MiaRec

Avaya Sbce-Integration-Guide

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1. Avaya SBCE SIPREC call recording

This guide provides instructions for configuring SIPREC-based call recording on Avaya Session Border Controller for Enterprise (SBCE) in Avaya Aura environment.



Info

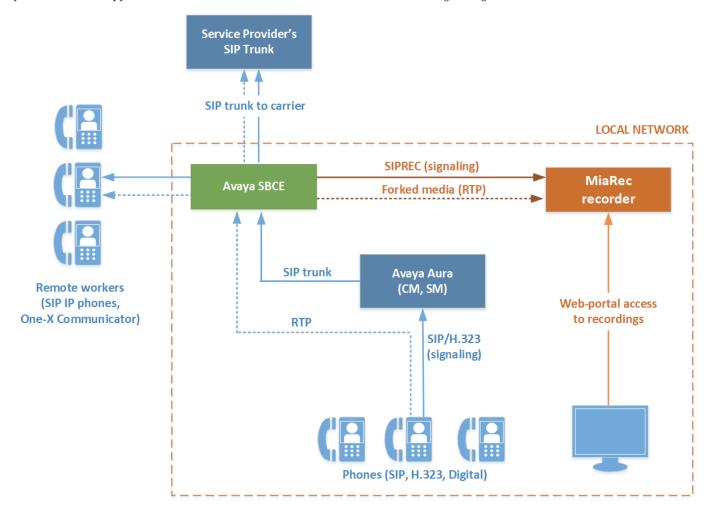
This guide covers SIPREC-related configuration only.

It assumes that Avaya Communication Manager, Session Manager and SBCE are pre-configured properly and you can make calls from local endpoints to SIP Trunk through SBCE, and, if applicable, calls from Remote Workers to SIP Trunk or local endpoints.

2. 01. How it works

The Session Recording Protocol (SIPREC) is an open SIP-based protocol for call recording. The standard is defined by Internet Engineering Task Force (IETF). Avaya SBCE acts as the Session Recording Client, while MiaRec acts as the Session Recording Server. Recording of a media session is done by sending a copy of a media stream to the recording server. Metadata is the information that is passed by the recording client to the recording server in a SIP session. The recording metadata describes the communication session and its media streams, and also identifies the participants of the call.

When call passes through SBCE to SIP Trunk, the call metadata and media are forked to the recording server using SIPREC protocol. MiaRec application records call sessions. End users can access recordings using web user interface.

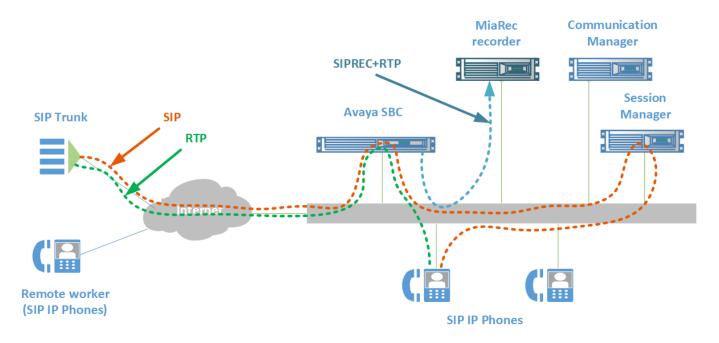


Prerequisites:

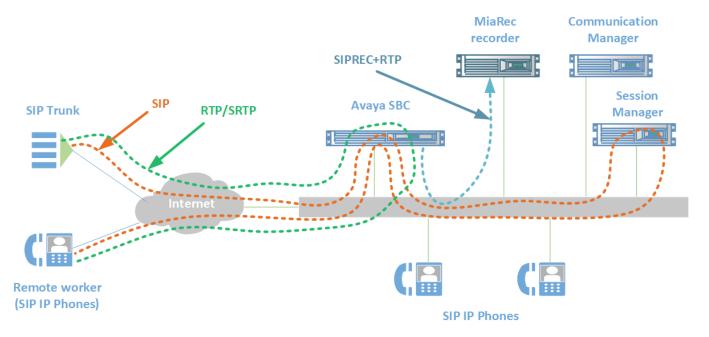
- Avaya SBCE v.7.1 or newer (older versions do not support SIPREC or have limited support)
- · Every recorded call additionally requires one standard and one advanced license on Avaya SBCE

