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# Ribbon SBC SWe Lite R9.0 Interop with MIDA Recorder : Interoperability Guide

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## Interoperable Vendors

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## Copyright

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## Document Overview

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This document outlines the best practices for configuring Ribbon SBC SWe Lite for Recording feature verification.



From Release 11.0.0 onwards, Ribbon **"SBC SWe Lite"** is rebranded as **"SBC SWe Edge"**.

### About Ribbon SBC SWe Lite

The Ribbon Session Border Controller Software Edition Lite (SBC SWe Lite) provides best-in-class communications security. Microservices designed to optimize resource allocation, dynamic scaling, and automated lifecycle management are all attributes of the SBC SWe Lite, delivering edge SBC capabilities, such as robust network security, overload controls, SIP normalization, SIP Recording, IPv4-IPv6 interworking, and audio transcoding.

### About MIDA Recorder platform

Mida Recorder is a Multimedia Recording System for professional and telephony networks that supports all relevant communication technologies in a single future-proof platform. The Mida Recorder records all your voice and video communications, regardless of the sub-systems where they're coming from, implementing a real Unified Recording System (URS).

### About SIP Recording

The SIP Recording capability helps users to comply with regulations, monitor the quality of service of representatives, store call information for quality analysis, and so on. The Ribbon SBC SWe Lite supports Recording for multiple recorders based on the Internet Engineering Task Force (IETF) standard.

The Ribbon SBC SWe Lite supports the RFC standard for a SIP recording interface. To support Recording, the SBC SWe Lite acts as a Session Recording Client (SRC), initiating a Recording Session (RS) for a Session Recording Server (SRS). The SBC SWe Lite initiates a recording session for all the Communication Sessions (CS) to record over SIP for the SRS. The CS output is based on the SBC SWe Lite's Web UI configuration for enabling recording.

SIP Recording on the SBC SWe Lite supports the following:

- Stores call information for quality analysis.
- Records call and media sessions on a third-party recording server.
- Checks the call detail records and determines if a call is recording or not.
- Provides call detail records for recorded calls.

## Scope

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This document provides configuration best practices for deploying Ribbon's SBC SWe Lite for MIDA Recorder interop. Note that these are configuration best practices, and each customer may have unique needs and networks. Ribbon recommends that customers work with network design and deployment engineers to establish the network design that best meets their requirements.

# Non-Goals

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This guide does not provide detailed configurations that meet the requirements of every customer. Use this guide as a starting point and build the SBC configurations in consultation with network design and deployment engineers.

# Audience

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This is a technical document intended for telecommunications engineers to configure both the Ribbon SBC and the third-party product. Navigating the third-party product as well as the Ribbon SBC SWe Lite GUI is required. Understanding the basic concepts of TLS/TCP/UDP, IP/ Routing, and SIP /SRTP is also necessary to complete the configuration and for any required troubleshooting.

# Prerequisites

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Before proceeding with the interop, make sure you have the following:

- Ribbon SBC SWe Lite
- SBC SWe Lite License
  - This interop requires the acquisition and application of SIP sessions. For more information, see [Working with Licenses](#).
  - This interop also requires the acquisition of SIPREC license.
- MIDA Recorder Platform
  - MIDA server running on 3.1.x version.
  - Licenses for recording application and expected traffic.

# Product and Device Details

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The configuration uses the following equipment and software:

Table 1: Requirements

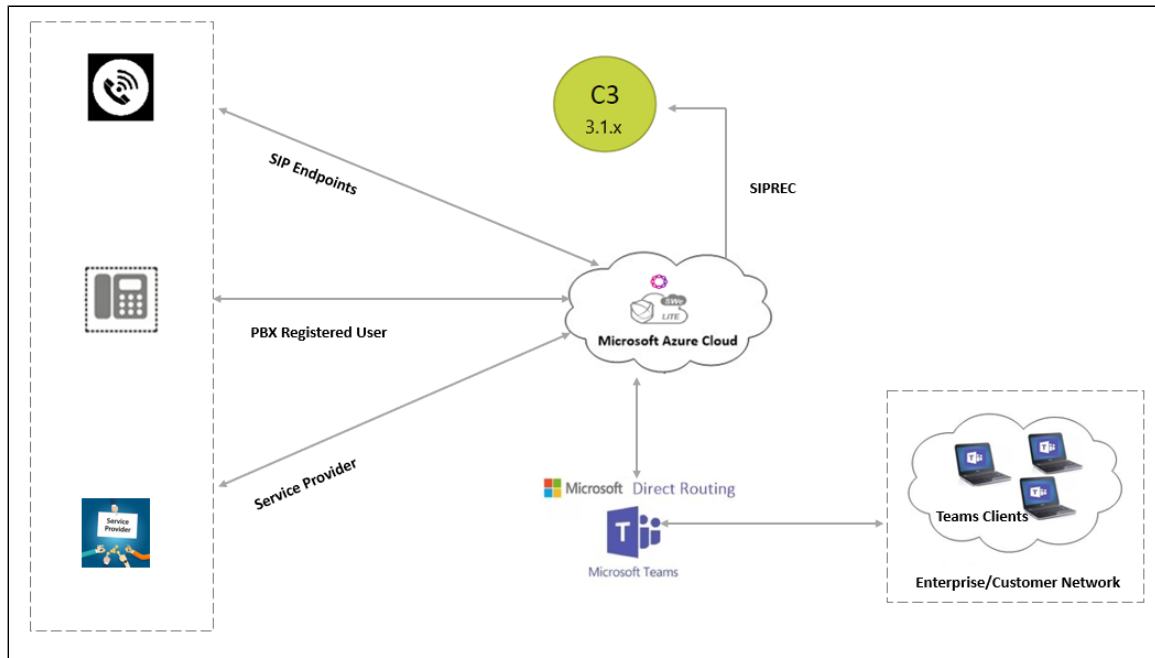
Product	Equipment/ Devices	Software/ Firmware Version
Ribbon Communications	Ribbon SBC SWe Lite	9.0.7
Third-party Equipment	MIDA Recorder	3.1.2
Third Party Phones	Kapanga Softphone	1.00
	Phonerlite	2.93
Administration and Debugging Tools	Wireshark	3.2.7
	LX Tool	2.1.0.6

# Network Topology

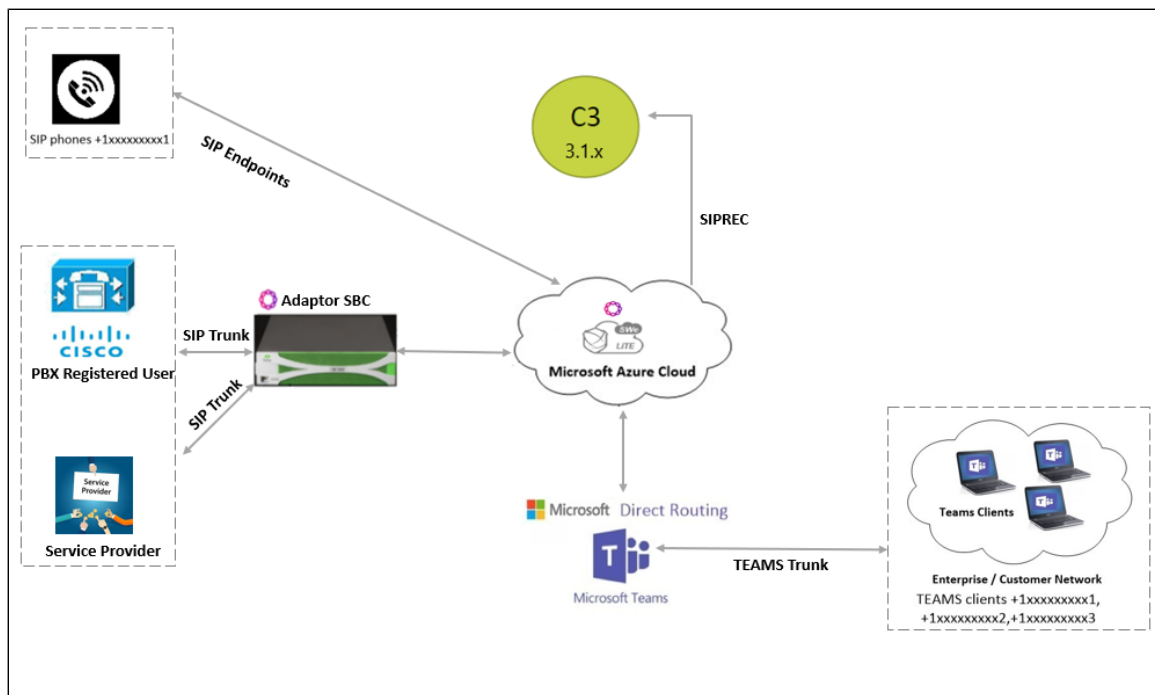
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# Deployment Topology

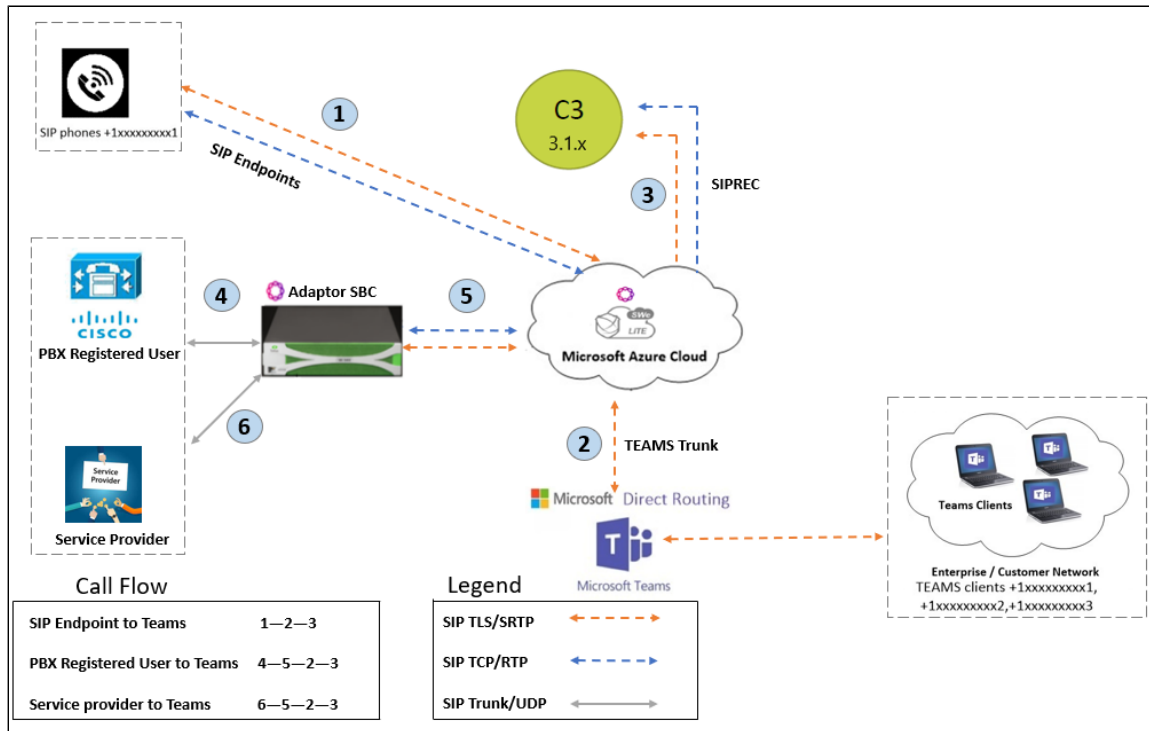




## IOT Lab Topology

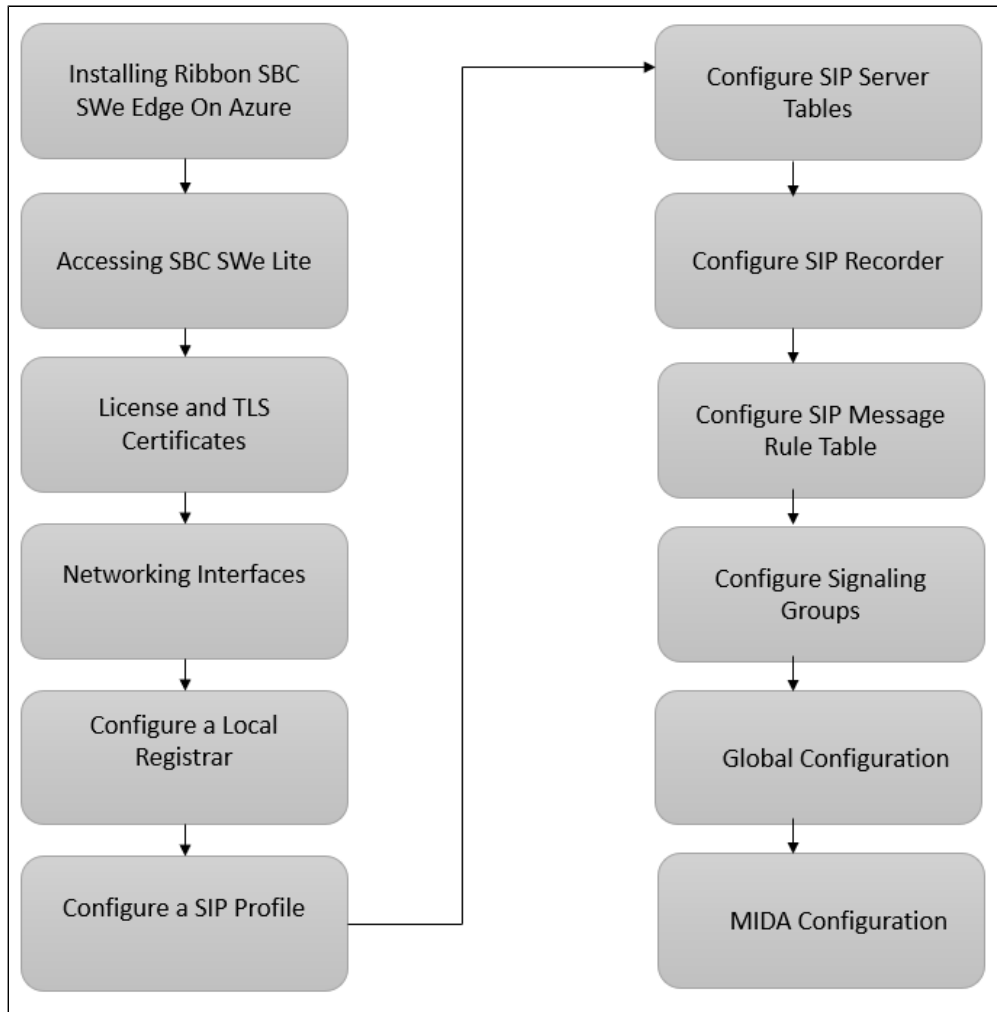


## Signaling and Media Flow



## Document Workflow

To successfully configure the MIDA Recorder, use the following workflow. Ribbon recommends that you complete the procedures in each section in the following sequence.



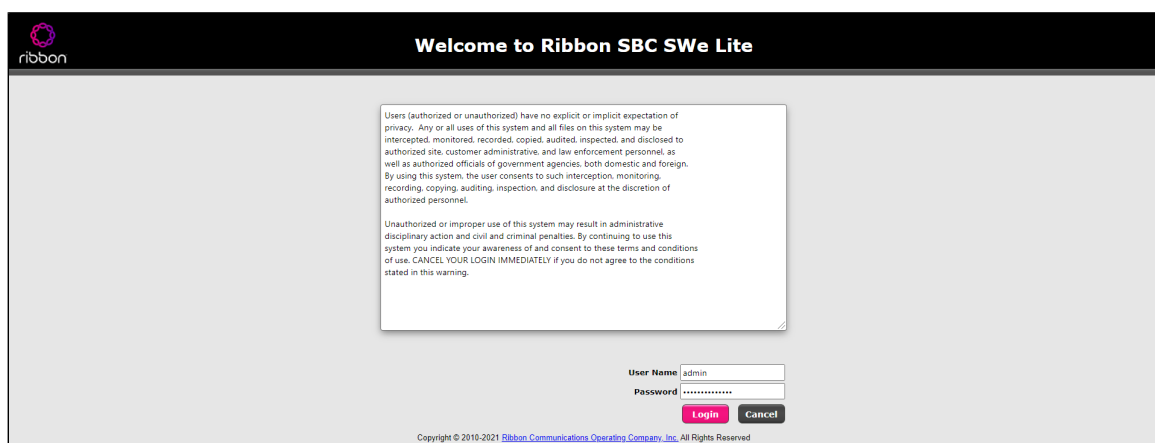
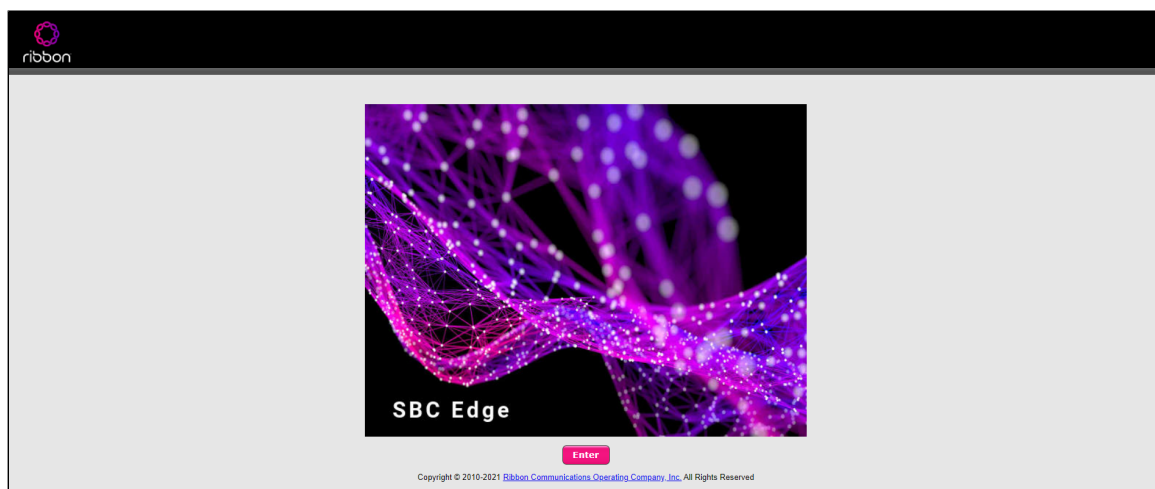
## Ribbon SBC SWe Edge Configuration

### Installing Ribbon SBC SWe Edge On Azure

The SBC SWe Edge is available for deployment in Azure. It is created as a virtual machine (VM) hosted in Azure. To deploy an SBC SWe Edge instance, refer to [Deploying an SBC SWe Edge from the Azure Marketplace](#).

### Accessing SBC SWe Lite

1. Open any browser and enter the SBC SWe Lite IP address.
2. Click **Enter** and log in with a valid User ID and Password.

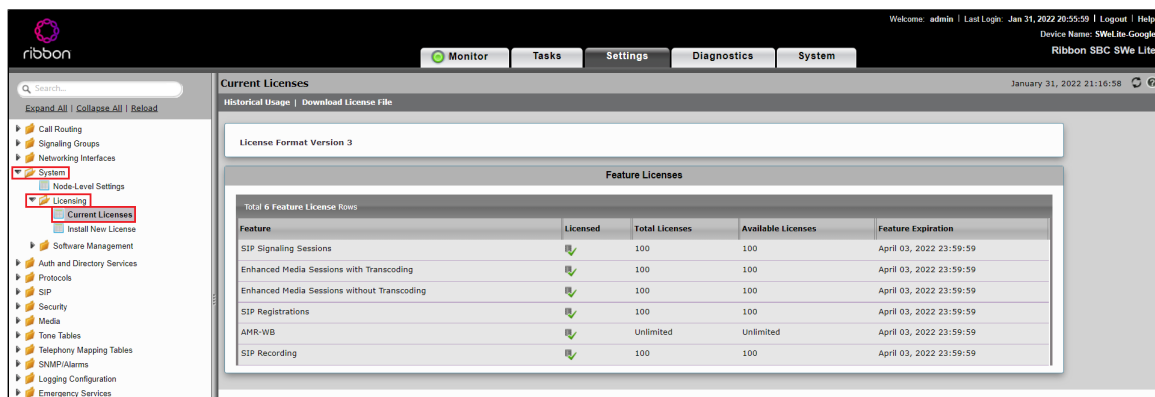


## License and TLS Certificates

### View License

This section describes how to view the status of each license along with a copy of the license keys installed on your SBC. The **Feature Licenses** panel enables you to verify whether a feature is licensed, along with the number of remaining licenses available for a specific feature at run-time.

From the **Settings** tab, navigate to **System > Licensing > Current Licenses**.



For more details on Licenses, refer to [Working with Licenses](#).

### SBC Certificate

1. From the **Settings** tab, navigate to **Security > SBC Certificates > Generate SBC Edge Certificates**.

2. Provide the **Common Name** of the SBC that includes Host and Domain.
3. Set Key Length to 2048 bits.
4. Provide the location information.
5. Click OK. The CSR generates and displays in the result text box.

