Mitel Technical Configuration Notes-HO3154

April 23, 2019

Configure MiVoice Business 9.0 SP1 PR1 for use with North Supply Call Recorder Using MBG

Description: This document provides a reference to Mitel Authorized Solutions providers for configuring the MiVoice Business to connect to the North Supply Call Recorder using MBG.

Environment: MiVoice Business 9.0 SP1 PR1 (9.0.1.23), MiVoice Border Gateway 10.1.0.250, Mitel 68XX Phone and Mitel 69XX Phone 5.1.0.1024, Mitel 69XX MiNET 01.04.00.80.

NOTICE

TRADEMARKS

Mitel Technical Configuration Notes – Configure MiVoice Business 9.0 SP1 PR1 for use with North Supply Call Recorder Using MBG.

Mitel Configuration Guide HO3154

April 2019

Table of Contents

Overview

This document provides a reference to Mitel Authorized Solutions providers for configuring the Mitel MiVB to connect to North Supply Call Recorder using MBG. The different devices can be configured in various configurations depending on your VoIP solution. This document covers a basic setup with required option setup.

Interop History

Version	Date	Reason
1	April 2019	Interop with Mitel MiVB 9.0 SP1 PR1 (9.0.1.23) and North Supply Call Recorder Using MBG.

Interop Status

The Interop of North Supply Call Recorder with MiVB using MBG has been given a Certification status. This Call recording device will be included in the Mitel Interoperability Reference Guide (IRG). The status North Supply Call Recording system achieved is:

	The most common certification which means North Supply Call Recording system has been tested and/or validated by the Mitel Third-Party Interop Team. Mitel Product Support will provide all necessary support related to the interop, but issues unique or specific to the 3rd party will be referred to the 3rd party as appropriate.

Software & Hardware Setup

This was the test setup to generate call between North Supply Call Recording and the MiVB using MBG.

Note – Although this testing was performed on the below tested variants, the scope of this testing can be extended to other product variants that work with the same firmware. The list of components for which this testing can be considered applicable is given in the "Additional Applicable Variants" column of the following table –

Manufacturer	Tested Variants	Software Version	Additional Applicable Variants
Mitel	MiVoice Business	Release 9.0 SP1 PR1 (9.0.1.23)	NA
Mitel	MBG-SRC	10.1.0.250	NA
Mitel	MiTai SDK MiTai Library	6.4 v14.1	NA
Mitel	69XX SIP and 68XX SIP 69XX MiNET	5.1.0.1024 01.04.00.80	NA
North Supply	Call Recorder SRC Protocol Version	Client V:5.4.2.4 Logger V:5.4.7.3 1.3	NA

SRC CRE Feature Matrix

The following table lists various features of SRC. North Supply Recorder provides support for these features as listed in the table

SRC Feature	Supported by CRE (Yes/No)
Support for Static Taps	No
Support for Dynamic Taps	Yes
Separate query commands to SRC	No
SIP Support	Yes
Tone Injection/Recording Indicator Beep	No
SRC Clustering	Yes
SRC Load balancing	Yes
Support for Transcoded Taps (G.729)	Yes
Support for Encrypted Taps	No
MiTAI Call Information	Yes
Indirect Call Recording (as of SRC 1.3)	No
Support for SIP Trunking via SRC	No

Tested Features

This is an overview of the features tested during the Interop test cycle and not a detailed view of the test cases.

Feature	Feature Description	Issues
Basic Call	Making and receiving a call	☑
Call Hold/Retrieve	Putting a call on hold/retrieve with MOH	☑
Call Transfer	Transferring a call to another destination	☑
Conference	Conferencing multiple calls together	☑
Call Forward	Forwarding calls to another destination using ESM	☑
Teleworker	Mitel remote connectivity with Teleworker	☑
Codec	Making and receiving calls Using G711 and G729 Codec	☑
SRTP Transcoding	Transcoding from SRTP to RTP from SRC to CRE	☑
Codec Transcoding	SRC only Supports Transcoding between G711 and G729A.	☑
SRC Resiliency	Call Recording happens via Secondary SRC when Primary SRC Down	☑

☑ - No issues found ✕ - Issues found, cannot recommend using ⚠ - Issues found

Device Limitations and Known Issues

This is a list of problems or unsupported features when North Supply Call Recorder with MBG is connected to the MiVB.

