

RingCentral Provisioning Guide for Algo SIP Endpoints

Need Help?

(604) 454-3792 or support@algosolutions.com

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Introduction

Algo SIP Endpoints may be provisioned in different ways with RingCentral. Each method provides advantages and disadvantages, and the optimal one will ultimately depend on the application and which Algo IP Endpoint is getting provisioned. This guide provides details regarding each method, when to use them, as well as configuration steps.

Paging Device

Paging devices can be provisioned to the system without a phone number or internal extension. Once the profile is set up, it must be added to a “Paging Only Group”. This is a collection of paging devices and/or desk phones that can receive a paging call. To page, dial *84. When prompted, enter the group number followed by #.

Recommend use:

- One-way paging using Algo IP speakers or paging adapters (single or multi-site)

Don't use for:

- Two-way communication using Algo IP speakers or intercoms
- Originating calls
- Receiving regular telephone calls
- DTMF zoning (multicast or analog zone controller)
- Door control (via DTMF) with intercoms
- Loud ringing / night ringer

Configuration

Step 1 - In the RingCentral web admin portal, go to “Phone System” -> “Phone & Devices” -> “Paging Devices”. Click on “+ Add Device”, enter a Device Nickname and click “Next”. The SIP credentials will be displayed (see below).

Note: enabling TLS and SRTP is not mandatory, but highly recommended for security reasons.

✕

✓ Device Nickname 2 Provisioning Info

Provisioning Information Copy

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	sip10.ringcentral.com:5096 ▼
Outbound Proxy Port	5096
User Name	██████████
Password	██████
Authorization ID	██████████

Step 2 - In the Algo Endpoint web interface, go to Basic Settings -> SIP tab. Copy & paste the credentials following the instructions below:

- RingCentral “SIP Domain” and “Local SIP Port” = Algo SIP Domain (Proxy Server) field
- RingCentral “User Name” = Algo Extension field
- RingCentral “Authorization ID” = Algo Authentication ID field
- RingCentral “Password” = Algo Authentication Password field

The screenshot shows the 'SIP Settings' configuration page in the Algo Endpoint web interface. The 'Basic Settings' tab is selected, and the 'SIP' sub-tab is active. The 'SIP Domain (Proxy Server)' field contains 'sip.ringcentral.com:5060' with a red arrow pointing to it. The 'Ring/Alert Mode' section has 'None' selected. The 'Page Extension' field contains '16049008054*803573462025'. The 'Authentication ID' field contains '803573462025' with a red arrow pointing to it. The 'Authentication Password' field is masked with dots. A 'Save' button is visible at the bottom right.

Step 3 - RingCentral “Outbound Proxy” and “Outbound Proxy Port” must be entered into the Outbound Proxy field (Advanced Settings -> Advanced SIP). Also set the SIP Transportation to “TLS”

In Advanced Settings -> Advanced SIP tab, set the following parameters:

- SIP Transportation = TLS
- Outbound Proxy = RingCentral “Outbound Proxy” and “Outbound Proxy Port” as provided by RingCentral and separated by colon (see below).
- SDP SRTP Offer = Standard
- SDP SRTP Offer Crypto Suite = All Suites

The screenshot shows the ALGO web interface. At the top, there are navigation tabs: Status, Basic Settings, Additional Features, Scheduler, **Advanced Settings** (circled in red), System, and Logout. Below these are sub-tabs: Network, Admin, Users, Time, Provisioning, Advanced Audio, **Advanced SIP** (circled in red), and Advanced Multicast. The main content area is titled "Advanced SIP Settings" and is divided into two sections: "General" and "SRTP".

General

SIP Transportation	TLS	←
<small>ⓘ Select Auto to check DNS NAPTR record, then try UDP/TCP. ⓘ In TLS mode, if the SIP Server requires endpoints to be authenticated, a PEM file containing both a device certificate and a private key needs to be installed on the Algo device. Use the "System > File Manager" tab to upload a certificate file renamed to 'sipclient.pem' in the 'certs' folder.</small>		
SIPS Scheme	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
Validate Server Certificate	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled <small>ⓘ Validate the SIP server against common certificate authorities. To validate against additional certificates, use the "System > File Manager" tab to upload a Base64 encoded X.509 certificate file in .pem, .cer, or .crt format to the 'certs/trusted' folder.</small>	
SIP Outbound Support (RFC 5626)	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled <small>ⓘ Enable this option to support best networking practices according to RFC 5626. This option should generally be enabled if the Algo device is being registered with a hosted server or if TLS is being used for SIP Transportation.</small>	
Outbound Proxy	sip10.ringcentral.com:5096	←
Register Period (seconds)	3600	

SRTP

SDP SRTP Offer	Standard	←
SDP SRTP Offer Crypto Suite	All Suites	←

Step 4 - Verify the registration status in the Algo web interface.

