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# SIP TRUNK RECORDING CONFIGURATION FOR CUCM 6.x TO 12.x

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MMS Version 12.0.1  
Revision 11.22.2022

## Contents

INTRODUCTION.....	1
IMPLEMENTATION OF SIP TRUNK RECORDING IN REVCORD SOFTWARE.....	2
SETTING UP SIP TRUNK RECORDING IN REVCORD.....	4
CONFIGURING THE CUCM.....	5
CREATING THE SIP TRUNK.....	5
CREATING THE ROUTE PATTERN.....	6
CREATING A RECORDING PROFILE.....	7
ENABLING PHONES FOR RECORDING.....	8
ADDING USERS FOR RECORDING AND MONITORING.....	9
CONFIGURING BEEP TONE FOR RECORDING AND MONITORING.....	10
OTHER SETTINGS.....	11

## INTRODUCTION

This manual describes the steps required to configure the Cisco Unified Communication Manager (CUCM) to record IP phones using Cisco's Duplicate Media Streaming (DMS) technology via SIP trunking.

The instructions in this guide assume that you have some experience operating a personal computer and working with Microsoft Windows as well as experience with the CUCM versions 6.x to 12.x. If you have any questions pertaining to the Windows operating system, refer to your Microsoft manual or Microsoft online help.

**Please note that this document is for reference only and provides only general guidance. Your CUCM expert should verify the steps below relating to the CUCM configuration.**

Please note that the CUCM can be in SCCP or SIP format. In addition for Customer (FarEnd) DN (Direct Number) information, the SIP Header of the invite that is sent to SIP recorder contains only the information (DN/Ci) of the Agent (NearEnd). For the Customer Direct Number, you must use full JTAPI. JTAPI is not available at this time.

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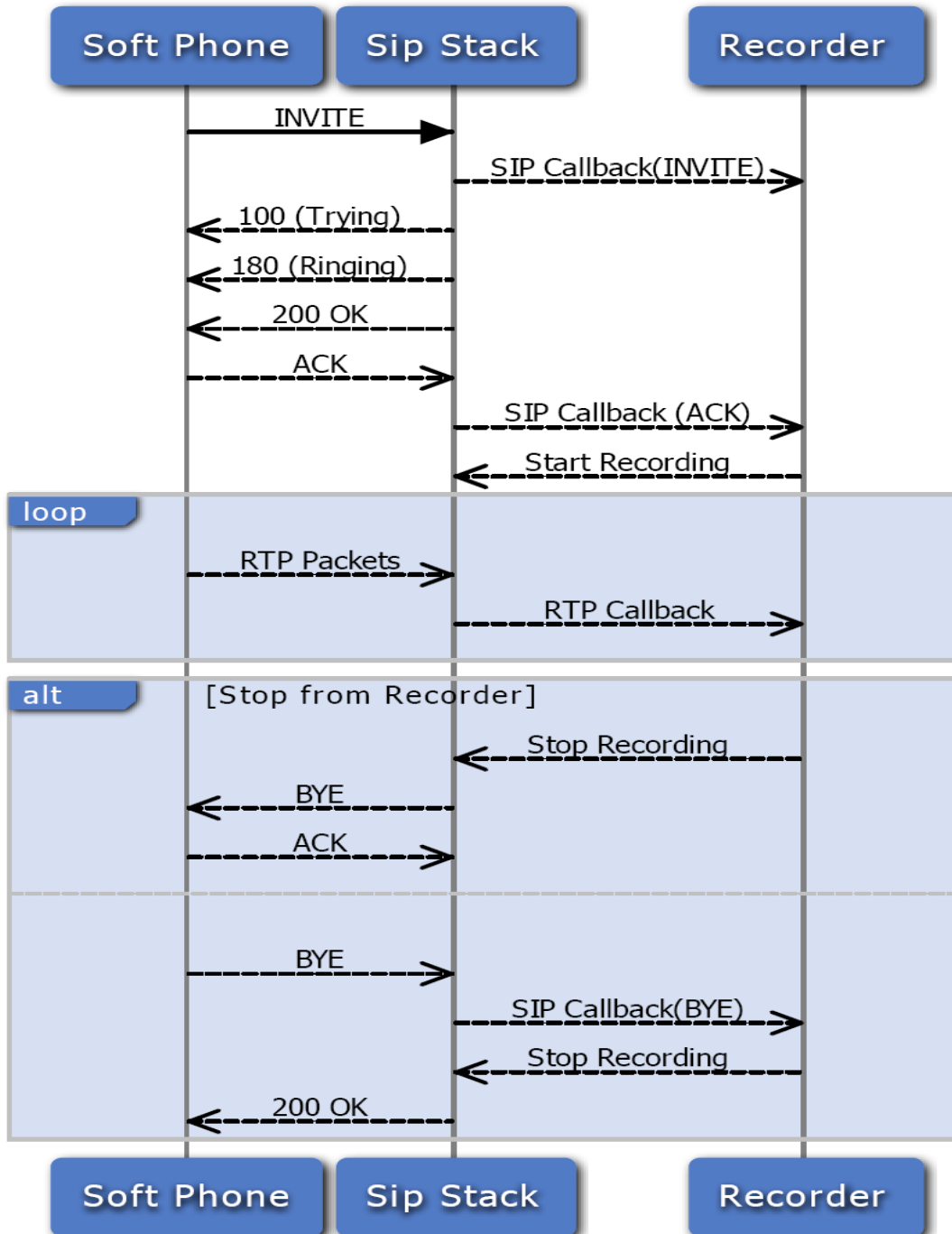
# IMPLEMENTATION OF SIP TRUNK RECORDING IN REVCORD SOFTWARE