Feature	Problem Description
Indirect Call Recording	Not Supported by North Supply Recorder **Recommended:** Contact North Supply for more Details
Secure RTP Recording	Not Supported by North Supply Recorder **Recommended:** Contact North Supply for more Details
SIP Trunking recording	North Supply doesn't support recording SIP trunking recording using SRC. The recorder is on SRC 1.3 and it doesn't support P-Call-Leg-ID parameter **Recommended:** Contact North Supply for more Details
SIP Trunk call from the monitored extension	When SIP trunk call is made (MBG configured as SIP trunk SBC) from monitored MiNET extension, only one-way audio is recorded. Recommendation – Upgrade to SRC 1.6 to get rid of this issue **Recommended:** Contact North Supply for more Details
Multiline calls	When there are two simultaneous calls on the monitored extension, it's recorded as merged conversation, but not as two different calls CDR reflects the details for the first call but doesn't indicate anything about the second one **Recommended:** Contact North Supply for more Details

Network Topology

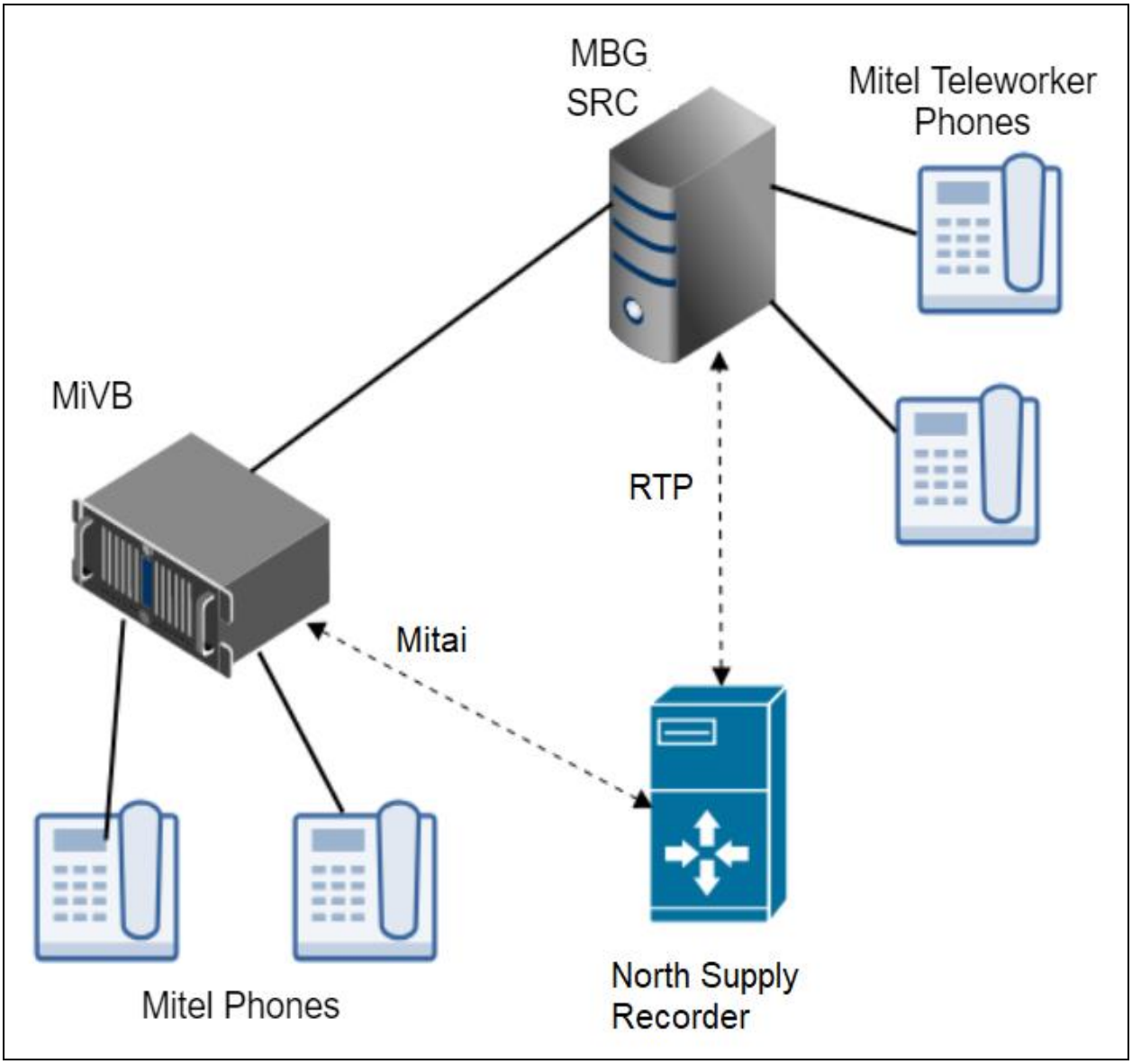


Figure 1 – Network Topology

Configuration Notes

This section is a description of how the SIP Interop was configured. These notes should give a guideline how a device can be configured in a customer environment and how North Supply Call Recorder with MiVB using MBG programming was configured in our test environment.

Disclaimer: Although Mitel has attempted to setup the interop testing facility as closely as possible to a customer premise environment, implementation setup could be different onsite. YOU MUST EXERCISE YOUR OWN DUE DILIGENCE IN REVIEWING, planning, implementing, and testing a customer configuration.

MiVoice Business Configuration Notes

The following steps show how to program a MiVB to interconnect with North Supply Call Recorder using MBG.

Configuration Template

A configuration template can be found in the same Mitel Knowledge Management System (KMS) article as this document. The template is Microsoft Excel spreadsheet (.CSV format) **solely** consisting of the SIP Device capabilities option settings used during Interop testing. All other forms should be programmed as indicated below. Importing the template can save you considerable configuration time and reduce the likelihood of data-entry errors. Refer to the MIVB documentation on how the Import functionality is used.

Network Requirements

- There must be adequate bandwidth to support the voice over IP. As a guide, the Ethernet bandwidth is approx 85 Kb/s per G.711 voice session and 29 Kb/s per G.729 voice session (assumes 20ms packetization). As an example, for 20 simultaneous SIP sessions, the Ethernet bandwidth consumption will be approx 1.7 Mb/s for G.711 and 0.6Mb/s. Almost all Enterprise LAN networks can support this level of traffic without any special engineering. Please refer to the MiVB Engineering guidelines for further information.
- For high quality voice, the network connectivity must support a voice-quality grade of service (packet loss <1%, jitter < 30ms, one-way delay < 80ms).

Assumptions for MIVB Programming

The SIP signaling connection uses UDP on Port 5060.

Licensing and Option Selection – SIP Licensing

Ensure that the MiVoice Business is equipped with enough IP Users licenses for the connection of SIP

end points. This can be verified within the License and Option Selection form. See **Figure 2**