Status Basic Settings Additional Features Scheduler Advanced Settings System Logout

Device Status

Welcome to the Algo 8301 Paging Adapter & Scheduler

Setting up your Paging Adapter & Scheduler:

Step 1: Configure your Paging Adapter & Scheduler
Log in with the default password and use the Basic Settings pages to set up the basic information.

Step 2: Check network settings (Optional)
Use the Network page under the Advanced Settings tab to change network settings. The default setting for the device is to obtain its IP address from a DHCP server. Contact your Network System administrator if you plan to assign a static IP address, Mask, and Gateway to the device.

Step 3: Secure your Paging Adapter & Scheduler (Optional)
Use the Admin page under the Advanced Settings tab to change the administrator password.
⚠️ Changing the password is extremely important if the device is directly connected to a public network.

Step 4: Register your Paging Adapter & Scheduler (Optional)
Please register your product using the link below:
<http://www.algosolutions.com/register>
Registration ensures your access to the latest upgrades to this product and important service notices.

Status

Device Name	pagingadapter-090045		
SIP Registration	Page	Successful	(Extension 16049008054*803573462025)
Call Status	Idle		

Step 5 - Check registration status in the RingCentral web admin portal.

Home Users Phone System Meetings Reports Billing More

Phones & Devices >> **Paging Devices**

Search [] Status [] + Add Device

Delete

<input type="checkbox"/>	Status	Name	Assigned Groups	Actions
<input type="checkbox"/>	🟢	test		⋮
<input type="checkbox"/>	🟡	Test Paging Device	Paging test	⋮
<input type="checkbox"/>	🟡	Test Paging Device	Test Paging Device	⋮
<input type="checkbox"/>	🟡	Test Paging Device	Test Paging Device	⋮
<input type="checkbox"/>	🟡	Test Paging Device	Test Paging Device	⋮
<input type="checkbox"/>	🟡	Test Paging Device	Test Paging Device	⋮

Step 6 - Once the Paging Device has been created and registered, the next step is to add it to an existing Paging Group or create a new one. Go to “Phone System” -> “Groups” -> “Paging Only”. Create a new Paging Only Group or add the recently created Paging Device to an existing one.

Step 7 - Expand “Paging” and assign one or more devices to the Group. Also configure the permissions under “Users Allowed to Page this Group”.

Home Users **Phone System** Meetings Reports Billing More

Company Info Phone Numbers Auto-Receptionist **Groups** Call Queues **Paging Only** Shared Lines Park Locations Call Monitoring Call Pickup Message-Only Extensions Announcement-Only Extensions Limited Extensions Phones & Devices Emergency Calling

Groups » **Paging Only**

Paging Only groups enable real-time one-way broadcasting through multiple desk phones and overhead paging devices. [Learn more about paging](#)

Search

Status	Name
<input checked="" type="checkbox"/>	Test_Group
<input checked="" type="checkbox"/>	Scott Test
<input checked="" type="checkbox"/>	Paging_Test
<input checked="" type="checkbox"/>	Call_cancel_test

Test_Group (Ext. 22)

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

Show All | Show Selected (2)

<input type="checkbox"/>	Phone Type	Phone Name	Ext.
<input checked="" type="checkbox"/>	Paging Device	test	-
<input type="checkbox"/>	Paging Device	Scottf_8301	-

Step 8 - To page dial *84. When prompted, enter the page group number followed by #.

Limited Extension

RingCentral limited extension is an extension offered with a limited feature set compared to a full extension. This type of extension provides capabilities not offered by the Paging Device profile, thus making it ideal for certain applications.