Trunk recording is similar to the standard VoIP recording except that instead of using Network Sniffing (port mirroring), it will use a SIP interface that will actively interact with the PBX using a SIP Protocol and receive audio directly from the PBX/Phone for recording. The SIP interface (revcord.dll) is developed by a third party and it is the core of the SIP call processing and RTP Extraction.

As the Call Flow Diagram ([Figure 1](#)) shows, when an invite request is received, the SIP UA sends a SIP message to the recorder informing it about the incoming call, simultaneously a 180- Ringing response, and thereafter a 200 OK response is sent to the caller side, informing about the successful establishment of the call. The caller, on receiving 200 OK sends back an ACK response. ON receiving the ACK, the SIP UA sends an ACK call back to the recorder. After the successful establishment of the session, the recorder starts recording. When a BYE response is sent from the caller side, the SIP UA informs the recorder about it by a call-back message and the recorder stops recording.

During the session, all the RTP packets will be routed toward the recorder through an RTP call-back. During the call, anytime, if the Revcord recorder fails to do a particular task related to recording or intends to stop recording then it sends a STOP message to SIP stack component, which in turn sends a BYE message to the remote party and terminates the call.

Figure 1: Call Flow Diagram



## SETTING UP SIP TRUNK RECORDING IN THE REVCORD MMS

In the Installation Wizard at the Channel Type page, there is a check box "Run As SIP Trunk". It will instruct the REVCORD Software to use Active Recording based on SIP commands from PBX.

Other Configuration like setting the IP Address or MAC Address in the Channel Settings remains the same for both Active and Passive recording except that the trigger for the channel must be set to SIP.

REVCORD Configuration Wizard - Channel Types

**Please select Card / Channel type**  
Select channel type and enter number of channels for each type. Can be a combination of Digital, Analog and VoIP.