The screenshot shows the 'Generate Certificate Signing Request' dialog box in the Ribbon Communications web interface. The dialog box is titled 'Subject Distinguished Name' and contains the following fields:

- Common Name:  \* Hostname or FQDN
- Subject Alternative Name DNS:  comma-separated FQDN list
- Email Address:
- ISO Country Code:  (dropdown menu)
- State/Province:
- Locality:  e.g.: City
- Organization:  e.g.: Company
- Organizational Unit:  e.g.: Department
- Key Length:  (dropdown menu)

An 'OK' button is located at the bottom right of the dialog box.

Provide the CSR to the Certificate Authority (CA) . CA generally provides the following certificates:

- SBC Certificate
- CA's Root Certificate
- Intermediate Certificate

The screenshot shows the 'SBC Certificates Index' page in the Ribbon Communications web interface. The page lists the following certificates:

- Generate SBC Edge CSR
- SBC Primary Certificate
- SBC Supplementary Certificates
- Trusted CA Certificates

The left sidebar shows the 'SBC Certificates' section expanded, with the following options:

- Generate SBC Edge CSR
- SBC Primary Certificate
- SBC Supplementary Certificates
- Trusted CA Certificates

You can import the SBC Primary Certificate in the following ways.

To import an X.509 signed certificate:

1. Select **X.509 Signed Certificate** from the Import menu at the top of the page.
2. Choose the import mode (**Copy and Paste** or **File Upload**) from the Mode pull-down menu.
3. If you choose **File Upload**, use the Browse button to find the file, and click **OK**.
4. If you choose **Copy and Paste**,
  - a. Open the file in a text editor and paste the contents into the Paste Base64 Certificate text field.
  - b. Click **OK**.

To import a PKCS12 Certificate and Key:

1. Select **PKCS12 Certificate** and **Key** from the Import menu at the top of the page.
2. Enter the password to export the certificate in the **Password** field.
3. Find the PKCS certificate and key file and click **OK**.

### Import X.509 Server Certificate

Mode
Copy and Paste

Paste Base64 Certificate

OK

### Import X.509 Server Certificate

Mode
File Upload

Select File
Choose File
No file chosen
Extensions [pem, der, cer, ber, p7b] \*

OK

### Import PKCS12 Server Certificate

Password

Select File
Choose File
No file chosen
Extensions [.pfx or .p12] \*

OK

Welcome: ribbon | Last Login: Feb 18, 2022 10:46:31 | Logout | H
Device Name: h
Ribbon SBC SWe Li

Monitor
Tasks
Settings
Diagnostics
System

Local Password Tables
SIP Profiles
SIP Server Tables
Trunk Groups
NAT Qualified Prefix Tables
Remote Authorization Tables
Contact Registrant Table
Message Manipulation
Node-Level SIP Settings
SIP Recording
Security
Users
Login Messages
SBC Certificates
Generate SBC Edge CSR
SBC Primary Certificate
SBC Supplementary Certificates
Trusted CA Certificates
TLS Profiles
Change Password
Ribbon Protect Bad Actors
Media
Media System Configuration
Media Profiles
SDS-SRTP Profiles
Teams

### SBC Primary Certificate

Import
Export
February 21, 2022 06:12:58

#### Subject

Common Name
ISO Country Code
State or Province
Locality
Organization
Organizational Unit
Email Address

#### Issuer

Common Name
Setigo RSA Domain Validation Secure Server CA
ISO Country Code
GB
State or Province
Greater Manchester
Locality
Salford
Organization
Setigo Limited
Organizational Unit
Email Address

#### Certificate

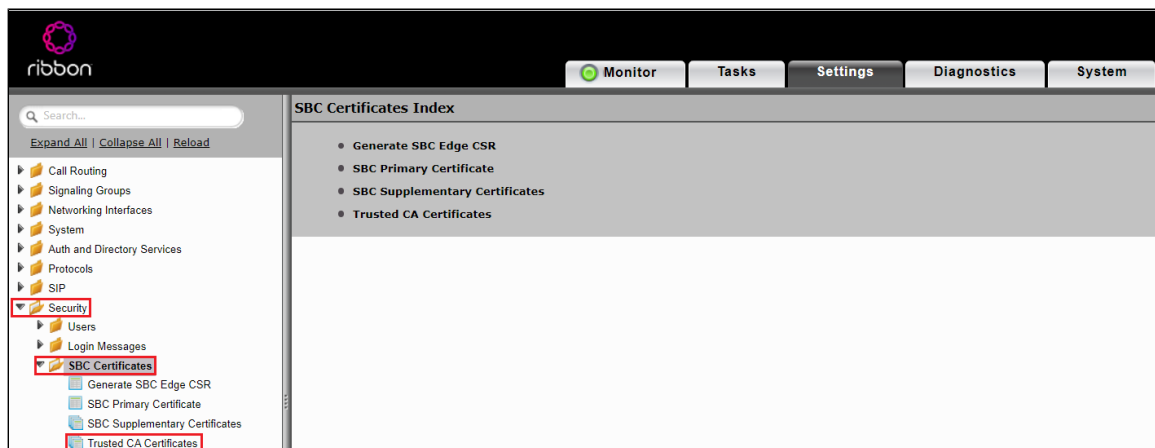
Not Valid Before
Apr 14, 2021 02:00:00
Not Valid After
Apr 15, 2022 01:59:59
Serial Number
1B2E602C395783A9A3FEBB03E152360E
Signature Algorithm
sha256WithRSAEncryption
Key Length
2048
Enhanced Key Usage
TLS Web Server Authentication, TLS Web Client Authentication
Key Usage
Digital Signature, Key Encipherment

## Trusted CA Certificates


A Trusted CA Certificate is issued by a Trusted Certificate Authority. Trusted CA Certificates are imported to the SBC SWe Edge to establish their authenticity on the network.

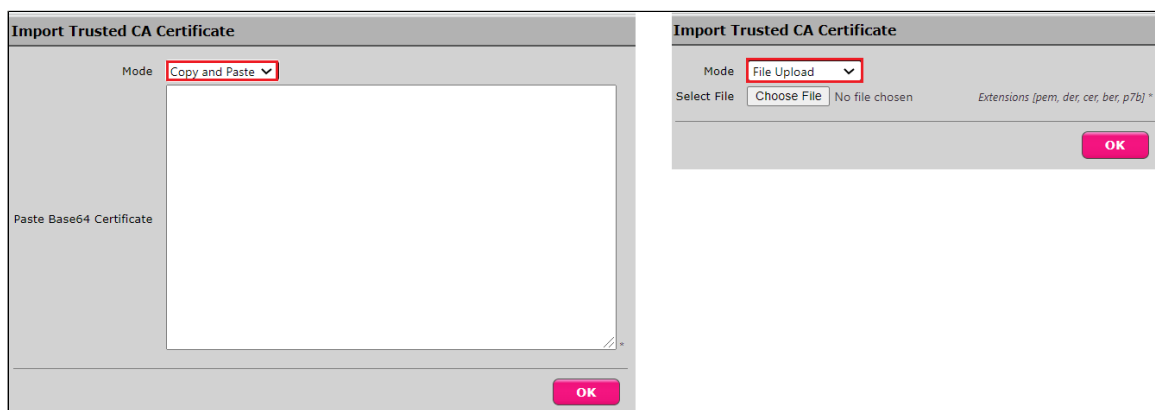
- For TLS to work, a **Trusted CA (Certificate Authority)** is required. For this interop, GoDaddy is used as **Trusted CA**.
- Add an entry in the Public DNS to resolve Ribbon SBC SWe Edge FQDN to **Public IP Address**.
- Ensure that you have the following certificates as part of the **root certificate trust**.
  - GTS Root R1
  - GlobalSign R2 (if required)

From the **Settings** tab, navigate to **Security > SBC Certificates > Trusted CA Certificates**.



The following procedure shows you how to import Trusted Root CA Certificates, using either the File Upload or Copy and Paste method:

1. To import a Trusted CA Certificate, click the **Import Trusted CA Certificate**  icon.
2. Select either **Copy and Paste** or **File Upload** from the Mode menu.
3. If you choose **File Upload**, select the **File** button to find the file.
4. Click **OK**.



When the **Verify Status** field in the Certificate panel indicates **Expired** or **Expiring Soon**, replace the Trusted CA Certificate. You must delete the old certificate to successfully import a new certificate.



Most Certificate Vendors sign the SBC Edge certificate with an intermediate certificate authority. There is at least one, but there could be several intermediate CAs in the certificate chain. When importing the Trusted Root CA Certificates, import the root CA certificate and all Intermediate CA certificates. Failure to import all certificates in the chain causes the import of the SBC Edge certificate to fail. Please refer to [Unable To Get Local Issuer Certificate](#) for more information.

## Networking Interfaces

The SBC SWe Lite supports five system-created logical interfaces known as Administrative IP and Ethernet 1 IP. In addition to the system-created logical interfaces, the Ribbon SBC SWe Lite also supports user-created VLAN logical sub-interfaces.

Access the Administrative IP and Ethernet 1 IP from the **Settings** tab, and then navigate to **Networking Interfaces > Logical Interfaces**.



Ribbon recommends that you use two interfaces with two different VLANs instead of configuring a single interface.

## Administrative IP

The SBC SWe Lite system supports a logical interface called the Administrative IP (Admin IP), which is also known as the Management IP. A Static IP or DHCP is used to run the Initial Setup of the SBC SWe Lite system.

Logical Interfaces

Interface Name	IPv4 Address	IPv6 Address	Description	Admin State	Display	Primary Key
Admin IP				Disabled	Counters	35
Ethernet 1 IP	10.0.0.20		WAN	Enabled	Counters	36

## Ethernet 1 IP

Ethernet 1 IP is assigned an IP address for transporting all the VoIP media packets (for example, RTP and SRTP) and all protocol packets (for example, SIP, RTP, and TLS). The DNS servers of the customer's network must map to the SBC SWe Lite system hostname to this IP address. In the default software, **Ethernet 1 IP** is enabled, and an IPv4 address is acquired through a connected DHCP server. This IP address is used for performing the Initial Setup on the SBC SWe Lite.

Identification/Status

Interface Name: **Ethernet 1 IP**  
 I/F Index: **4**  
 Alias:   
 Description:   
 Admin State:

Networking

MAC Address: **00:0d:3a:2c:d6:9b**  
 IP Addressing Mode:



ribbon

Welcome: ribbon | Last Login: Feb 18, 2022 10:46:31 | Logout

Device Name: Ribbon SBC SV

Monitor Tasks Settings Diagnostics System

Admin State: Enabled

Networking

MAC Address: 00:0d:3a:2c:d6:9b

IP Addressing Mode: IPv4

IPv4 Information

IP Address: 10.0.0.20

IP Netmask: 255.255.255.0

IP Assign Method: DHCP

Media Next Hop IP: 10.0.0.1

DHCP Options to Use: IP Address and Default Route

Apply

## Configure Static Routes

Static routes communicate with remote networks. In a production environment, static routes are mainly configured for routing from a specific network to another network that you can only access through one point or one interface, that is, single path access or a default route.

Derive the **Private IP address** and **Gateway** for each interface on AWS.

### Destination IP

Specifies the destination IP address.

### Mask

Specifies the network mask of the destination host or subnet. If the 'Destination IP Address' field and 'Mask' field are both 0.0.0.0, the static route is called the 'default static route'.

### Gateway

Specifies the IP address of the next-hop router to use for this static route.

### Metric

Specifies the cost of this route and therefore indirectly specifies the preference of the route. Lower values indicate more preferred routes. The typical value is 1 for most static routes, indicating that static routes are preferred to dynamic routes.

From the **Settings** tab, navigate to **Protocols > IP > Static Routes** to configure static routes. Click the **+** icon to add the entries.

Static IP Route Table

Total 3 IP Route Rows

Row ID	Destination IP	Mask	Gateway	Metric	Primary Key
1	52	255.252.0.0	10.4.3.1	1	1
2	115	255.255.255.255	10.4.2.1	1	2
3	115	255.255.255.0	10.4.2.1	1	3

## Configure a Local Registrar

SIP Registration allows users to upload their current locations for use by proxy servers. Registration creates bindings in a location service for a particular domain that associates an address-of-record URI with one or more contact addresses.

Registration entails sending a **REGISTER** request to a special type of User-Agent Server (UAS ) known as a registrar. A registrar acts as the front-end to the location service for a domain, reading and writing mappings based on the contents of REGISTER requests.

The Broadsoft AS handles the registration for its users with **authentication**.



Registration on SBC Edge with the **reg-key** parameter will provide support in the upcoming release.

To configure a local registrar, navigate to **SIP > Local Registrars**.

The screenshot shows the 'SIP Local Registrar Table' configuration page. The left sidebar lists navigation options under 'SIP', including 'Local Registrars' and 'SIP Profiles'. The main area displays a table with columns: Description, Max. Users, Display, and Primary Key. The table lists 'Home' and 'Sandbox' registrars, each with a maximum of 5 users. Below the table, there is a form to add a new registrar with fields for 'Description' (set to 'Sandbox') and 'Maximum Number of Users' (set to 5). An 'Apply' button is visible. The top navigation bar includes 'Monitor', 'Tasks', 'Settings', 'Diagnostics', and 'System'.

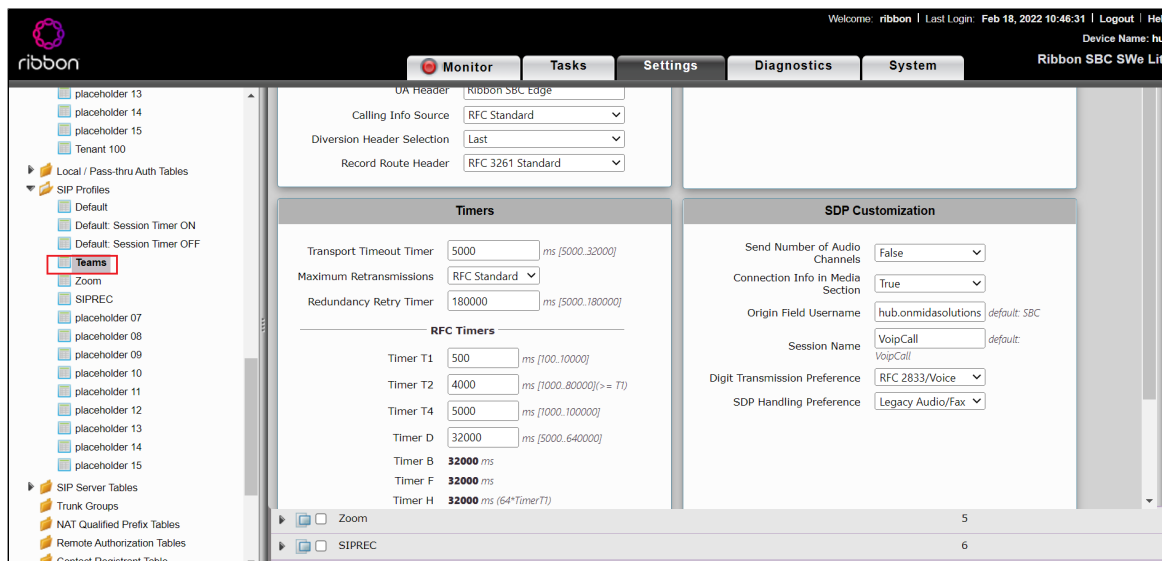
Description	Max. Users	Display	Primary Key
Home	5	Counters   Registered Users	1
Sandbox	5	Counters   Registered Users	2

## Configure a SIP Profile

SIP Profiles control the how the SBC Edge communicates with SIP devices. They control important characteristics, such as session timers, SIP header customization, SIP timers, MIME payloads, and option tags.

To configure a profile, navigate to **SIP > SIP Profiles**.

The screenshot shows the 'SIP Profiles' configuration page. The left sidebar lists navigation options under 'SIP Profiles', including 'Default', 'Default: Session Timer ON', 'Default: Session Timer OFF', and 'Teams'. The 'Teams' profile is selected. The main area displays configuration settings for the 'Teams' profile, including 'Session Timer' (Enabled), 'MIME Payloads' (ELIN Identifier: LOC, PIDF-LO Passthrough: Enable, Unknown Subtype Passthrough: Disable), 'Header Customization' (FQDN in From Header: SBC Edge FQD, FQDN in Contact Header: SBC FQDN, Send Assert Header: Trusted Only, SBC Edge Diagnostics Header: Enable, Trusted Interface: Enable, UA Header: Ribbon SBC Edge, Calling Info Source: RFC Standard), and 'Options Tags' (100rel: Supported, Path: Not Present, Timer: Supported, Update: Supported). The top navigation bar includes 'Monitor', 'Tasks', 'Settings', 'Diagnostics', and 'System'.



## Configure SIP Server Tables

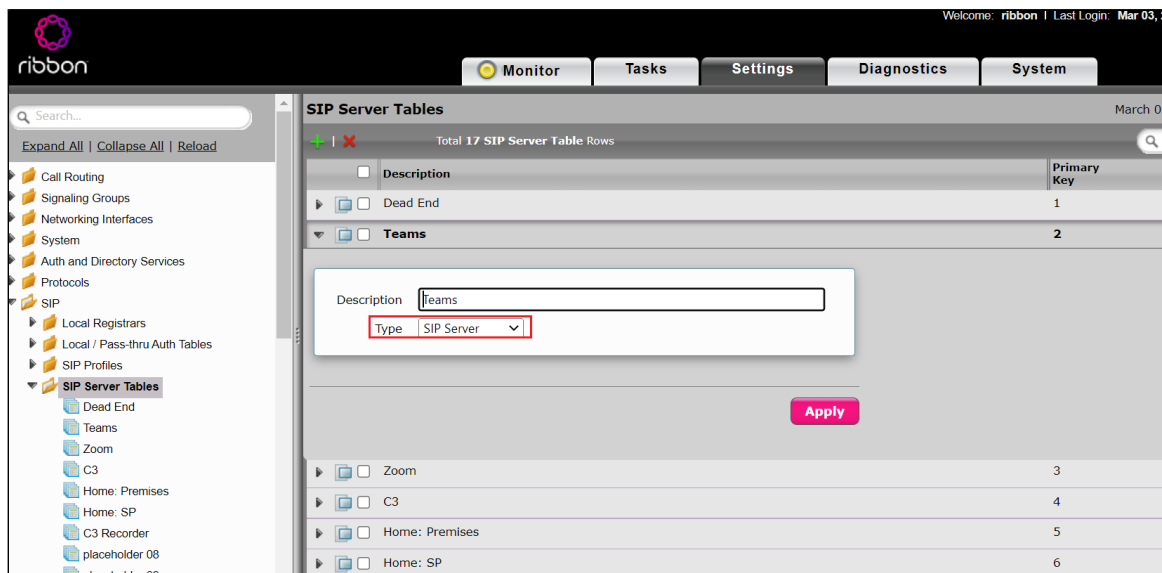
SIP Server Tables contain information about the SIP devices connected to the SBC Edge. The tables provide information about the IP addresses, ports, and protocols used to communicate with each server.

Use the following SIP devices:

- **Teams**: Provides information about the Teams endpoint.
- **C3**: Provides information about the C3 Recorder.
- **Service provider**: Provides information about Service Provider endpoints.
- **Premises**: Provides information about Premises endpoints.

To configure the tables,

1. Navigate to **SIP > SIP Server Tables**.
2. Provide a name for the SIP Server.
3. From the Type drop-down list, choose **SIP Server**.
4. Click OK.



## SIP Server Table Entry for Teams

1. Click on the SIP Server Table that you just created.
2. From the Create SIP Server drop-down list, select **IP/FQDN**.

3. Enable **OPTION** pings by selecting SIP Options from the Monitor field.
4. Click OK.

The screenshot shows the 'Teams' configuration page in the Ribbon SBC interface. The left sidebar contains a tree view with 'Teams' selected. The main panel displays the configuration for a SIP server named 'sip.pstnhub.microsoft.com'. The 'Host FQDN/IP' field is highlighted with a red box. Other fields include 'Server Lookup' (IP/FQDN), 'Port' (5061), 'Protocol' (TLS), 'Display Counters' (Counters), and 'Priority' (1). The 'Monitor' field is set to 'SIP Options'. The 'Keep Alive Frequency' is 30 seconds, and the 'Recover Frequency' is 5 seconds. The 'Local Username' and 'Peer Username' are both set to 'Anonymous'. The 'Remote Authorization Table' and 'Contact Registrant Table' are both set to 'None', and the 'Session URI Validation' is set to 'Liberal'. The 'Connection Reuse' section shows 'Reuse' set to 'True', 'Sockets' set to 4, and 'Reuse Timeout' set to 'Forever'.



#### Note

Repeat the same steps for different HOST FQDN.

The screenshot shows the 'Teams' configuration page in the Ribbon SBC interface. The left sidebar contains a tree view with 'Teams' selected. The main panel displays a table with three entries for the 'Teams' SIP server. The table has columns for 'Host / Domain', 'Server Lookup', 'Port', 'Protocol', 'Display Counters', 'Priority', and 'Primary Key'.

Host / Domain	Server Lookup	Port	Protocol	Display Counters	Priority	Primary Key
sip.pstnhub.microsoft.com	IP/FQDN	5061	TLS	Counters	1	1
sip2.pstnhub.microsoft.com	IP/FQDN	5061	TLS	Counters	1	2
sip3.pstnhub.microsoft.com	IP/FQDN	5061	TLS	Counters	1	3

## SIP Server Table Entry for C3 Recorder

1. Click on the SIP Server Table that you just created.
2. From the Create SIP Server drop-down list, select **IP/FQDN**.
3. Enable **OPTION** pings by selecting SIP Options from the Monitor field.
4. Click OK.

