

MiaRec

Cisco Cube-Integration-Guide

MiaRec, Inc.

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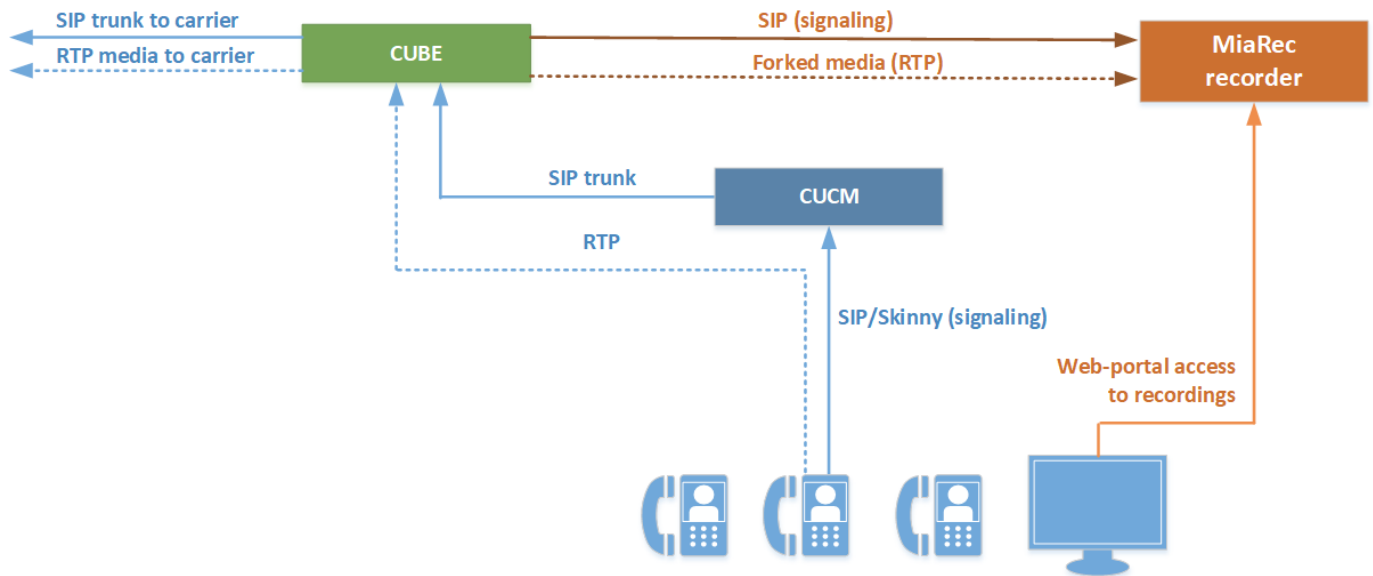
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1. Cisco CUBE Network-based Recording Integration

This guide provides instructions for configuring Network-Based Recording on Cisco CUBE.

1.0.1 How it works

The Network-Based Recording is a feature of Cisco CUBE. Cisco CUBE acts as a recording client, while MiaRec acts as a recording server. Recording of a media session is done by sending a copy of a media stream to a recording server (media forking). Metadata is the information that is passed by a 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.



1.0.2 Restrictions for Cisco CUBE Network-Based Recording

Network-based recording is not supported for the following calls:

- Calls that do not use Session Initiation Protocol (SIP). Must be a SIP-to-SIP call flow.
- Flow-around calls.
- Session Description Protocol (SDP) pass-through calls.
- Real-time Transport Protocol (RTP) loopback calls.
- High-density transcoder calls.
- IPv6-to-IPv6 calls.
- IPv6-to-IPv4 calls with IPv4 endpoint.
- Secure Real-time Transport Protocol (SRTP) passthrough calls.
- SRTP-RTP calls with forking for SRTP leg (forking is supported for the RTP leg).
- Resource Reservation Protocol (RSVP).
- Multicast music on hold (MOH).

Recording is not supported if CUBE is running a TCL IVR application with the exception of `survivability.tcl`, which is supported with network based recording.

Digital Signal Processing (DSP) resources are not supported on forked legs.

1.0.3 Restrictions for Video Recording

- If the main call has multiple video streams (m-lines), the video streams other than the first video m-line are not forked.
- Application media streams of the primary call are not forked to the recording server.
- Forking is not supported if the anchor leg or recording server is on IPv6.
- High availability is not supported on forked video calls.

2. Cisco CUBE configuration for Network-Based Recording

2.1 Step 1. Enter the configuration mode

```
Device> enable
Device# configure terminal
```

2.2 Step 2. Choose a dummy dial-peer tag for the recorder.

Note, 8000 in this example is a dummy dial-peer tag for the recorder. You need to make sure it doesn't conflict with the existing dial-peers.

Execute the following command to view a list of the existing dial-peers:

```
Device# show dial-peer voice
```

Check if 8000 is not used yet. Otherwise, choose a different dial-peer tag like 8002 and make the corresponding changes to the commands in the next steps.