Analog / Digital      Number of Channels: 32       Use Audiocodes

Analog (Proprietary)      Number of Channels: 16

VoIP      Number of Channels: 32       Run as SIP Trunk (SIP Invite)

SIP Server Settings:  
SIP Port: 5060      RTP Port: 4000

Enable SmartNet (Additional settings required under channels)

Enable 128 Bit Encryption

< Back      Next >      Finish      Cancel

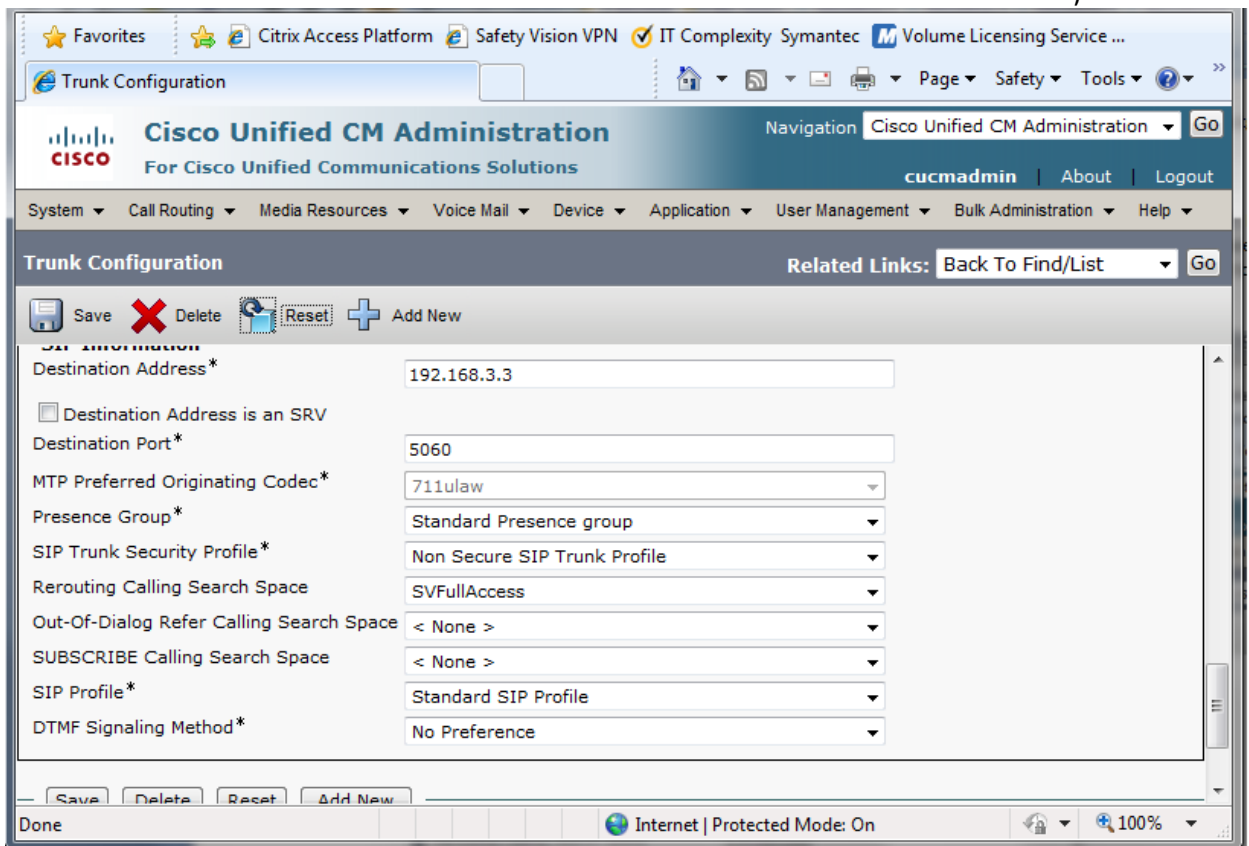


## CONFIGURING THE CUCM

Please Note that each task below must be completed for a proper configuration.

