Cisco Call Recording Architectures

Table of Contents

[Recording from the Phone 2](#_Toc407188728)

[CUBE only Recording 2](#_Toc407188729)

[Recording from the CUBE 3](#_Toc407188730)

[Minimum Versions for Audio from the CUBE 3](#_Toc407188731)

[CUBE Setup 4](#_Toc407188732)

[http 4](#_Toc407188733)

[wsapi 4](#_Toc407188734)

[UCM Setup 4](#_Toc407188735)

[SIP Trunk 4](#_Toc407188736)

[Phone Setup 5](#_Toc407188737)

[Recording 7940/7960 phones. 5](#_Toc407188738)

# Recording from the Phone

This is the traditional recording architecture we have used to record calls. The SIP invite to Calabrio comes from UCM and the Built in Bridge in the phone sends the media stream to the recorder. It is simple to setup and always works. The only downside is if the phone is remote across a WAN then it send two media streams of 80K bits each across the WAN link to the recorder, that is in addition to the normal 80K bit audio each way. This results in 80K bits going to the phone and 240K bits coming from the phone.

This does not work on phones that do not have the BiB such as 7940/7960 phones. It does record all calls both external and internal.

CUBE

UCM

Phone

Call

Recorder

Service Provider

SIP Invite

Audio from BiB

Calabrio Network Recording using the Phone Built in Bridge

# CUBE only Recording

This is an alternate architecture where the CUBE sends both the SIP Invite and the audio stream to the phone. This removes any limitations on WAN links. The Calabrio does not handle this very well as its licensing is based on a named user. The SIP trunk from the CUBE does not carry the phone user name unlike the first example where the SIP invite comes from UCM. As a result the Calabrio needs access to the UCM call data records or the CCX server if the user being recorded is an agent. It has to map the GUID of the SIP call into an end user by running a reconciliation process.

This does have the advantage of recording all phones including 7940/7960. This architecture works well for the Cisco Media Sense recorder but less well for Calabrio. It only records external calls, it does not record internal calls.

CUBE

UCM

Phone

Call

Recorder

Service Provider

SIP Invite

Audio

From CUBE

Calabrio CUBE Recording

# Recording from the CUBE

This is the third recording architecture which combines the simplicity of Network Recording using the Built in Bridge but having the audio stream come from the CUBE. The SIP Invite comes from UCM and provides the end user information that Calabrio requires. The Audio stream comes from the CUBE which is transparent to Calabrio.

This does record external calls for all phones including the 7940/7960. It can also record internal calls for those phones having the BiB. For recording internal calls the UCM instructs the phone to send the audio stream instead of the CUBE.

The recording method on UCM is "Gateway preferred". That means that internal phone to phone calls will be recorded using the BiB and this will still take WAN bandwidth. You can disable the BiB on the phone and that will prevent it recording using the BiB while still allowing recording for calls that cross the CUBE. This will also stop silent monitoring and is likely be an issue if the people being recorded are CCX agents.

UCM runs an additional wsapi protocol over http to the CUBE. UCM uses this to instruct the CUBE to start and stop the audio streams and to provide the end point IP and port number to send the streams to.

CUBE

UCM

Phone

Call

Recorder

Service Provider

SIP Invite

Audio from CUBE

SIP

wsapi

Calabrio Network Recording using CUBE

## Minimum Versions for Audio from the CUBE

|  |  |
| --- | --- |
| UCM Version | 10.0 or later |
| IOS Version | 15.3(3)M or later |
| Trunk between CUBE and UCM | Must be SIP |

## CUBE Setup

Additional setup is required on the CUBE to configure http and the wsapi protocol.

### http

ip http server

ip http max-connections 100

ip http timeout-policy idle 600 life 86400 requests 86400

http client connection idle timeout 600

### wsapi

uc wsapi

 message-exchange max-failures 2

 source-address 10.99.18.12

 probing interval negative 10

 probing interval keepalive 255

 probing max-failures 5

 !

 provider xmf

 no shutdown

 remote-url 1 http://10.99.18.53:8090/ucm\_xmf

 !

 !

Notes

source-address 10.99.18.12

This is the IP address used by the CUBE for the wsapi messages

remote-url 1 http://10.99.18.53:8090/ucm\_xmf

This is the UCM that is allowed to send wsapi commands to the CUBE

You must do an index for each UCM publisher/subscriber as in

remote-url 1 http://10.12.0.100:8090/ucm\_xmf

remote-url 2 http://10.12.0.101:8090/ucm\_xmf

## UCM Setup

### SIP Trunk

On the SIP trunk to the CUBE you must tick the "This trunk connects to a recording-enabled gateway" button and reset the trunk.



### Phone Setup

When enabling recording on the phone or device profile select the "Gateway Preferred" as the Recording Media Source.



### Recording 7940/7960 phones.

You can't record a 7940/7960 phone direct as they have no setup for recording. You must use an extension mobility device profile and select the profile as a 7942 or 7962. You can then setup the recording option/ recording profile/ recording media source and this will work for external call recording.

### Debug/Troubleshooting

show wsapi registration all

debug wsapi xmf messages

debug wsapi infrastructure detail

debug voip application

debug voip application media forking