2.3 Step 3. Create a recorder profile

Here we choose 200 for a recording profile tag. If 200 is not available, then choose a different value and make the corresponding changes to the commands in the next steps.

```
Device(config)# media profile recorder 200
Device(cfg-mediaprofile)# media-type audio
Device(cfg-mediaprofile)# media-recording 8000
Device(cfg-mediaprofile)# exit
```

Where:

- **8000** is a dummy dial-peer for the recorder (see Step 2).
- **200** is a recorder profile tag.

2.4 Step 4. Create a media class that points to a recorder

Here we choose 100 for a media class tag. If 100 is not available, then choose a different value and make the corresponding changes to the commands in the next steps.

```
Device(config)# media class 100
Device(cfg-mediaclass)# recorder profile 200
Device(cfg-mediaclass)# exit
```

Where:

- **100** is a media class tag.
- **200** is a recorder profile tag (configured above).

2.5 Step 5. Create a dial-peer pointing to the MiaRec recorder.

```
Device(config)# dial-peer voice 8000 voip
Device(config-dial-peer)# description MiaRec recorder
Device(config-dial-peer)# media class 100
Device(config-dial-peer)# destination-pattern 8000
Device(config-dial-peer)# session protocol sipv2
Device(config-dial-peer)# session target ipv4:10.1.2.3:5080
Device(config-dial-peer)# session transport tcp
Device(config-dial-peer)# exit
```

Where:

- **8000** is a dummy dial-peer for the recorder (configured above).
- **10.1.2.3:5080** is an IP address and port of the recorder (change it to the ip-address of your MiaRec recording server).
- **destination-pattern 8000** is a dummy configuration. It is ignored by CUBE because this dial-peer is a recorder rather than a SIP trunk.

2.6 Step 6. Assign recorder to the existing dial peer(s).

It is recommended to assign the recorder to the incoming dial-peer rather than to the outgoing dial-peer.

First, check your existing dial-peers by running the following command:

```
Device# show dial-peer voice
```

In the example below, we modify the existing dial-peer 1 that matches inbound call legs (your dial-peer tag may differ).

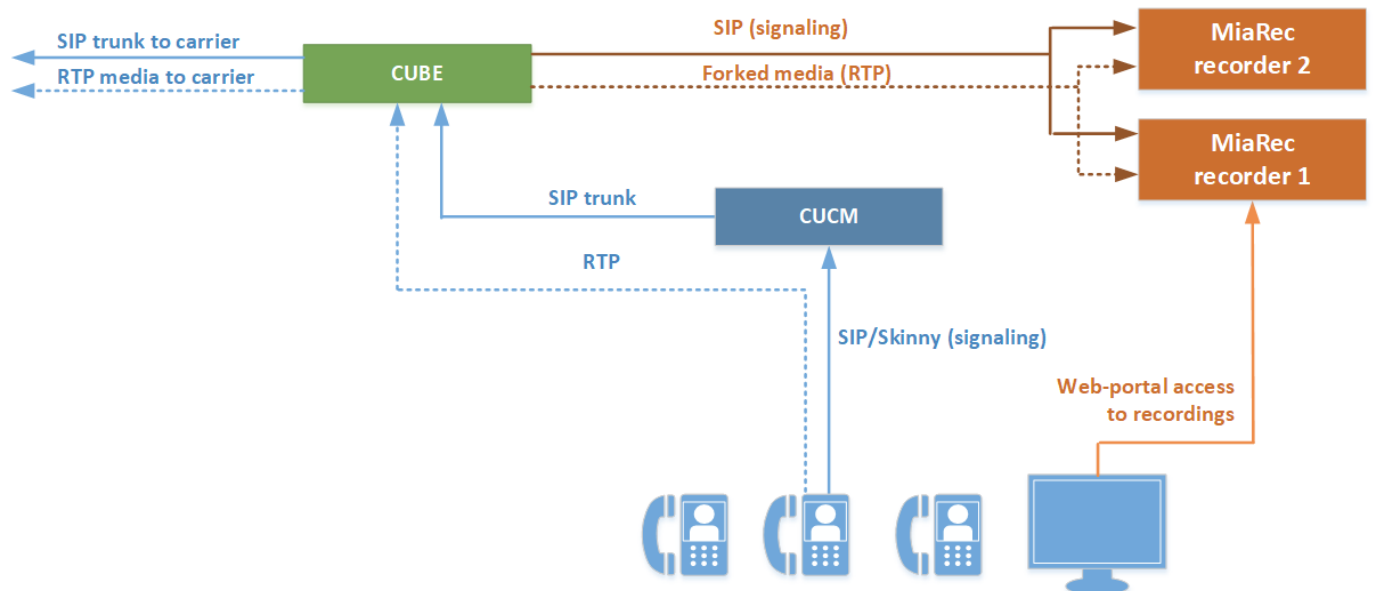
Second, modify the existing dial-peer by adding command `media-class 100`. This command activates call recording on dial-peer.

```
dial-peer voice 1 voip
description Generic incoming dial match
session protocol sipv2
incoming called-number .
media-class 100
...
```

With such configuration, Network-Based Recording will be enabled on all calls passing through CUBE.