### CREATING THE SIP TRUNK

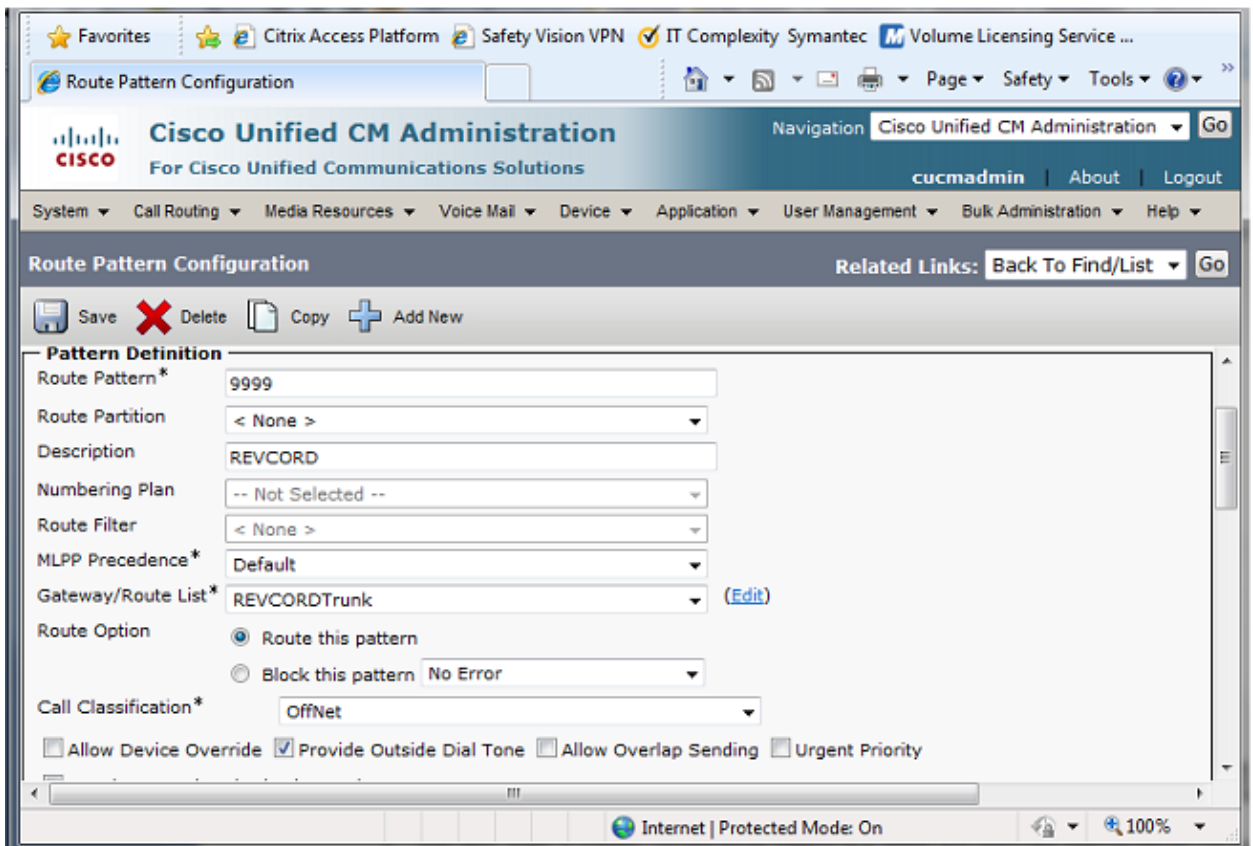
1. From the System Menu, select System, Security Profile, SIP Trunk Security Profile. Change the Outgoing Transport Type to UDP and click on Save.
2. From the Device Menu, select Trunk.
3. Click Add New, select SIP Trunk and Device Protocol as SIP
4. Click Next. Give the new Trunk a name (e.g. REVCORDTrunk) and select Default as the Device Pool. Enter the IP Address of the REVCORD Recorder that will be recording these calls. You should leave the Destination Port as 5060 unless instructed otherwise. The SIP Trunk Security Profile should be set to Non Secure SIP Trunk Profile. The SIP Profile should be set to Standard SIP Profile. Finally Click Save.



