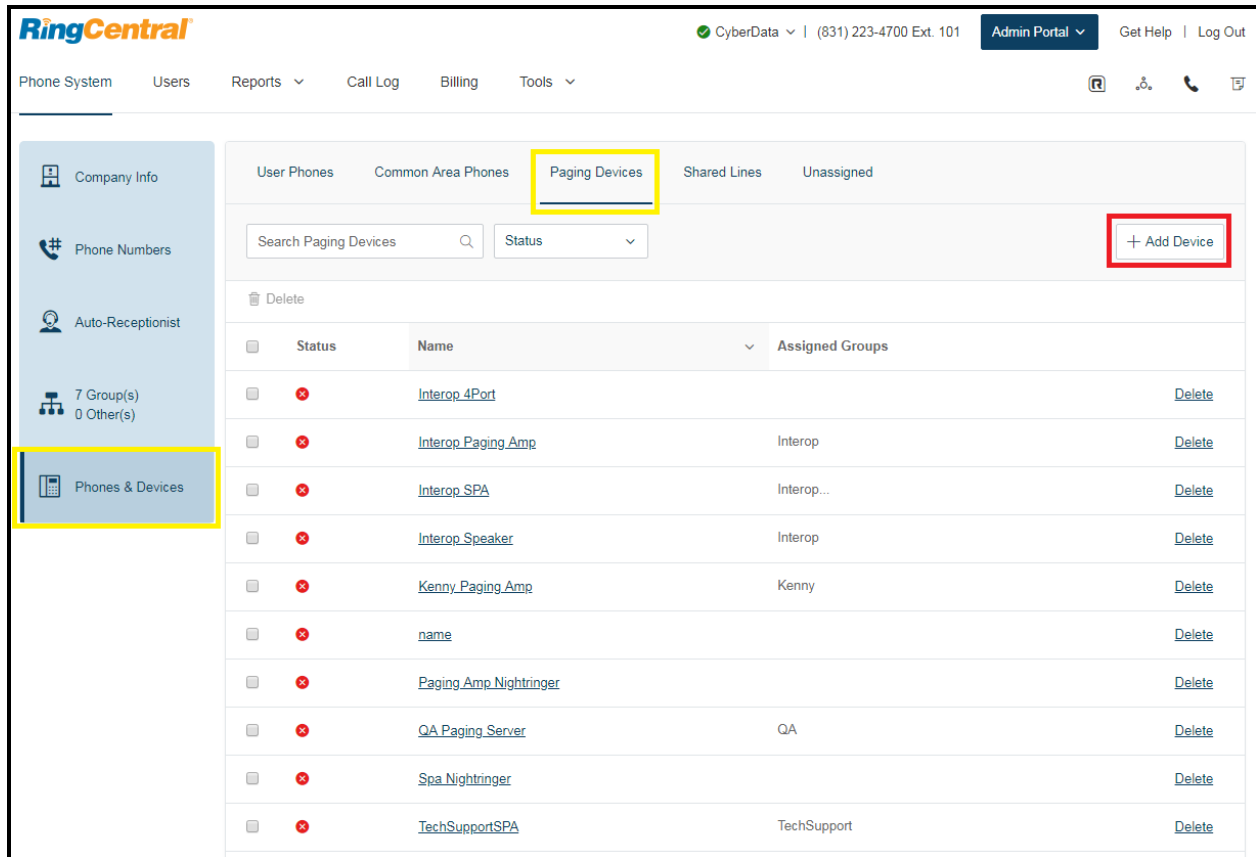
**Figure 5-1:** RingCentral Admin Portal Login



The screenshot shows the RingCentral Admin Portal Sign In page. At the top is the RingCentral logo. Below it is a 'Sign In' heading. The form contains three input fields: 'Direct, Fax or Main Number' with a country dropdown (USA) and the number '+18312234700', 'Extension (Optional)', and 'Password' with a toggle for visibility. At the bottom are 'Back' and 'Sign In' buttons.

- From the Phones & Devices menu, select Paging Devices, and then click Add Device.

**Figure 5-2: Add Device**



3. A popup window labeled **Add Paging Device** will appear. Set the **Paging Device Nickname**, and then click **Next**.

**Figure 5-3:** Add Paging Device - Nickname

4. A popup window labeled **Generic Paging Device Provisioning** will appear. The credentials will be used to register the SIP speaker's primary extension with RingCentral.

**Figure 5-4. Provisioning Information**

×

✓ Device Nickname    **2 Provisioning Info**

Provisioning information for CyberData paging devices

CyberData paging devices need to be programmed with the information given below to make them fully functional when assigned to paging group.

**Step 1**  
Open a web browser session to the CyberData device. Please consult the vendor documentation for details on how to determine the IP address of your device and how to enter the relevant login credentials.

**Step 2**  
Navigate to the Networking page and confirm that the device is configured for DHCP operation.

**Step 3**  
Navigate to the SIP Configuration page and enter the following settings in the appropriate fields and Click "Save". The device may reboot.

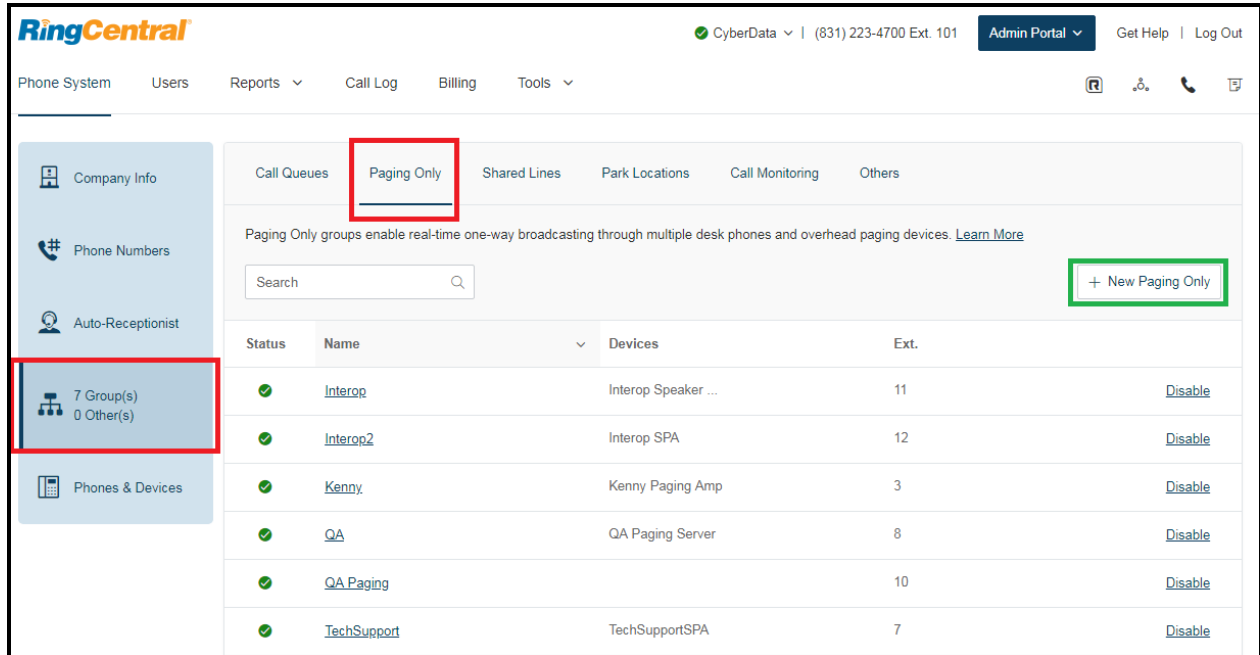
Field	Value
SIP Domain	sip.ringcentral.com
Remote SIP port	5060
Local SIP port	5060
Outbound Proxy	sip20.ringcentral.com
Outbound Proxy Port	5090
User Name	18312234700*803304087011
Authorization ID	803304087011
Password	

Done

*Note: The Password has been obscured. These values are published only for reference.*

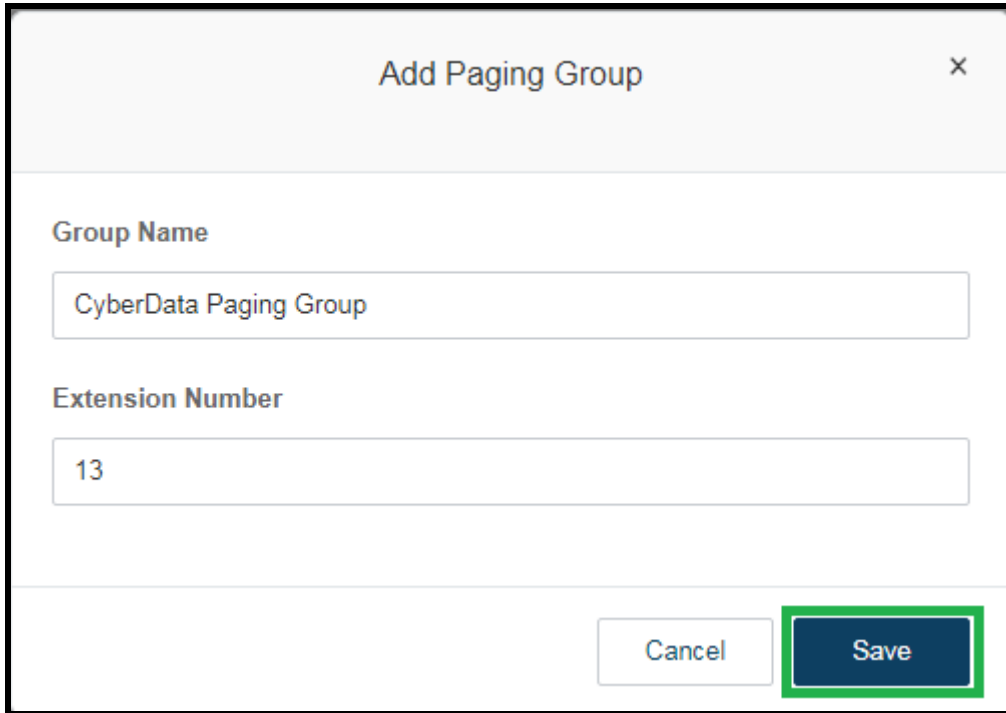
- Next, add the new Paging Device to a *Paging Only* group. From the [n] **Groups** menu, select **Paging Only**, then click **New Paging Group**.

Figure 5-5: Add Group



6. A popup window labeled **Add Paging Group** will appear. Enter an available extension number and name for the *Paging Only* group, then click **Save**.

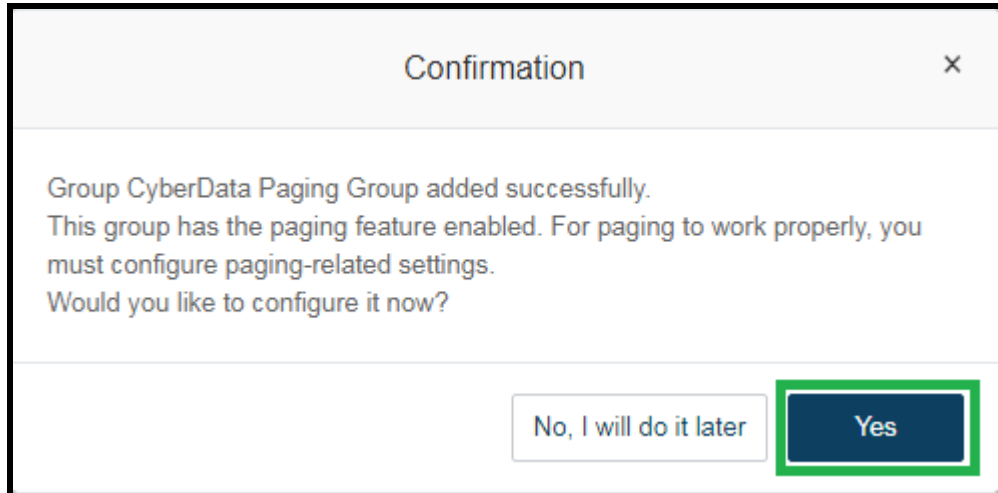
**Figure 5-6.** Add Paging Group



The image shows a dialog box titled "Add Paging Group" with a close button (X) in the top right corner. The dialog contains two input fields. The first is labeled "Group Name" and contains the text "CyberData Paging Group". The second is labeled "Extension Number" and contains the text "13". At the bottom right of the dialog, there are two buttons: "Cancel" and "Save". The "Save" button is highlighted with a green border.