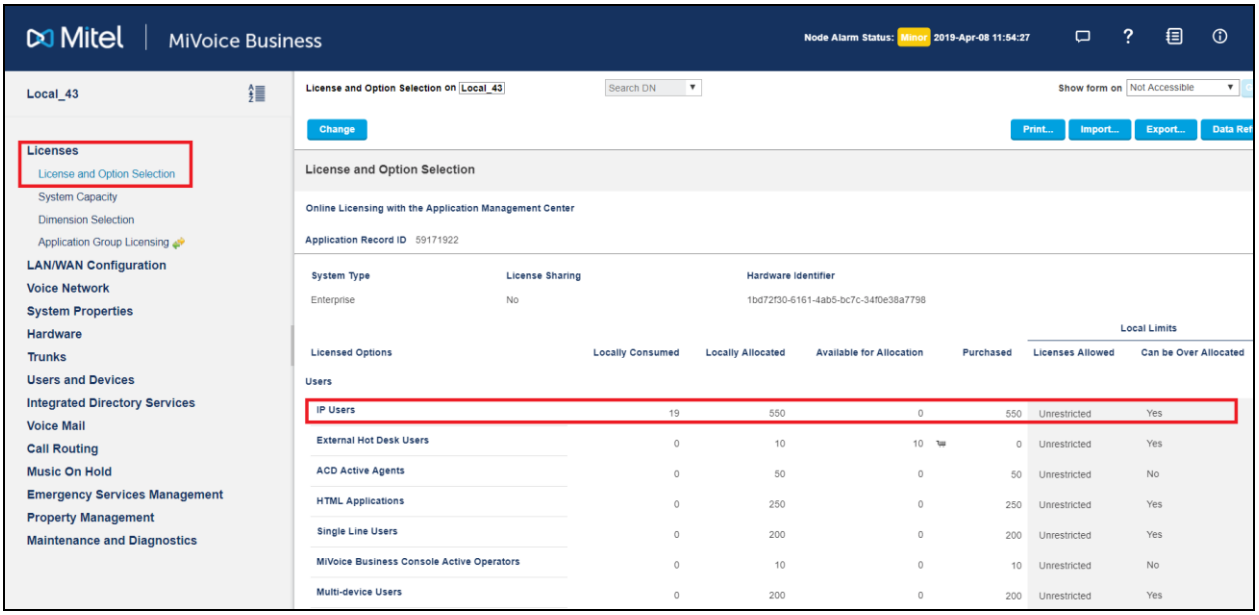


Figure 2 – Licenses

Multiline IP Set Configuration

On the MiVoice Business, a SIP device can be programmed either in the User Configuration form or the Multiline IP Set Configuration form and are programmed as a “Generic SIP Phone”. Enterprise Manager can also be used to provision where this application is installed.

The User PIN is the SIP authentication password and the Number is the Directory Number (DN is a telephone number). The Number and User PIN must match the information in the SIP phone settings. All other field names should be programmed per the site requirements or left at default. See an example in **Figure 3**.