Supported call scenarios:

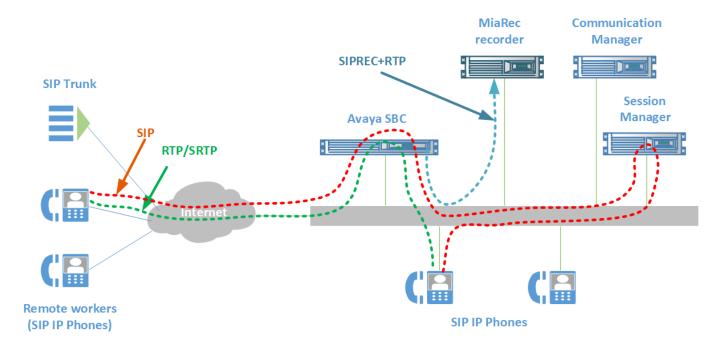
• Inbound/outbound calls via SIP Trunk to local endpoints at the enterprise site.



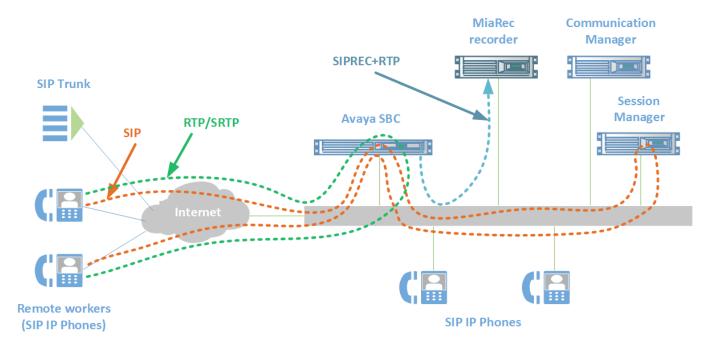
• Inbound/outbound calls via SIP Trunk to Remote Workers.



• Internal calls between Remote Workers and local endpoints at the enterprise site.



• Internal calls between Remote Workers



Not supported call scenarios:

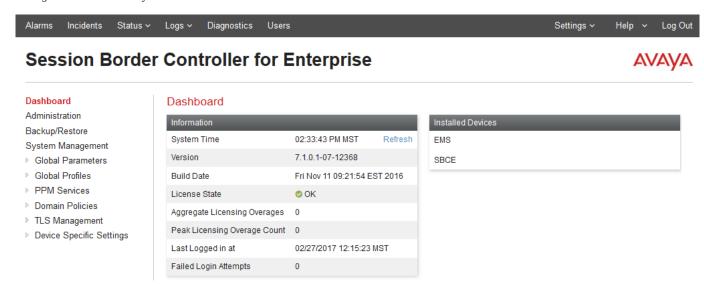
• Internal calls between local endpoints at the enterprise site. Avaya SBCE is not in a media path for this scenario, so call recording cannot be done using SIPREC on the SBCE.

3. 02. Access Avaya SBCE web interface

Access the Session Border Controller using a web browser by entering the URL https://, where is the private IP address configured at installation. A log in screen is presented. Log in using the appropriate username and password.



Once logged in, a dashboard is presented with a menu on the left-hand side. The menu is used as a starting point for all configuration of the Avaya SBCE.



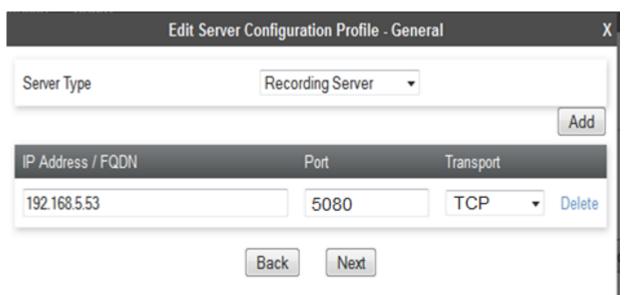
4. 03. Add Server Configuration Profile

To define the MiaRec recording server, navigate to **Global Profiles -> Server Configuration** in the main menu on the left hand side. Click on **Add** and enter an appropriate name in the pop-up menu.