Recommend use:

- Two-way communication using Algo IP speakers or paging adapters
- Intercoms of speakers originating calls
- Capable of receiving regular telephone calls
- DTMF zoning (multicast or analog zone controller)
- Door control (via DTMF) with intercoms

Don't use for:

- Loud ringing / night ringer
- One-way paging using Algo IP speakers or paging adapters (single or multi-site)

Configuration

Step 1 - In the RingCentral web admin portal, go to "Phone System" -> "Groups" -> "Limited Extensions". Add a new Limited Extension or enable an existing one.

Home Users **Phone System** Meetings Reports ▾ Billing More 🔍 👤 📞 📄

- Company Info >
- Phone Numbers >
- Auto-Receptionist >
- Groups ▾**
 - Call Queues
 - Paging Only
 - Shared Lines
 - Park Locations
 - Call Monitoring
 - Call Pickup
 - Message-Only Extensions
 - Announcement-Only Extensions
 - Limited Extensions**
- Phones & Devices >
- Emergency Calling >

Groups » **Limited Extensions** 🔍

Limited Extension gives admins the ability to purchase an extension with a limited feature set that is not tied to a user. [Learn More](#)

Status	Name	Numbers	Ext.	Msg.	Assigned Status	Actions
➔	Lmt_Ext_Test	(604) 243-3038	105	0 / 0	Assigned	⋮
➔	New_Ltd_Ext	(604) 227-7324	107	0 / 0	Assigned	⋮
➔	Test Limited Extension	(604) 330-0097	100	0 / 0	Assigned	⋮
⊖	Unassigned Limited Extension	(604) 393-9643		0 / 0	Unassigned	⋮
⊖	Unassigned Limited Extension	(604) 239-2984		0 / 0	Unassigned	⋮

Total: 5 Show:

Step 3 - At this point, the SIP credentials are displayed. Copy and paste as per instructions provided on the next step.

Note: enabling TLS and SRTP is not mandatory, but highly recommended for security reasons.

Setup & Provisioning ✕

✓ Select Device ✓ Provisioning 3 Finish

Manual Provisioning Copy

To connect your device with RingCentral services, setup your device following the steps below. 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	sip10.ringcentral.com:5096 ▼
Outbound Proxy Port	5096
User Name	██████████
Password	██████████
Authorization ID	██████████

Done

Step 4 - In the Algo Endpoint web interface, go to Basic Settings -> SIP tab. Copy & paste the credentials following the instructions below:

- RingCentral “SIP Domain” and “Local SIP Port” = Algo SIP Domain (Proxy Server) field
- RingCentral “User Name” = Algo Extension field
- RingCentral “Authorization ID” = Algo Authentication ID field
- RingCentral “Password” = Algo Authentication Password field

Note: enabling TLS and SRTP is not mandatory, but highly recommended for security reasons.

The screenshot shows the 'SIP Settings' page in the Algo Endpoint web interface. The 'Basic Settings' tab is selected, and the 'SIP' sub-tab is active. The page contains several input fields for SIP configuration, with red arrows pointing to the 'SIP Domain (Proxy Server)' and 'Authentication Password' fields.

SIP Settings

SIP

This section allows the SIP server information & account credentials to be entered. This information should be obtained from your telephone system administrator or hosted account provider. After saving these settings, see the [Status](#) tab to confirm successful registration.

SIP Domain (Proxy Server)

Default port is 5060. To specify a different port, enter PROXY:PORT, e.g. my_proxy.com:5070, or 192.168.1.10:5080.

Ring/Alert Mode Monitor "Ring" event on registered SIP extension None

Page Extension

Authentication ID

Authentication Password

Display Name (Optional)

The device will auto-answer any inbound call received on this extension and provide a voice paging path (and multicast if configured).

Step 5 - RingCentral “Outbound Proxy” and “Outbound Proxy Port” must be entered into the Outbound Proxy field (Advanced Settings -> Advanced SIP). Also set the SIP Transportation to “TLS”.