The screenshot shows the 'C3' configuration page for a SIP Server. The left sidebar contains a tree view with categories like Call Routing, Signaling Groups, Networking Interfaces, System, Auth and Directory Services, Protocols, SIP, SIP Server Tables, Dead End, Teams, Zoom, C3, Home: Premises, Home: SP, C3 Recorder, and placeholder 08. The main area is titled 'C3' and 'March 03, 2022 14:07'. It features a 'Create SIP Server' dropdown and a table with one row: 'cloud.midasolutions.com' with IP/FQDN, Port 5062, Protocol UDP, Display Counters, and Priority 1. Below the table are three panels: 'Server Host' (Server Lookup: IP/FQDN, Priority: 1, Host FQDN/IP: cloud.midasolutions.com, Host IP Version: IPv4, Port: 5062, Protocol: UDP), 'Transport' (Monitor: SIP Options, Keep Alive Frequency: 30, Recover Frequency: 5, Local Username: Anonymous, Peer Username: Anonymous), and 'Remote Authorization and Contacts' (Remote Authorization Table: None, Contact Registrant Table: None).

## SIP Server Table Entry for Premises

1. Click on the SIP Server Table that you just created.
2. From the Create SIP Server drop-down list, select **IP/FQDN**.
3. Enable **OPTION** pings by selecting SIP Options from the Monitor field.
4. Click OK.

The screenshot shows the 'Sandbox: Premises' configuration page for a SIP Server. The left sidebar contains a tree view with categories like placeholder 10, placeholder 11, placeholder 12, placeholder 13, placeholder 14, placeholder 15, SIP Server Tables, Dead End, Teams, Zoom, C3, Home: Premises, Home: SP, C3 Recorder, placeholder 08, placeholder 09, placeholder 10, Sandbox: Premises, Sandbox: SP, placeholder 13, placeholder 14, placeholder 15, Tenant 100: Premises, and Tenant 100: SP. The main area is titled 'Sandbox: Premises' and 'February 21, 2022 10:21'. It features a 'Create SIP Server' dropdown and a table with one row: '115.110.115.110' with IP/FQDN, Port 5066, Protocol TCP, Display Counters, Priority 1, and Print Key 1. Below the table are four panels: 'Server Host' (Server Lookup: IP/FQDN, Priority: 1, Host FQDN/IP: 115.110.115.110, Port: 5066, Protocol: TCP), 'Transport' (Monitor: SIP Options, Keep Alive Frequency: 30, Recover Frequency: 5, Local Username: Anonymous, Peer Username: Anonymous), 'Remote Authorization and Contacts' (Remote Authorization Table: None, Contact Registrant Table: None, Session URI Validation: Liberal), and 'Connection Reuse' (Reuse: True, Sockets: 4, Reuse Timeout: Forever).

## SIP Server Table Entry for Service Provider

1. Click on the SIP Server Table that you just created.
2. From the Create SIP Server drop-down list, select **IP/FQDN**.
3. Enable **OPTION** pings by selecting SIP Options from the Monitor field.
4. Click OK.

Welcome: ribbon | Last Login: Mar 03, 2022 06:07:32 | Log

Monitor Tasks Settings Diagnostics System

**Sandbox: SP** March 03, 2022

Create SIP Server Total 1 SIP Server Row

Host / Domain	Server Lookup	Port	Protocol	Display Counters	Priority
115.110	IP/FQDN	5065	TCP	Counters	1

**Server Host**

Server Lookup **IP/FQDN**

Priority **1**

Host FQDN/IP **115.110**

Port **5065**

Protocol **TCP**

**Transport**

Monitor **SIP Options**

Keep Alive Frequency **30** \* secs [30..300]

Recover Frequency **5** \* secs [5..300]

Local Username **Anonymous** \* Local Username of SBC Edge

Peer Username **Anonymous** \* Peer Username of sip server

**Remote Authorization and Contacts**

Remote Authorization Table **None**

Contact Registrant Table **None**

Session URI Validation **Liberal**

**Connection Reuse**

Reuse **True**

Sockets **4**

Reuse Timeout **Forever**

## Configure SIP Recorder

1. Navigate to **SIP > SIP Recording**.
2. Provide a name for the Recorder Server.
3. From the Type drop-down list, choose **SIP Profile**.
4. From Load Balancing drop-down list, choose **Round Robin**.

Welcome: ribbon | Last Login: Mar 03, 2022 06:07:32 | Log

Monitor Tasks Settings Diagnostics System

**SIP Recording Table** March 03, 2022 14:21:59

Total 1 SIP Recording Row

Description	Admin State	Service Status	Display	Primary Key
C3 Recorder	Enabled	Up	Counters   Channels   Sessions	50001

Description **C3 Recorder**

Admin State **Enabled**

**SIP Channels and Routing**

No. of Channels **10** \* [1..960]

SIP Profile **SIPREC**

Recording Server Table **C3 Recorder**

Load Balancing **Round Robin**

Channel Hunting **Most Idle**

**SIP IP Details**

Signaling/Media Source IP **Ethernet 1 IP (Dynamic)**

Signaling DSCP **40** \* [0..63]

1. Provide Listening ports for TLS/UDP/TCP.
2. Provide Federated IP.
3. Click OK.

The screenshot shows the Ribbon SBC Settings page with the 'SIP Recording Table' selected. The left sidebar shows the navigation tree with 'SIP Recording' highlighted. The main content area displays the 'SIP Recording Table' configuration for the 'C3 Recorder'. The table is currently 'Up' and shows a list of ports and protocols. A red box highlights the 'Listen Ports' section, which lists three ports: 5061 (TLS), 5064 (UDP), and 5060 (TCP). Another red box highlights the 'Federated IP/FQDN' section, which shows a single entry for 'cloud.midasolutions.com' with a netmask/prefix of '255.255.255.255'.

Port	Protocol	TLS Profile ID
5061	TLS	Default
5064	UDP	N/A
5060	TCP	N/A

IP/FQDN	Netmask/Prefix
cloud.midasolutions.com	255.255.255.255

## Configure SIP Message Rule Table

The SBC Edge allows a maximum of 100 SIP Message Rule Tables and a maximum of 32 SIP Message rules per table. The maximum of 32 SIP Message rules per table includes all SIP rule types: Header, Request, Status, and Raw.

To configure the table, navigate to **SIP > Message Manipulation > Message Rule Tables**.

**SIPREC** is used to convert an IP address to FQDN for the C3 Recorder.

1. Enter **SIPREC** in the Description field.
2. From the drop-down list, select the values for the **Applicable Messages** and **Table Result Type** fields.

The screenshot shows the Ribbon SBC Settings page with the 'Message Rule Tables' section expanded. The 'SIPREC' rule is selected, and a configuration dialog box is open. The dialog box has three fields: 'Description' (set to 'SIPREC'), 'Applicable Messages' (set to 'All Messages'), and 'Table Result Type' (set to 'Optional'). A red box highlights the 'Description' field. Below the dialog box, there is an 'Apply' button. The background shows a list of message rules, including 'Detect Refer', 'Teams: Mida Solutions Tenant', 'C3: tenant identification', 'SIPREC', 'Zoom: Home', and 'Agent Match bug workaround'.

Rule Name	Applicable Messages	Table Result Type	Count
Detect Refer	Optional	REFER	1
Teams: Mida Solutions Tenant	Optional	All	2
C3: tenant identification	Optional	INVITE	3
<b>SIPREC</b>	<b>Optional</b>	<b>All</b>	<b>4</b>
Zoom: Home	Optional	INVITE	5
Agent Match bug workaround	Optional	INVITE	6

1. Expand the Message Rule table, select SIPREC, and select the values for **Match Regex** and **Replace Regex** from the drop-down list.
2. Attach the message rule to the **SIP Recorder**.

**SIPREC**

March 03, 2022 14:37:01

Total 1 Message Manipulation Rules Row

Admin State	Rule Type	Result Type	Description
Enabled	Raw Message Rule	Optional	Inbound - Override local address

**Test Rule**

Description: Inbound - Override local address

Condition Expression: Add/Edit

Admin State: Enabled

Result Type: Optional

Match Regex: 10\,0\,21\,5

Replace Regex: cloud.midasolutions.com

**SIP Recording Table**

March 03, 2022 14:37:01

Total 1 SIP Recording Row

Description	Admin State	Service Status	Display	Primary Key
C3 Recorder	Enabled	Up	Counters   Channels   Sessions	50001

Message Manipulation: Enabled

**Inbound Message Manipulation**

Message Table List: SIPREC

**Outbound Message Manipulation**

Message Table List: SIPREC

## Teams MIDA Solutions Tenant

To configure this rule,

1. Navigate to **SIP > Message Manipulation > Message Rule Tables**.
2. Add **Strip 00** as **International prefix** in the **Description** field.

**Teams: Mida Solutions Tenant**

March 03, 2022 14:37:01

Total 3 Message Manipulation Rules Rows

Admin State	Rule Type	Result Type	Description
Enabled	Request Line Rule	Optional	Strip 00 as International prefix

**Test Rule**

Description: Strip 00 as International prefix

Condition Expression: Add/Edit \$(1)\$(3)

Admin State: Enabled

Result Type: Optional

Request Line Value: Modify Add/Edit Match: (sip;)6;d00(\*) Replace: \1+\2



1. Strip route prefix 6x.
2. Strip prefix + from Call ID.

ribbon | Welcome: ribbon | Last Login: Mar 03, 2022 06:07:3

Monitor Tasks Settings Diagnostics System Ribbon

Teams: Mida Solutions Tenant March 03, 2022 14

Create Rule Test Message Total 3 Message Manipulation Rules Rows

Admin State	Rule Type	Result Type	Description
<input type="checkbox"/>	Request Line Rule	Optional	Strip 00 as International prefix
<input checked="" type="checkbox"/>	Request Line Rule	Optional	Strip route prefix 6x

Test Rule

Description: Strip route prefix 6x

Condition Expression: Add/Edit: \${1}/\${3}

Admin State: Enabled

Result Type: Optional

Request Line Value: Modify Add/Edit Match: (sip:6id(.\*) Replace: \1\2

ribbon | Welcome: ribbon | Last Login: Mar 03, 2022 06

Monitor Tasks Settings Diagnostics System Ribbon

Teams: Mida Solutions Tenant March 03, 2022

Create Rule Test Message Total 3 Message Manipulation Rules Rows

Admin State	Rule Type	Result Type	Description
<input type="checkbox"/>	Request Line Rule	Optional	Strip 00 as International prefix
<input type="checkbox"/>	Request Line Rule	Optional	Strip route prefix 6x
<input checked="" type="checkbox"/>	Header Rule	Optional	Strip prefix + from CLID

Test Rule

Description: Strip prefix + from CLID

Condition Expression: Add/Edit: \${1}/\${3}

Admin State: Enabled

Result Type: Optional

Header Action: Modify

Header Name: From

ribbon | Welcome: ribbon | Last Login: Mar 03, 2022 06

Monitor Tasks Settings Diagnostics System Ribbon

Teams: Mida Solutions Tenant March 03, 2022

Create Rule Test Message Total 3 Message Manipulation Rules Rows

Admin State	Rule Type	Result Type	Description
<input type="checkbox"/>	Request Line Rule	Optional	Strip 00 as International prefix
<input type="checkbox"/>	Request Line Rule	Optional	Strip route prefix 6x
<input checked="" type="checkbox"/>	Header Rule	Optional	Strip prefix + from CLID

Header Action: Modify

Header Name: From

Header Value

Display Name: Ignore

URI

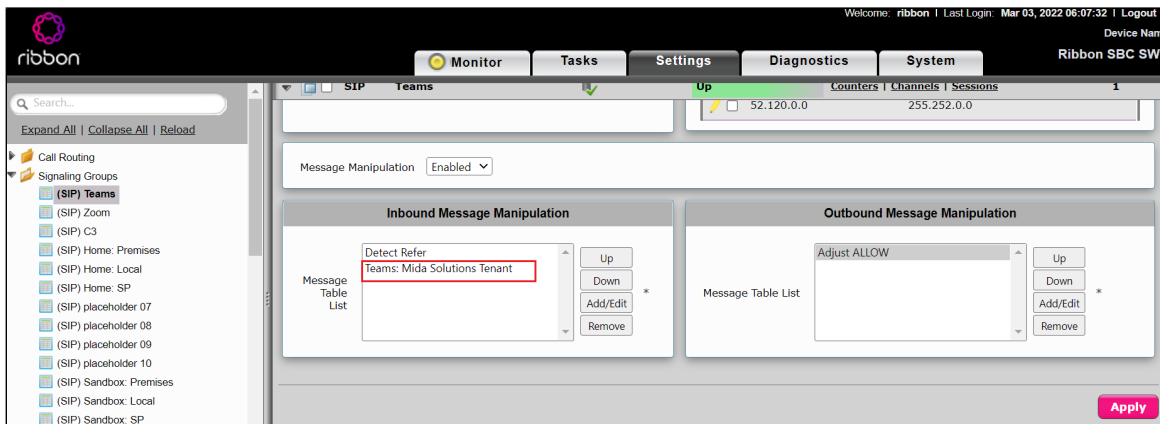
URI Scheme: Ignore

URI User Info: Modify Add/Edit Match: \+.(\*) Replace: \1

URI Host: Ignore

URI Port: Ignore

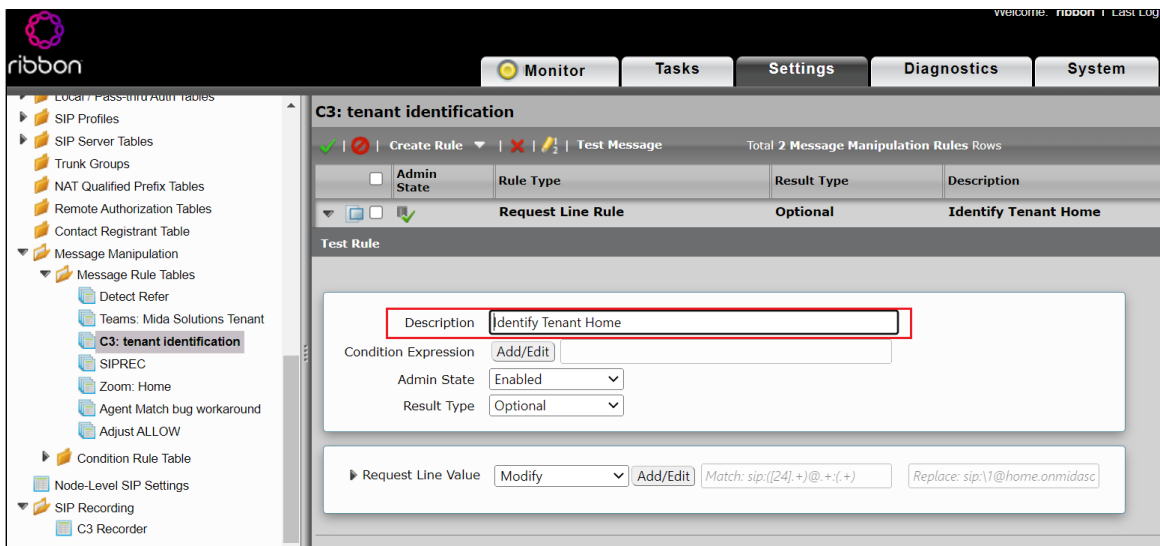
1. Attach created message rule to the **Teams Signaling group**.



### C3: tenant identification

To configure this rule,

1. Navigate to **SIP > Message Manipulation > Message Rule Tables**.
2. Tenant Home.
3. Identify Tenant xxx.
4. Attach created message rule to the **C3 Recorder**.



Welcome: ribbon | Last Login: Mar 03, 2022

Monitor Tasks Settings Diagnostics System

Local Pass-thru Auth Tables  
SIP Profiles  
SIP Server Tables  
Trunk Groups  
NAT Qualified Prefix Tables  
Remote Authorization Tables  
Contact Registrant Table  
Message Manipulation  
Message Rule Tables  
Detect Refer  
Teams: Mida Solutions Tenant  
**C3: tenant identification**  
SIPREC  
Zoom: Home  
Agent Match bug workaround  
Adjust ALLOW  
Condition Rule Table  
Node-Level SIP Settings  
SIP Recording  
C3 Recorder  
Security

**C3: tenant identification** March 03, 2022

Create Rule Test Message Total 2 Message Manipulation Rules Rows

Admin State	Rule Type	Result Type	Description
<input type="checkbox"/>	Request Line Rule	Optional	Identify Tenant Home
<input checked="" type="checkbox"/>	<b>Request Line Rule</b>	<b>Optional</b>	<b>Identify Tenant xxx</b>

Test Rule

Description: Identify Tenant xxx

Condition Expression: Add/Edit

Admin State: Enabled

Result Type: Optional

Request Line Value: Modify Add/Edit Match: sip:(\d|\d\d)(+).+; Replace: sip:\2@tenant\1.onmid

Welcome: ribbon | Last Login: Mar 03, 2022 06:07:32 | Logout

Monitor Tasks Settings Diagnostics System

Search... Expand All Collapse All Reload

Call Routing  
Signaling Groups  
(SIP) Teams  
(SIP) Zoom  
(SIP) C3  
(SIP) Home: Premises  
(SIP) Home: Local  
(SIP) Home: SP  
(SIP) placeholder 07  
(SIP) placeholder 08  
(SIP) placeholder 09  
(SIP) placeholder 10  
(SIP) Sandbox: Premises  
(SIP) Sandbox: Local  
(SIP) Sandbox: SP

SIP Teams Up Counters Channels Sessions 1

SIP Zoom Up Counters Channels Sessions 2

SIP C3 Up Counters Channels Sessions 3

5061 TLS SIP Endpoint

Message Manipulation Enabled

Inbound Message Manipulation

Message Table List

C3: tenant identification Up Down Add/Edit Remove

Outbound Message Manipulation

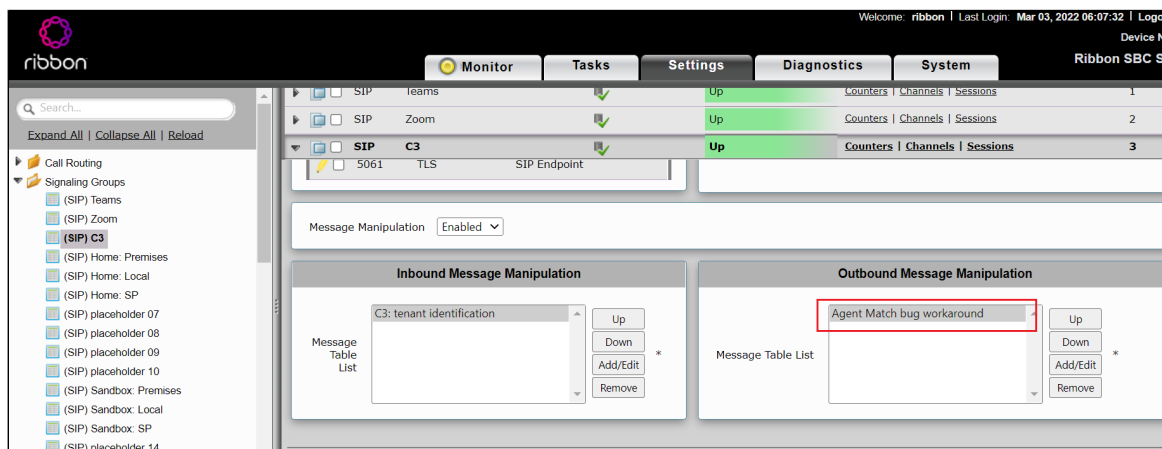
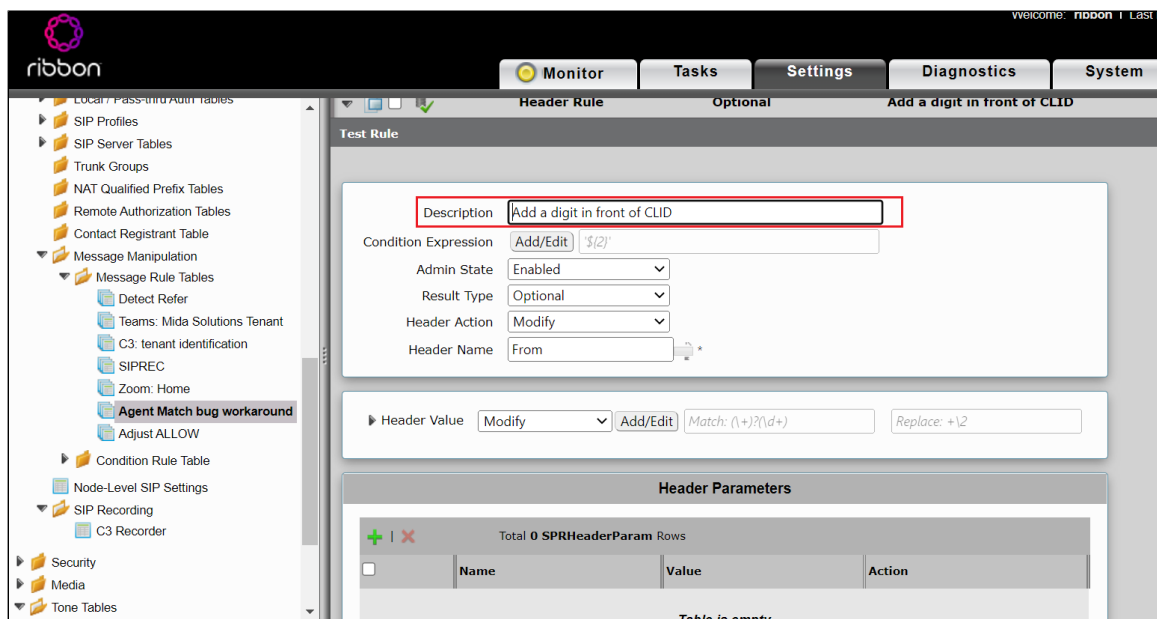
Message Table List