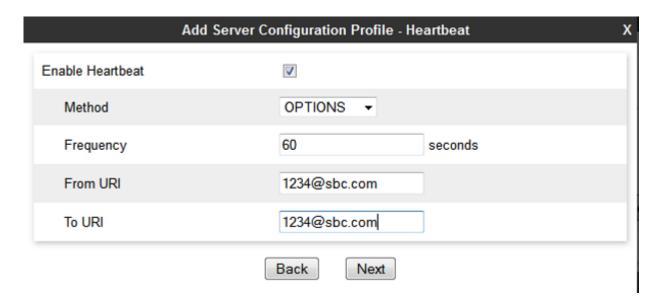
Click Next and enter details in the dialog box:

- In the Server Type drop down menu, select Recording Server.
- Click on Add to enter an IP address
- In the IP Addresses / FQDN box, type the MiaRec recording server interface address.
- In the **Port** box, enter the port to be used for the listening port configured on the MiaRec (TLS or TCP). This guide describes TCP transport configuration.
- In the **Transport** drop down menu, select **TCP**.



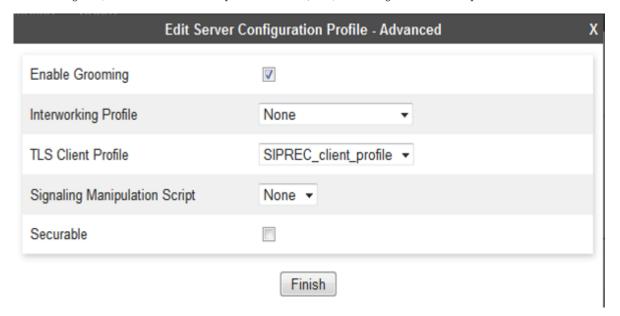
Click Next to configure Hearbeat as follows:

• Enable Heartbeat with method OPTIONS



Click \boldsymbol{Next} to configure $\boldsymbol{Grooming}$ as follows:

- Enable **Grooming** which allows us to support multiple connections.
- No interworking profile required for MiaRec
- If using TLS, then select the Client profile created (note, the configuration of TLS profile is not covered in this guide)



Click Finish.

5. 04. Add Routing Profile for Recording Server

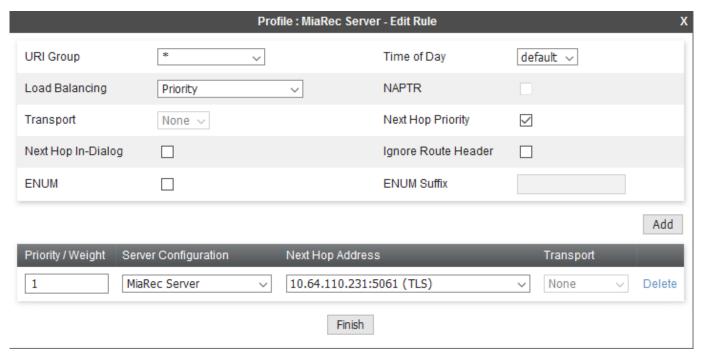
Routing information is required for routing recordings to MiaRec. The IP addresses and ports defined here will be used as the destination addresses for signalling.

To define routing to the MiaRec SIP Trunk, navigate to **Global Profiles -> Routing** in the main menu on the left hand side. Click on Add and enter an appropriate name in the dialogue box.