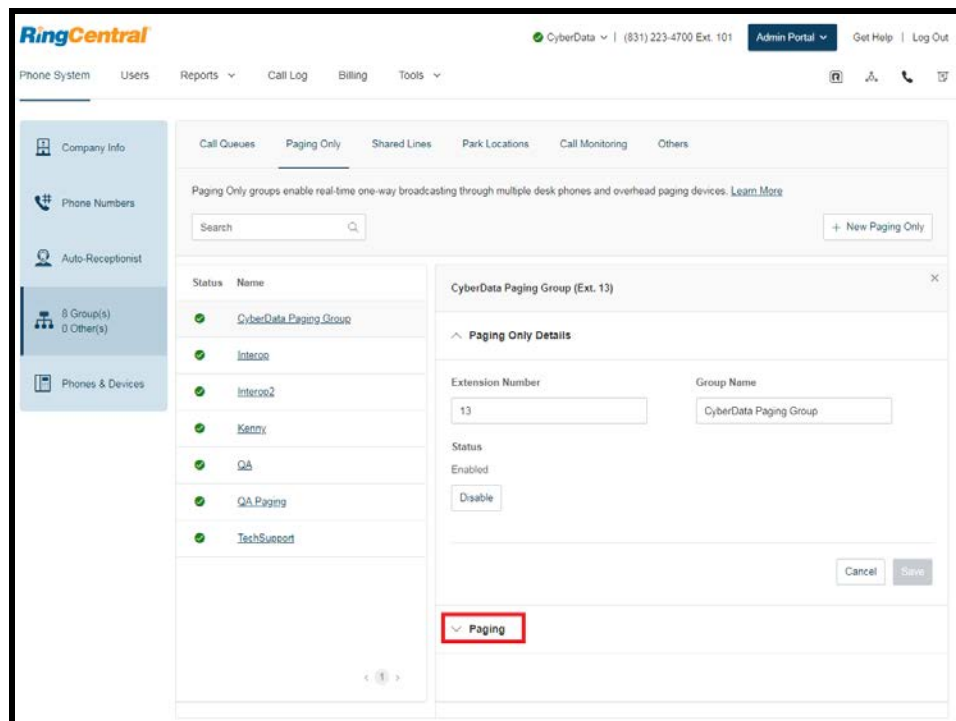
7. A confirmation screen will confirm the paging group has been created. Select **Yes** to configure paging settings.

**Figure 5-7: Confirmation**



8. Verify the new paging group appears in the **Groups** list. Select the paging group and a menu will appear to the far right of the screen. From this menu, select **Paging**.

**Figure 5-8: Group Paging Menu**



- From the **Paging** menu, select **Devices to Receive Page**, then check the devices to add to the group and press **Save**.

**Figure 5-9:** Devices to Receive Page

CyberData Paging Group (Ext. 13)

▼ Paging Only Details

^ Paging

Devices to Receive Page    Users Allowed to Page this Group

Only-Paging capable phones are displayed in the list. You can select up to 25 devices.

Search  Phone Type: All Phone T... ▼

Show All | [Show Selected \(4\)](#)

<input type="checkbox"/>	Phone Type	Phone Name	Ext.
<input type="checkbox"/>	User Phone	Christina PolycomVX300	104
<input checked="" type="checkbox"/>	Paging Device	CyberData Paging Amp	-
<input checked="" type="checkbox"/>	Paging Device	CyberData SIP Paging Adapter	-
<input type="checkbox"/>	Paging Device	CyberData SIP Paging Server	-
<input checked="" type="checkbox"/>	Paging Device	CyberData SIP Speaker	-
<input checked="" type="checkbox"/>	Paging Device	Paging Amp Nightringer	-
<input type="checkbox"/>	User Phone	QA Polycom	602
<input type="checkbox"/>	Paging Device	SIP IP66 Outdoor Horn	-

Total: 8      Show: 10 < 1 >

Cancel    **Save**



- Next, select **Users Allowed to Page this Group** to designate users with paging privileges. Check the box next to the users desired then press **Save**.

**Figure 5-10:** Users Allowed to Page This Group

The screenshot shows a web interface for configuring paging. At the top, there is a 'Paging' header with an expand/collapse arrow. Below it, there are two tabs: 'Devices to Receive Page' and 'Users Allowed to Page this Group'. The second tab is selected and highlighted with a green box. Below the tabs, there is a search bar and a dropdown menu for 'All Departments'. Below that, there are links for 'Show All' and 'Show Selected (3)'. A table lists users with columns for 'Name', 'Ext.', and 'Department'. Three rows are checked with green boxes: 'CyberData Corporation' (Ext. 101), 'Interop PolycomVWX300' (Ext. 104), and 'Interop Snom360' (Ext. 103). At the bottom, there is a 'Total: 23' label, a 'Show: 10' dropdown, and a pagination control showing '1 2 3'. Finally, there are 'Cancel' and 'Save' buttons at the bottom right, with the 'Save' button highlighted in a green box.

<input type="checkbox"/>	Name	Ext.	Department
<input type="checkbox"/>	Available User2	945	
<input type="checkbox"/>	Cameron Device	934	
<input type="checkbox"/>	Cameron Nightringer	935	
<input type="checkbox"/>	Cameron Snom	932	
<input checked="" type="checkbox"/>	CyberData Corporation	101	
<input type="checkbox"/>	Group User	943	
<input checked="" type="checkbox"/>	Interop PolycomVWX300	104	
<input checked="" type="checkbox"/>	Interop Snom360	103	
<input type="checkbox"/>	Interop Strobe	942	
<input type="checkbox"/>	Kenny phone 2	938	

- The page redirects back to the group's paging menu after clicking **Save**. Proceed to **Configure SIP Parameters**.

### Configure SIP Parameters

One may feel more comfortable with web-based configuration or provisioning using templates. Both methods are documented in this configuration guide. Be sure to review the SIP Speaker’s operation guide for complete information on configuration through the web interface and CyberData’s “autoprovisioning” method using templates via HTTP, HTTPS, and TFTP protocols.

**Table 5-1: CyberData Configuration Settings**

<b>Primary SIP Server</b> field	From the Paging Device Provisioning Information popup: <b>SIP Server/SIP Domain</b>
<b>Primary SIP User ID</b> field	From the Paging Device Provisioning Information popup: <b>User Name</b>
<b>Primary SIP Auth ID</b> field	From the Paging Device Provisioning Information popup: <b>Authorization ID</b>
<b>Primary SIP Auth Password</b> field	From the Paging Device Provisioning Information popup: <b>Password</b>
<b>Outbound Proxy</b> field	From the Paging Device Provisioning Information popup: <b>Outbound Proxy</b>
<b>Outbound Proxy Port</b> field	From the Paging Device Provisioning Information popup: <b>Outbound Proxy Port</b>
<b>Re-registration Interval (in seconds)</b> field	<b>30</b>
<b>Keep Alive Period</b> field	<b>0</b>
<b>Force Selected Codec</b> checkbox	<b>Yes</b>
<b>Codec</b> dropdown	<b>PCMU (G.711, u-law)</b>

*Web Configuration*

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

1. Click **Launch Browser** from the CyberData Discovery Utility or point a browser to the CyberData device's IP address to access the Home Page of the web interface.
2. Enter the default credentials when prompted and click the **Log In** button.

**Username: admin**

**Password: admin**

**Figure 5-11. Web Interface Login**

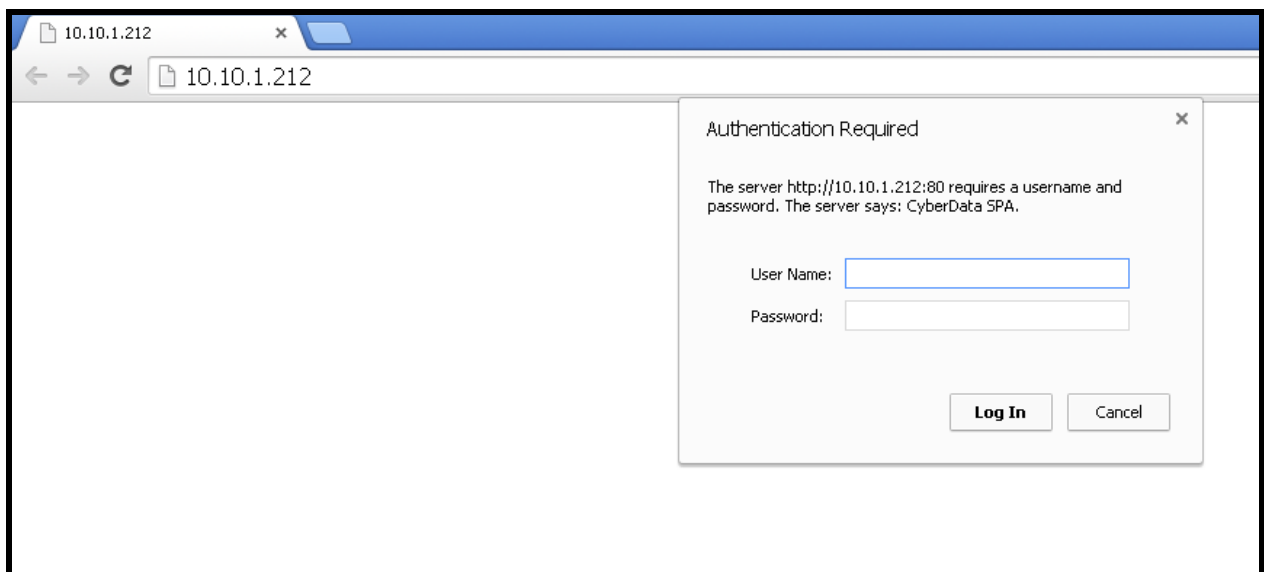
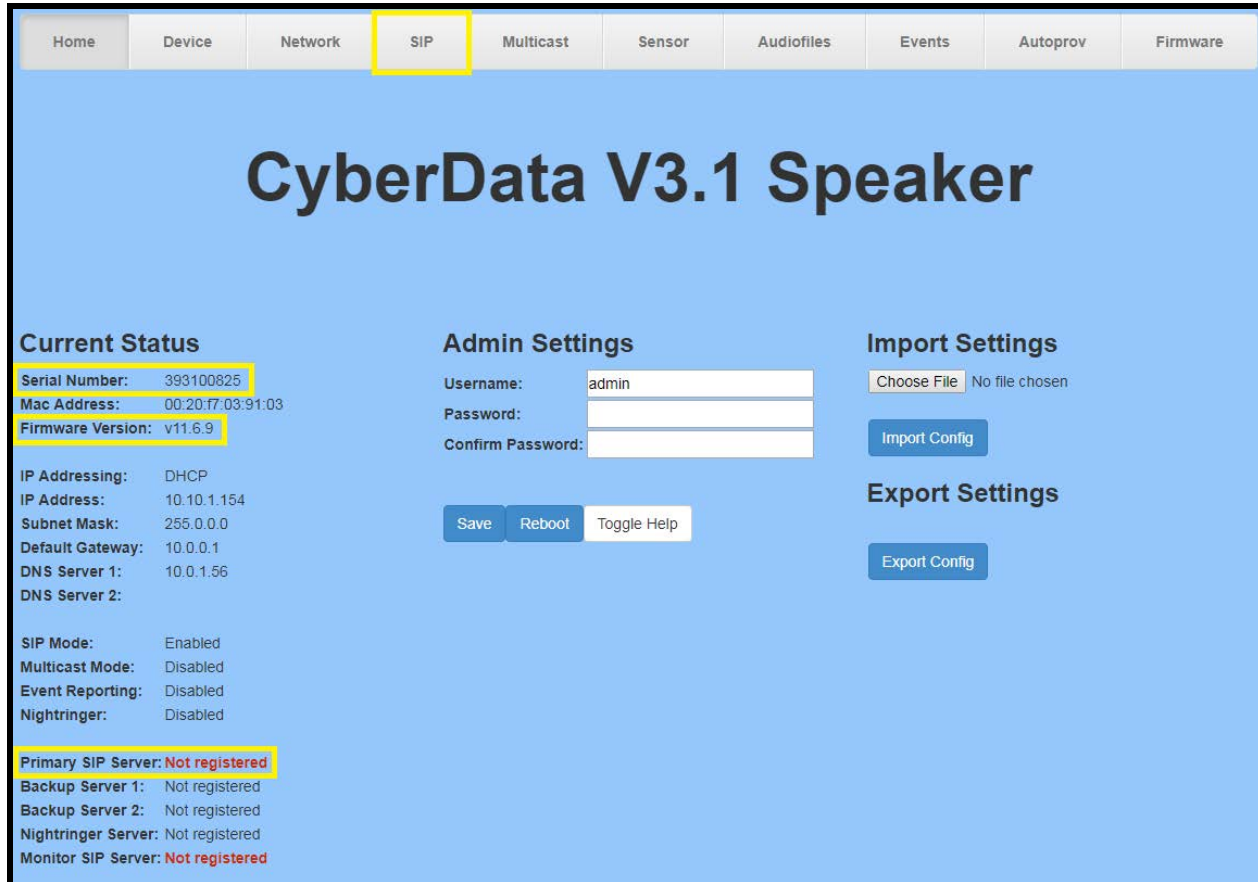