Agent Match bug workaround Up Down Add/Edit Remove

## Agent Match bug workaround

To configure this rule,

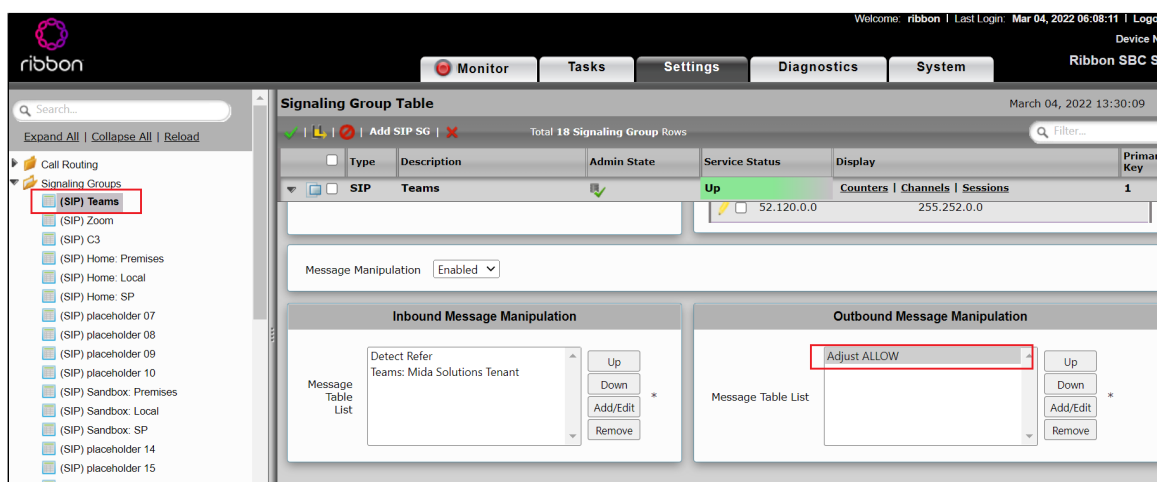
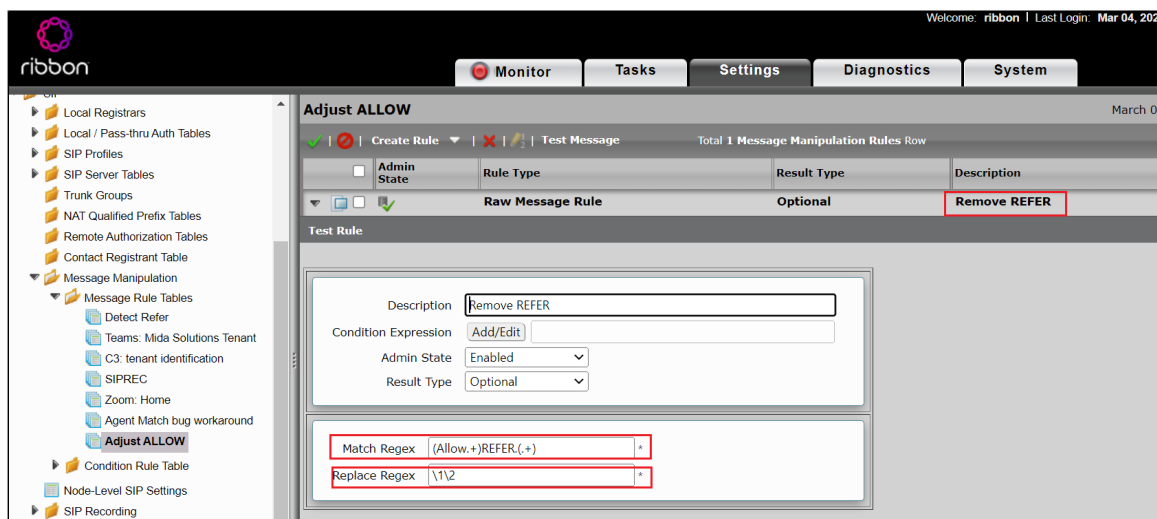
1. Navigate to **SIP > Message Manipulation > Message Rule Tables**.
2. Add a digit in front of CLID.
3. Attach created message rule to the **C3 Recorder**.



## Adjust ALLOW

This rule is used to disable REFER in outbound message manipulation.

1. Navigate to **SIP > Message Manipulation > Message Rule Tables**. Note that the SWeLite does not receive any REFER message for processing.
2. Attach created message rule to the Teams Signaling Group.



## Configure Signaling Groups

Signaling groups allow grouping telephony channels together for routing and shared configuration. They are used for routing calls and selecting Call Routes.

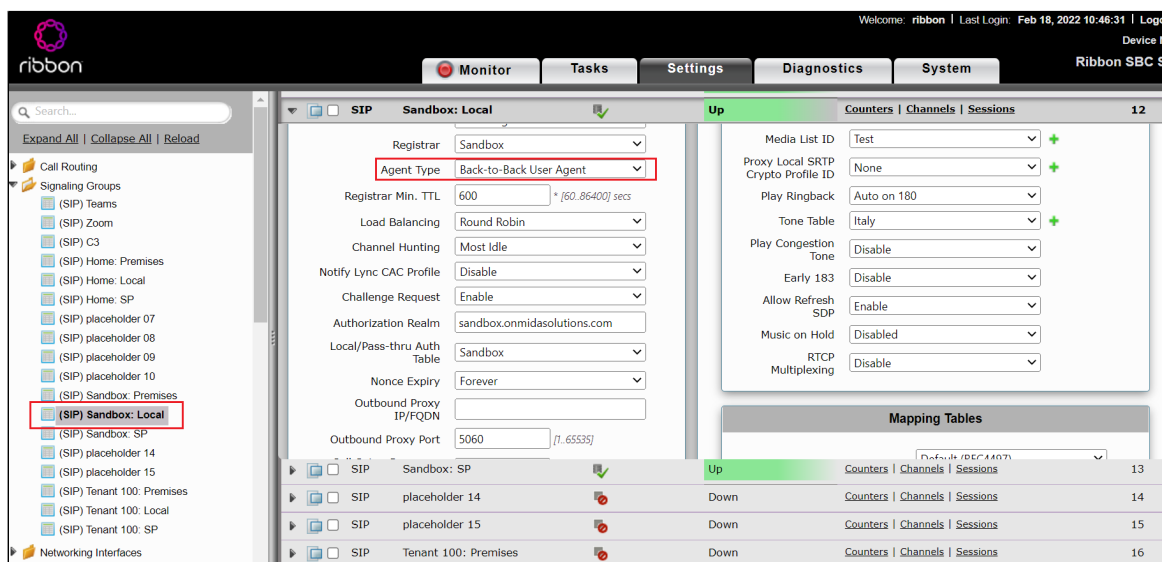
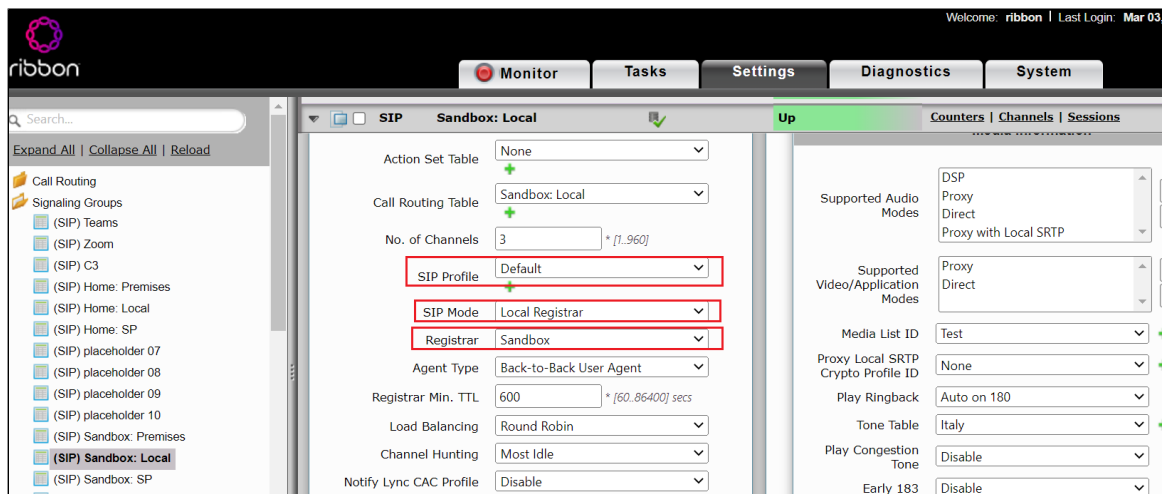
Signaling Groups include

- Sandbox\_Local\_SG
- Sandbox\_Teams\_SG
- Sandbox\_ServiceProvider\_SG
- Sandbox\_Premises\_SG
- C3\_SG

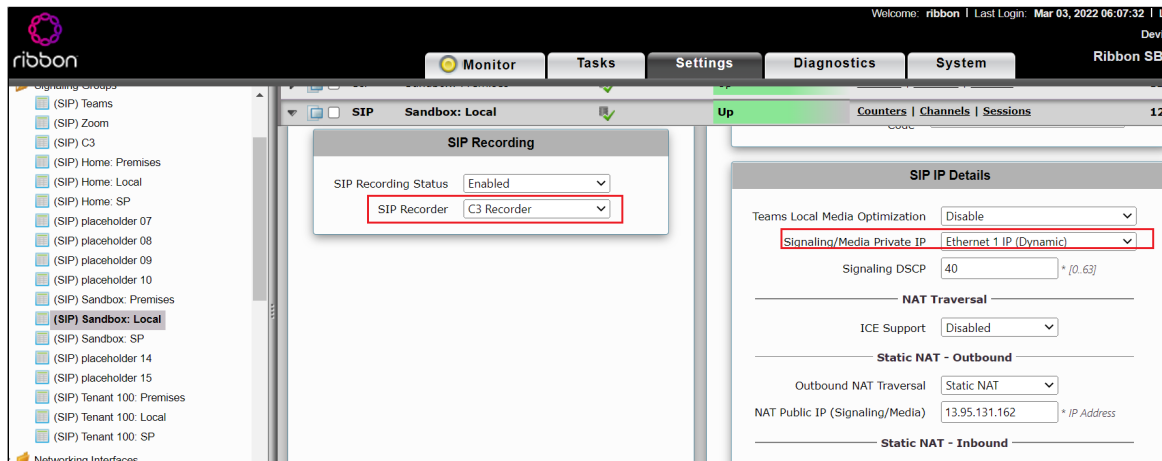
Use the following procedures to configure Signaling Groups.

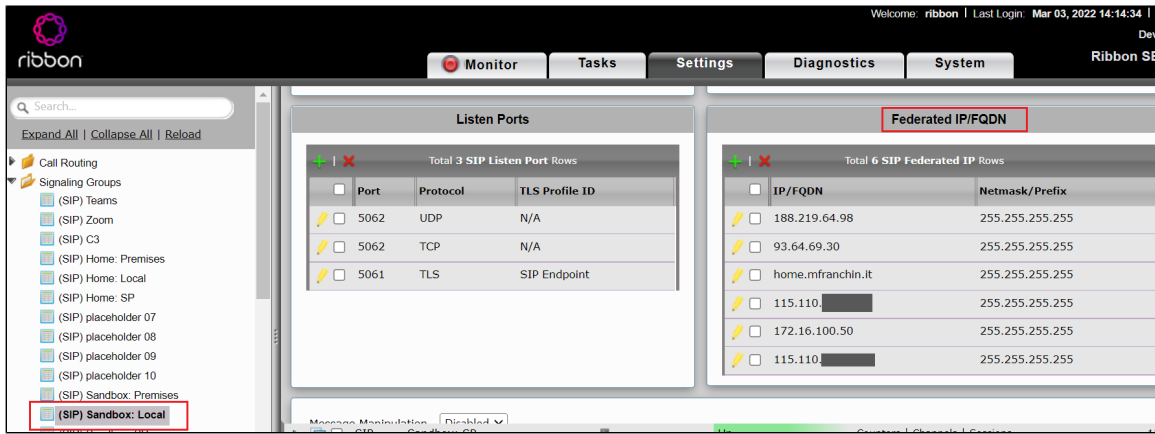
### Sandbox\_Local\_SG

1. Navigate to **Signaling Groups**.
2. Click **Add SIP SG**.
3. In **SIP Profile**, choose the "Sip Profile" created in [step 5](#).
4. In **SIP Mode**, select **Local Registrar** and attach the SIP Local Registrar created in [step 4](#).
5. In Agent Type, select **Back-to-back user agent**.



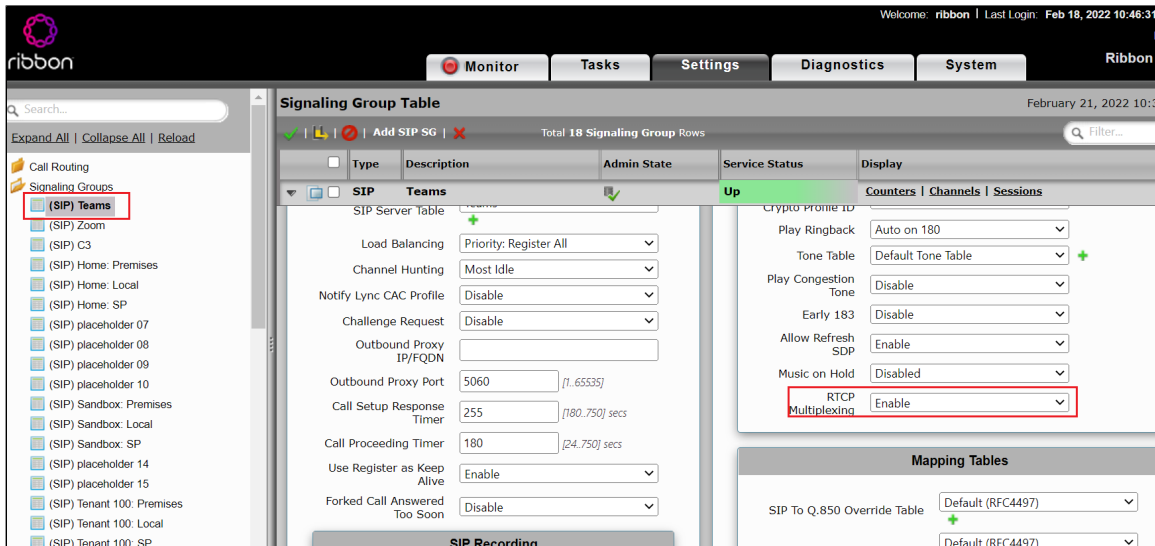
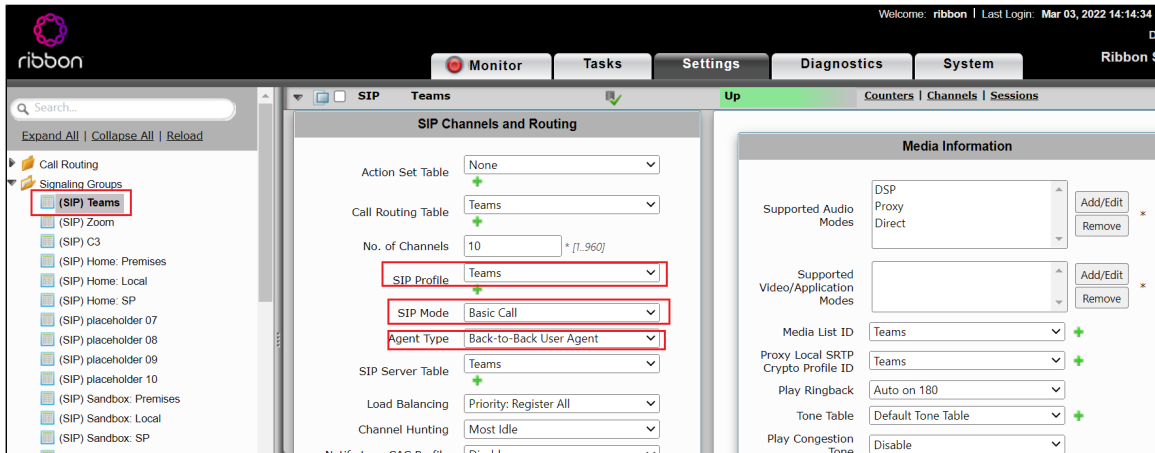
1. Enable SIP recording, and attach the Recording Server Table created for the SIP recording.
2. Select Ethernet 1 as the **Signaling/Media Source IP**.
3. Configure the IP addresses as the Federated IPs for the **Sandbox\_LOCAL\_SG**

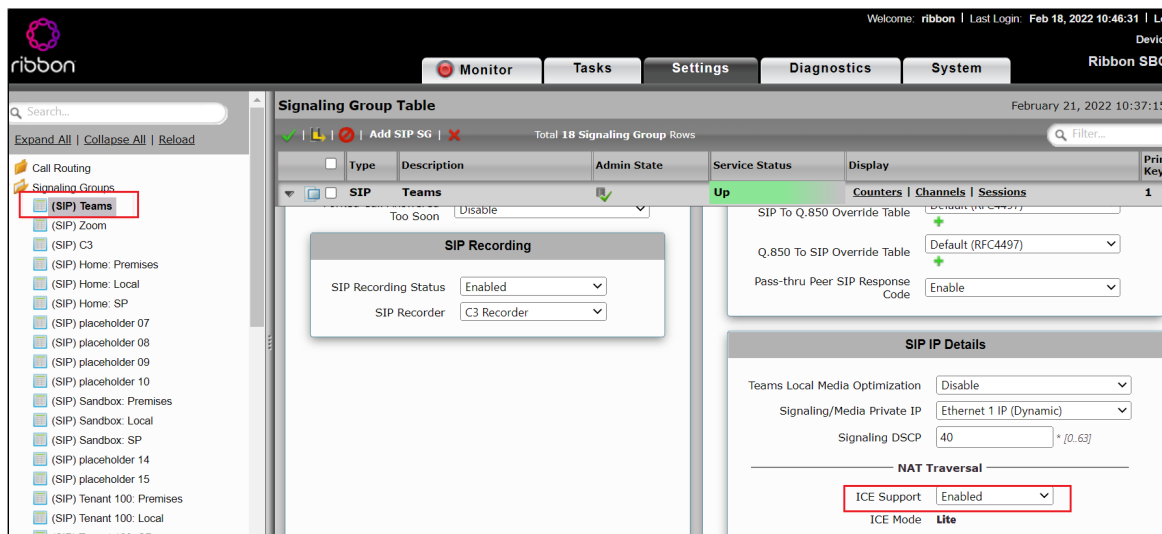




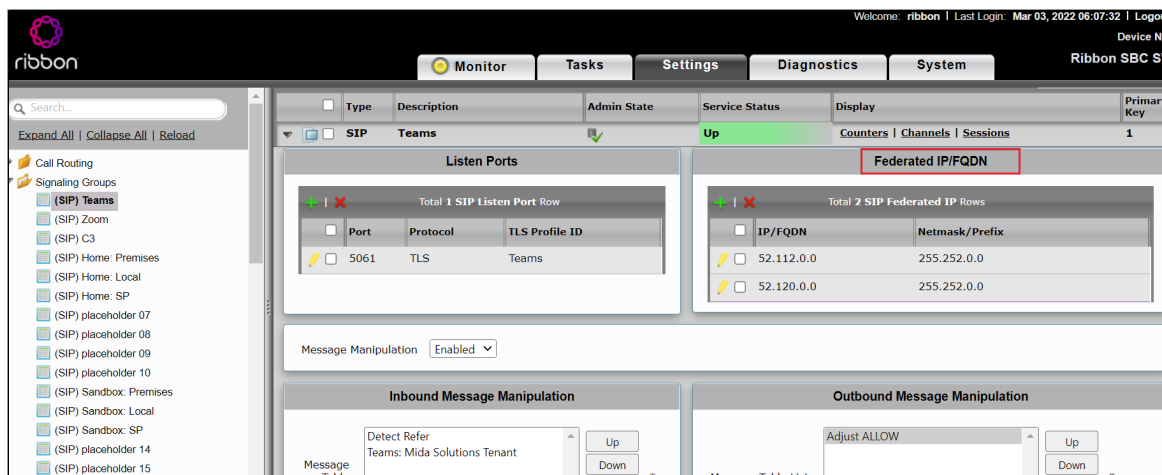
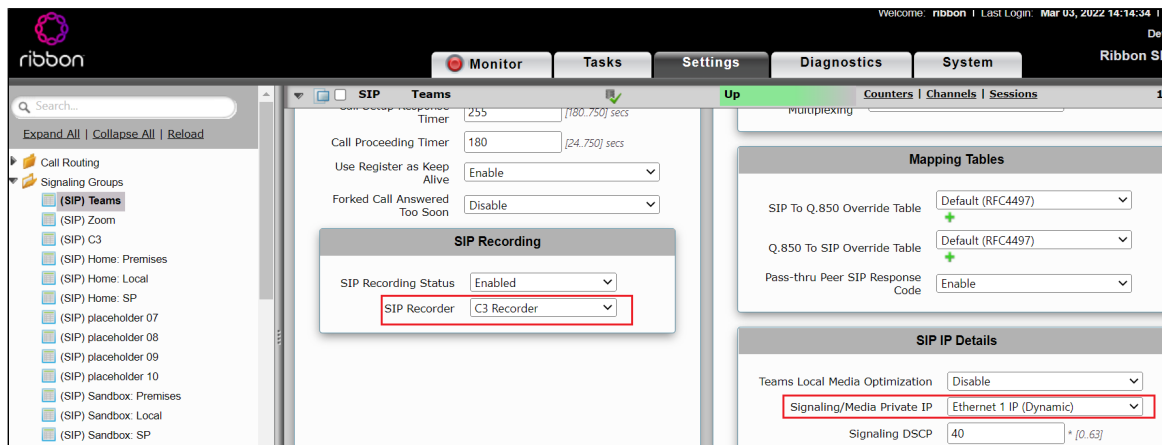
## Sandbox\_Teams\_SG

