

# Configuration Tips

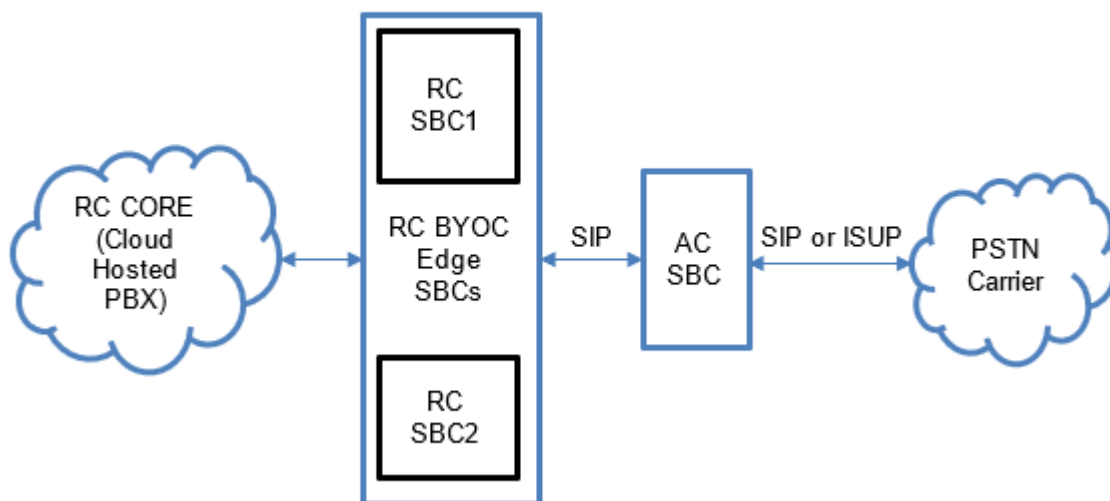
## SBC with RingCentral BYOC

### (Bring Your Own Carrier)

## 1 Overview

This document describes configuration tips for connecting AudioCodes SBCs to RingCentral BYOC Edge SBCs. To configure AudioCodes SBCs, use the specific User's Manual and other SBC documents. These manuals can be found at [www.audiocodes.com/library/technical-documents](http://www.audiocodes.com/library/technical-documents).

## 2 Basic Diagram



### 3 SIP Signaling

RingCentral supports the following protocols:

- **UDP:** Port 5060
- **TCP:** Port 5060
- **TLS:** Port 5061

Use the above values when setting up the SIP Interface and Proxy Set for RingCentral.

If you are using TLS, verify the certificate on the SBC and set up TLS contexts as needed. Refer to the User's Manual for device and root certificates. You also need to configure NTP.

### 4 Coders

RingCentral supports the following coders:

- G.711ulaw
- G.711alaw
- G.722
- G.729

## 5 Number Format

All numbers should be in E.164 format. This includes numbers in the Request URI, From header, To header, Contact header, and P-Asserted-Identity header. The IP Inbound and Outbound Manipulations can be used to add or remove +1 (for North America) as needed. You may need to create Message Manipulations to add +1 for the Contact and PAI headers. If you use message manipulations, assign the message manipulation Set ID as the Outbound Manipulation Set in the Ring Central IP Group.

An alternative method for Inbound/Outbound Manipulations removing the +1 on calls from RingCentral, is to create a message manipulation to remove the +1 and assign the manipulation Set ID as the Pre-Classification Main Set in the SIP Interface used by RingCentral.

## 6 Anonymous

Anonymous calls are supported.

## 7 Call Hold

Either side can place a call On Hold and then remove the Hold.

## 8 DTMF Relay

RFC 2833, Payload Type 101

## 9 Fax Protocol

- T.38
- T.30 G.711 encoded

## 10 Asserted Identity Header

RingCentral expects the P-Asserted-Identity header to be included in SIP messages, especially the INVITE message. If you need to add the P-Asserted-Identity header, set the **SBCAssertIdentity** RingCentral IP Profile parameter to 'Add'. You can also use message manipulations to add the P-Asserted-Identify header.

## 11 Media

RingCentral supports RTP and SRTP.

The following Crypto Suites are supported by RingCentral:

- AES\_256\_CM\_HMAC\_SHA1\_80
- AES\_256\_CM\_HMAC\_SHA1\_32
- AES\_192\_CM\_HMAC\_SHA1\_80
- AES\_192\_CM\_HMAC\_SHA1\_32

The following Crypto Suites are supported by AudioCodes SBC:

- AES\_CM\_128\_HMAC\_SHA1\_80
- AES\_CM\_128\_HMAC\_SHA1\_32
- AES\_256\_CM\_HMAC\_SHA1\_80
- AES\_256\_CM\_HMAC\_SHA1\_32

**Note:** The AES\_256 suites are supported by both RingCentral and AudioCodes SBCs.

For calls from RingCentral, the AudioCodes SBC may need to use the AES\_CM\_128 suites for the other side of the call. If that is the case, the SBC needs to remove the Crypto Suites sent from RingCentral and add the AES\_CM\_128 Crypto Suites. Do the following:

1. Create Crypto Suites Groups and Crypto Suites.
2. Assign the Crypto Groups to the appropriate IP Profiles.
3. Set the **SBCRemoveUnknownCrypto** IP Profile parameter to 'Yes'. For this functionality, use SBC firmware loads 7.40A.100.233 or later.

## 12 Host in Request URI and To Headers

RingCentral expects the host in the Request URI and To headers to be the IP or FQDN of the RingCentral SBC, and not the IP of AudioCodes SBC.

If needed, create message manipulations to change these fields and assign the Manipulation Set ID as the Outbound Manipulation Set for the RingCentral IP Group.

**Examples:** (Using the message manipulation editor as different firmware releases may have different fields available.)

### 1. Manipulation rule to use the RingCentral IP in the Request URI

Parameter	Value
Index	<b>1</b>
Name	<b>SBC to RC Header.Request.URL</b>
Manipulation Set ID	<b>1</b>
Message Type	<b>Any</b>
Condition	
Action Subject	<b>Header.Request-URI.URL.Host</b>
Action Type	<b>Modify</b>
Action Value	<b>Param.Message.Address.Dst.IP-For-URL</b>

### 2. Manipulation rule to use the RingCentral SBC IP in the To header

Parameter	Value
Index	<b>2</b>
Name	<b>SBC to RC Header.To.URL.Host</b>
Manipulation Set ID	<b>1</b>
Message Type	<b>Any</b>
Condition	
Action Subject	<b>Header.To.URL.Host</b>
Action Type	<b>Modify</b>
Action Value	<b>Param.Message.Address.Dst.IP</b>