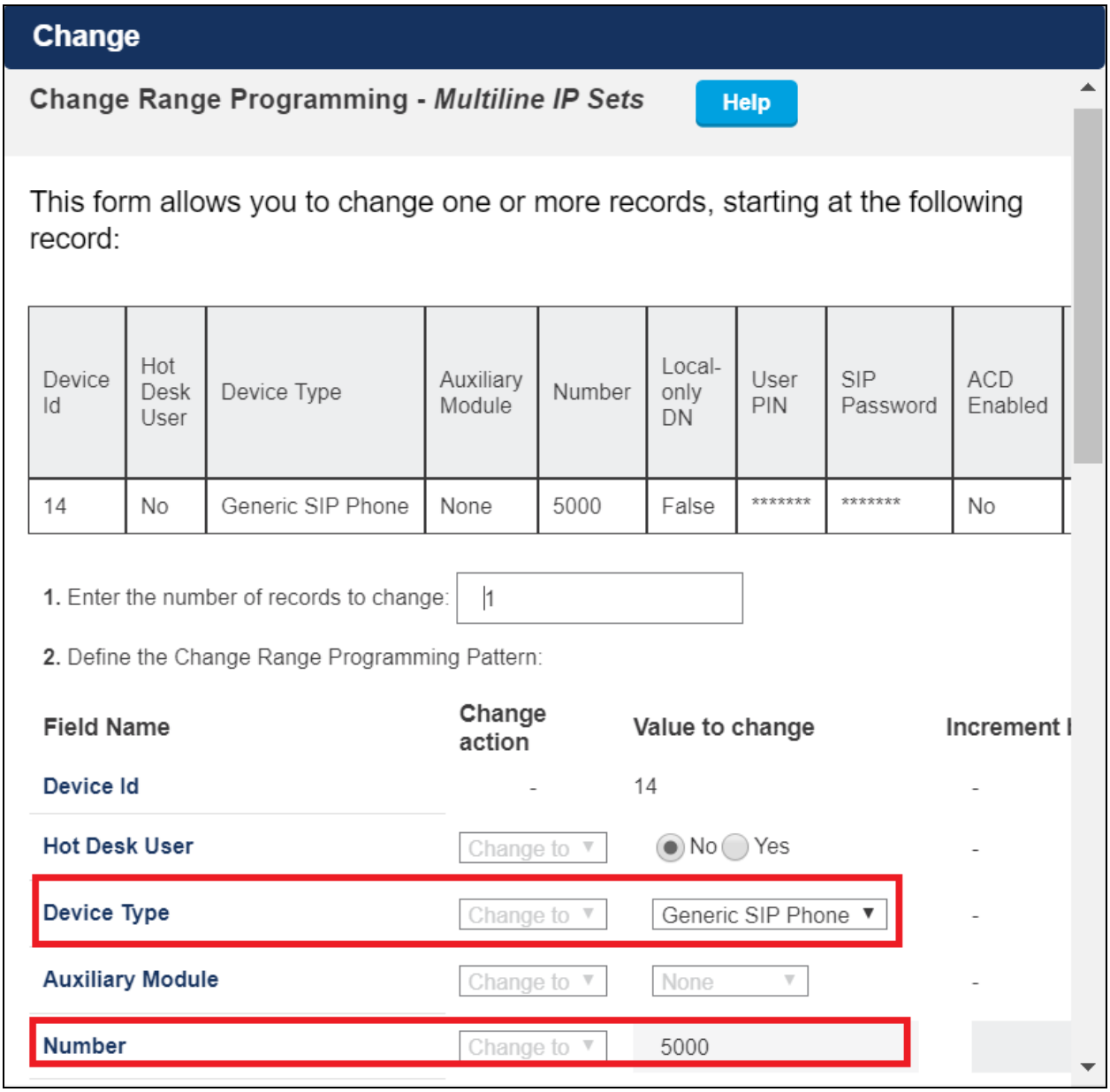


Figure 3 (A)– Multiline IP Set Configuration

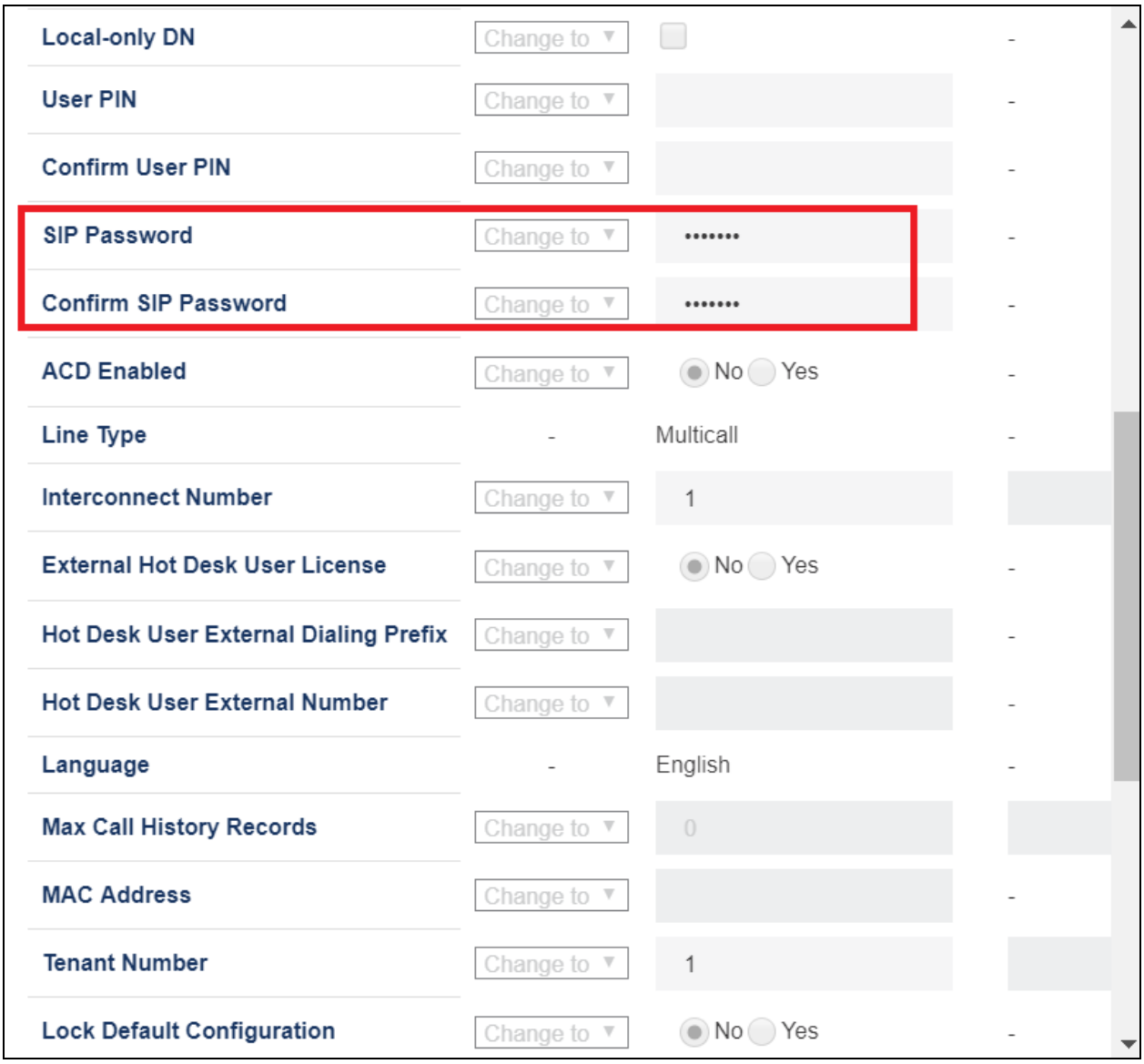