1. In **SIP Profile**, choose the "Sip Profile" created in [step 5](#).
2. In **Agent Type**, select **Back-to-back user agent**.
3. In **SIP Mode**, select Basic Call.
4. Enable **RTCP multiplexing** and **Icelite**





1. Enable SIP recording and attach the Recording Server Table created for the SIP recording.
2. Select Ethernet 1 as the **Signaling/Media Source IP**.
3. Configure the IP addresses as the Federated IPs for the **Teams\_SG**

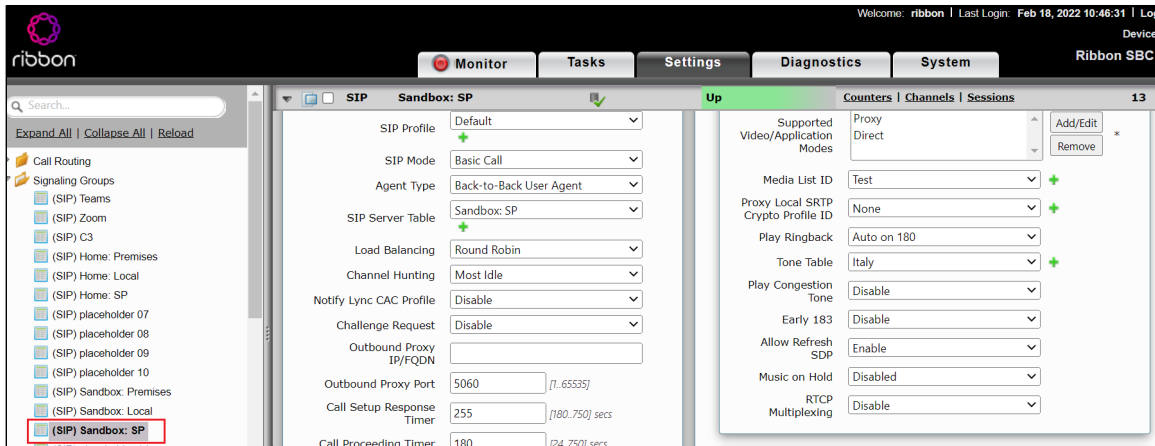
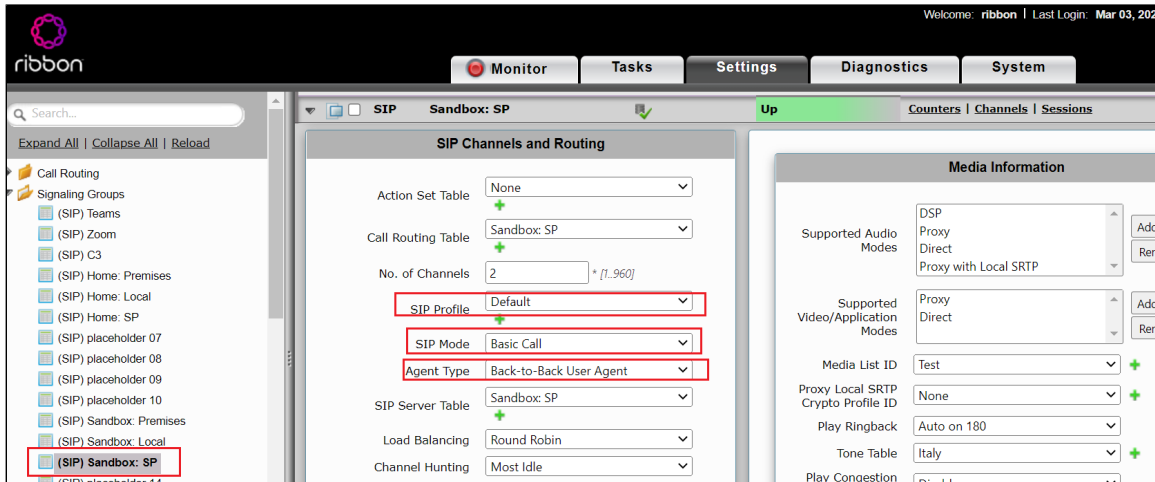


## Sandbox\_ServiceProvider\_SG

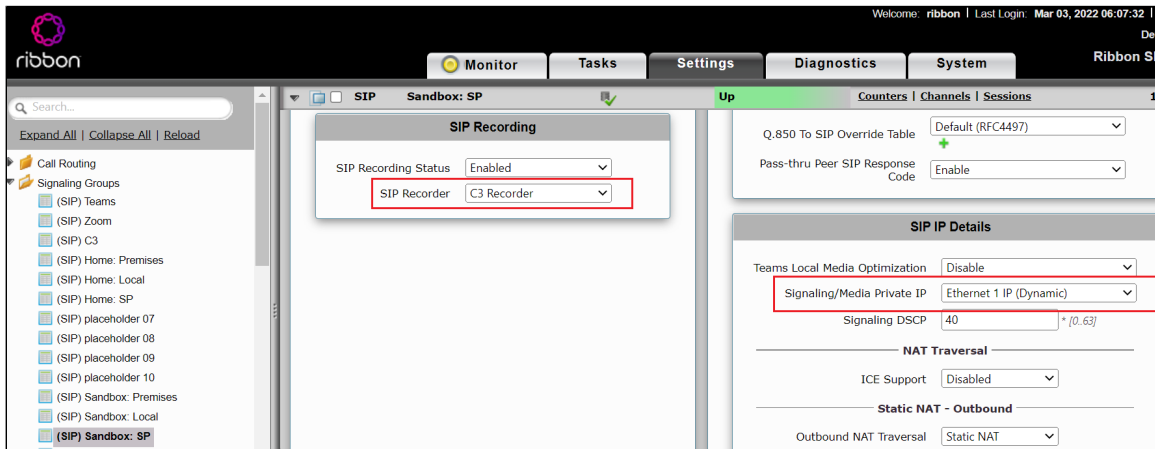
1. In **SIP Profile**, choose the "Sip Profile" created in [step 5](#).
2. In Agent Type, select **Back-to-back user agent**.

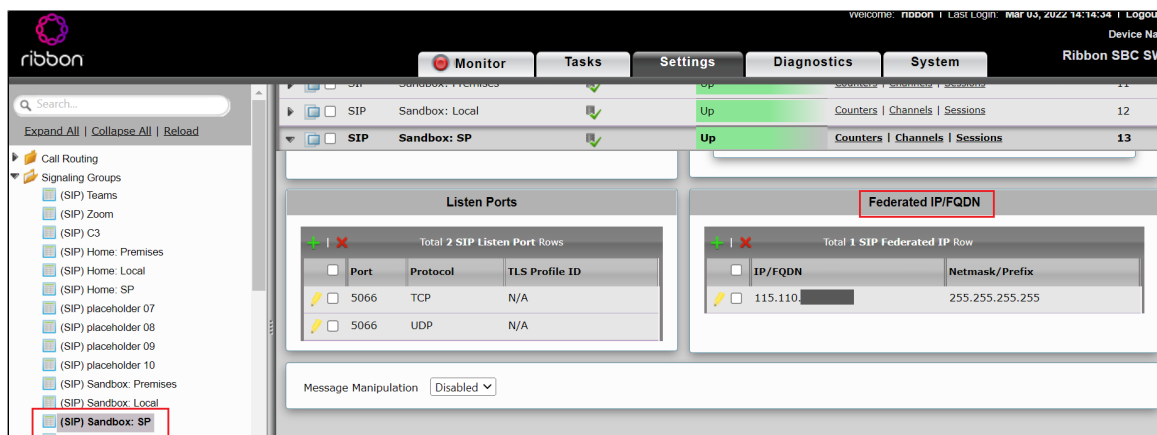


3. In **SIP Mode**, select Basic Call.



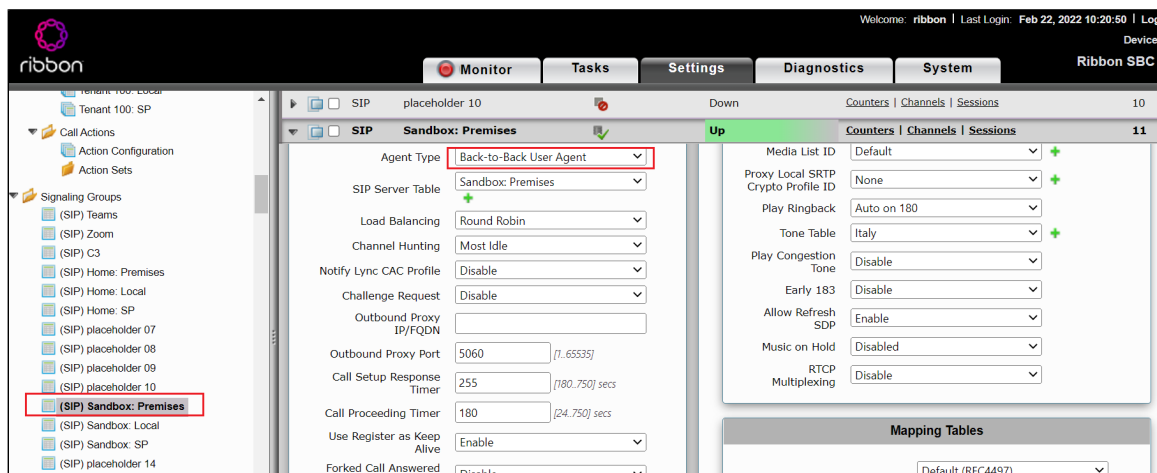
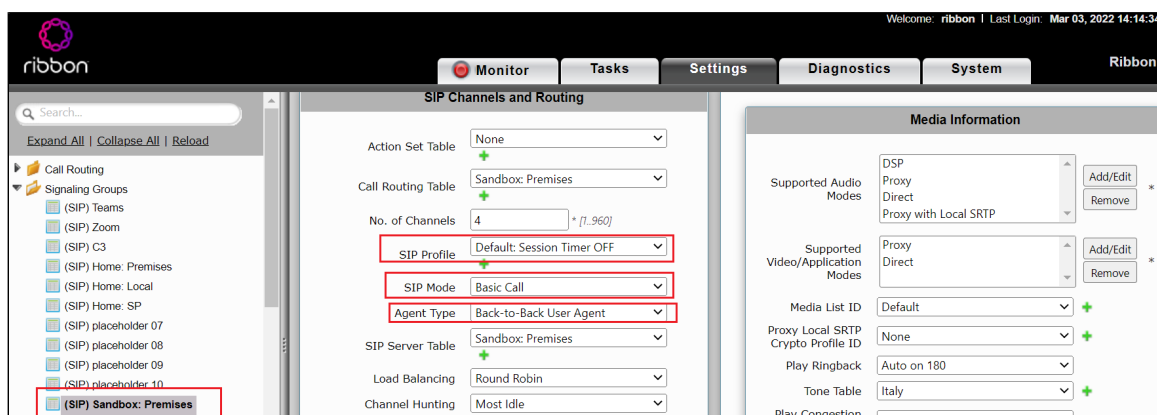
1. Enable SIP recording and attach the Recording Server Table created for the SIP recording.
2. Select Ethernet 1 as the **Signaling/Media Source IP**.
3. Configure the IP addresses as the Federated IPs for the **ServiceProvider\_SG**.



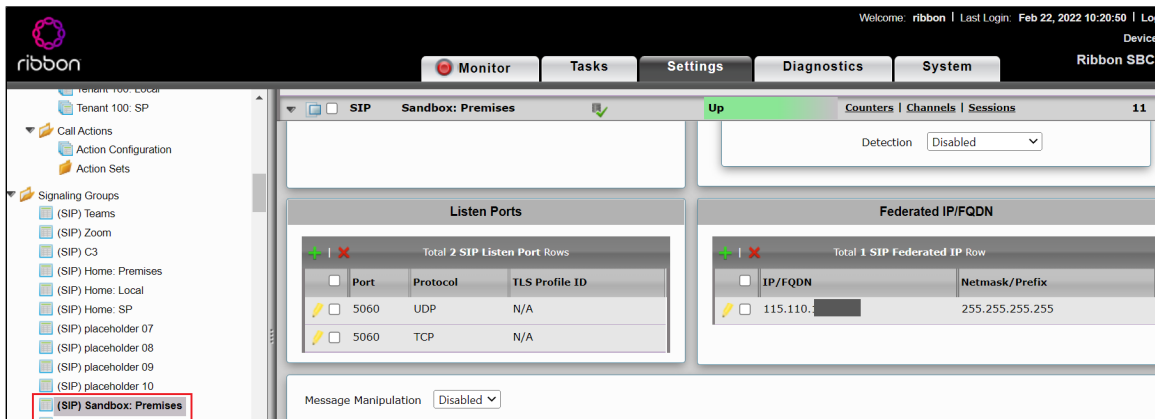
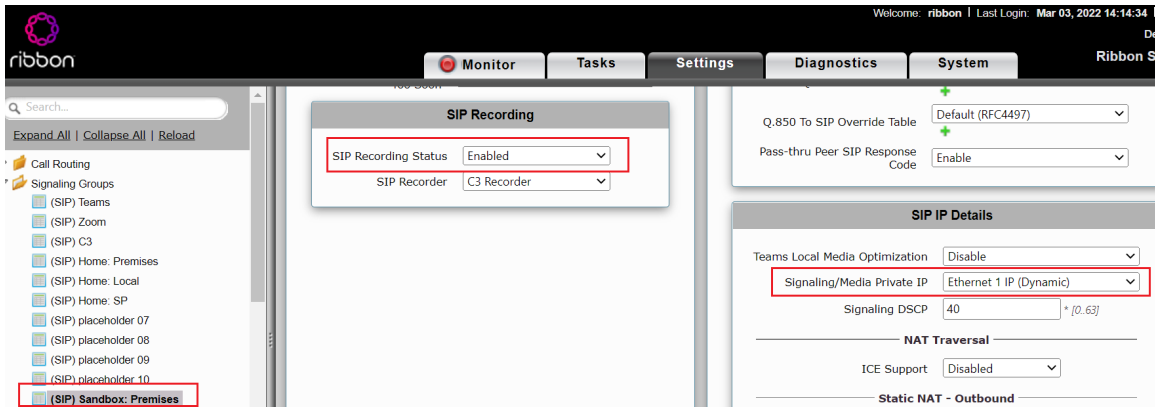


## Sandbox\_Premises\_SG

1. In **SIP Profile**, choose the "Sip Profile" created in [step 5](#).
2. In **Agent Type**, select **Back-to-back user agent**.
3. In **SIP Mode**, select **Basic Call**.

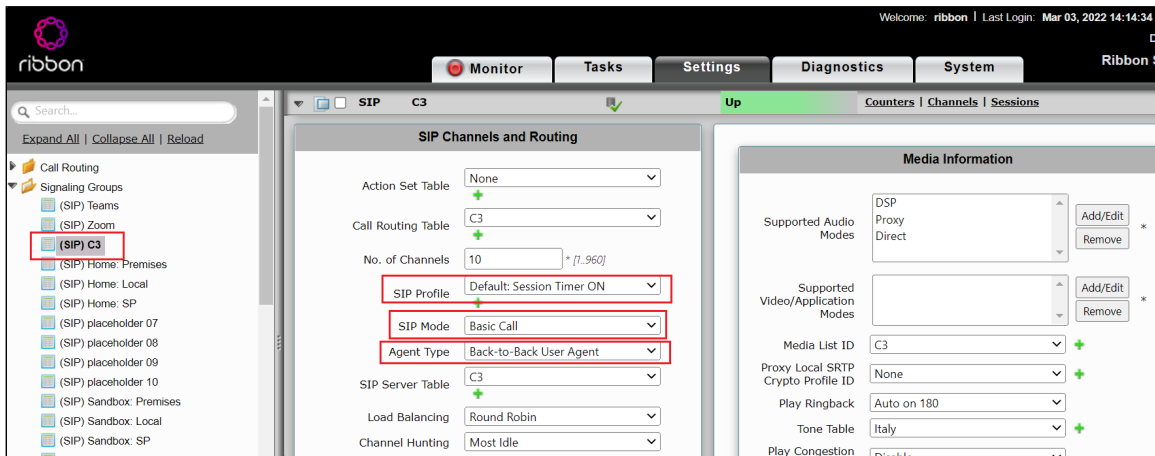


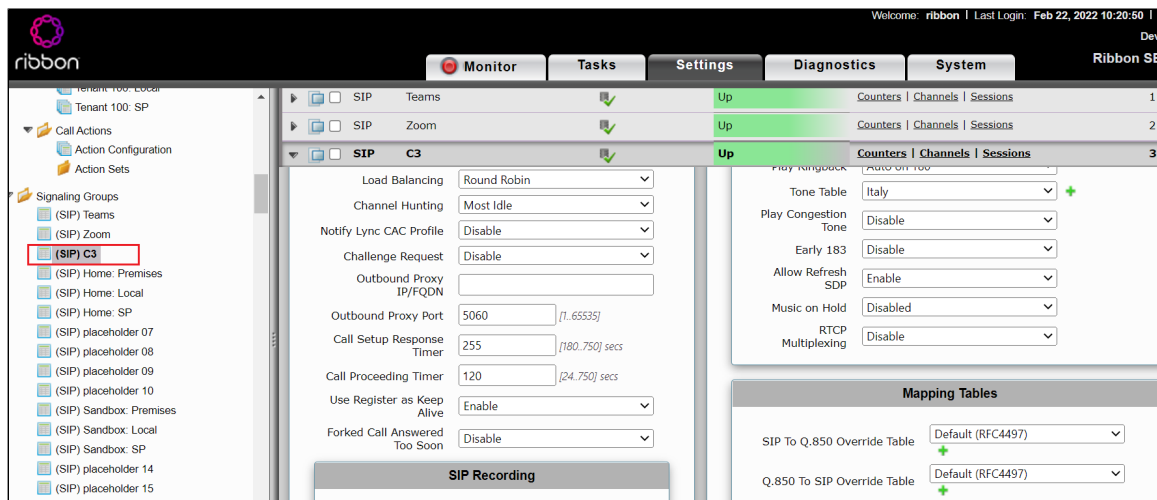
1. Enable SIP recording and attach the Recording Server Table created for SIP recording.
2. Select Ethernet 1 as the **Signaling/Media Source IP**.
3. Configure IP addresses as the Federated IPs for the **Premises\_SG**



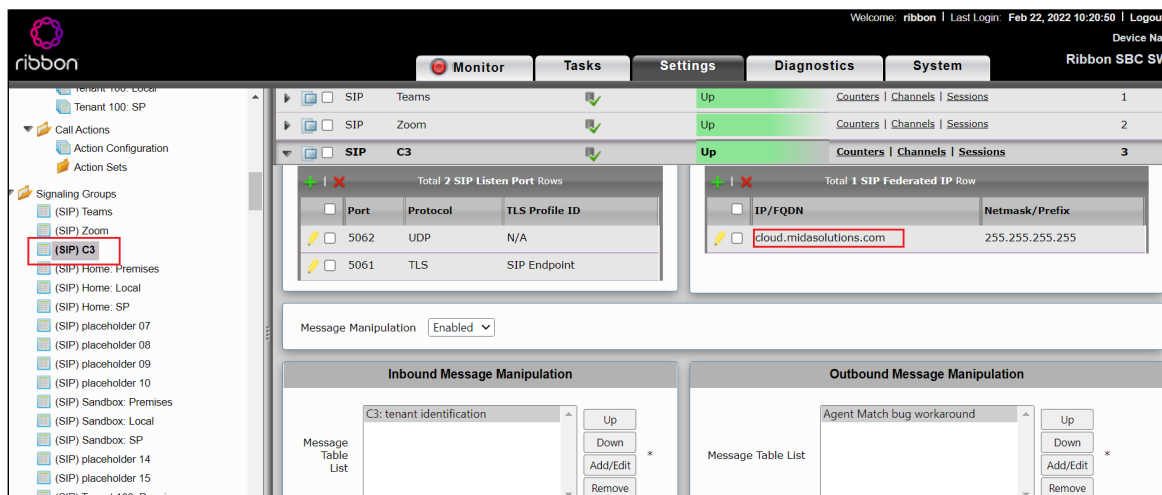
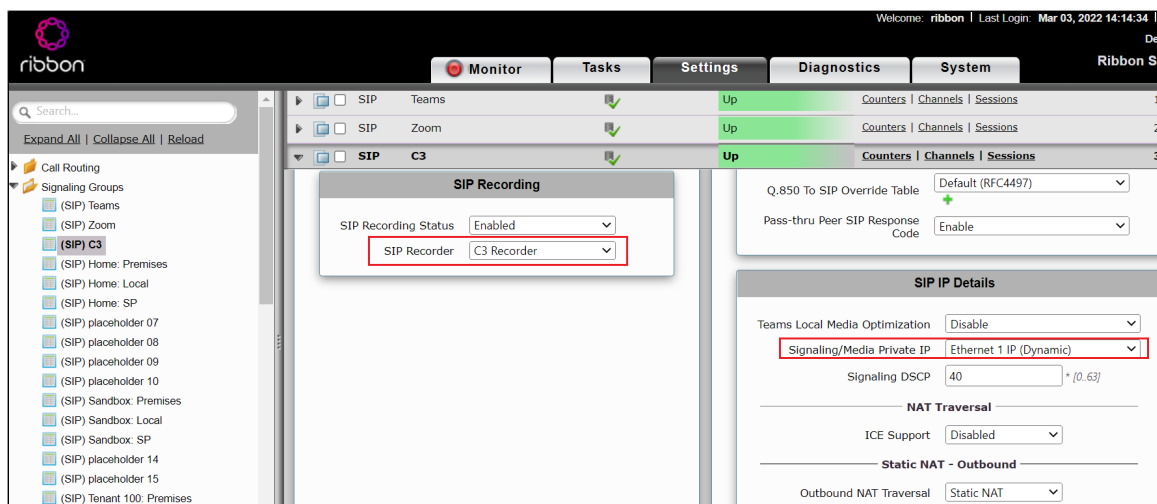
## C3\_SG (Recorder SG)

1. In **SIP Profile**, choose the "Sip Profile" created in [step 5](#).
2. In **Agent Type**, select **Back-to-back user agent**.
3. In **SIP Mode**, select Basic Call.