Click Next and enter details for the Routing Profile:

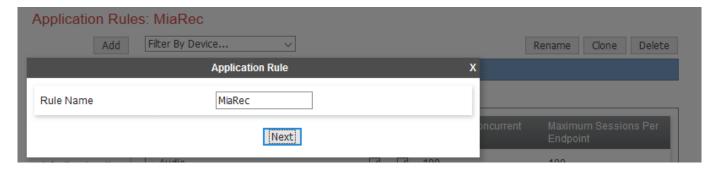
- Click Add to specify the IP address for the MiaRec SIP trunk.
- Assign a priority in the **Priority / Weight** field. If only a single recording server is used, then choose **1**. If multiple recordings servers are configured for load balancing / auto-failover, then choose priority/weight for each server accordingly.
- Select the recording server defined in Step 2 in the **Server Configuration** drop down menu. This automatically populates the **Next Hop Address** field.



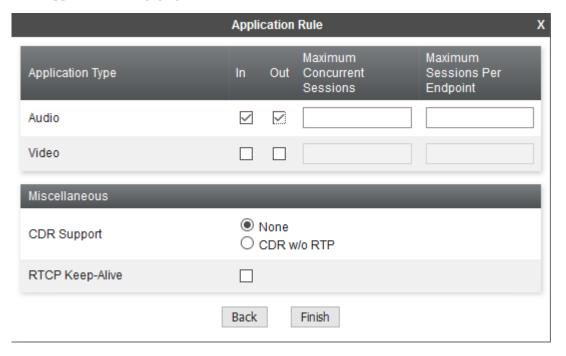
Click Finish.

6. 05. Define Application Rules

An application rules needs to be defined for MiaRec. To create a new Application Rules, navigate to **Domain Policies -> Application Rules**. Click **Add** and enter an appropriate name in the pop-up menu and click **Next**.

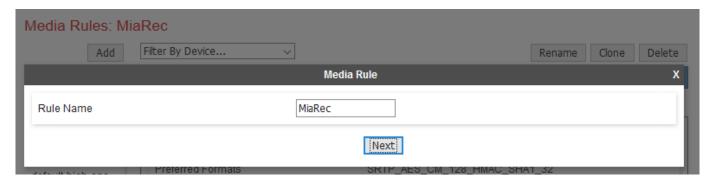


In the Application Rule pop-up windows, check In and Out boxes for Audio, and click Finish.