Figure 5-12: Home Page of Speaker Web Interface



3. On the Home Page, click **SIP Config** on the top toolbar to access the SIP Configuration page.

*Note: The firmware version and registration status for the paging extension and Nightringer extensions appear here.*

10. Enter the provisioning information from the [Generic Paging Device Provisioning](#) popup window.

*Note: The Local SIP Port is set to 5060 on default and is used by the Speaker as its source port for the primary extension configured on this page.*

5. Set the *Re-registration Interval (in seconds)* to **30 seconds**.
6. Set the *Keep Alive Period* to **0**.
7. Enable *Force Codec Selection* and use **PCMU**.
8. Click **Save** and **Reboot** to store changes.

Figure 5-13: SIP Configuration

# CyberData V3.1 Speaker

### SIP Settings

Enable SIP operation:

Register with a SIP Server:

Use Cisco SRST:

Primary SIP Server: sip.ringcentral.com

Primary SIP User ID: 18312234700\*803304087011

Primary SIP Auth ID: 803304087011

Primary SIP Auth Password: \*\*\*\*\*

Backup SIP Server 1:

Backup SIP User ID 1:

Backup SIP Auth ID 1:

Backup SIP Auth Password 1:

Backup SIP Server 2:

Backup SIP User ID 2:

Backup SIP Auth ID 2:

Backup SIP Auth Password 2:

Remote SIP Port: 5060

Local SIP Port: 5060

Outbound Proxy: sip20.ringcentral.com

Outbound Proxy Port: 5090

Monitor User ID: 200

Monitor Authenticate ID: 200

Monitor Authenticate Password: \*\*\*\*\*

Disable rport Discovery:

Buffer SIP Calls:

Re-registration Interval (in seconds): 30

Unregister on Boot:

Keep Alive Period: 0

### Nightringer Settings

Enable Nightringer:

SIP Server: 10.0.0.253

Remote SIP Port: 5060

Local SIP Port: 5061

Outbound Proxy:

Outbound Proxy Port: 0

User ID: 241

Authenticate ID: 241

Authenticate Password: \*\*\*\*\*

Re-registration Interval (in seconds): 360

### RTP Settings

RTP Port (even): 10500

Jitter Buffer: 50

### Call Disconnection

Terminate Call after delay: 0

### Codec Selection

Force Selected Codec:

Codec: PCMU (G.711, u-law)

### Button Settings

Dial Out Extension: 204

Extension ID: id204

Save Reboot Toggle Help

## Autoprovisioning

If autoprovisioning the Speaker, use the SIP Settings in the autoprovisioning template to register the Speaker with RingCentral. An autoprovisioning template is provided in the respective firmware folder available on the **Downloads** tab of the product webpage here:

<https://www.cyberdata.net/collections/sip/products/011393>

Be sure to use the autoprovisioning template for the firmware version running on the Speaker. The firmware version can be verified on the **Home** page of the web interface. Refer to the Operations Guide for instructions on autoprovisioning configuration.

**Figure 5-14.** Autoprovisioning Template Example – SIP Settings

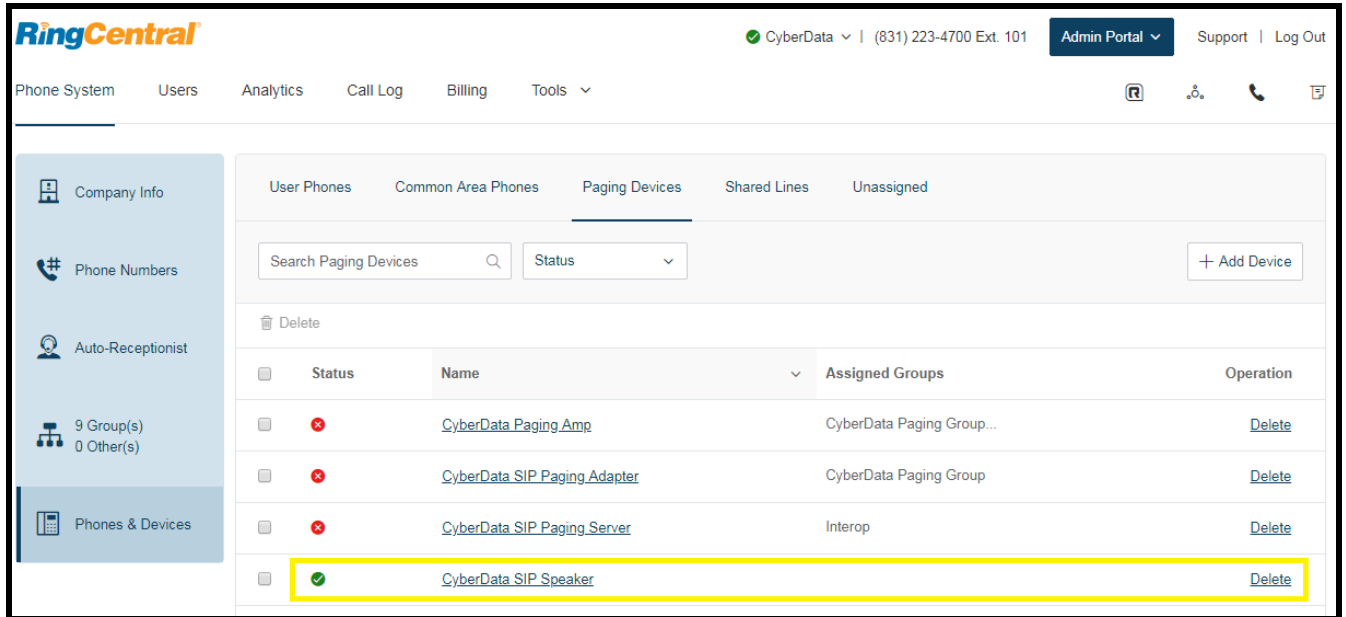
```
<SIPSettings>
  <EnableSIPOperation>Yes</EnableSIPOperation>
  <SIPServer>sip.ringcentral.com</SIPServer>
  <RemoteSIPPort>5060</RemoteSIPPort>
  <BackupSIPServer1></BackupSIPServer1>
  <BackupSIPServer2></BackupSIPServer2>
  <LocalSIPPort>5060</LocalSIPPort>
  <OutboundProxy>sip20.ringcentral.com</OutboundProxy>
  <OutboundProxyPort>5090</OutboundProxyPort>
  <SIPUserID>18312234700*194773016011</SIPUserID>
  <SIPAuthID>194773016011</SIPAuthID>
  <SIPAuthPassword>*****</SIPAuthPassword>
  <SIPRegistrationTimeout>30</SIPRegistrationTimeout>
  <SIPUnregisterOnBoot>No</SIPUnregisterOnBoot>
  <SIPRegisterOnBoot>Yes</SIPRegisterOnBoot>
  <BufferSIPCalls>No</BufferSIPCalls>
  <RTPPort>10500</RTPPort>
  <CallTimeout>0</CallTimeout>
  <UseCiscoSRST>No</UseCiscoSRST>
  <DisableRportDiscovery>No</DisableRportDiscovery>
  <KeepAlive>0</KeepAlive>
</SIPSettings>
```

**Note:** These example values are published only for reference. The SIPAuthPassword value should be the actual value from the **Generic Paging Device Provisioning** popup window.

### Verify the Paging Extension is Registered

After the Speaker has rebooted and initialized to store changes, refresh the Home page of the web interface. The device should show as **[Registered with SIP Server]** in green text on the bottom of the Home Page of the web interface. Additionally, the registration status can be verified with RingCentral through the Admin Portal. From the **Phones & Devices** menu, select **Devices** and the Paging Device just created for the Speaker. The status should show as “online” in the **Device Details**.

**Figure 5-15: Device Details – Status**



### Make a Test Call

Once the device has registered with RingCentral, use a phone associated with an [Allowed User](#) to dial the extension of the paging group. Refer to [RingCentral Article Number 5983](#) for instructions on paging a group from an IP phone.

## 6.0 Configuration Procedure: UDP Voice-Prompted Paging

When an installation requires more flexibility than auto-answer live paging, the SIP Speaker's primary extension can be provisioned as an IP phone associated with a user extension. Provisioning as a Paging Device does not allow the speaker to transmit audio back to the calling phone (talkback speaker) OR does not allow for sending of DTMF characters for stored message playback. Provision the Speaker's paging extension as an IP phone to enable the following features:

- Talkback
- Playing up to 9 configurable stored pages
- Security code

*Note: Talkback is only possible for the 011397/011398.*

### Add an IP Phone

This section describes the process of creating a user, provisioning an IP phone, and registering the primary extension that will be used for paging with RingCentral. First, a RingCentral user must be designated for the SIP Speaker. Use the following steps to create a user and provision an IP phone for the primary extension through the RingCentral Admin Portal.