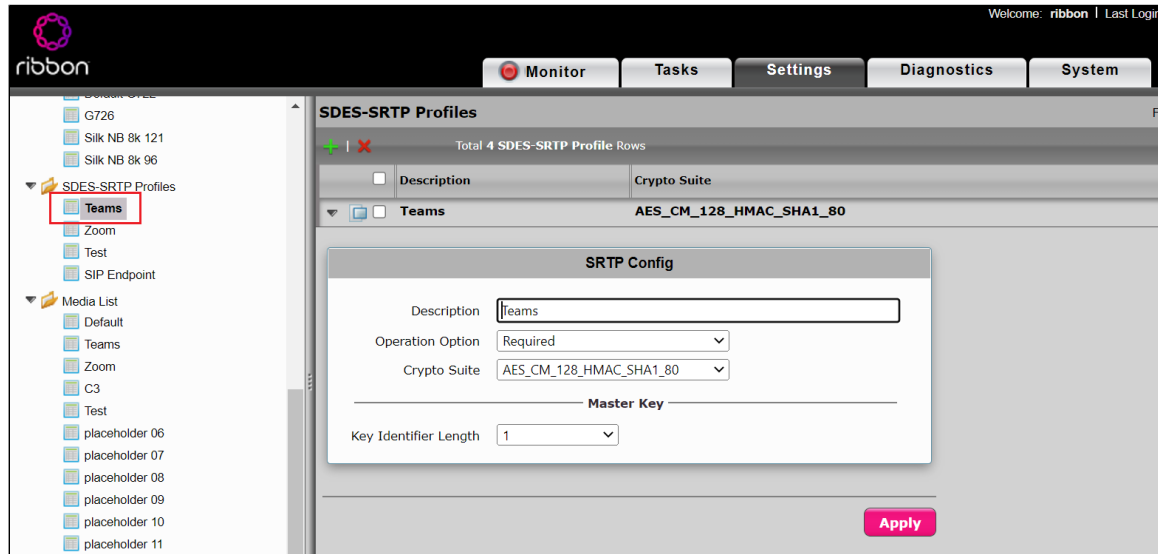
1. Enable SIP recording and attach the Recording Server Table created for SIP recording.
2. Select Ethernet 1 as the **Signaling/Media Source IP**.
3. Configure the Recorder IP addresses or fqdn as the Federated IPs for the **C3\_SG**.



## SRTP Profile for Teams

SDES-SRTP Profiles define a cryptographic context that is used in SRTP negotiation. SDES-SRTP Profiles required for enabling encryption and SRTP are applied to Media Lists. SDES-SRTP Profiles was previously named Media Crypto Profiles.

From the **Settings** tab, navigate to **Media > SDES-SRTP Profiles**. Click the **+** icon to create a new SRTP profile.



Perform the following steps to complete the configuration:

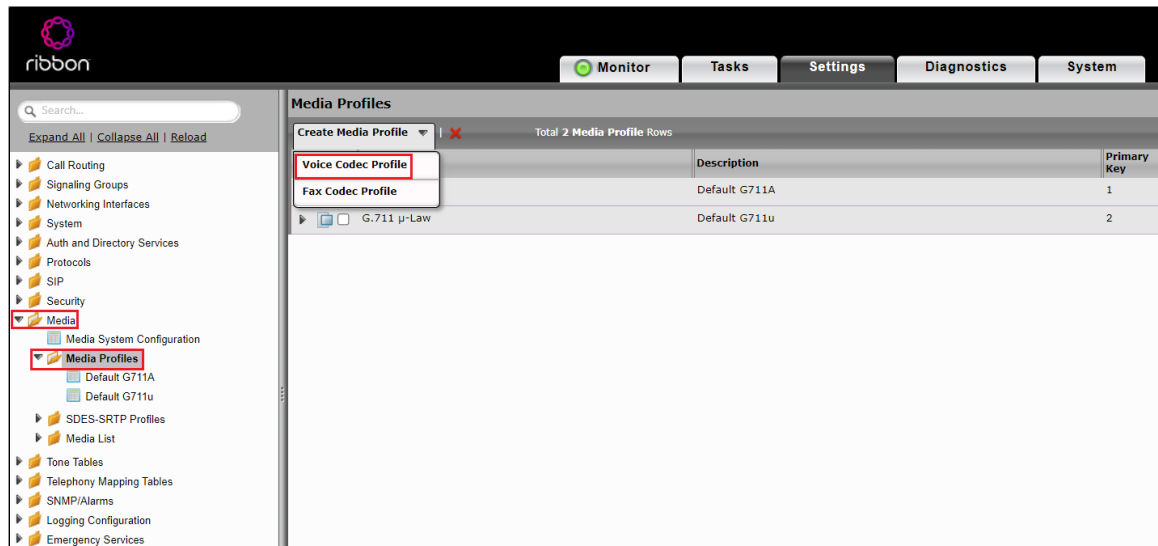
1. Provide the desired description for the profile.
2. Set Operation Option as **"Required"**. This setting permits call connections only if you can use encryption for the call. If the peer device does not support **SRTP** (Secure Real Time Protocol) for voice encryption over the IP network, the call setup will fail.
3. Attach the Crypto suite **"AES\_CM\_128\_HMAC\_SHA1\_80"** - A crypto suite algorithm that uses the 128 bit AES-CM encryption key and a 80 bit HMAC\_SHA1 message authentication tag length.
4. Key Identifier Length set to **"0"** - Set this value to **1** to enable the MKI in SDP.
5. Click **OK**.

## Global Configuration

### Media Profiles

Media Profiles allow you to specify the individual voice and fax compression codecs and their associated settings, for inclusion in a Media List. Different codecs provide varying levels of compression, allowing one to reduce bandwidth requirements at the expense of voice quality.

From the **Settings** tab, navigate to **Media > Media Profiles**. From the **Create Media Profile** drop-down list, select **Voice Codec Profile**



Welcome: ribbon | Last Login: Mar 03, 2022 14:14: | Ribbon

Monitor Tasks Settings Diagnostics System

Media Profiles

Create Media Profile | X Total 8 Media Profile Rows

Codec	Description	Primary Key
<input type="checkbox"/> G.711 A-Law	Default G711A	1
<input type="checkbox"/> G.711 µ-Law	Default G711u	2
<input type="checkbox"/> G.729	Default G729	3
<input type="checkbox"/> [Redacted]	Default OPUS	4
<input type="checkbox"/> [Redacted]	Default G722	5
<input type="checkbox"/> G.726	G726	6
<input type="checkbox"/> SILK	Silk NB 8k 121	7
<input type="checkbox"/> SILK	Silk NB 8k 96	9

⚠ Ensure not to configure OPUS and G722 . For more information, see Caveat.

## Media List

To create a Media List for Teams endpoint,

1. Attach SRTP profile created in earlier step
2. Disable **Silence Suppression** flag.
3. Configure only one supported codec for Teams leg to avoid in-dialog codec change.

Welcome: ribbon | Last Login: | Ribbon

Monitor Tasks Settings Diagnostics System

Media List View

+ | X Total 20 Media List Rows

Description	Primary Key
<input type="checkbox"/> Default	1
<input type="checkbox"/> Teams	2

Description: Teams

Media Profiles List:  Up Down Add/Edit Remove

SDES-SRTP Profile: Teams Associated SIP SG Listen Ports should be TLS only. +

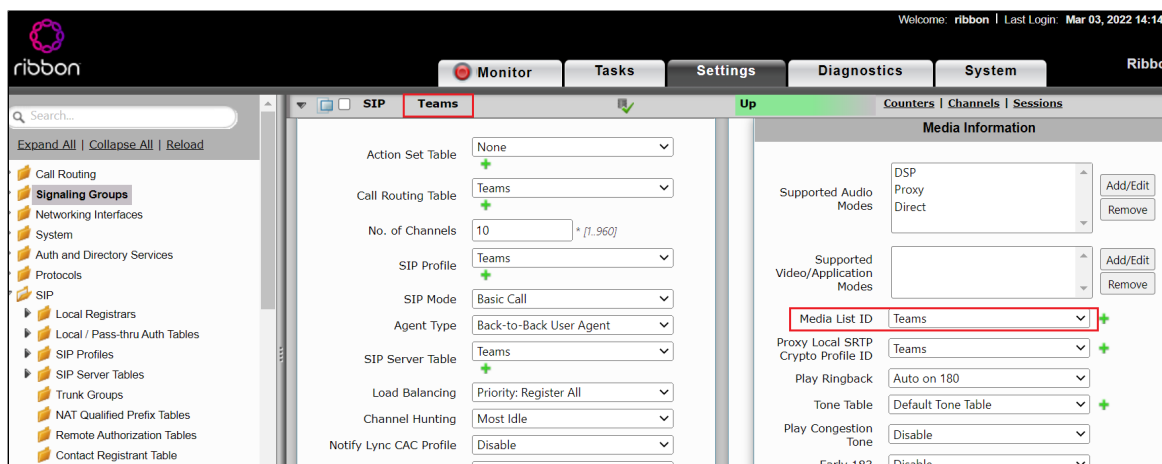
Media DSCP: 46 \* [0..63]

Dead Call Detection: Disabled

Silence Suppression: Disabled

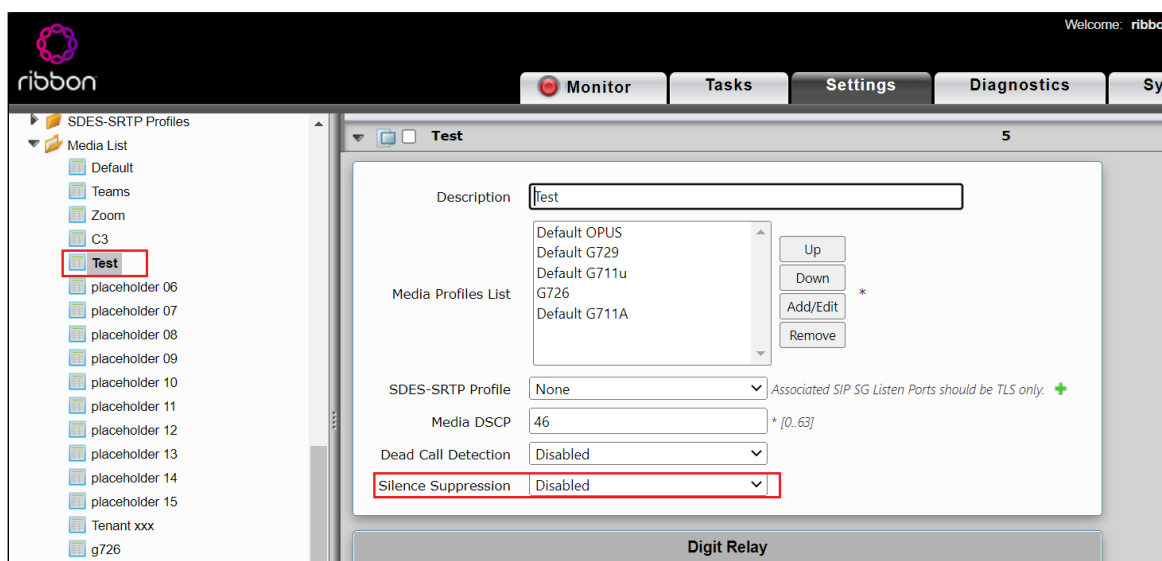
ℹ Silence Suppression flag is disabled since the MIDA Recorder does not support CN payload.

- Attach created Media List to Teams Signaling SG

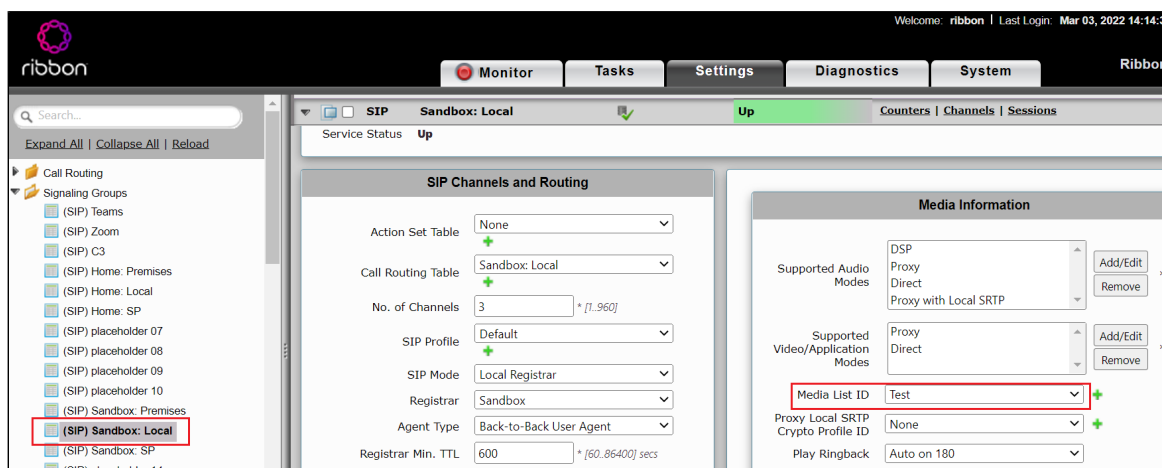


To create Media List for other endpoints,

- Disable **Silence Suppression** flag.



- Attach created Media List to other Signaling SG

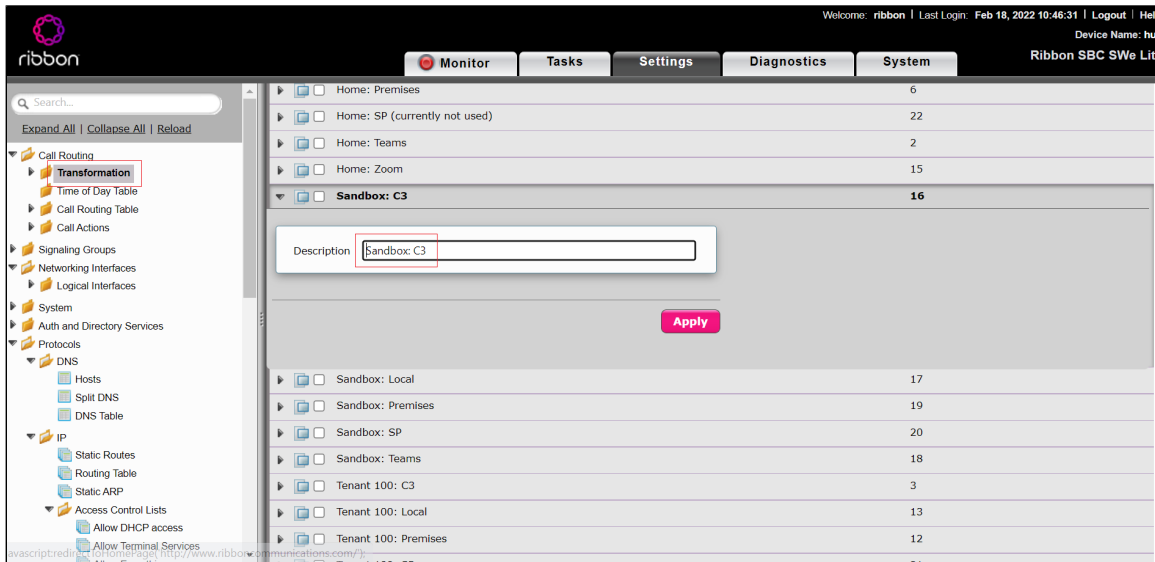


## Transformation Table

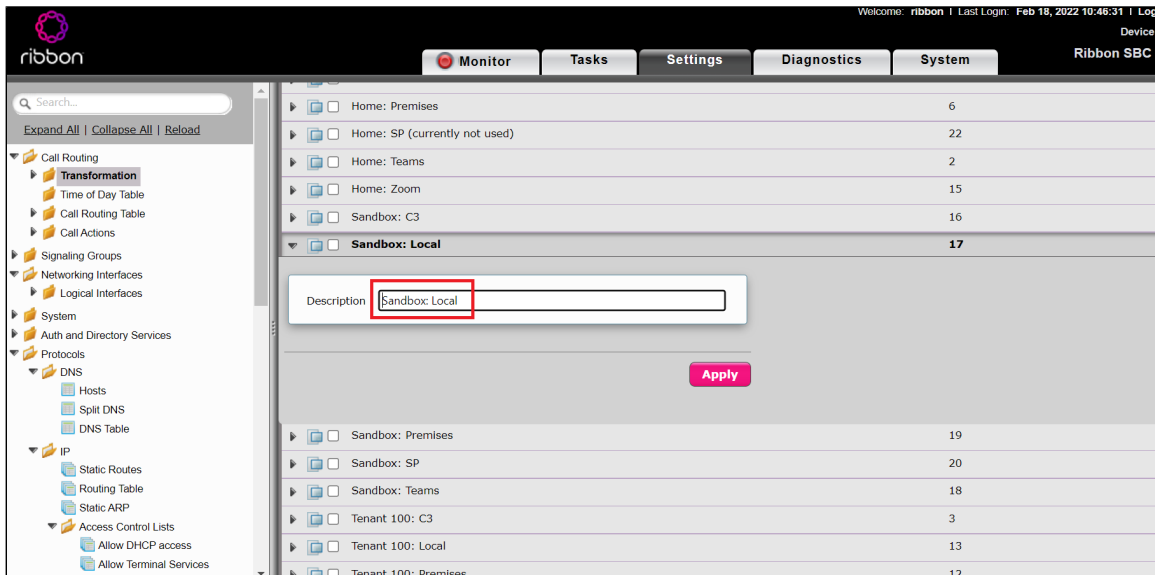
Transformation Tables facilitate the conversion of names, numbers, and other fields when routing a call. They can, for example, convert a public PSTN number into a private extension number, or a SIP address (URI). Every entry in a Call Routing Table requires a Transformation Table. In addition, Transformation tables are configurable as a reusable pool that Action Sets can reference.

From the Settings tab, navigate to **Call Routing > Transformation**. Click the **+** icon to create a Transformation Table.

1. Provide a name for the Transformation Table in the **Description** field.
2. Provide name of **C3 recorder**.
3. Click **OK**.



1. Provide a name for the Transformation Table in the **Description** field.
2. Provide name of **Sandbox:Local**.
3. Click **OK**.



1. Provide a name for the Transformation Table in the **Description** field.
2. Provide name of **Premises**.
3. Click **OK**.



Welcome: ribbon | Last Login: Feb 18, 2022 10:46

Monitor Tasks Settings Diagnostics System

Search...

Expand All | Collapse All | Reload

Call Routing

- Transformation
  - Time of Day Table
  - Call Routing Table
  - Call Actions
- Signaling Groups
- Networking Interfaces
  - Logical Interfaces
- System
- Auth and Directory Services
- Protocols
  - DNS
    - Hosts
    - Split DNS
    - DNS Table
  - IP
    - Static Routes
    - Routing Table
    - Static ARP
  - Access Control Lists
    - Allow DHCP access
    - Allow Terminal Services

Home: Teams	2
Home: Zoom	15
Sandbox: C3	16
Sandbox: Local	17
<b>Sandbox: Premises</b>	<b>19</b>

Description:

Apply

Sandbox: SP	20
Sandbox: Teams	18
Tenant 100: C3	3
Tenant 100: Local	13
Tenant 100: Premises	12
Tenant 100: SP	21
Tenant 100: Teams	5

1. Provide a name for the Transformation Table in the **Description** field.
2. Provide name of **Service Provider**.
3. Click **OK**.