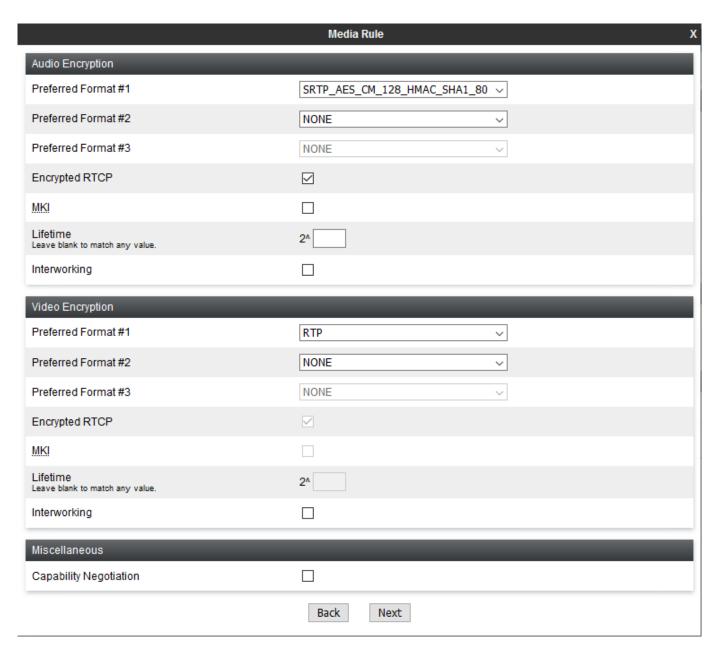


7. 06. Define Media Rules

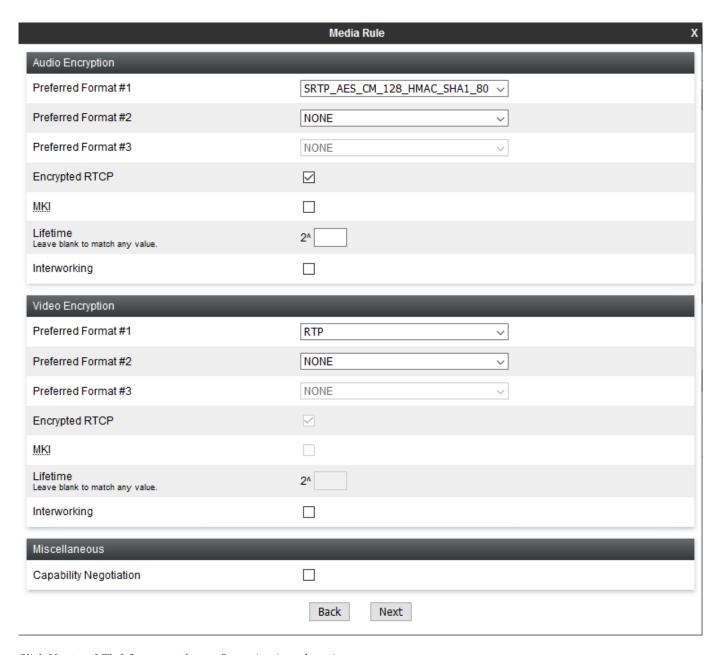
Audio formats need to be specified for MiaRec. To create a Media Rule for MiaRec, navigate to **Domain Policies -> Media Rules**. Click **Add** and enter an appropriate name in the pop-up menu and click **Next**.



In the **Media Rule** pop-up, under **Audio Encryption**, select a **Preferred Format #1** and select **continue**. If using, SRTP select **SRTP_AES_CM_128_128_HMAC_SHA1_80** or for RTP select **RTP** (it is recommended to use SRTP when TLS is enabled as well. Otherwise, use RTP), select **Next**.



In the **Media Rule** pop-up, under the **Audio Codec** section, select box for **Codec Prioritization**. For **Preferred Codecs** select **PCMU**, **PCMA** and **telephone-event**, and click >.



Click \mathbf{Next} and \mathbf{Finish} to save the configuration (not shown).

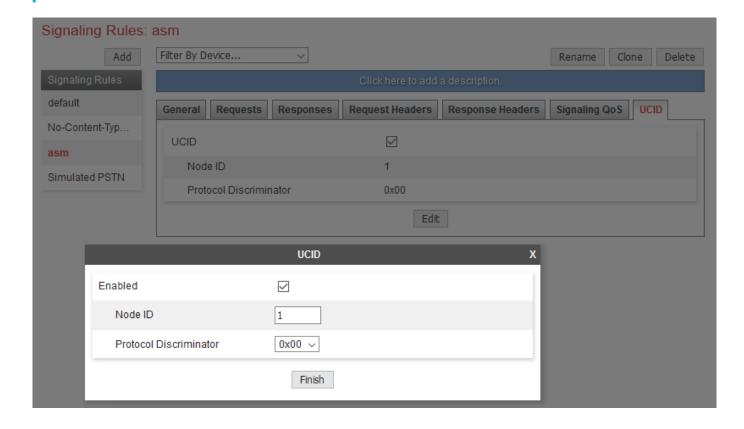
8. 07. Configure UCID

UCID needs to be enabled for **Signaling Rules** that are defined for Session Manager and MiaRec. Navigate to **Domain Policies**-> **Signaling Rules**. Select the policy for Session Manager and select the **UCID** tab. Click **Edit**, select the **Enabled** check box and type in a unique value in **Node ID** field. Click **Finish** to save configuration.

Perform similar steps for the MiaRec signaling rule.

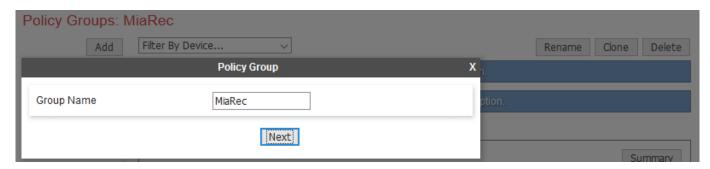


- UCID will need to be enabled on the Signaling rule for MiaRec and the one for SM.
- Node ID should be unique on the SBC and across the solution.
- Protocol Discriminator should match what is on CM configuration. This is typically 0x00 as that is the recommended value.