In Advanced Settings -> Advanced SIP tab, set the following parameters:

- SIP Transportation = TLS
- Outbound Proxy = RingCentral “Outbound Proxy” and “Outbound Proxy Port” as provided by RingCentral and separated by colon (see below).
- SDP SRTP Offer = Standard
- SDP SRTP Offer Crypto Suite = All Suites

The screenshot shows the ALGO web interface. At the top, there are navigation tabs: Status, Basic Settings, Additional Features, Scheduler, **Advanced Settings** (circled in red), System, and Logout. Below these are sub-tabs: Network, Admin, Users, Time, Provisioning, Advanced Audio, **Advanced SIP** (circled in red), and Advanced Multicast. The main content area is titled "Advanced SIP Settings" and is divided into two sections: "General" and "SRTP".

General

SIP Transportation	TLS	←
<small>ⓘ Select Auto to check DNS NAPTR record, then try UDP/TCP. ⓘ In TLS mode, if the SIP Server requires endpoints to be authenticated, a PEM file containing both a device certificate and a private key needs to be installed on the Algo device. Use the "System > File Manager" tab to upload a certificate file renamed to 'sipclient.pem' in the 'certs' folder.</small>		
SIPS Scheme	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
Validate Server Certificate	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled <small>ⓘ Validate the SIP server against common certificate authorities. To validate against additional certificates, use the "System > File Manager" tab to upload a Base64 encoded X.509 certificate file in .pem, .cer, or .crt format to the 'certs/trusted' folder.</small>	
SIP Outbound Support (RFC 5626)	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled <small>ⓘ Enable this option to support best networking practices according to RFC 5626. This option should generally be enabled if the Algo device is being registered with a hosted server or if TLS is being used for SIP Transportation.</small>	
Outbound Proxy	sip10.ringcentral.com:5096	←
Register Period (seconds)	3600	

SRTP

SDP SRTP Offer	Standard	←
SDP SRTP Offer Crypto Suite	All Suites	←

Step 6 - Verify the registration status in the Algo web interface.

The screenshot shows the 'Device Status' page of the Algo 8180 SIP Audio Alerter (G2) web interface. At the top, there are navigation tabs: Status, Basic Settings, Additional Features, Advanced Settings, System, and Logout. The 'Status' tab is selected. Below the tabs, the page title is 'Welcome to the Algo 8180 SIP Audio Alerter (G2)'. The main content area contains instructions for setting up the device, including four steps: 1. Configure your SIP Audio Alerter, 2. Check network settings (Optional), 3. Secure your SIP Audio Alerter (Optional), and 4. Register your SIP Audio Alerter (Optional). A red box highlights the registration status in the table below.

Status	
Device Name	sipalerter-120d88
SIP Registration	Page Successful (Extension 16043300097)
Call Status	Idle

Digital Line

A RingCentral digital line can originate or receive regular telephone calls. It's a full extension, thus proving most flexibility for different applications.

Recommend use:

- Loud ringing / night ringer
- Two-way communication using Algo IP speakers or paging adapters
- Intercoms of speakers originating calls
- Capable of receiving regular telephone calls
- DTMF zoning (multicast or analog zone controller)
- Door control (via DTMF) with intercoms

Don't use for:

- One-way paging using Algo IP speakers or paging adapters (single or multi-site)

Configuration

Step 1 - In the RingCentral web admin portal, go to "Phone System" -> "Phone & Devices" -> "User Phones". Add a new account using the "+ Add Device" button.

Step 2 - On the third step, select "Other Phones" and "Existing phone". Continue to finish creating the user account.


Add User Phones ×

✓ Select Location ✓ Select User **3 Select Devices** 4 Select Numbers 5 Add Emergency Address 6 Add Shipping Info 7 Confirm


MVP Licenses - Domestic DigitalLine Unlimited available: 992
Each device requires a license, if the quantity of devices added exceeds the available license amount, you will be charged for the extra licenses.


Select Devices Devices Added: 0 Devices (max 50)

Desktop Phones **Other Phones**



Existing Phone
Price: FREE





RingCentral Phone app
Price: FREE


Qty	Device Name	Device Option
No device added		

Back Next

Step 3 - After creating the user account, click on “Setup & Provision”.

Home Users **Phone System** Meetings Reports Billing More

< Back Existing Phone



Device
Existing Phone

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

Serial Number: N/A
Assigned Type: User Phone
Status: Offline

Name: Digital Line Test

Assigned To
User

Step 4 - If prompted to select a model (see screenshot below), click on “Set up Manually Using SIP”.