Device Name: Ribbon SBC SWe

Monitor Tasks Settings Diagnostics System

Search...

Expand All | Collapse All | Reload

Call Routing

- Transformation
  - Time of Day Table
  - Call Routing Table
  - Call Actions
- Signaling Groups
- Networking Interfaces
  - Logical Interfaces
- System
- Auth and Directory Services
- Protocols
  - DNS
    - Hosts
    - Split DNS
    - DNS Table
  - IP
    - Static Routes
    - Routing Table
    - Static ARP
  - Access Control Lists
    - Allow DHCP access
    - Allow Terminal Services

Home: Teams	2
Home: Zoom	15
Sandbox: C3	16
Sandbox: Local	17
Sandbox: Premises	19
<b>Sandbox: SP</b>	<b>20</b>

Description:

Apply

Sandbox: Teams	18
Tenant 100: C3	3
Tenant 100: Local	13
Tenant 100: Premises	12
Tenant 100: SP	21
Tenant 100: Teams	5

1. Provide a name for the Transformation Table in the **Description** field.
2. Provide name for **Teams**.
3. Click **OK**.

Welcome: ribbon | Last Login: Feb 18, 2022 10:46:3

Monitor Tasks Settings Diagnostics System Ribbon

Search...

Expand All | Collapse All | Reload

- Call Routing
  - Transformation
    - Time of Day Table
    - Call Routing Table
    - Call Actions
  - Signaling Groups
  - Networking Interfaces
    - Logical Interfaces
  - System
  - Auth and Directory Services
  - Protocols
    - DNS
      - Hosts
      - Split DNS
      - DNS Table
    - IP
      - Static Routes
      - Routing Table
      - Static ARP
    - Access Control Lists
      - Allow DHCP access
      - Allow Terminal Services

Home: Teams 2

Home: Zoom 15

Sandbox: C3 16

Sandbox: Local 17

Sandbox: Premises 19

Sandbox: SP 20

**Sandbox: Teams 18**

Description:

Apply

Tenant 100: C3 3

Tenant 100: Local 13

Tenant 100: Premises 12

Tenant 100: SP 21

Tenant 100: Teams 5

## Transformation Table Entry

1. Click on the **Transformation Table** created in the previous step.
2. Click the **+** icon to create an entry
3. Provide the values in the **Input** and **Output** fields.
4. Click OK.

## Transformation Entry for C3 Recorder

Welcome: ribbon | Last Login: Feb 18, 2022 10:46:31 | Log

Monitor Tasks Settings Diagnostics System Ribbon SBC S

Search...

Expand All | Collapse All | Reload

- Call Routing
  - Transformation
    - Action: C3 Feature Codes
    - Action: Refer from Teams
    - Action: Reject All
    - Home: Demo 1 - TeamsDemo
    - Home: Demo 2 - CiscoDemo
    - Home: Demo 3 - Zoom Demo
    - Home: Local
    - Home: Premises
    - Home: SP (currently not used)
    - Home: Teams
    - Home: Zoom
    - Sandbox: C3**
    - Sandbox: Local
    - Sandbox: Premises
    - Sandbox: SP
    - Sandbox: Teams
    - Tenant 100: C3
    - Tenant 100: Local
    - Tenant 100: Premises
    - Tenant 100: SP

Sandbox: C3 February 21, 2022 07:28:27

Total 4 Transformation Entry Rows

Admin State	Input Field Type	Input Field Value	Output Field Type	Output Field Value	Match Type	Description
<input type="checkbox"/>	SIP: R-URI Domain	sb4.midasolutions.com.(*)	SIP: R-URI Domain	sandbox.onmidasolutions.com/1	Optional (Match One)	From Trunk
<input type="checkbox"/>	SIP: R-URI	sandbox.onmidasolutions.com.*	SIP: R-URI	\0	Mandatory (Must Match)	Validate

Description:

Admin State: ☐ Enabled

Match Type: ☐ Mandatory (Must Match)

**Input Field**

Type:

Value:

**Output Field**

Type:

Value:

Apply

ribbon Monitor Tasks Settings Diagnostics System February 21, 2022 07:28:27

Search...

Expand All | Collapse All | Reload

Call Routing

- Transformation
  - Action: C3 Feature Codes
  - Action: Refer from Teams
  - Action: Reject All
  - Home: Demo 1 - TeamsDemo
  - Home: Demo 2 - CiscoDemo
  - Home: Demo 3 - Zoom Demo
  - Home: Local
  - Home: Premises
  - Home: SP (currently not used)
  - Home: Teams
  - Home: Zoom
  - Sandbox: C3**
  - Sandbox: Local
  - Sandbox: Premises
  - Sandbox: SP
  - Sandbox: Teams
  - Tenant 100: C3
  - Tenant 100: Local
  - Tenant 100: Premises
  - Tenant 100: SP

**Sandbox: C3** February 21, 2022 07:28:27

Total 4 Transformation Entry Rows

Admin State	Input Field Type	Input Field Value	Output Field Type	Output Field Value	Match Type	Description	Primary Key
<input checked="" type="checkbox"/>	SIP: R-URI Domain	sbc4.midassolutions.com(.*)	SIP: R-URI Domain	sandbox.onmidassolutions.com\1	Optional (Match One)	From Trunk	3
<input checked="" type="checkbox"/>	SIP: R-URI Domain	sandbox.onmidassolutions.com.*	SIP: R-URI Domain	\0	Mandatory (Must Match)	Validate Tenant	2
<input checked="" type="checkbox"/>	Called Address/Number	999\(\d	Called Address/Number	999\100	Optional (Match One)	Feature Codes	6

Description:

Admin State:

Match Type:

**Input Field**

Type:

Value:

**Output Field**

Type:

Value:

## Transformation Entry for Sandbox:Local

ribbon Monitor Tasks Settings Diagnostics System February 21, 2022 07:32:19

Search...

Expand All | Collapse All | Reload

Call Routing

- Transformation
  - Action: C3 Feature Codes
  - Action: Refer from Teams
  - Action: Reject All
  - Home: Demo 1 - TeamsDemo
  - Home: Demo 2 - CiscoDemo
  - Home: Demo 3 - Zoom Demo
  - Home: Local
  - Home: Premises
  - Home: SP (currently not used)
  - Home: Teams
  - Home: Zoom
  - Sandbox: C3
  - Sandbox: Local**
  - Sandbox: Premises
  - Sandbox: SP
  - Sandbox: Teams
  - Tenant 100: C3
  - Tenant 100: Local
  - Tenant 100: Premises
  - Tenant 100: SP
  - Tenant 100: Teams

**Sandbox: Local** February 21, 2022 07:32:19

Total 3 Transformation Entry Rows

Admin State	Input Field Type	Input Field Value	Output Field Type	Output Field Value	Match Type	Description	Primary Key
<input checked="" type="checkbox"/>	SIP: R-URI Domain	sbc2.midassolutions.com(.*)	SIP: R-URI Domain	sandbox.onmidassolutions.com\1	Optional (Match One)	From Trunk	5
<input checked="" type="checkbox"/>	SIP: R-URI Domain	sandbox.onmidassolutions.com.*	SIP: R-URI Domain	\0	Mandatory (Must Match)	Validate Tenant	4

Description:

Admin State:

Match Type:

**Input Field**

Type:

Value:

**Output Field**

Type:

Value:

**Apply**

ribbon Monitor Tasks Settings Diagnostics System February 21, 2022 07:32:19

Search...

Expand All | Collapse All | Reload

Call Routing

- Transformation
  - Action: C3 Feature Codes
  - Action: Refer from Teams
  - Action: Reject All
  - Home: Demo 1 - TeamsDemo
  - Home: Demo 2 - CiscoDemo
  - Home: Demo 3 - Zoom Demo
  - Home: Local
  - Home: Premises
  - Home: SP (currently not used)
  - Home: Teams
  - Home: Zoom
  - Sandbox: C3
  - Sandbox: Local
  - Sandbox: Premises
  - Sandbox: SP
  - Sandbox: Teams
  - Tenant 100: C3
  - Tenant 100: Local
  - Tenant 100: Premises
  - Tenant 100: SP
  - Tenant 100: Teams

**Sandbox: Local** February 21, 2022 07:32:19

Total 3 Transformation Entry Rows

Admin State	Input Field Type	Input Field Value	Output Field Type	Output Field Value	Match Type	Description	Primary Key
<input checked="" type="checkbox"/>	SIP: R-URI Domain	sbc2.midassolutions.com(.*)	SIP: R-URI Domain	sandbox.onmidassolutions.com\1	Optional (Match One)	From Trunk	5
<input checked="" type="checkbox"/>	SIP: R-URI Domain	sandbox.onmidassolutions.com.*	SIP: R-URI Domain	\0	Mandatory (Must Match)	Validate Tenant	4
<input checked="" type="checkbox"/>	Called Address/Number	(80)?(994\d\d)	Called Address/Number	\2	Optional (Match One)	To Local	6

Description:

Admin State:

Match Type:

**Input Field**

Type:

Value:

**Output Field**

Type:

Value:

## Transformation Entry for Sandbox:Premises

ribbon | Monitor | Tasks | Settings | Diagnostics | System | February 21, 2022 07:35:29

Search... Expand All Collapse All Reload

Call Routing

- Transformation
  - Action: C3 Feature Codes
  - Action: Refer from Teams
  - Action: Reject All
  - Home: Demo 1 - TeamsDemo
  - Home: Demo 2 - CiscoDemo
  - Home: Demo 3 - Zoom Demo
  - Home: Local
  - Home: Premises
  - Home: SP (currently not used)
  - Home: Teams
  - Home: Zoom
  - Sandbox: C3
  - Sandbox: Local
  - Sandbox: Premises**
  - Sandbox: SP
  - Sandbox: Teams
  - Tenant 100: C3
  - Tenant 100: Local
  - Tenant 100: Premises
  - Tenant 100: SP

Sandbox: Premises

Total 2 Transformation Entry Rows

Admin State	Input Field Type	Input Field Value	Output Field Type	Output Field Value	Match Type	Description	Primary Key
<input checked="" type="checkbox"/>	SIP: R-URI Domain	sandbox.onmidasolutions.com.*	SIP: R-URI Domain	\0	Mandatory (Must Match)	Validate Tenant	6

Description: Validate Tenant

Admin State: Enabled

Match Type: Mandatory (Must Match)

Input Field

Type: SIP: R-URI Domain

Value: sandbox.onmidasolutions.com.\*

Output Field

Type: SIP: R-URI Domain

Value: \0

Apply

ribbon | Monitor | Tasks | Settings | Diagnostics | System | February 21, 2022 07:35:29

Search... Expand All Collapse All Reload

Call Routing

- Transformation
  - Action: C3 Feature Codes
  - Action: Refer from Teams
  - Action: Reject All
  - Home: Demo 1 - TeamsDemo
  - Home: Demo 2 - CiscoDemo
  - Home: Demo 3 - Zoom Demo
  - Home: Local
  - Home: Premises
  - Home: SP (currently not used)
  - Home: Teams
  - Home: Zoom
  - Sandbox: C3
  - Sandbox: Local
  - Sandbox: Premises**
  - Sandbox: SP
  - Sandbox: Teams
  - Tenant 100: C3
  - Tenant 100: Local
  - Tenant 100: Premises
  - Tenant 100: SP

Sandbox: Premises

Total 2 Transformation Entry Rows

Admin State	Input Field Type	Input Field Value	Output Field Type	Output Field Value	Match Type	Description	Primary Key
<input checked="" type="checkbox"/>	SIP: R-URI Domain	sandbox.onmidasolutions.com.*	SIP: R-URI Domain	\0	Mandatory (Must Match)	Validate Tenant	6
<input checked="" type="checkbox"/>	Called Address/Number	(81)?(+)	Called Address/Number	\2	Optional (Match One)	To Premises	7

Description: To Premises

Admin State: Enabled

Match Type: Optional (Match One)

Input Field

Type: Called Address/Number

Value: (81)?(+)

Output Field

Type: Called Address/Number

Value: \2

Apply

## Transformation Entry for Service Provider

ribbon | Monitor | Tasks | Settings | Diagnostics | System | February 21, 2022 07:39:33

Search... Expand All Collapse All Reload

Call Routing

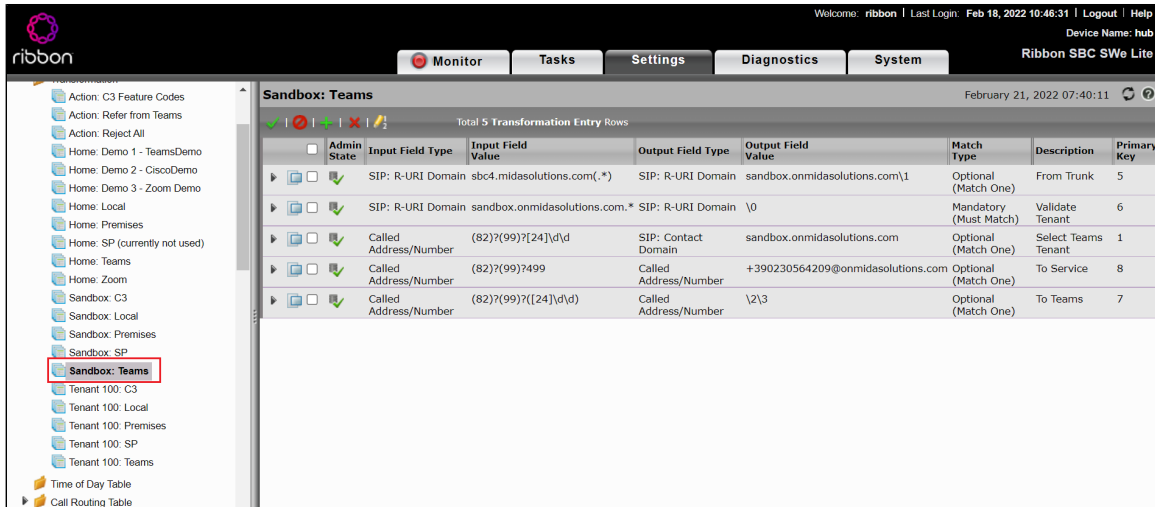
- Transformation
  - Action: C3 Feature Codes
  - Action: Refer from Teams
  - Action: Reject All
  - Home: Demo 1 - TeamsDemo
  - Home: Demo 2 - CiscoDemo
  - Home: Demo 3 - Zoom Demo
  - Home: Local
  - Home: Premises
  - Home: SP (currently not used)
  - Home: Teams
  - Home: Zoom
  - Sandbox: C3
  - Sandbox: Local
  - Sandbox: Premises
  - Sandbox: SP**
  - Sandbox: Teams
  - Tenant 100: C3
  - Tenant 100: Local
  - Tenant 100: Premises
  - Tenant 100: SP

Sandbox: SP

Total 2 Transformation Entry Rows

Admin State	Input Field Type	Input Field Value	Output Field Type	Output Field Value	Match Type	Description	Primary Key
<input checked="" type="checkbox"/>	SIP: R-URI Domain	sandbox.onmidasolutions.com.*	SIP: R-URI Domain	\0	Mandatory (Must Match)	Validate Tenant	6
<input checked="" type="checkbox"/>	Called Address/Number	\+.	Called Address/Number	\0	Optional (Match One)	To SP	7

## Transformation Entry for Teams endpoint



February 21, 2022 07:40:11

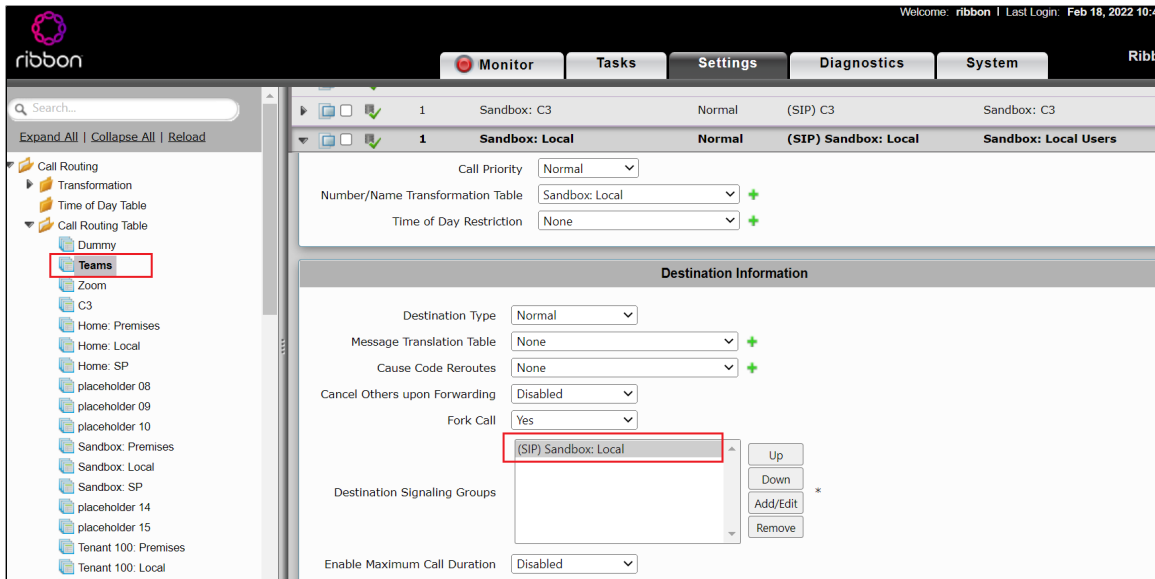
Admin State	Input Field Type	Input Field Value	Output Field Type	Output Field Value	Match Type	Description	Primary Key
<input checked="" type="checkbox"/>	SIP: R-URI Domain	sbc4.midassolutions.com(.*)	SIP: R-URI Domain	sandbox.onmidassolutions.com\1	Optional (Match One)	From Trunk	5
<input checked="" type="checkbox"/>	SIP: R-URI Domain	sandbox.onmidassolutions.com.*	SIP: R-URI Domain	\0	Mandatory (Must Match)	Validate Tenant	6
<input checked="" type="checkbox"/>	Called Address/Number	(82)?(99)?[24]\d\d	SIP: Contact Domain	sandbox.onmidassolutions.com	Optional (Match One)	Select Teams Tenant	1
<input checked="" type="checkbox"/>	Called Address/Number	(82)?(99)?499	Called Address/Number	+390230564209@onmidassolutions.com	Optional (Match One)	To Service	8
<input checked="" type="checkbox"/>	Called Address/Number	(82)?(99)?[24]\d\d	Called Address/Number	\2\3	Optional (Match One)	To Teams	7

## Configure Call Routing Tables

Call Routing allows calls to be carried between signaling groups, thus allowing calls to be carried between ports, and between protocols (like ISDN to SIP). Routes are defined by Call Routing Tables, which allow for flexible configuration of which calls are carried, and how they are translated.

### TEAMS

1. Navigate to **Call Routing > Call Routing Table**.
2. Attach the Transformation Table entry created in the previous step.
3. Select the **Destination Signaling Group** as LOCAL\_SG.



Call Priority: Normal

Number/Name Transformation Table: Sandbox: Local

Time of Day Restriction: None

Destination Information

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: Yes

Destination Signaling Groups: (SIP) Sandbox: Local

Enable Maximum Call Duration: Disabled

Welcome: ribbon | Last Login: Feb 18, 2022 10:41

Monitor Tasks Settings Diagnostics System

Search...

Expand All | Collapse All | Reload

- Call Routing
  - Transformation
  - Time of Day Table
  - Call Routing Table
    - Dummy
    - Teams**
    - Zoom
    - C3
    - Home: Premises
    - Home: Local
    - Home: SP
    - placeholder 08
    - placeholder 09
    - placeholder 10
    - Sandbox: Premises
    - Sandbox: Local
    - Sandbox: SP
    - placeholder 14
    - placeholder 15
    - Tenant 100: Premises
    - Tenant 100: Local
    - Tenant 100: SP

1 Home: Teams Normal (SIP) Teams Mida: Teams Users

1 Sandbox: SP Normal (SIP) Sandbox: SP Sandbox: SP

### Route Details

Description:

Admin State:

Route Priority:

Call Priority:

Number/Name Transformation Table:  +

Time of Day Restriction:  +

### Destination Information

Destination Type:

Message Translation Table:  +

Cause Code Reroutes:  +

Cancel Others upon Forwarding:

Fork Call:

Up

1. Select the Destination Signaling Group as Sandbox\_Premises\_SG

Welcome: ribbon | Last Login: Feb 23, 2022 0

Monitor Tasks Settings Diagnostics System

Search...