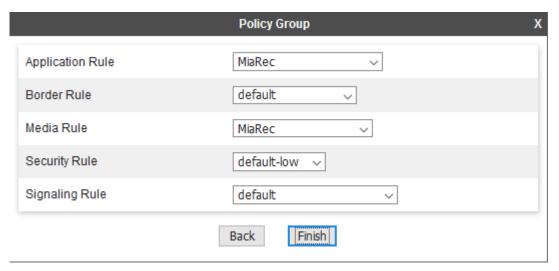


9. 08. Define End Point Policy Group

To define an **End Point Policy Group** for MiaRec, navigate to **Domain Policies -> End Point Policy Group** and click **Add**. Click **Add** and enter an appropriate name in the pop-up menu and select **Next**.

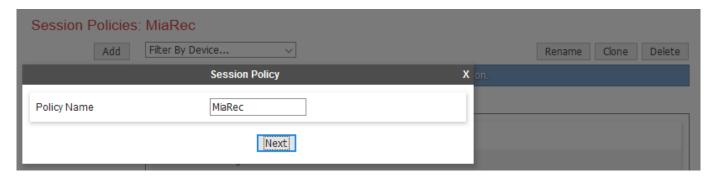


In the **Policy Group** pop-up, select **Application Rule** defined in Step 5 and select **Media Rule** defined in Step 6. Click **Finish** to save configuration.



10. 09. Define Session Policies

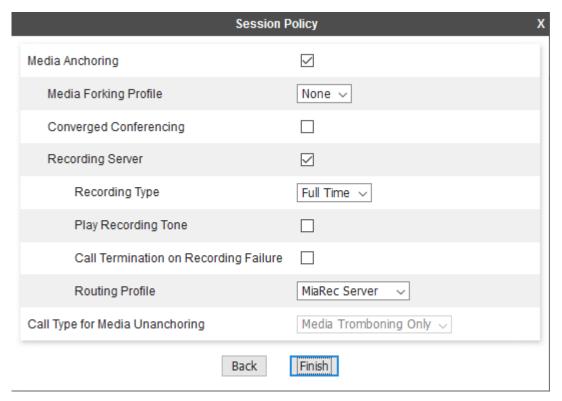
To define **Session Policy** for MiaRec, navigate to **Domain Policies -> Session Policies** and click **Add**. Click **Add** and enter an appropriate name in the pop-up menu and click **Next**.



In the Session Policy pop-up, select the Media Anchoring and Recording Server check boxes.

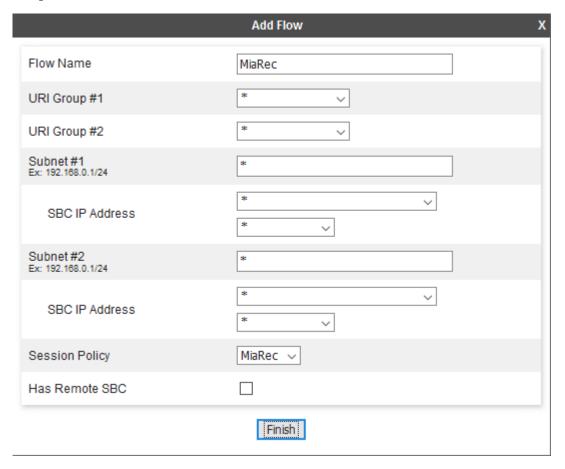
In the Recording Type field, select Full Time.

In the **Routing Profile** field, select the Routing profile configured in Step 4.



11. 10. Define Session Flows

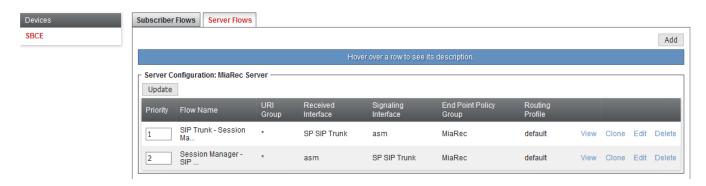
To define Session Policy for MiaRec, navigate to **Device Specific Settings -> Session Flows** and click **Add**. Click **Add** and enter an appropriate **Flow Name** in the pop-up menu and select the **Session Policy** defined in Step 9. Click **Finish** to save the configuration.