If you need to enable Network-Based Recording recording on selective call scenarios, then check [2].

2.7 High-availability for Network-Based recording



When using MiaRec in a high-availability setup (i.e. 2 or more recorders with auto-failover and redundancy), then you need to do the following changes to CUBE configuration:

2.7.1 Create a dial-peer configuration for each MiaRec recorder.

Create a dial-peer configuration for each recorder. Use the `preference` parameter to specify a primary/secondary server.

Example:

Recorder 1 (dial-peer 8000):

```
Device(config)# dial-peer voice 8000 voip
Device(config-dial-peer)# description MiaRec recorder 1
Device(config-dial-peer)# preference 1
Device(config-dial-peer)# media class 100
Device(config-dial-peer)# destination-pattern 8000
Device(config-dial-peer)# session protocol sipv2
Device(config-dial-peer)# session target ipv4:10.0.0.10:5080
Device(config-dial-peer)# session transport tcp
Device(config-dial-peer)# exit
```

Recorder 2 (dial-peer 8002):

```
Device(config)# dial-peer voice 8002 voip
Device(config-dial-peer)# description MiaRec recorder 2
Device(config-dial-peer)# preference 2
Device(config-dial-peer)# media class 100
Device(config-dial-peer)# destination-pattern 8002
Device(config-dial-peer)# session protocol sipv2
Device(config-dial-peer)# session target ipv4:10.0.0.20:5080
Device(config-dial-peer)# session transport tcp
Device(config-dial-peer)# exit
```

Where:

- **8000** is a dummy dial-peer for the primary recorder.
- **8002** is a dummy dial-peer for the secondary recorder.
- **10.0.0.10:5080** is an IP address and port of the primary recorder (change it to the ip-address of your MiaRec recording server).
- **10.0.0.20:5080** is an IP address and port of the secondary recorder (change it to the ip-address of your MiaRec recording server).
- **preference 1/2** is a preference of the recorders.
- **destination-pattern 8000/8002** is a dummy configuration. It is ignored by CUBE because this dial-peer is a recorder rather than SIP trunk.

2.7.2 Create a recorder profile

Change the **media-recording** configuration in the recording profile to point to both recorders (8000 and 8002 in our example):

```
Device(config)# media profile recorder 200
Device(cfg-mediaprofile)# media-type audio
Device(cfg-mediaprofile)# media-recording 8000 8002
Device(cfg-mediaprofile)# exit
```

Where:

- **8000** is a dummy dial-peer for the primary recorder.
- **8002** is a dummy dial-peer for the secondary recorder.
- **200** is a recorder profile tag.

References:

- [1] [Cisco Unified Border Element Configuration Guide - Network-Based Recording](#)
- [2] [CUBE Media Forking Dial Peer Question](#)

3. MiaRec Network-Based Recording configuration

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

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

Administration > System

Recording Interfaces

ACTIVE RECORDING INTERFACES

Cisco Built-in-Bridge	Disabled	Configure
SIPREC	Enabled	Configure

PASSIVE RECORDING INTERFACES

Passive Network Capture	Disabled	Configure
H.323	Disabled	
Nortel UNISTIM	Disabled	
SIP	Disabled	
MGCP	Disabled	
Avaya H.323	Disabled	
Cisco Skinny	Disabled	

SUPPLEMENTARY INTERFACES

Cisco TAPI	Disabled	Configure
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Click the **Configure** link for SIPREC interface.

- Select the **Enable SIPREC recording** check box.
- Select the **Enable SIP Dial-in recording** check box.
- Change the **Signaling UDP port** and **Signaling TCP port** parameters according to the port configuration in Cisco CUBE. 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 Cisco CUBE 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 the **Begin RTP port range** and **End RTP port range** parameters. 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. For details, see Firewall configuration.

Administration > System > Recording Interfaces

Configure Recording Interface

Enable *

☒ Enable SIPREC recording

SIP Dial-In

☒ Enable SIP Dial-In recording interface (default is no)

If enabled, then both SIP and SIPREC protocols are supported. Otherwise, only the SIPREC protocol is supported.

No-Audio Begin Timeout

240

seconds

This timeout specifies how long to wait for the first RTP media packet before give up

No-Audio Normal Timeout

3600

seconds

In case of RTP transmission stopping, this timeout specifies how long to wait for RTP restoration before forcibly completing call recording

Signaling UDP port

5080

Listening UDP port for SIPREC signaling (use 0 to disable UDP)

Signaling TCP port

5080

Listening TCP port for SIPREC signaling (use 0 to disable TCP)