Expand All | Collapse All | Reload

- Call Routing
  - Transformation
  - Time of Day Table
  - Call Routing Table
    - Dummy
    - Teams**
    - Zoom
    - C3
    - Home: Premises
    - Home: Local
    - Home: SP
    - placeholder 08
    - placeholder 09
    - placeholder 10
    - Sandbox: Premises
    - Sandbox: Local
    - Sandbox: SP
    - placeholder 14
    - placeholder 15
    - Tenant 100: Premises
    - Tenant 100: Local
    - Tenant 100: SP

Number/Name Transformation Table:  +

Time of Day Restriction:  +

### Destination Information

Destination Type:

Message Translation Table:  +

Cause Code Reroutes:  +

Cancel Others upon Forwarding:

Fork Call:

Up

Destination Signaling Groups:  Down

Add/Edit

Remove

Enable Maximum Call Duration:

### Media

Audio Stream Mode:

Video/Application Stream Mode:

### Quality of Service

Quality Metrics Number of Calls:  [1..100]

Quality Metrics Time Before Retry:  [1..60] min

1. Select the Destination Signaling Group as Sandbox\_C3\_SG

Welcome: ribbon | Last

Monitor Tasks Settings Diagnostics System

Search...

Expand All | Collapse All | Reload

Call Routing

Transformation

Time of Day Table

Call Routing Table

Dummy

**Teams**

Zoom

C3

Home: Premises

Home: Local

Home: SP

placeholder 08

placeholder 09

placeholder 10

Sandbox: Premises

Sandbox: Local

Sandbox: SP

placeholder 14

placeholder 15

Tenant 100: Premises

Tenant 100: Local

Tenant 100: SP

Call Actions

Description: Sandbox: C3

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: C3

Time of Day Restriction: None

Destination Information

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: No

Destination Signaling Groups: (SIP) C3

Enable Maximum Call Duration: Disabled

Up

Down

Add/Edit

Remove

### C3

1. Navigate to **Call Routing > Call Routing Table**.
2. Attach the Transformation Table entry created in the previous step.
3. Select the **Destination Signaling Group** as LOCAL\_SG.

Welcome: ribbon | Last Login: Mar

Monitor Tasks Settings Diagnostics System

Search...

Expand All | Collapse All | Reload

Call Routing

Transformation

Time of Day Table

Call Routing Table

Dummy

Teams

**C3**

Zoom

Home: Premises

Home: Local

Home: SP

placeholder 08

placeholder 09

placeholder 10

Sandbox: Premises

Sandbox: Local

Sandbox: SP

placeholder 14

placeholder 15

Tenant 100: Premises

Tenant 100: Local

Tenant 100: SP

Call Actions

Description: Sandbox: Local Users

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: Local

Time of Day Restriction: None

Destination Information

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: Yes

Destination Signaling Groups: (SIP) Sandbox: Local

Enable Maximum Call Duration: Disabled

Up

Down

Add/Edit

Remove

1. Select the **Destination Signaling Group** as Premises\_SG.

Welcome: ribbon | Last

**Monitor** **Tasks** **Settings** **Diagnostics** **System**

Search...

Expand All | Collapse All | Reload

Call Routing

- Transformation
- Time of Day Table
- Call Routing Table
  - Dummy
  - Teams
  - Zoom
  - C3**
  - Home: Premises
  - Home: Local
  - Home: SP
  - placeholder 08
  - placeholder 09
  - placeholder 10
  - Sandbox: Premises
  - Sandbox: Local
  - Sandbox: SP
  - placeholder 14
  - placeholder 15
  - Tenant 100: Premises
  - Tenant 100: Local
  - Tenant 100: SP

Description: Sandbox: Premises

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: Premises

Time of Day Restriction: None

**Destination Information**

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: Yes

Destination Signaling Groups: (SIP) Sandbox: Premises

Enable Maximum Call Duration: Disabled

Up, Down, Add/Edit, Remove

1. Select the **Destination Signaling Group** as Teams\_SG.

Welcome: ribbon | Last

**Monitor** **Tasks** **Settings** **Diagnostics** **System**

Search...

Expand All | Collapse All | Reload

Call Routing

- Transformation
- Time of Day Table
- Call Routing Table
  - Dummy
  - Teams
  - Zoom
  - C3**
  - Home: Premises
  - Home: Local
  - Home: SP
  - placeholder 08
  - placeholder 09
  - placeholder 10
  - Sandbox: Premises
  - Sandbox: Local
  - Sandbox: SP
  - placeholder 14
  - placeholder 15
  - Tenant 100: Premises
  - Tenant 100: Local
  - Tenant 100: SP

Description: Sandbox: Teams Users

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: Teams

Time of Day Restriction: None

**Destination Information**

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: No

Destination Signaling Groups: (SIP) Teams

Enable Maximum Call Duration: Disabled

Up, Down, Add/Edit, Remove

## Sandbox\_Premises

1. Navigate to **Call Routing > Call Routing Table**.
2. Attach the Transformation Table entry created in the previous step.
3. Select the **Destination Signaling Group** as LOCAL\_SG.



Welcome: ribbon | Last Log

Monitor Tasks Settings Diagnostics System

Search...

Expand All | Collapse All | Reload

Call Routing

- Transformation
- Time of Day Table
- Call Routing Table
  - Dummy
  - Teams
  - Zoom
  - C3
  - Home: Premises
  - Home: Local
  - Home: SP
  - placeholder 08
  - placeholder 09
  - placeholder 10
  - Sandbox: Premises**
  - Sandbox: Local
  - Sandbox: SP
  - placeholder 14
  - placeholder 15
  - Tenant 100: Premises
  - Tenant 100: Local
  - Tenant 100: SP

Description: Sandbox: Local Users

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: Local

Time of Day Restriction: None

Destination Information

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: Yes

Destination Signaling Groups: (SIP) Sandbox: Local

Enable Maximum Call Duration: Disabled

1. Select the **Destination Signaling Group** as Service\_Provider\_SG.

Welcome: ribbon | Last Log

Monitor Tasks Settings Diagnostics System

Search...

Expand All | Collapse All | Reload

Call Routing

- Transformation
- Time of Day Table
- Call Routing Table
  - Dummy
  - Teams
  - Zoom
  - C3
  - Home: Premises
  - Home: Local
  - Home: SP
  - placeholder 08
  - placeholder 09
  - placeholder 10
  - Sandbox: Premises**
  - Sandbox: Local
  - Sandbox: SP
  - placeholder 14
  - placeholder 15
  - Tenant 100: Premises
  - Tenant 100: Local
  - Tenant 100: SP

Admin State: Enabled

Priority: 1

Transformation Table: Sandbox: SP

Destination Type: Normal

First Signaling Group: (SIP) Sandbox: SP

Description: Sandbox: SP

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: SP

Time of Day Restriction: None

Destination Information

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: No

Destination Signaling Groups: (SIP) Sandbox: SP

1. Select the **Destination Signaling Group** as C3\_SG.

Welcome: ribbon | Last Login: [unavailable]

**Monitor** **Tasks** **Settings** **Diagnostics** **System**

Search...

Expand All | Collapse All | Reload

- Call Routing
  - Transformation
  - Time of Day Table
  - Call Routing Table
    - Dummy
    - Teams
    - Zoom
    - C3
    - Home: Premises
    - Home: Local
    - Home: SP
    - placeholder 08
    - placeholder 09
    - placeholder 10
    - Sandbox: Premises**
    - Sandbox: Local
    - Sandbox: SP
    - placeholder 14
    - placeholder 15
    - Tenant 100: Premises
    - Tenant 100: Local
    - Tenant 100: SP

Description: Sandbox: C3

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: C3

Time of Day Restriction: None

**Destination Information**

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: No

Destination Signaling Groups: (SIP) C3

Enable Maximum Call Duration: Disabled

Up, Down, Add/Edit, Remove

1. Select the **Destination Signaling Group** as Sandbox\_Teams\_SG.

Welcome: ribbon | Last Login: [unavailable]

**Monitor** **Tasks** **Settings** **Diagnostics** **System**

Search...

Expand All | Collapse All | Reload

- Call Routing
  - Transformation
  - Time of Day Table
  - Call Routing Table
    - Dummy
    - Teams
    - Zoom
    - C3
    - Home: Premises
    - Home: Local
    - Home: SP
    - placeholder 08
    - placeholder 09
    - placeholder 10
    - Sandbox: Premises**
    - Sandbox: Local
    - Sandbox: SP
    - placeholder 14
    - placeholder 15
    - Tenant 100: Premises
    - Tenant 100: Local
    - Tenant 100: SP

Description: Sandbox: Teams Users

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: Teams

Time of Day Restriction: None

**Destination Information**

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: No

Destination Signaling Groups: (SIP) Teams

Enable Maximum Call Duration: Disabled

Up, Down, Add/Edit, Remove

## Sandbox\_Local

1. Navigate to **Call Routing > Call Routing Table**
2. Attach the Transformation Table entry created in the previous step.
3. Select the **Destination Signaling Group** as LOCAL\_SG.

Welcome: ribbon | Last Login:

Monitor Tasks Settings Diagnostics System

Search...

Expand All | Collapse All | Reload

Call Routing

Transformation

Time of Day Table

Call Routing Table

Dummy

Teams

Zoom

C3

Home: Premises

Home: Local

Home: SP

placeholder 08

placeholder 09

placeholder 10

Sandbox: Premises

**Sandbox: Local**

Sandbox: SP

placeholder 14

placeholder 15

Tenant 100: Premises

Tenant 100: Local

Tenant 100: SP

Description: Sandbox: Local Users

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: Local

Time of Day Restriction: None

Destination Information

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: Yes

Destination Signaling Groups: (SIP) Sandbox: Local

Up

Down

Add/Edit

Remove

Enable Maximum Call Duration: Disabled

1. Select the **Destination Signaling Group** as Service\_Provider\_SG.

Welcome: ribbon | Last Login:

Monitor Tasks Settings Diagnostics System

Search...

Expand All | Collapse All | Reload

Call Routing

Transformation

Time of Day Table

Call Routing Table

Dummy

Teams

Zoom

C3

Home: Premises

Home: Local

Home: SP

placeholder 08

placeholder 09

placeholder 10

Sandbox: Premises

**Sandbox: Local**

Sandbox: SP

placeholder 14

placeholder 15

Tenant 100: Premises

Tenant 100: Local

Tenant 100: SP

Description: Sandbox: SP

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: SP

Time of Day Restriction: None

Destination Information

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: No

Destination Signaling Groups: (SIP) Sandbox: SP

Up

Down

Add/Edit

Remove

Enable Maximum Call Duration: Disabled

1. Select the **Destination Signaling Group** as C3\_SG.

Welcome: ribbon | Last

Monitor Tasks Settings Diagnostics System

Search...

Expand All | Collapse All | Reload

Call Routing

- Transformation
- Time of Day Table
- Call Routing Table
  - Dummy
  - Teams
  - Zoom
  - C3
  - Home: Premises
  - Home: Local
  - Home: SP
  - placeholder 08
  - placeholder 09
  - placeholder 10
  - Sandbox: Premises
  - Sandbox: Local**
  - Sandbox: SP
  - placeholder 14
  - placeholder 15
  - Tenant 100: Premises
  - Tenant 100: Local
  - Tenant 100: SP

Description: Sandbox: C3

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: C3

Time of Day Restriction: None

Destination Information

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: No

(SIP) C3

Destination Signaling Groups

Enable Maximum Call Duration: Disabled

Up

Down

Add/Edit

Remove

1. Select the **Destination Signaling Group** as Sandox\_Premises\_SG.

Welcome: ribbon | Last Login: Mar

Monitor Tasks Settings Diagnostics System

Search...

Expand All | Collapse All | Reload

Call Routing

- Transformation
- Time of Day Table
- Call Routing Table
  - Dummy
  - Teams
  - Zoom
  - C3
  - Home: Premises
  - Home: Local
  - Home: SP
  - placeholder 08
  - placeholder 09
  - placeholder 10
  - Sandbox: Premises
  - Sandbox: Local**
  - Sandbox: SP
  - placeholder 14
  - placeholder 15
  - Tenant 100: Premises
  - Tenant 100: Local
  - Tenant 100: SP

Description: Sandbox: Premises

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: Premises

Time of Day Restriction: None

Destination Information

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: Yes

(SIP) Sandbox: Premises

Destination Signaling Groups

Enable Maximum Call Duration: Disabled

Up

Down

Add/Edit

Remove

1. Select the **Destination Signaling Group** as Teams\_SG.

ribbon Monitor Tasks Settings Diagnostics System

Welcome: ribbon | Last Login: 1

Search...

Expand All | Collapse All | Reload

- Call Routing
  - Transformation
  - Time of Day Table
  - Call Routing Table
    - Dummy
    - Teams
    - Zoom
    - C3
    - Home: Premises
    - Home: Local
    - Home: SP
    - placeholder 08
    - placeholder 09
    - placeholder 10
    - Sandbox: Premises
    - Sandbox: Local**
    - Sandbox: SP
    - placeholder 14
    - placeholder 15
    - Tenant 100: Premises
    - Tenant 100: Local
    - Tenant 100: SP

Description: Sandbox: Teams Users

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: Teams

Time of Day Restriction: None

**Destination Information**

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: No

Destination Signaling Groups: (SIP) Teams

Enable Maximum Call Duration: Disabled

Up, Down, Add/Edit, Remove

## Sandbox\_ServiceProvider

1. Navigate to **Call Routing > Call Routing Table**
2. Attach the Transformation Table entry created in the previous step.
3. Select the **Destination Signaling Group** as LOCAL\_SG.

ribbon Monitor Tasks Settings Diagnostics System

Welcome: ribbon | Last Login: Mar 04, 2022 02:54

Search...

Expand All | Collapse All | Reload

- Call Routing
  - Transformation
  - Time of Day Table
  - Call Routing Table
    - Dummy
    - Teams
    - Zoom
    - C3
    - Home: Premises
    - Home: Local
    - Home: SP
    - placeholder 08
    - placeholder 09
    - placeholder 10
    - Sandbox: Premises
    - Sandbox: Local
    - Sandbox: SP**
    - placeholder 14
    - placeholder 15
    - Tenant 100: Premises
    - Tenant 100: Local

Description: Sandbox: Local Users

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: Local

Time of Day Restriction: None

**Destination Information**

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: Yes

Destination Signaling Groups: (SIP) Sandbox: Local

Up, Down, Add/Edit, Remove

1. Select the **Destination Signaling Group** as Teams\_SG.

Welcome: ribbon | Last Login: M

Monitor Tasks Settings Diagnostics System

Search...

Expand All | Collapse All | Reload

- Call Routing
  - Transformation
  - Time of Day Table
  - Call Routing Table
    - Dummy
    - Teams
    - Zoom
    - C3
    - Home: Premises
    - Home: Local
    - Home: SP
    - placeholder 08
    - placeholder 09
    - placeholder 10
    - Sandbox: Premises
    - Sandbox: Local
    - Sandbox: SP**
    - placeholder 14
    - placeholder 15
    - Tenant 100: Premises
    - Tenant 100: Local
    - Tenant 100: SP

Description: Sandbox: Teams Users

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: Teams

Time of Day Restriction: None

**Destination Information**

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

Fork Call: No

Destination Signaling Groups: (SIP) Teams

Enable Maximum Call Duration: Disabled

Up Down Add/Edit Remove

1. Select the **Destination Signaling Group** as C3\_SG.

Welcome: ribbon | Last Login: M

Monitor Tasks Settings Diagnostics System

Search...

Expand All | Collapse All | Reload

- Call Routing
  - Transformation
  - Time of Day Table
  - Call Routing Table
    - Dummy
    - Teams
    - Zoom
    - C3
    - Home: Premises
    - Home: Local
    - Home: SP
    - placeholder 08
    - placeholder 09
    - placeholder 10
    - Sandbox: Premises
    - Sandbox: Local
    - Sandbox: SP**
    - placeholder 14
    - placeholder 15
    - Tenant 100: Premises
    - Tenant 100: Local
    - Tenant 100: SP

Description: Sandbox: C3

Admin State: Enabled

Route Priority: 1

Call Priority: Normal

Number/Name Transformation Table: Sandbox: C3

Time of Day Restriction: None

**Destination Information**

Destination Type: Normal

Message Translation Table: None

Cause Code Reroutes: None

Cancel Others upon Forwarding: Disabled

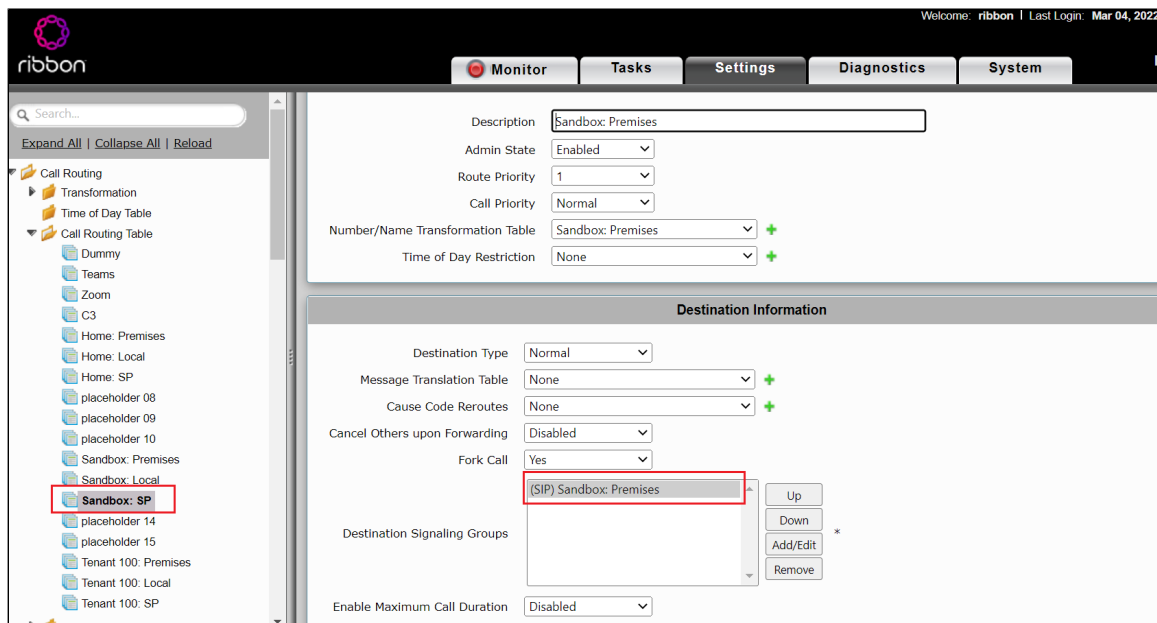
Fork Call: No

Destination Signaling Groups: (SIP) C3

Enable Maximum Call Duration: Disabled

Up Down Add/Edit Remove

1. Select the **Destination Signaling Group** as Premises\_SG.



## MIDA Configuration

To configure the MIDA Recorder, visit <https://www.midasolutions.com/>

## Supplementary Services and Features Coverage

The following checklist depicts the set of services/features covered through the configurations defined in this Interop Guide.

Sr. No.	Supplementary Services/ Features	Coverage
1	Call Setup and Termination over TLS/TCP	✓
2	Call Transfer (Blind/Unattended)	✓
3	Call Transfer (Consultative/Attended)	✓
4	Call hold and Resume (with MOH V1 enabled)	✓
5	Long Duration	✓
6	DTMF handling-OutofBand	✓
7	Direct Media	✓
8	DTMF - Inband and RFC2833	✓
9	Round Robin Option for SRS recorder	✓
10	4xx/5xx Response Handling	✓
11	Call Forward - No Answer	✓
12	Call Park and Retrieve	✓
13	Simultaneous Ringing	✓
14	SRTP on Recording Session	✗

15	Session Refresh	✓
16	Transcoded calls	✓
17	Call Mute (Comfort Noise)	✗

#### Legend

Supported	✓
Not Supported	✗

## Caveats

The following items should be noted in relation to this Interop. These are either limitations or test observations pertaining to this Interoperability.

- SBC SWe Lite does not send encrypted media to the SIPREC as it is currently not supported.
  - Fix for this issue would be a part of upcoming releases.
- SWe Lite does not send Re-INVITE for Recording Server when codec renegotiation occurs between two endpoints via UPDATE.
  - Fix for this issue would be a part of upcoming releases.
- Coredump occurs on SWe Lite when OPUS codec is negotiated between two endpoints.
  - Issue is fixed in Release 9.0.9.
- Long duration calls fail as SWe Lite doesn't send session refresh INVITE with SAVP and crypto towards Teams endpoint.
  - Issue is fixed in Release 9.0.8.
- There is no audio observed when G722 codec is negotiated between two endpoints.
  - Issue is fixed in Release 9.0.8.
- CN (Comfort Noise) parameter is not honored by MIDA Recorder.

## Support

For any support related queries about this guide, please contact your local Ribbon representative or use the details below:

- Sales and Support: 1-833-742-2661
- Other Queries: 1-877-412-8867
- Website: <https://ribboncommunications.com/services/ribbon-support-portal>

## References

For detailed information about Ribbon products and solutions, please visit:  
<https://ribboncommunications.com/products>

For detailed information about MIDA products and solutions, please visit:  
<https://www.midasolutions.com/>

## Conclusion

This Interoperability Guide describes how to configure Ribbon SBC SWe Lite with the MIDA Recorder.

All features and capabilities tested are detailed within this document - any limitations, notes or observations are also recorded in order to provide the reader with an accurate understanding of what has been covered, and what has not.

Configuration guidance is provided to enable the reader to replicate the same base setup - there may be additional configuration changes required to suit the exact deployment environment.



