

Using TLS and SRTP on RingCentral

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- Initial Release

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1.0 Does my device support TLS and SRTP?

Before upgrading the device to use TLS and SRTP the device must support these features. The device's serial number can be used to determine support. Both TLS and SRTP support is required to use these features, TLS cannot be used without SRTP.

Table 1-1: Support for TLS and SRTP

Serial Number	TLS and SRTP Support
<u>SIP Paging Server</u>	
1460xxxxx	No
1461xxxxx	No
1462xxxxx	Yes
<u>SIP Paging Adapter</u>	
2330xxxxx	No
2331xxxxx	Yes
2332xxxxx	Yes
<u>SIP Four Port Zone Controller</u>	
1710xxxxx	No
1711xxxxx	No
<u>SIP Outdoor Intercom</u>	
1860xxxxx	No
1861xxxxx	No
1862xxxxx	Yes
<u>SIP Outdoor Keypad Intercom</u>	
2140xxxxx	No
2141xxxxx	No
2142xxxxx	No
<u>SIP RFID Intercom</u>	
477xxxxxx	No
<u>SIP Indoor Intercom</u>	
2110xxxxx	No
2111xxxxx	No
2112xxxxx	No
<u>SIP Emergency Intercom</u>	
2090xxxxx	No
2091xxxxx	No
2092xxxxx	No

Serial Number	TLS and SRTP Support
<u>SIP Call Button</u>	
0490xxxxx	No
0491xxxxx	No
0492xxxxx	Yes
<u>SIP Outdoor Call Button</u>	
491xxxxxx	Yes
<u>SIP RGB Strobe</u>	
3761xxxxx	No
3762xxxxx	No
<u>SIP Outdoor Strobe</u>	
4790xxxxx	No
<u>SIP Speaker</u>	
393xxxxxx	Yes
394xxxxxx	Yes
<u>SIP Talkback Speaker</u>	
397xxxxxx	Yes
398xxxxxx	Yes
<u>SIP Office Ringer</u>	
2160xxxxx	No
2161xxxxx	No
2162xxxxx	No
<u>SIP IP66 Outdoor Horn</u>	
457xxxxxx	Yes
<u>SIP Paging Amplifier</u>	
324xxxxxx	Yes
<u>SIP Loudspeaker Amplifiers</u>	
404xxxxxx	Yes
405xxxxxx	Yes

2.0 Enabling TLS and SRTP

After determining that the device supports TLS and SRTP there are a few short steps required to enable the features. The steps required are to enable NTP, change SIP Transport Protocol to TLS, adjust the Outbound Proxy port, and finally enable SRTP. Follow these steps to enable TLS and SRTP.

2.1 Enable NTP on the Device tab – Posix Time zone String

Depending on the product, the process of enabling NTP is slightly different. The main identifier for which process is the Time Zone field, some use a Posix Timezone string and others use a more modern “County/Major_City”.

Figure 2-1: Enable NTP – Posix Timezone string

Time Settings

Set Time with NTP server on boot:

NTP Server: north-america.pool.ntp.org

Posix Timezone String (see manual): PST8PDT,M3.2.0/2:00:00,M11.1.0,

Periodically sync time with server:

Time update period (in hours): 1

Current Time: 14:25:00

Set Time Manually 14:25:00

Set

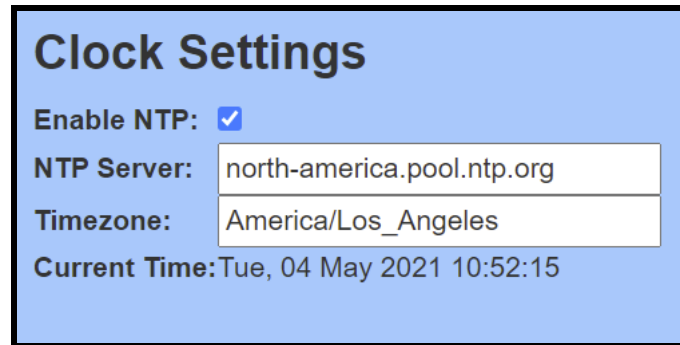
1. Check the box for **Set Time with NTP Server on boot**.
2. Adjust the **NTP Server** as necessary
3. Adjust the **Posix Timezone String** to the local area.
4. Check the box for **Periodically sync time with server**.
5. Set **Time update period (in hours)** to 1.
6. **Save**.

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](#)

2.2 Enable NTP on the Device Tab

IF the section is called **Clock Settings** follow this process to enable NTP. By default, NTP should be enabled.

Figure 2-2: Enable NTP



The screenshot shows a 'Clock Settings' window with a light blue background. At the top, the title 'Clock Settings' is displayed in a large, bold, black font. Below the title, there are four settings:

- Enable NTP:** A checkbox that is checked with a blue checkmark.
- NTP Server:** A text input field containing the value 'north-america.pool.ntp.org'.
- Timezone:** A text input field containing the value 'America/Los_Angeles'.
- Current Time:** A label followed by the text 'Tue, 04 May 2021 10:52:15'.

1. Ensure **Enable NTP** is enabled.
2. Adjust the **NTP Server** as necessary.
3. Adjust the **Timezone** as necessary.
4. **Save.**

2.3 Adjusting SIP Settings

The rest of the process is the same for all products. Follow these steps to adjust the SIP Settings.

1. Change SIP Transport Protocol to **TLS**.
2. Ensure TLS Version is set to 1.2 only (Recommended).
3. Change the Outbound Proxy port to **5096**.
4. Set SRTP to Enabled/Mandatory.
5. Save.
6. Reboot.

Figure 2-3: SIP Settings

SIP Settings

Enable SIP operation:

SIP Transport Protocol: TLS

TLS Version: 1.2 only (recommended)

Verify Server Certificate:

Register with a SIP Server:

Use Cisco SRST:

Primary SIP Server: sip.ringcentral.com

Primary SIP User ID: 18312234700*803850191011

Primary SIP Auth ID: 803850191011

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: 5096

Disable rport Discovery:

Buffer SIP Calls:

Re-registration Interval (in seconds): 30

Unregister on Boot:

Keep Alive Period: 0

Nighthringer Settings

Enable Nighthringer:

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

SRTP: Enabled

Call Disconnection

Terminate Call after delay: 0

Codec Selection

Force Selected Codec:

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

3.0 Contact CyberData Corporation

Sales

For sales-related questions, please visit our [Contact CyberData Sales](#) web page for more information.

Technical Support

For CyberData Technical Support, please submit a [Contact CyberData VoIP Technical Support](#) form on our website.

The CyberData VoIP Technical Support Contact form initiates a troubleshooting ticket which CyberData uses for quality assurance purposes.

Additionally, the Contact VoIP Tech Support form tells us which phone system you are using, the make and model of the network switch, and other essential troubleshooting information we need to efficiently assist with a resolution. Please also include as much detail as possible in the Describe Problem section of the form. Your installation is extremely important to us.

Documentation Feedback

We realize changes to the software or hardware of the RingCentral PBX solution may render this document obsolete. We welcome and encourage documentation feedback to ensure continued applicability.