5. Login to the RingCentral Admin Portal at <https://service.ringcentral.com>.

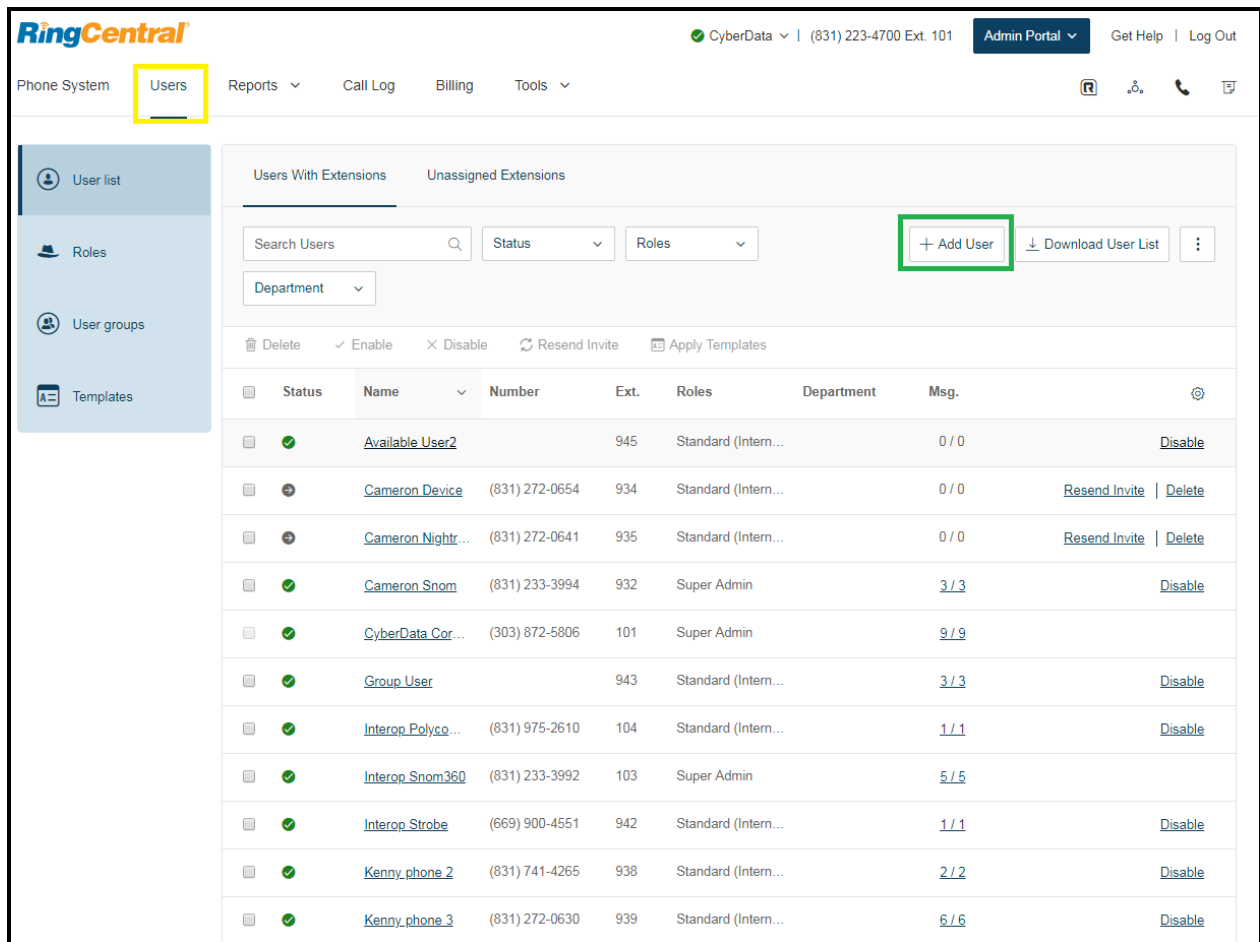
**Figure 6-1: RingCentral Admin Portal Login**

The screenshot shows the RingCentral Admin Portal login interface. At the top is the RingCentral logo. Below it is a 'Sign In' heading. The form contains three input fields: 'Direct, Fax or Main Number' with a country dropdown menu set to the United States and the number '+18312234700', 'Extension (Optional)', and 'Password'. At the bottom of the form are two buttons: 'Back' and 'Sign In'.



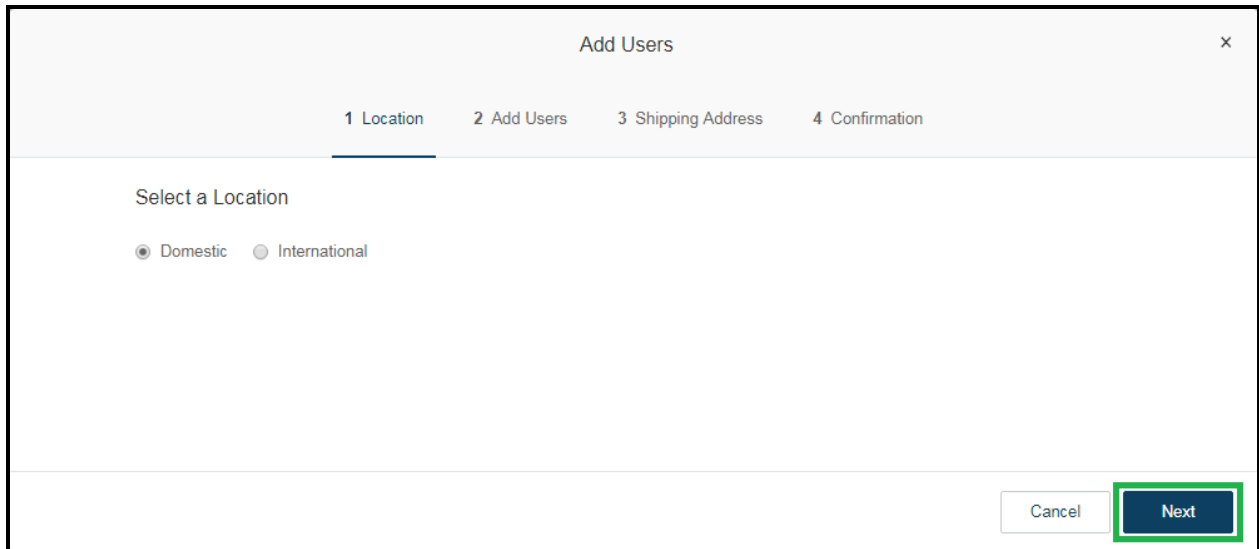
6. Select **Users**, and then press the **Add User** button.

**Figure 6-2. Add User Button**



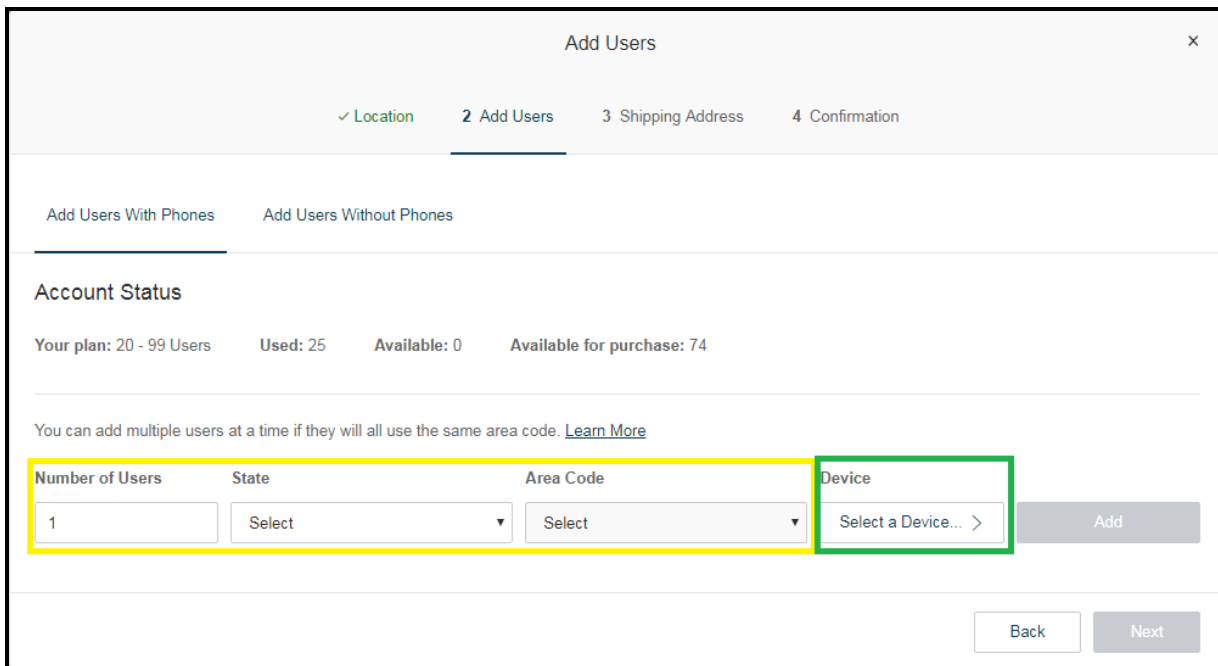
7. A popup window labeled **Add User** will appear. Select a location then press **Next**.

**Figure 6-3: Add User Popup**



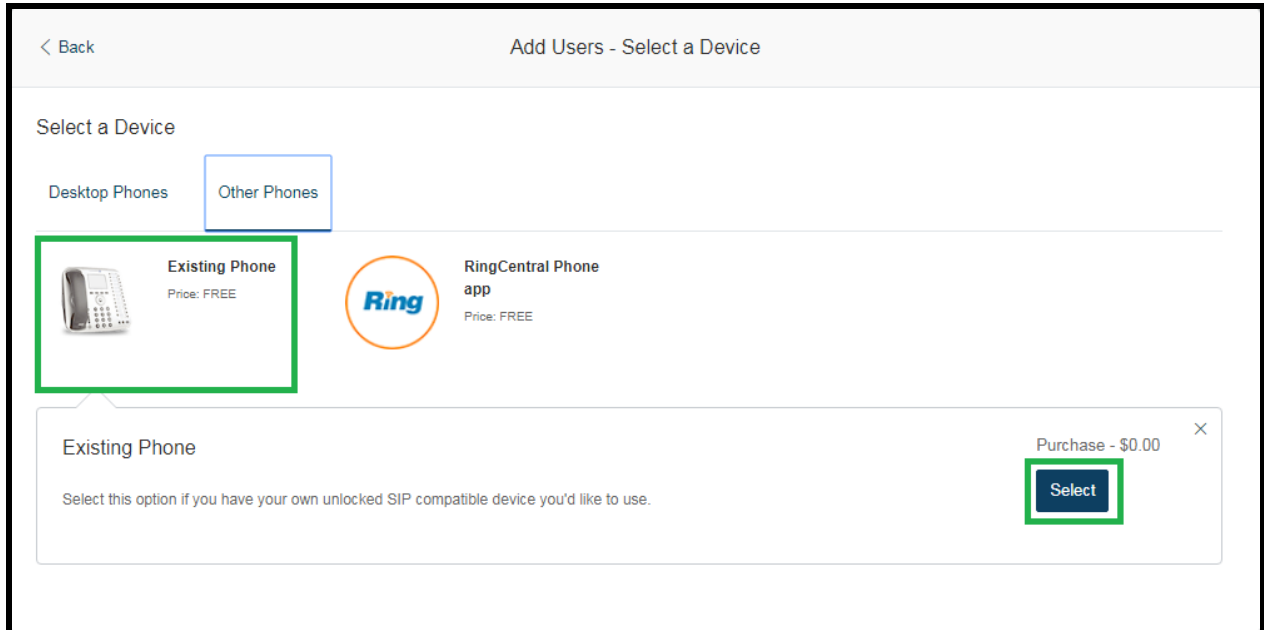
8. In the subsection **Add Users with Phones**, select the number of users, state, area code, and device.

**Figure 6-4: Pick a Phone Number**



11. A prompt will ask to select a phone type. Choose **Other Phones**, and then make sure **Existing Phone** is selected. Press **Select**.