12. 11. Define Server Flows

The End Point Server Flows allow calls to be recorded by MiaRec when they are passing through Avaya SBCE to the Service Provider's SIP Trunk. Navigate to **Device Specific Setting -> End Point Flows -> Server Flows**.

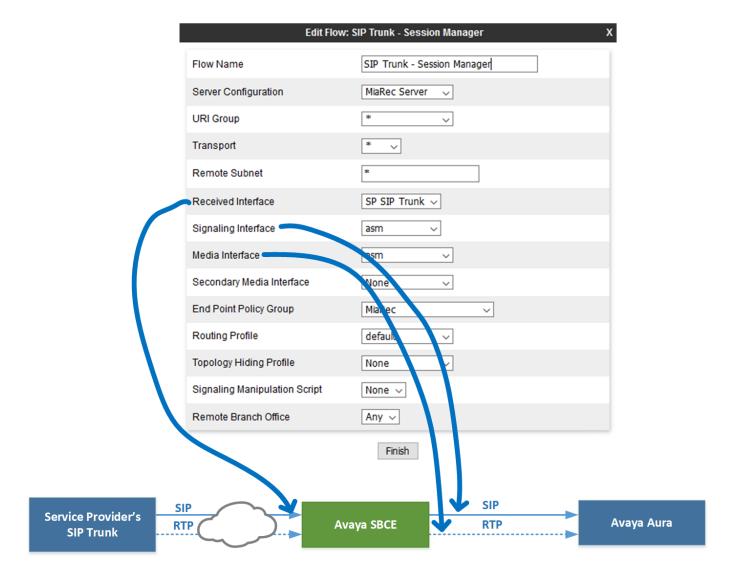
Create two Server Flows for MiaRec, one to record calls coming in from Service Provider's SIP Trunking service and another for calls coming in from Session Manager.



12.0.1 Server flow 1. SIP Trunk -> Session Manager, i.e. inbound calls

Configure:

- In the **Server Configuration** field, select the one created in Step 3.
- In the Received Interface field, select the one used towards Service Provider for SIP Trunk.
- In the Signaling Interface field, select the one used towards Session Manager for SIP signaling.
- In the **Media Interface** field, select the one used towards Session Manager for RTP media.
- In the **Endpoint Policy Group** field, select the one created in Step 8.
- In the Routing Profile field, select default i.e. Routing profile without any IP address.
- In the **Topology Hiding** field, select **None**. The SBC will send the same information it sends to SM based on the TH set in the SM server flow.

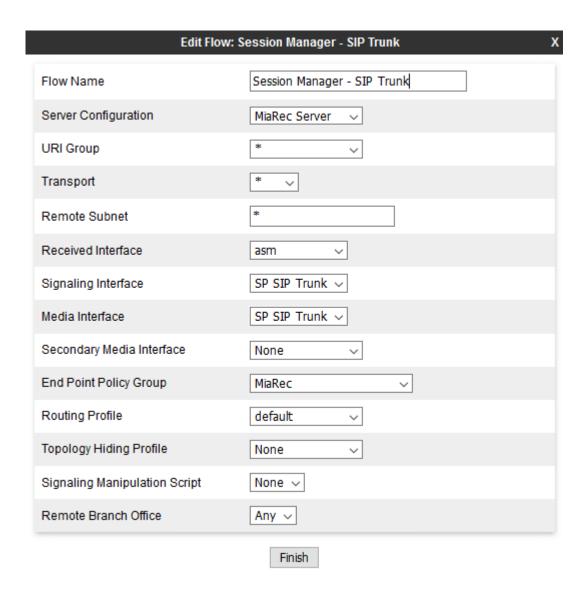


12.0.2 Server flow 2. Session Manager -> SIP Trunk, i.e. outbound calls

This server flow is similar to the previous one, but for reverse call direction, outbound call through Service Provider's SIP Trunk. The **Received Interface**, **Signaling Interface** and **Media Interface** are reversed.