Setup & Provisioning

1 Select Device 2 Provisioning 3 Finish

Select your model to begin

Can't find the model? Want to bring your own device? [Set up manually using SIP](#)

Cancel Next

Step 5 - At this point, the SIP credentials are displayed. Copy and paste as per instructions provided on the next step.

Note: enabling TLS and SRTP is not mandatory, but highly recommended for security reasons.

Setup & Provisioning ×

✓ Select Device ✓ Provisioning 3 Finish

Manual Provisioning Copy

To connect your device with RingCentral services, setup your device following the steps below. 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	sip10.ringcentral.com:5096 ▼
Outbound Proxy Port	5096
User Name	██████████
Password	██████████
Authorization ID	██████████

Done

Step 6 - In the Algo Endpoint web interface, go to Basic Settings -> SIP tab. Copy & paste the credentials following the instructions below:

- RingCentral “SIP Domain” and “Local SIP Port” = Algo SIP Domain (Proxy Server) field
- RingCentral “User Name” = Algo Extension field
- RingCentral “Authorization ID” = Algo Authentication ID field
- RingCentral “Password” = Algo Authentication Password field

Note: enabling TLS and SRTP is not mandatory, but highly recommended for security reasons.

The screenshot shows the 'SIP Settings' page in the Algo Endpoint web interface. The 'Basic Settings' tab is selected, and the 'SIP' sub-tab is active. The 'SIP Domain (Proxy Server)' field contains 'sip.ringcentral.com:5060' with a red arrow pointing to it. The 'Authentication ID' field contains '804121148024' with a red arrow pointing to it. The 'Authentication Password' field is masked with dots. A 'Save' button is visible at the bottom right.

Step 7 - RingCentral “Outbound Proxy” and “Outbound Proxy Port” must be entered into the Outbound Proxy field (Advanced Settings -> Advanced SIP). Also set the SIP Transportation to “TLS”.

In Advanced Settings -> Advanced SIP tab, set the following parameters:

- SIP Transportation = TLS
- Outbound Proxy = RingCentral “Outbound Proxy” and “Outbound Proxy Port” as provided by RingCentral and separated by colon (see below).
- SDP SRTP Offer = Standard
- SDP SRTP Offer Crypto Suite = All Suites

The screenshot shows the Algo web interface with the following configuration:

- Advanced Settings** (circled in red)
- Advanced SIP** (circled in red)
- General**
 - SIP Transportation:** TLS (dropdown, red arrow pointing to it)
 - SIPS Scheme:** Disabled (radio button selected)
 - Validate Server Certificate:** Disabled (radio button selected)
 - SIP Outbound Support (RFC 5626):** Disabled (radio button selected)
 - Outbound Proxy:** sip10.ringcentral.com:5096 (text field, red arrow pointing to it)
 - Register Period (seconds):** 3600 (text field)
- SRTP**
 - SDP SRTP Offer:** Standard (dropdown, red arrow pointing to it)
 - SDP SRTP Offer Crypto Suite:** All Suites (dropdown)

Step 8 - Verify the registration status in the Algo web interface.

Status Basic Settings Additional Features Scheduler Advanced Settings System Logout

Device Status

Welcome to the Algo 8301 Paging Adapter & Scheduler

Setting up your Paging Adapter & Scheduler:

Step 1: Configure your Paging Adapter & Scheduler
Log in with the default password and use the Basic Settings pages to set up the basic information.

Step 2: Check network settings (Optional)
Use the Network page under the Advanced Settings tab to change network settings. The default setting for the device is to obtain its IP address from a DHCP server. Contact your Network System administrator if you plan to assign a static IP address, Mask, and Gateway to the device.

Step 3: Secure your Paging Adapter & Scheduler (Optional)
Use the Admin page under the Advanced Settings tab to change the administrator password.
⚠ Changing the password is extremely important if the device is directly connected to a public network.

Step 4: Register your Paging Adapter & Scheduler (Optional)
Please register your product using the link below:
<http://www.algosolutions.com/register>
Registration ensures your access to the latest upgrades to this product and important service notices.

Status

Device Name	pagingadapter-090045		
SIP Registration	Page	Successful	(Extension 16043302491)
Call Status	Idle		