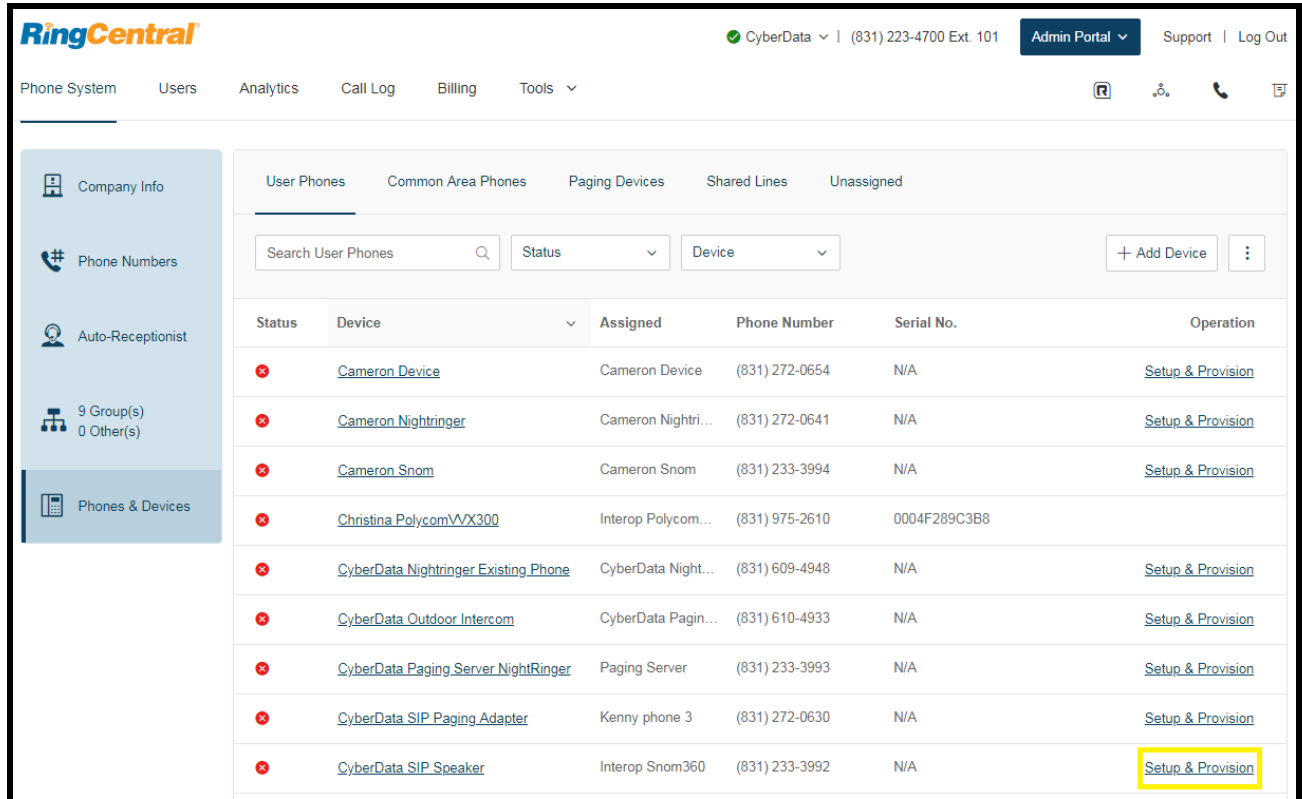
**Figure 6-5:** Select Phone Type



12. The process will lead through a six-step ordering process to set up a RingCentral Digital Line. Click the **Select** button to choose an **Existing Phone** and follow the steps in the ordering window to complete the order.

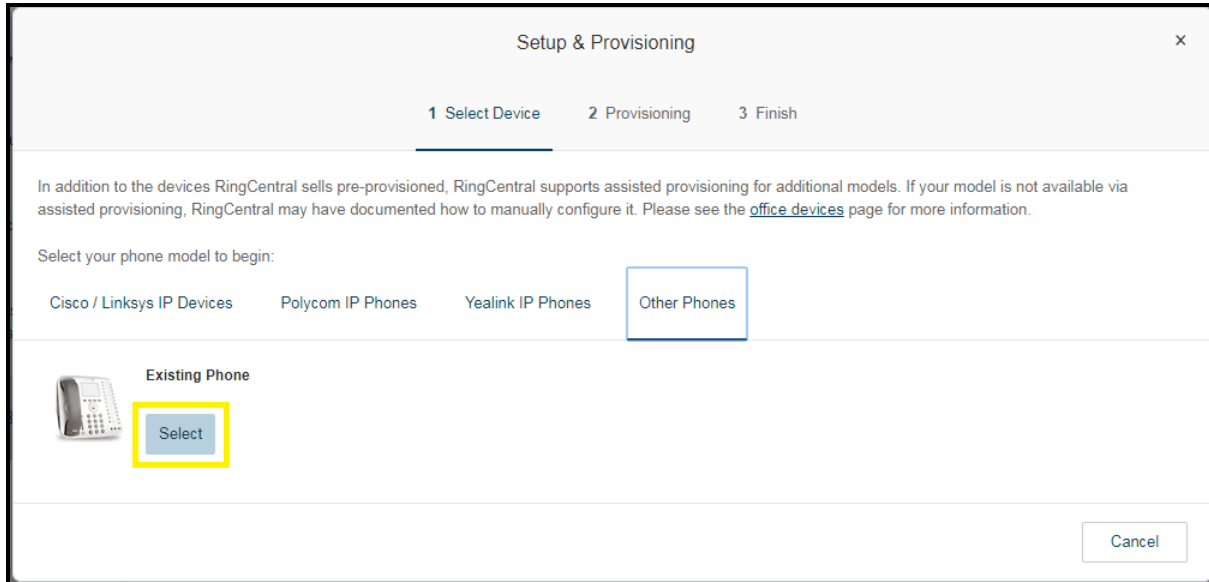
13. From the **Phones & Devices** menu, select **User Phones** and select the user phone designated for the SIP Speaker. Click **Setup and Provision**.

**Figure 6-6: Setup and Provision**



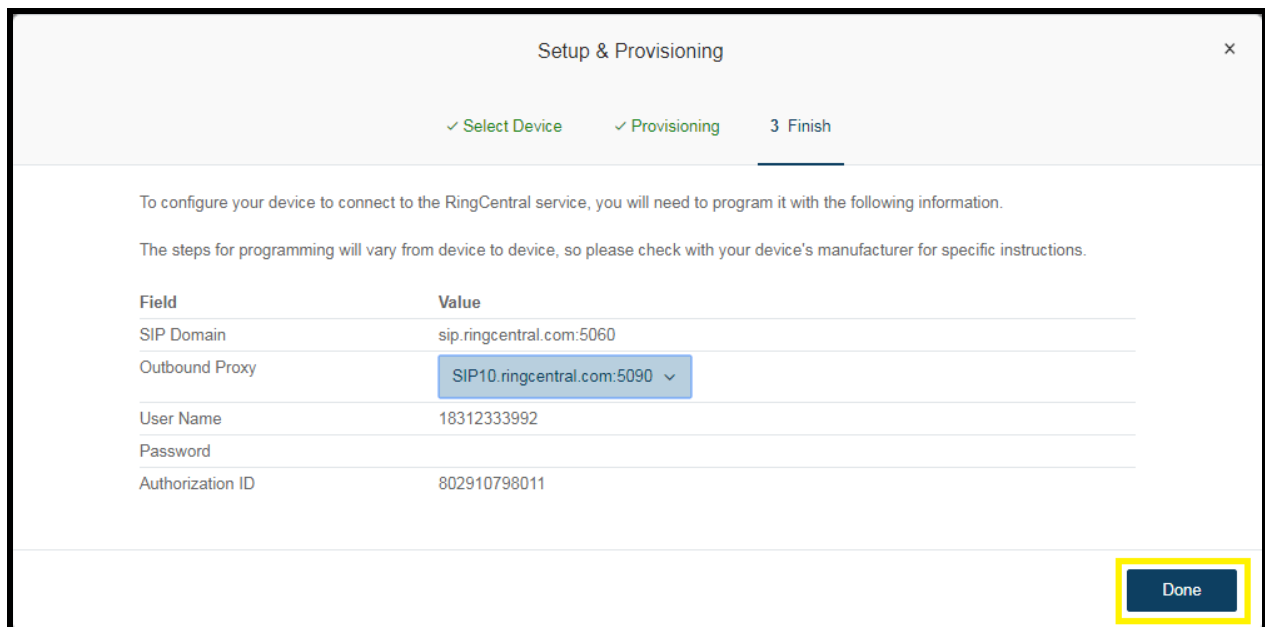
14. A popup window labeled **Assisted provisioning – Step 1** will appear. Select **Other Phones** and click **Next**.

Figure 6-7: Assisted provisioning – Step 1



15. A popup window labeled **Assisted Generic IP Phone/Adaptor Provisioning** will appear. The provisioning information to register the primary extension with RingCentral.

Figure 6-8: IP Phone Provisioning Information



*Note: The Password has been obscured. These values are published only for reference.*

**SIP Fields Table**

Use the following table to determine how the RingCentral SIP field values above correlate to the CyberData SIP field values.

**Table 6-1: CyberData Configuration Settings**

<b>Primary SIP Server</b> field	From the Paging Device Provisioning Information popup: <b>SIP Server/SIP Domain</b>
<b>Primary SIP User ID</b> field	From the Paging Device Provisioning Information popup: <b>User Name</b>
<b>Primary SIP Auth ID</b> field	From the Paging Device Provisioning Information popup: <b>Authorization ID</b>
<b>Primary SIP Auth Password</b> field	From the Paging Device Provisioning Information popup: <b>Password</b>
<b>Outbound Proxy</b> field	From the Paging Device Provisioning Information popup: <b>Outbound Proxy</b>
<b>Outbound Proxy Port</b> field	From the Paging Device Provisioning Information popup: <b>Outbound Proxy Port</b>
<b>Re-registration Interval (in seconds)</b> field	<b>30</b>
<b>Keep Alive Period</b> field	<b>0</b>
<b>Force Selected Codec</b> checkbox	<b>Yes</b>
<b>Codec</b> dropdown	<b>PCMU (G.711, u-law)</b>

**Configure SIP Parameters**

If configuring through the web interface, use the following steps to login to the web interface of the Speaker and register the primary extension with RingCentral.

1. Click **Launch Browser** from the CyberData Discovery Utility or point a browser to the CyberData device’s IP address to access the Home Page of the web interface.
2. Enter the web login credentials when prompted and click the **Log In** button.
3. On the Home Page, click **SIP** on the top of the screen to access the SIP Configuration page.
4. Enter the provisioning information from the [Assisted Generic IP Phone Provisioning](#) popup window. Use [Table 6-1](#) to enter RingCentral SIP values into the proper CyberData SIP fields.
5. Set the *Re-registration Interval (in seconds)* to **30 seconds**.
6. Set the *Keep Alive Period* to **0**.
7. Enable *Force Codec Selection* and use **PCMU**.
8. Click **Save** and **Reboot** to store changes.

Figure 6-9: SIP Configuration

# CyberData V3.1 Speaker

### SIP Settings

Enable SIP operation:

Register with a SIP Server:

Use Cisco SRST:

Primary SIP Server: sip.ringcentral.com

Primary SIP User ID: 18312333992

Primary SIP Auth ID: 802910798011

Primary SIP Auth Password: .....