5. Click Reset as requested.

## CREATING THE ROUTE PATTERN

1. Create a route pattern for the recorder SIP Trunk. The Recording Destination Address in the recording profile must match this pattern. Select the SIP trunk that points to the recorder or select a route list of which the recorder is a member.
2. From the Call Routing menu select Route/Hunt and then Route Pattern

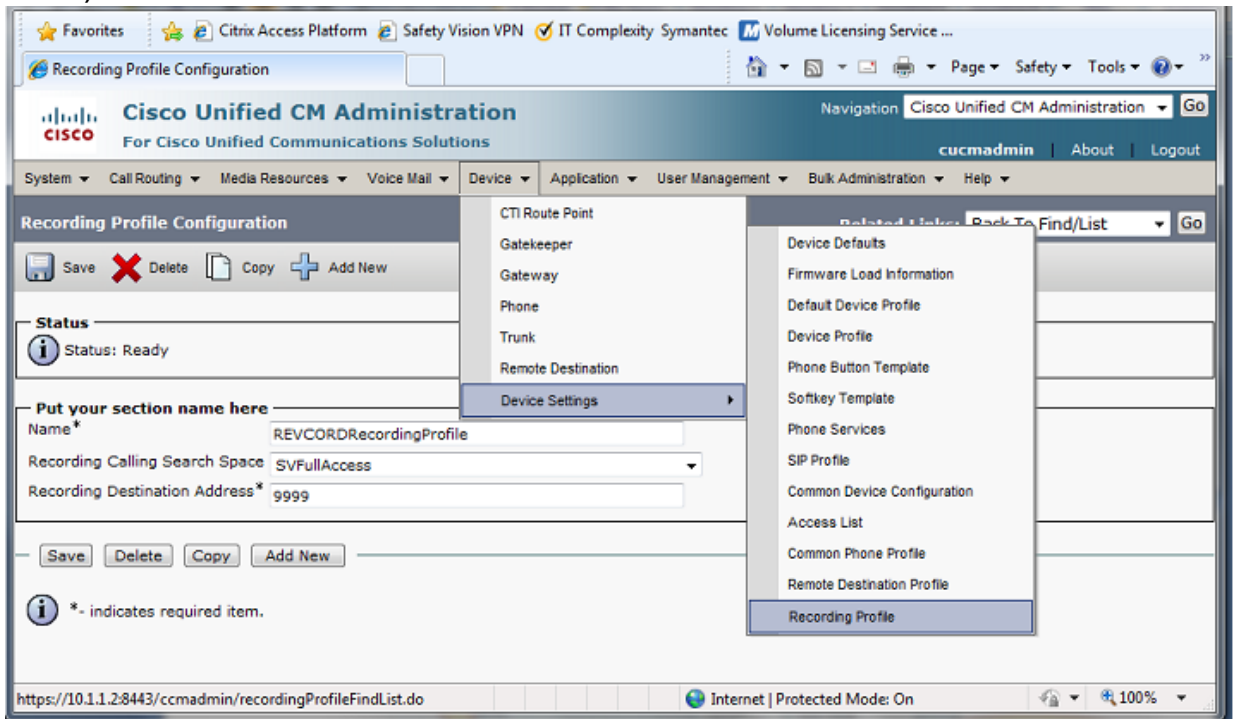


3. Click Add New Enter a suitable, unused Route Pattern (e.g. 9999) and select the Gateway/Route List that was created earlier ( e.g. REVCORDTrunk), and select Save. An informational message may be displayed, just click OK