Configure:

- In the **Server Configuration** field, select the one created in Step 3.
- In the Received Interface field, select the one used towards Session Manager for SIP signaling.
- In the Signaling Interface field, select the one used towards Service Provider for SIP signaling.
- In the Media Interface field, select the one used towards Service Provider for RTP media.
- In the **Endpoint Policy Group** field, select the one created in Step 8.
- In the Routing Profile field, select default i.e. Routing profile without any IP address.
- In the **Topology Hiding** field, select **None**. The SBC will send the same information it sends to SM based on the TH set in the SM server flow.



12.0.3 Server flow 3. Remote worker calls.

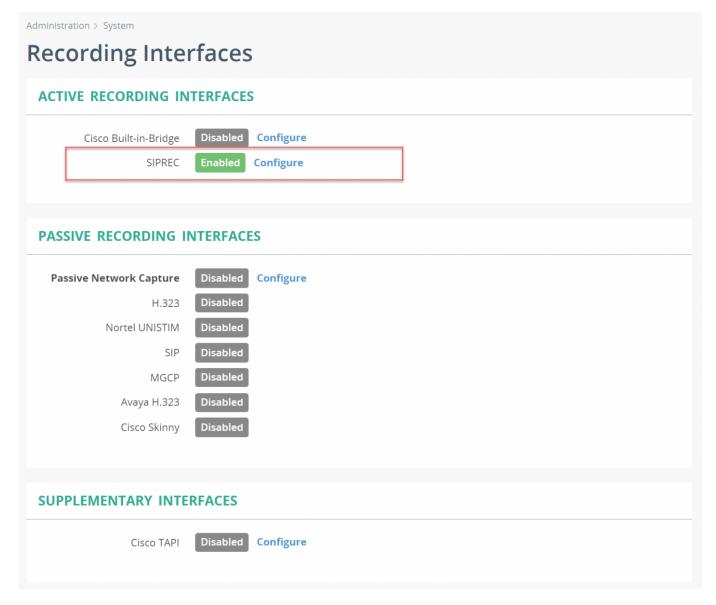
If Remote Workers connect to SBCE via external network interface different from the Service Provider's SIP Trunk, then an additional server flow is required to record Remote Worker calls:

- \bullet In the $\bf Server\ Configuration$ field, select the one created in Step 3.
- In the **Received Interface** field, select the one used towards Remote Workers.
- In the **Signaling Interface** field, select the one used towards Session Manager for SIP signaling.
- \bullet In the $\bf Media\ Interface$ field, select the one used towards Session Manager for RTP media.
- In the **Endpoint Policy Group** field, select the one created in Step 8.
- \bullet In the $Routing\ Profile\ {\it field}$, select default i.e. Routing profile without any IP address.
- In the **Topology Hiding** field, select **None**. The SBC will send the same information it sends to SM based on the TH set in the SM server flow.

13. 12. Configure MiaRec SIPREC recording interface

In MiaRec web portal, navigate to Administration -> System -> Recording interfaces.

- Enable the "SIPREC" recording interface.
- Disable all other recording interfaces if you do not use them.



Click the **Configure** link for SIPREC interface.

- Check Enable SIPREC recording
- Change the **Signaling UDP port** and **Signaling TCP port** parameters according to the port configuration in Avaya SBCE. By default, MiaRec is listening on port 5080 for both TCP and UDP signaling data.
- If MiaRec server is located behind NAT, then specify **Public Ip-address** which is used by Avaya SBCE to establish SIPREC connection. Make sure that port forwarding is configured properly on your NAT router. If MiaRec server and Cisco CUBE are in the same network, then leave this parameter empty.
- If necessary, change the default values of UDP port range for RTP media packets. Edit parameters **Begin RTP port range** and **End RTP port range**. Make sure that the port range is large enough for anticipated number of concurrently recorded calls. One concurrent call requires one UDP port for single media stream recording and two UDP ports for dual media stream recording.



Hint

Make sure that firewall is configured properly and inbound connections on SIP signaling and RTP ports are permitted.

Administration > System > Recording Interfaces

Configure Recording Interface