Backup SIP Server 1: \_\_\_\_\_

Backup SIP User ID 1: \_\_\_\_\_

Backup SIP Auth ID 1: \_\_\_\_\_

Backup SIP Auth Password 1: \_\_\_\_\_

Backup SIP Server 2: \_\_\_\_\_

Backup SIP User ID 2: \_\_\_\_\_

Backup SIP Auth ID 2: \_\_\_\_\_

Backup SIP Auth Password 2: \_\_\_\_\_

Remote SIP Port: 5060

Local SIP Port: 5060

Outbound Proxy: sip10.ringcentral.com

Outbound Proxy Port: 5090

Monitor User ID: 200

Monitor Authenticate ID: 200

Monitor Authenticate Password: .....

Disable rport Discovery:

Buffer SIP Calls:

Re-registration Interval (in seconds): 30

Unregister on Boot:

Keep Alive Period: 0

### Nightringer Settings

Enable Nightringer:

SIP Server: 10.0.0.253

Remote SIP Port: 5060

Local SIP Port: 5061

Outbound Proxy: \_\_\_\_\_

Outbound Proxy Port: 0

User ID: 241

Authenticate ID: 241

Authenticate Password: .....

Re-registration Interval (in seconds): 360

### RTP Settings

RTP Port (even): 10500

Jitter Buffer: 50

### Call Disconnection

Terminate Call after delay: 0

### Codec Selection

Force Selected Codec:

Codec: PCMU (G.711, u-law)

### Button Settings

Dial Out Extension: 204

Extension ID: id204

Save Reboot Toggle Help

## Autoprovisioning

If autoprovisioning the SIP Speaker, use the SIP Settings in the autoprovisioning template to register the paging extension with RingCentral.

**Figure 6-10:** Autoprovisioning Template Example – SIP Settings

```
<SIPSettings>
  <EnableSIPOperation>Yes</EnableSIPOperation>
  <SIPServer>sip.ringcentral.com</SIPServer>
  <RemoteSIPPort>5060</RemoteSIPPort>
  <BackupSIPServer1></BackupSIPServer1>
  <BackupSIPServer2></BackupSIPServer2>
  <LocalSIPPort>5060</LocalSIPPort>
  <OutboundProxy>sip10.ringcentral.com</OutboundProxy>
  <OutboundProxyPort>5090</OutboundProxyPort>
  <SIPUserID>18312333992</SIPUserID>
  <SIPAuthID>802910798011</SIPAuthID>
  <SIPAuthPassword>*****</SIPAuthPassword>
  <SIPUserID2></SIPUserID2>
  <SIPAuthID2></SIPAuthID2>
  <SIPAuthPassword2></SIPAuthPassword2>
  <SIPUserID3></SIPUserID3>
  <SIPAuthID3></SIPAuthID3>
  <SIPAuthPassword3></SIPAuthPassword3>
  <MonitorUserID>200</MonitorUserID>
  <MonitorAuthID>200</MonitorAuthID>
  <MonitorAuthPassword>ext200</MonitorAuthPassword>
  <SIPRegistrationTimeout>30</SIPRegistrationTimeout>
  <SIPUnregisterOnBoot>No</SIPUnregisterOnBoot>
  <SIPRegisterOnBoot>Yes</SIPRegisterOnBoot>
  <BufferSIPCalls>No</BufferSIPCalls>
  <RTPPort>10500</RTPPort>
  <JitterBuffer>50</JitterBuffer>
  <CallTimeout>0</CallTimeout>
  <UseCiscoSRST>No</UseCiscoSRST>
  <DisableRportDiscovery>No</DisableRportDiscovery>
  <DialoutExtension0>204</DialoutExtension0>
  <DialoutID0>id204</DialoutID0>
  <NatPingOptions>No</NatPingOptions>
  <KeepAlive>0</KeepAlive>
  <DefaultCodec>1</DefaultCodec>
</SIPSettings>
```

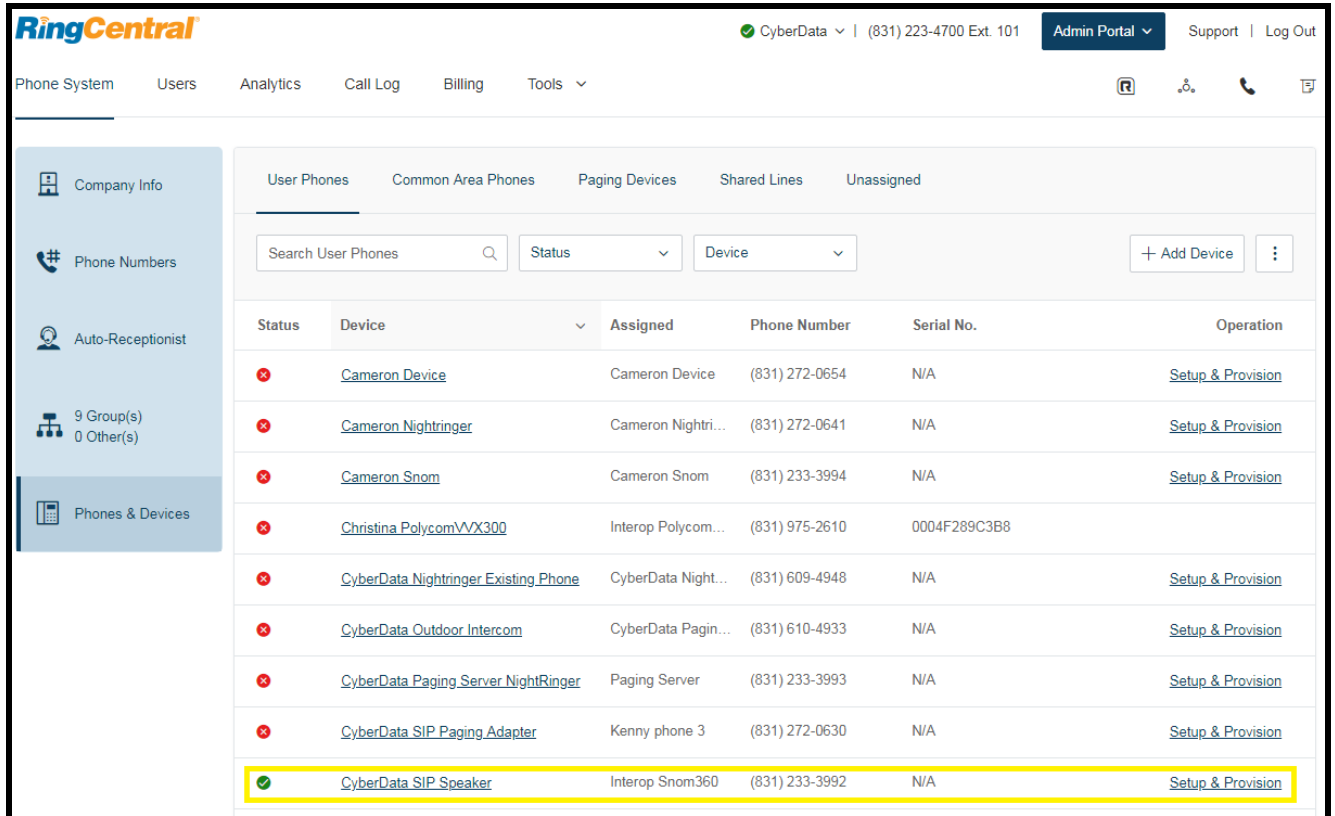
**Note:** These example values are published only for reference. The SIPAuthPassword value should be the actual value from the [Assisted Generic IP Phone Provisioning](#) popup window.



**Verify the Paging Extension Is Registered**

After the Speaker has rebooted and initialized to store changes, refresh the Home page of the web interface. The device should show as **[Registered with SIP Server]** in green text on the bottom of the Home Page of the web interface. Additionally, the registration status may be verified through RingCentral through the Admin Portal. From the **Phones & Devices** menu, select **User Phones** and the IP Phone created for the Speaker. The status should show as “online” in the **Phone Details**.

**Figure 6-11. Phone Details – Status**



Once the Primary extension has registered with RingCentral and has been configured with the appropriate Device settings for the installation, a RingCentral phone may be used to dial the extension.

## 7.0 Configuration Procedure: Nightringer

### What is a Nightringer?

The CyberData SIP-enabled IP Speaker offers a secondary SIP extension called “**Nightringer**” in addition to the primary extension used for auto-answer paging. The Nightringer plays a customizable ring tone when an incoming call is detected. The Nightringer extension can be added to ring groups for simultaneous ringing. When added to a ring group, the Nightringer will ring until a ring group member picks up the call. The Nightringer stops ringing when the call is answered by a ring group member or when the caller disconnects before a ring group member picks up the call. The Nightringer extension cannot answer a call.

### Provisioning Nightringer with RingCentral

Provisioning a Nightringer extension with RingCentral differs from provisioning the auto-answer paging extension. It is important to note the Paging Extension and Nightringer Extension must use separate sets of SIP extension parameters. That is, each must be assigned their own SIP extension. The Nightringer cannot use the same provisioning information already in use by the Primary Extension (and vice versa).

When integrating with RingCentral, the Nightringer extension must be provisioned as an IP phone rather than a Paging Device which allows the Nightringer to ring.

If the Nightringer is provisioned and registered as a Paging Device, the Nightringer will only ring for 2 seconds before the call is cancelled by the RingCentral server. Thus, it is necessary to provision the Nightringer as an IP phone for full functionality. Please consult with RingCentral for costs associated with IP phone provisioning on the account.

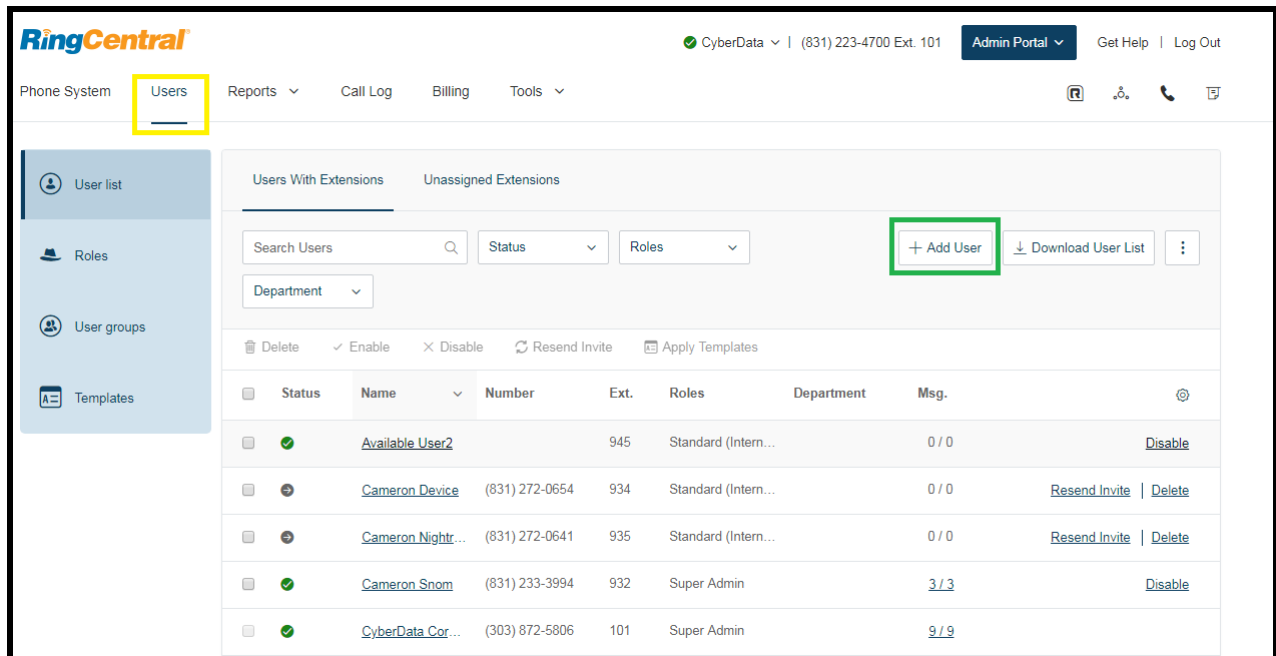
***Note:** For voice paging, use the provision the primary extension as a Paging Device following the instructions in [Section 4.0 “Configuration Procedure: Auto-answer Paging.”](#)*

## Add an IP Phone

To provision the speaker's Nightringer extension, add a RingCentral Existing Phone through the RingCentral Admin Portal. First, designate a RingCentral User for the Nightringer.