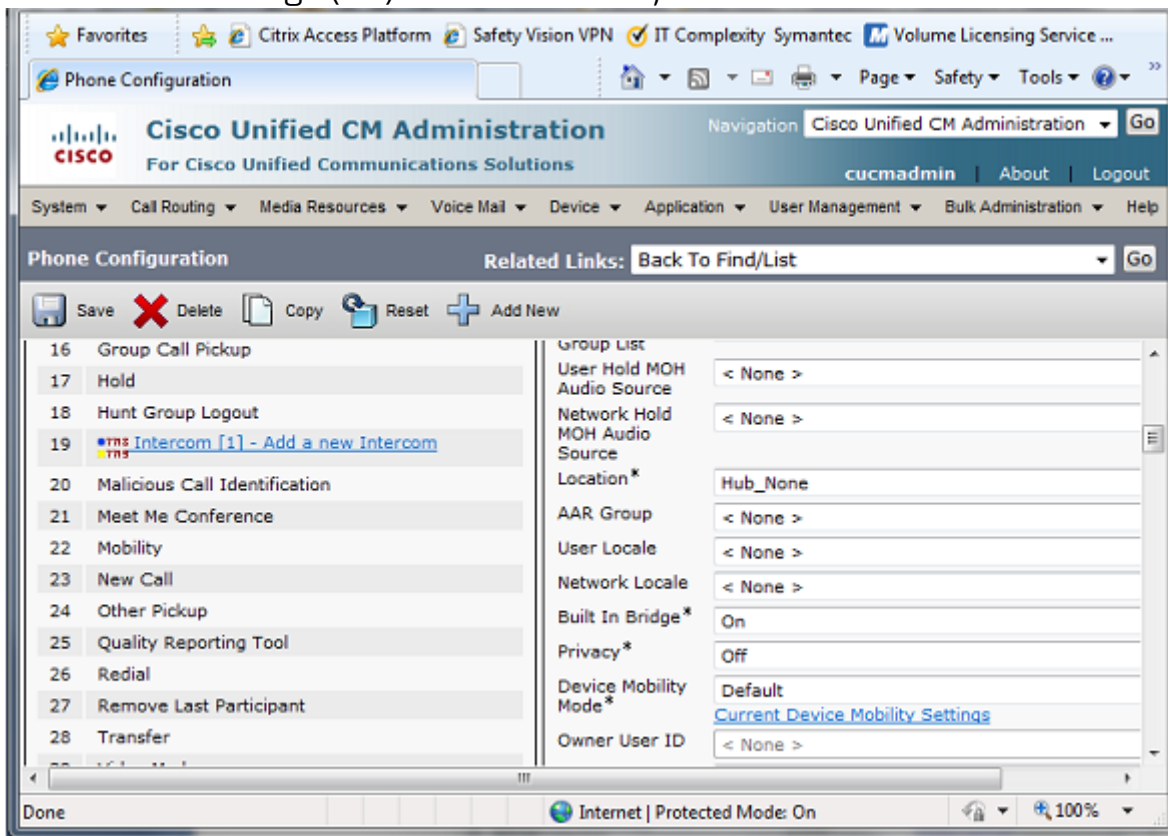
## CREATING A RECORDING PROFILE

1. From the Device Menu, select Device Setting and then Recording Profile.
2. Enter a suitable name for this profile (e.g. REVCORDRecordingProfile) and set the Destination Route Pattern and Calling Search Space that was created earlier (e.g. 9999), then click Save