1. From the **Users** menu, click the **Add** button.

**Figure 7-1: Add User Button**



2. A popup window labeled **Add User** will appear. Choose the user location then press **next**.

**Figure 7-2: Add User Location**

Add Users

1 Location 2 Add Users 3 Shipping Address 4 Confirmation

Select a Location

Domestic  International

Cancel Next

3. In the subsection **Add Users with Phones**, select the number of users, state, area code, and device.

**Figure 7-3: Add User Phone Number**

Learn More'. At the bottom, there is a form with four fields: 'Number of Users' (input field with '1'), 'State' (dropdown menu with 'Select'), 'Area Code' (dropdown menu with 'Select'), and 'Device' (dropdown menu with 'Select a Device...'). The 'Number of Users', 'State', and 'Area Code' fields are highlighted in yellow, and the 'Device' field is highlighted in green. At the bottom right, there are 'Back' and 'Next' buttons."/>

Add Users

✓ Location 2 Add Users 3 Shipping Address 4 Confirmation

Add Users With Phones Add Users Without Phones

Account Status

Your plan: 20 - 99 Users Used: 25 Available: 0 Available for purchase: 74

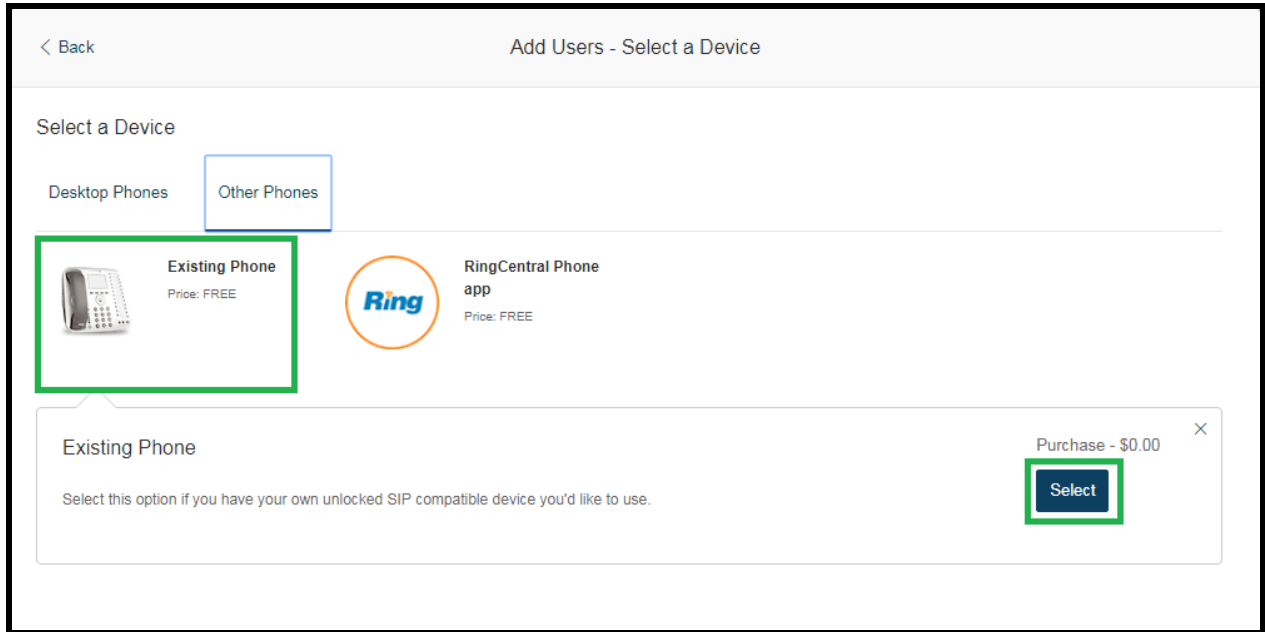
You can add multiple users at a time if they will all use the same area code. [Learn More](#)

Number of Users	State	Area Code	Device
1	Select	Select	Select a Device... >

Back Next

4. Next, select a phone type. Click the **Select** button to choose an **Existing Phone**. Select **Existing Phone**.

**Figure 7-4: Select Phone Type**



- From the **Phones & Devices** menu, select **User Phones** and the select the user phone designated for the Nightringer. Click **Setup and Provision**.

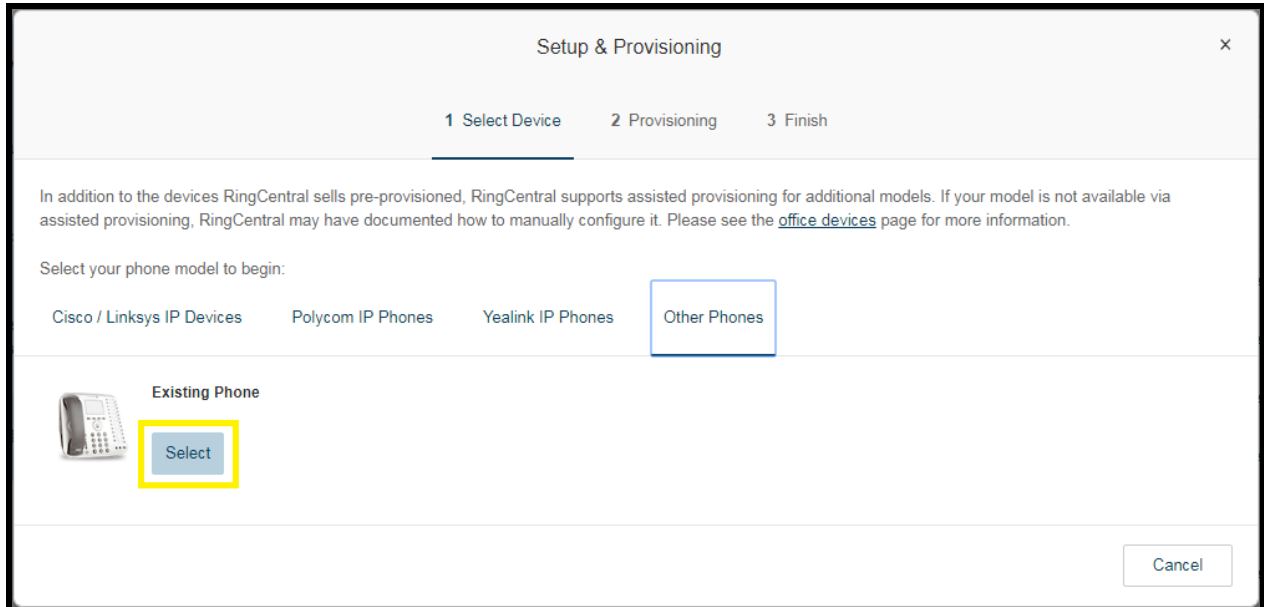
**Figure 7-5: Setup and Provision**

The screenshot shows the RingCentral Admin Portal interface. The top navigation bar includes the RingCentral logo, user information (CyberData | (831) 223-4700 Ext. 101), and an Admin Portal dropdown. Below the navigation bar, there are tabs for 'User Phones', 'Common Area Phones', 'Paging Devices', 'Shared Lines', and 'Unassigned'. The 'User Phones' tab is active, displaying a search bar and filters for 'Status' and 'Device'. A table lists several user phones, each with a 'Setup & Provision' link. The link for the 'CyberData Nightringer Existing Phone' is highlighted with a yellow box.

Status	Device	Assigned	Phone Number	Serial No.	
✖	<a href="#">Cameron Device</a>	Cameron Device	(831) 272-0654	N/A	<a href="#">Setup &amp; Provision</a>
✖	<a href="#">Cameron Nightringer</a>	Cameron Nightri...	(831) 272-0641	N/A	<a href="#">Setup &amp; Provision</a>
✖	<a href="#">Cameron Snom</a>	Cameron Snom	(831) 233-3994	N/A	<a href="#">Setup &amp; Provision</a>
✖	<a href="#">Christina Nightringer</a>	Kenny phone 3	(831) 272-0630	N/A	<a href="#">Setup &amp; Provision</a>
✖	<a href="#">Christina PolycomVX300</a>	Interop Polycom...	(831) 975-2610	0004F289C3B8	
✖	<a href="#">CyberData Nightringer Existing Phone</a>	CyberData Night...	(831) 609-4948	N/A	<a href="#">Setup &amp; Provision</a>

6. A popup window labeled **Assisted provisioning – Step 1** will appear. Select **Other Phone** and click **Next**.

**Figure 7-6:** Assisted Provisioning – Step 1



7. A popup window labeled **Assisted Generic IP Phone/Adaptor Provisioning** will appear. The provisioning information is used to register the SIP Speaker's Nighthringer extension with RingCentral.

**Figure 7-7: IP Phone Provisioning Information**

The screenshot shows a 'Setup & Provisioning' window with a progress bar at the top indicating three steps: 'Select Device' (checked), 'Provisioning' (checked), and 'Finish' (active). Below the progress bar, there is instructional text and a table of provisioning information.

To configure your device to connect to the RingCentral service, you will need to program it with the following information.

The steps for programming will vary from device to device, so please check with your device's manufacturer for specific instructions.

Field	Value
SIP Domain	sip.ringcentral.com:5060
Outbound Proxy	SIP10.ringcentral.com:5090
User Name	18316094948
Password	[Obscured]
Authorization ID	802872227010

A 'Done' button is located at the bottom right of the window.

*Note: The Password has been obscured. These values are published only for reference.*



**SIP Fields Table**

Use the following table to determine how the RingCentral SIP field values above correlate to the CyberData SIP field values.