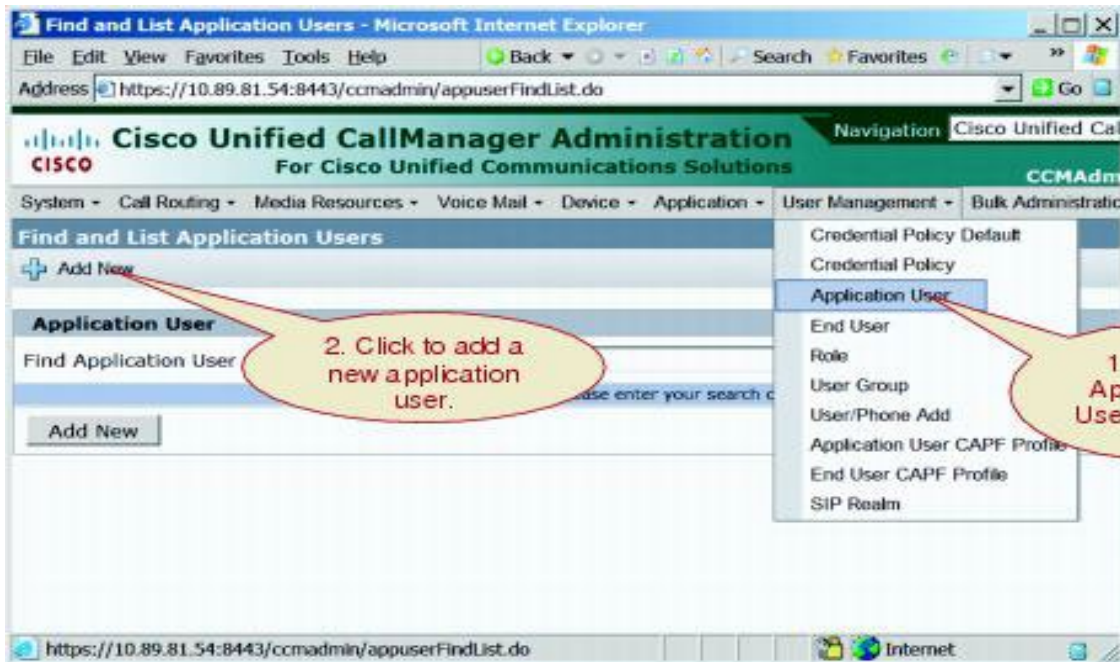
## ENABLING PHONES FOR RECORDING

1. From the Device Menu, select Phone. Click find to show the list of phones.
2. Click on a Phone that you wish to enable for recording
3. Set the Built in Bridge (BIB) to On and Privacy to Off and then click Save.

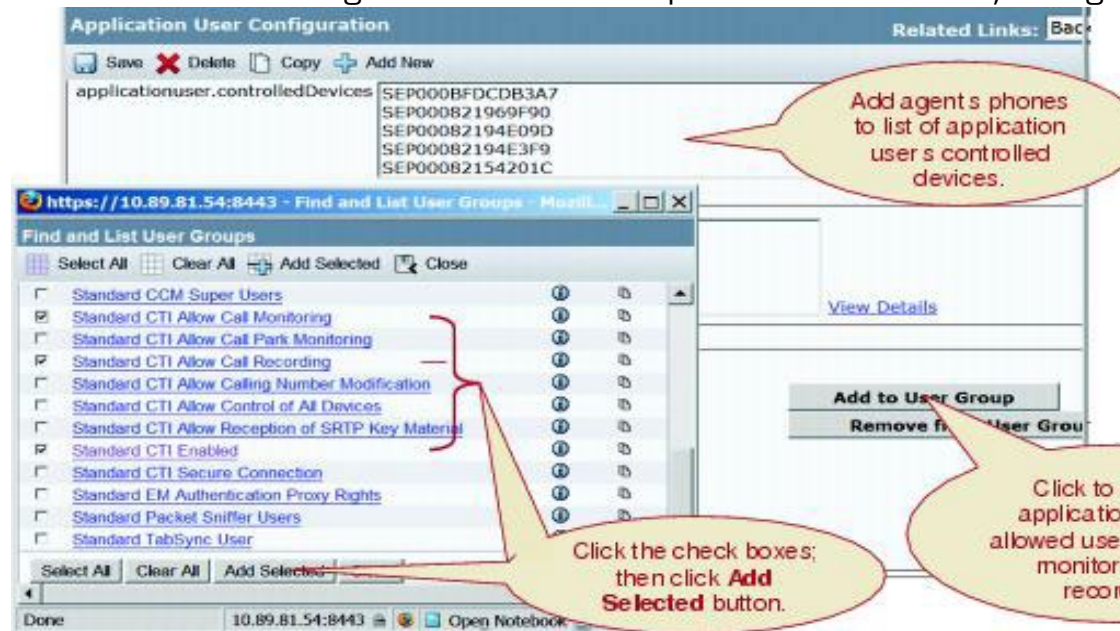


4. Do not reset the Phone just yet; instead, click on the Line on the Phone you wish to record.
5. Set the Call Recording Option to Automatic Call Recording Enabled. Set the Recording Profile to the one created earlier (e.g. REVCORDRecordingProfile) and then click Save.
6. Now reset the Phone, by pressing the Reset button and following the prompts.