**Table 7-1: CyberData Configuration Settings**

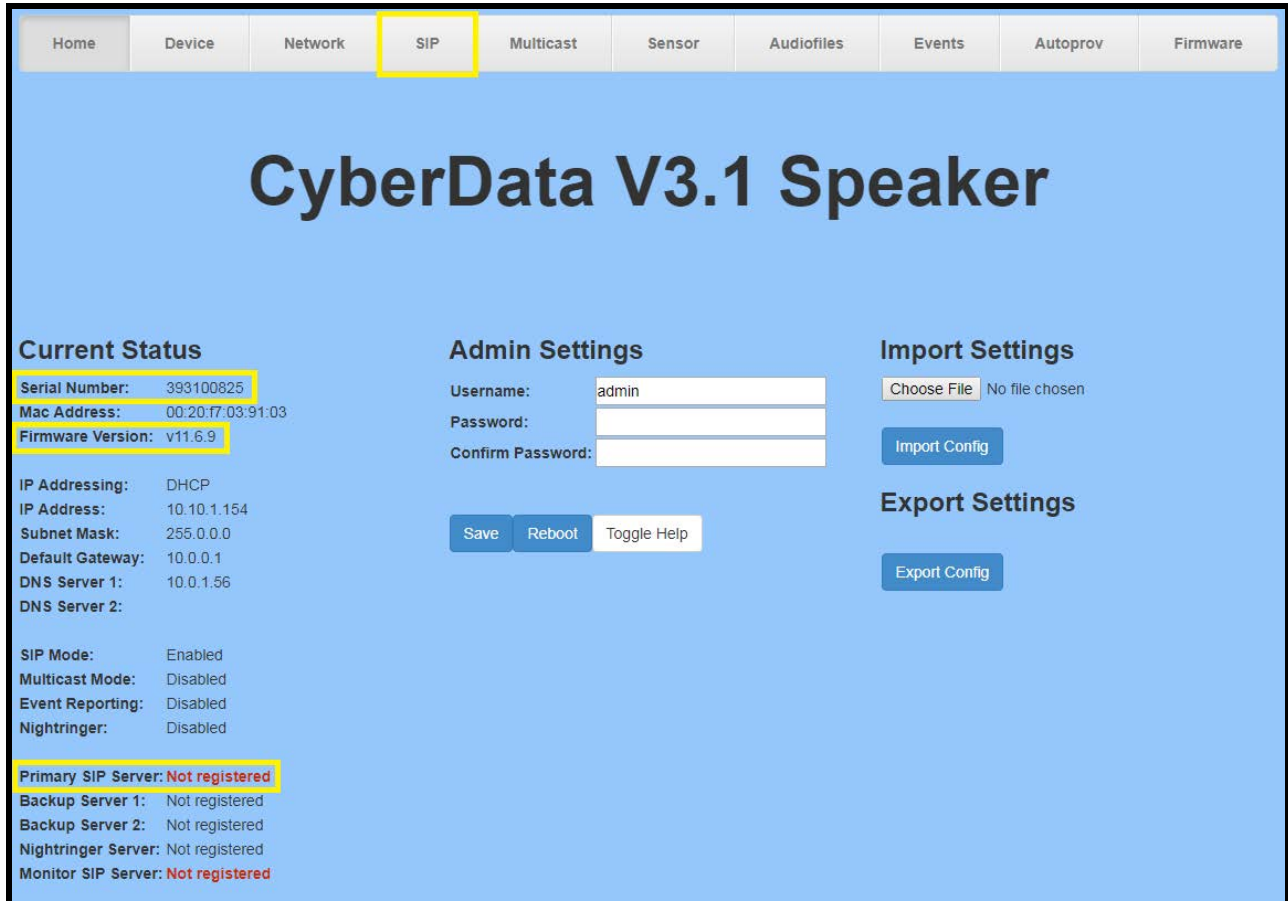
<b>Primary SIP Server</b> field	From the Digital Line Provisioning Information popup: <b>SIP Server</b>
<b>Primary SIP User ID</b> field	From the Digital Line Provisioning Information popup: <b>SIP User ID</b>
<b>Primary SIP Auth ID</b> field	From the Digital Line Provisioning Information popup: <b>Authenticate ID</b>
<b>Primary SIP Auth Password</b> field	From the Digital Line Provisioning Information popup: <b>Authenticate Password</b>
<b>Outbound Proxy</b> field	From the Digital Line Provisioning Information popup: <b>Outbound Proxy</b>
<b>Outbound Proxy Port</b> field	From the Digital Line Provisioning Information popup: <b>Outbound Proxy Port</b>
<b>Re-registration Interval (in seconds)</b> field	<b>30</b>
<b>Keep Alive Period</b> field	<b>0</b>
<b>Force Selected Codec</b> checkbox	<b>Yes</b>
<b>Codec</b> dropdown	<b>PCMU (G.711, u-law)</b>

### Configure Nightringer SIP Parameters

If configuring the Nightringer extension through the web interface, use the following steps to register Nightringer with RingCentral.

1. Review [Configure the SIP Parameters](#).
2. From the Home page of the web interface, click **SIP** on the toolbar on the top side of the screen.

**Figure 7-8: Home Page of the Web Interface**



3. Enter the provisioning information from the [Nightringer's Assisted Generic IP Phone/Adaptor Provisioning](#) popup.
4. Set the *Re-registration Interval (in seconds)* to 30 seconds.
5. Set the *Keep Alive Period* to **0**.
6. Enable *Force Codec Selection* and select **PCMU**.
7. Click **Save** and **Reboot** to store changes.

**Figure 7-9:** Nightringer Configuration Page of the Web Interface

# CyberData V3.1 Speaker

<h3>SIP Settings</h3> <p>Enable SIP operation: <input checked="" type="checkbox"/></p> <p>Register with a SIP Server: <input checked="" type="checkbox"/></p> <p>Use Cisco SRST: <input type="checkbox"/></p> <p>Primary SIP Server: <input type="text" value="sip.ringcentral.com"/></p> <p>Primary SIP User ID: <input type="text" value="18312333992"/></p> <p>Primary SIP Auth ID: <input type="text" value="802910798011"/></p> <p>Primary SIP Auth Password: <input type="password" value="*****"/></p> <p>Backup SIP Server 1: <input type="text"/></p> <p>Backup SIP User ID 1: <input type="text"/></p> <p>Backup SIP Auth ID 1: <input type="text"/></p> <p>Backup SIP Auth Password 1: <input type="password"/></p> <p>Backup SIP Server 2: <input type="text"/></p> <p>Backup SIP User ID 2: <input type="text"/></p> <p>Backup SIP Auth ID 2: <input type="text"/></p> <p>Backup SIP Auth Password 2: <input type="password"/></p> <p>Remote SIP Port: <input type="text" value="5060"/></p> <p>Local SIP Port: <input type="text" value="5060"/></p> <p>Outbound Proxy: <input type="text" value="sip10.ringcentral.com"/></p> <p>Outbound Proxy Port: <input type="text" value="5090"/></p> <p>Monitor User ID: <input type="text" value="200"/></p> <p>Monitor Authenticate ID: <input type="text" value="200"/></p> <p>Monitor Authenticate Password: <input type="password" value="*****"/></p> <p>Disable rport Discovery: <input type="checkbox"/></p> <p>Buffer SIP Calls: <input type="checkbox"/></p> <p>Re-registration Interval (in seconds): <input type="text" value="30"/></p> <p>Unregister on Boot: <input type="checkbox"/></p> <p>Keep Alive Period: <input type="text" value="0"/></p>	<h3>Nightringer Settings</h3> <p>Enable Nightringer: <input checked="" type="checkbox"/></p> <p>SIP Server: <input type="text" value="sip.ringcentral.com"/></p> <p>Remote SIP Port: <input type="text" value="5060"/></p> <p>Local SIP Port: <input type="text" value="5061"/></p> <p>Outbound Proxy: <input type="text" value="sip10.ringcentral.com"/></p> <p>Outbound Proxy Port: <input type="text" value="5090"/></p> <p>User ID: <input type="text" value="18316094948"/></p> <p>Authenticate ID: <input type="text" value="802872227010"/></p> <p>Authenticate Password: <input type="password" value="*****"/></p> <p>Re-registration Interval (in seconds): <input type="text" value="30"/></p>
<h3>RTP Settings</h3> <p>RTP Port (even): <input type="text" value="10500"/></p> <p>Jitter Buffer: <input type="text" value="50"/></p>	<h3>Call Disconnection</h3> <p>Terminate Call after delay: <input type="text" value="0"/></p>
<h3>Codec Selection</h3> <p>Force Selected Codec: <input checked="" type="checkbox"/></p> <p>Codec: <input type="text" value="PCMU (G.711, u-law)"/></p>	<h3>Button Settings</h3> <p>Dial Out Extension: <input type="text" value="204"/></p> <p>Extension ID: <input type="text" value="id204"/></p>
<p> <input type="button" value="Save"/> <input type="button" value="Reboot"/> <input type="button" value="Toggle Help"/> </p>	

## Autoprovisioning

If autoprovisioning the SIP Speaker, use the Nightringer Settings in the autoprovisioning template to register the Nightringer with RingCentral.

**Figure 7-10:** Autoprovisioning Template Example – Nightringer Settings

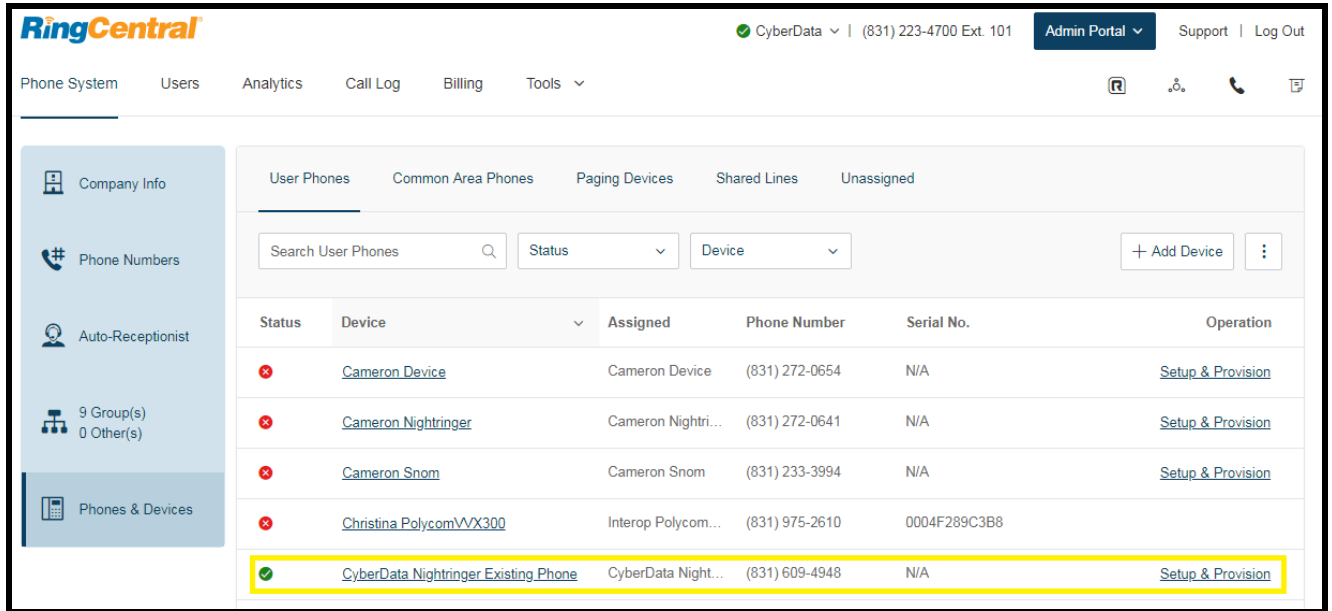
```
<NightringerSettings>
  <EnableNightringer>Yes</EnableNightringer>
  <NightringerSIPServer>sip.ringcentral.com</NightringerSIPServer>
  <NightringerRemotePort>5060</NightringerRemotePort>
  <NightringerLocalPort>5061</NightringerLocalPort>
  <NightringerOutboundProxy>sip10.ringcentral.com</NightringerOutboundProxy>
  <NightringerOutboundProxyPort>5090</NightringerOutboundProxyPort>
  <NightringerUserID>18316094948</NightringerUserID>
  <NightringerAuthID>802872227010</NightringerAuthID>
  <NightringerAuthPassword>*****</NightringerAuthPassword>
  <NightringerRegistrationTimeout>30</NightringerRegistrationTimeout>
</NightringerSettings>
```

*Note:* These example values are published only for reference. The `NightringerAuthPassword` value should be the actual value from the [Nightringer's Assisted Generic IP Phone/Adaptor Provisioning](#) popup.

**Verify the Nightringer is Registered**

After the SIP Speaker has rebooted and initialized, refresh the **Home** page of the web interface. The device should show as **[Registered with SIP Server]** in green text on the bottom of the Home Page of the web interface. Additionally, the registration status may be verified with RingCentral through the admin portal. From the **Phones & Devices** menu, select **User Phones** and the IP Phone just created for the Nightringer. The status should show as “online” in the **Phone Details**.

**Figure 7-11: Nightringer Phone Details – Status**



**Make a Test Call**

Once the device has registered with RingCentral, use any RingCentral phone to dial the Nightringer extension.

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