## ADDING USERS FOR RECORDING AND MONITORING



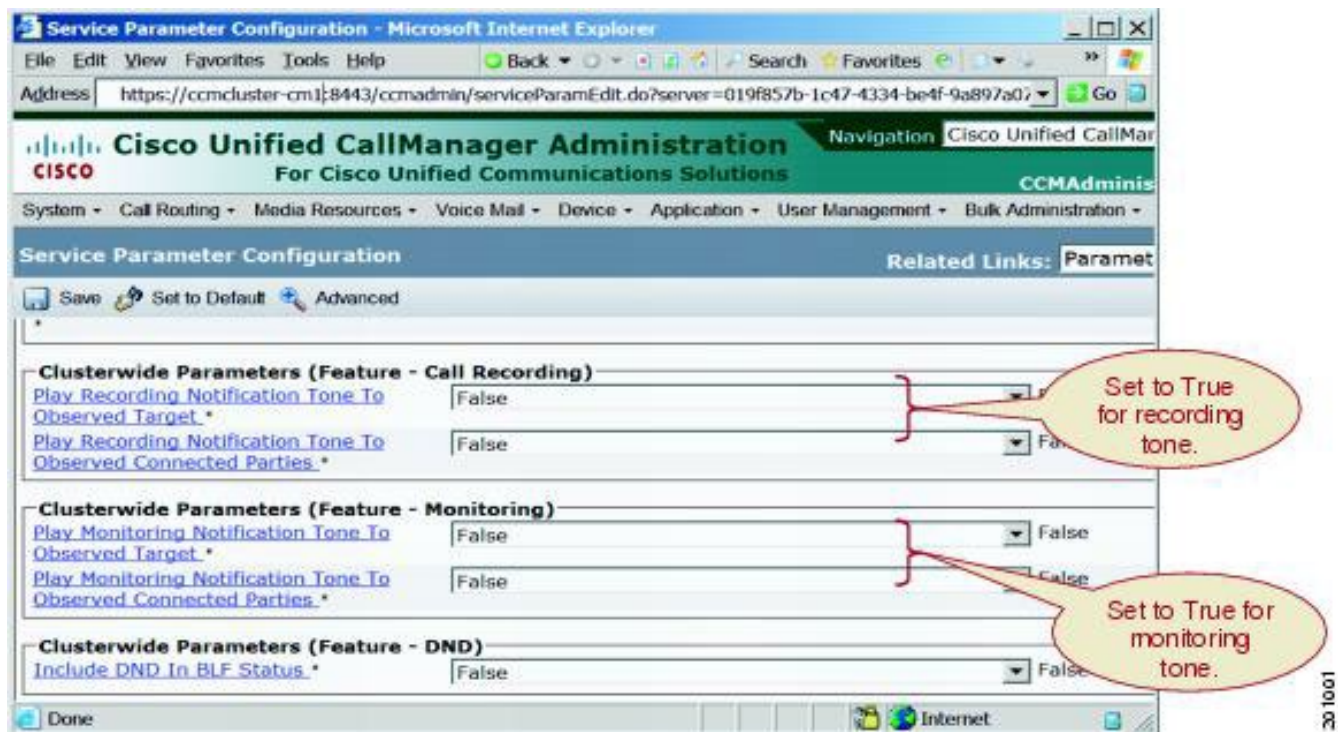
Use the **User Management > Application User** Menu option in Cisco Unified Communications Manager Administration to perform the necessary configuration.





## CONFIGURING BEEP TONE FOR RECORDING AND MONITORING

Use the **System >Service Parameters** Menu option in Cisco Unified Communication Manager Administration to perform the necessary configuration.



## OTHER SETTINGS

1. To disable any of the Codec that is not supported by our software. This can be done across the system by selecting the System Menu, and then Enterprise Parameters Configuration and then changing the Advertise (e.g. G.722) codec to Disabled
2. Note: G.722 codec is supported by our software, just for reference it is used here. Currently we support G.711, G.722, G.723, and G.729.
3. Reset the Phones to be recorded so that they do not advertise G.722.