Figure 3 (B)– Multiline IP Set Configuration

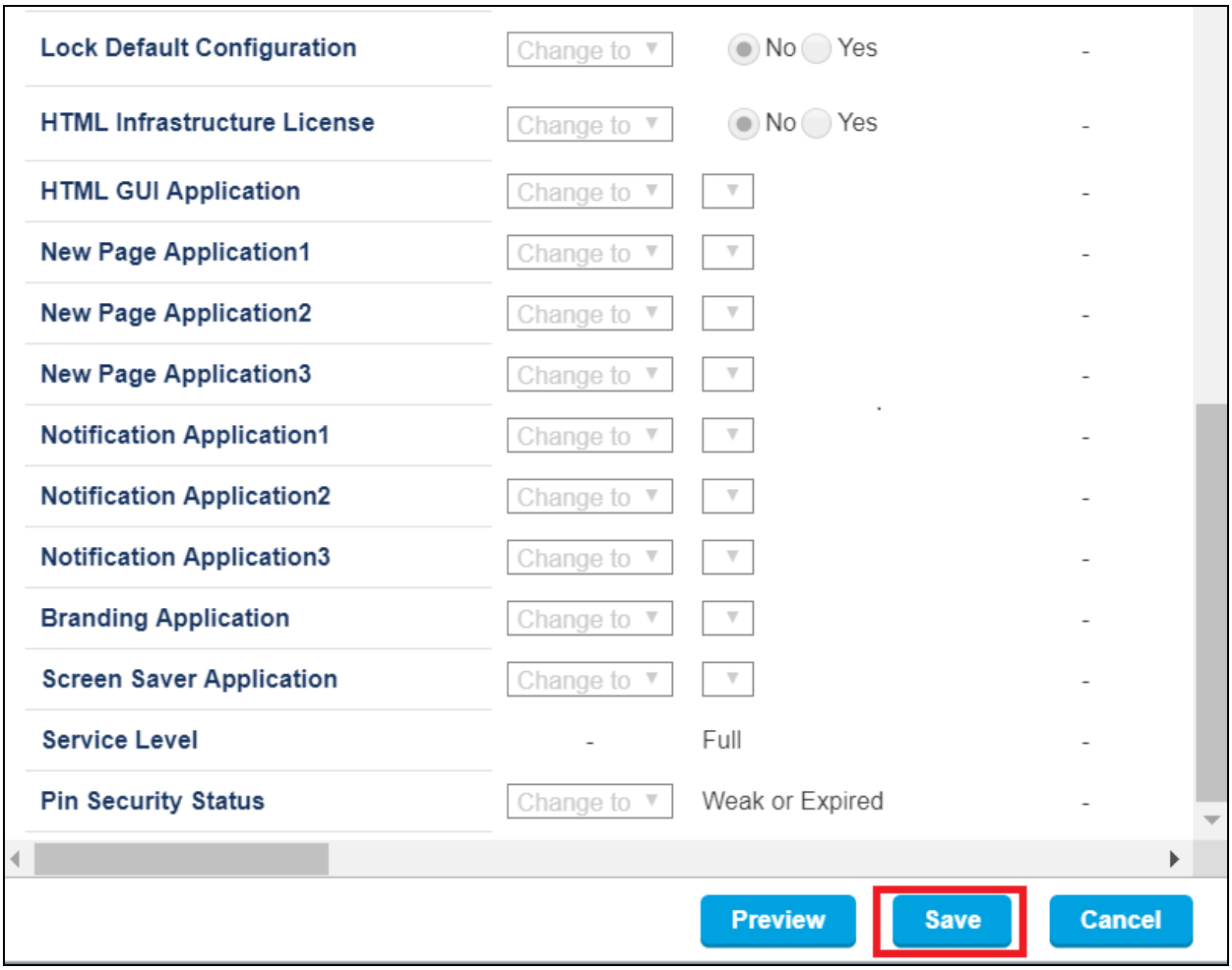


Figure 3 (C)– Multiline IP Set Configuration

Multiline Set Key Assignment

You use the Multiline Set Key Assignment form to assign the line type, ring type, and directory number to each line selected on the device

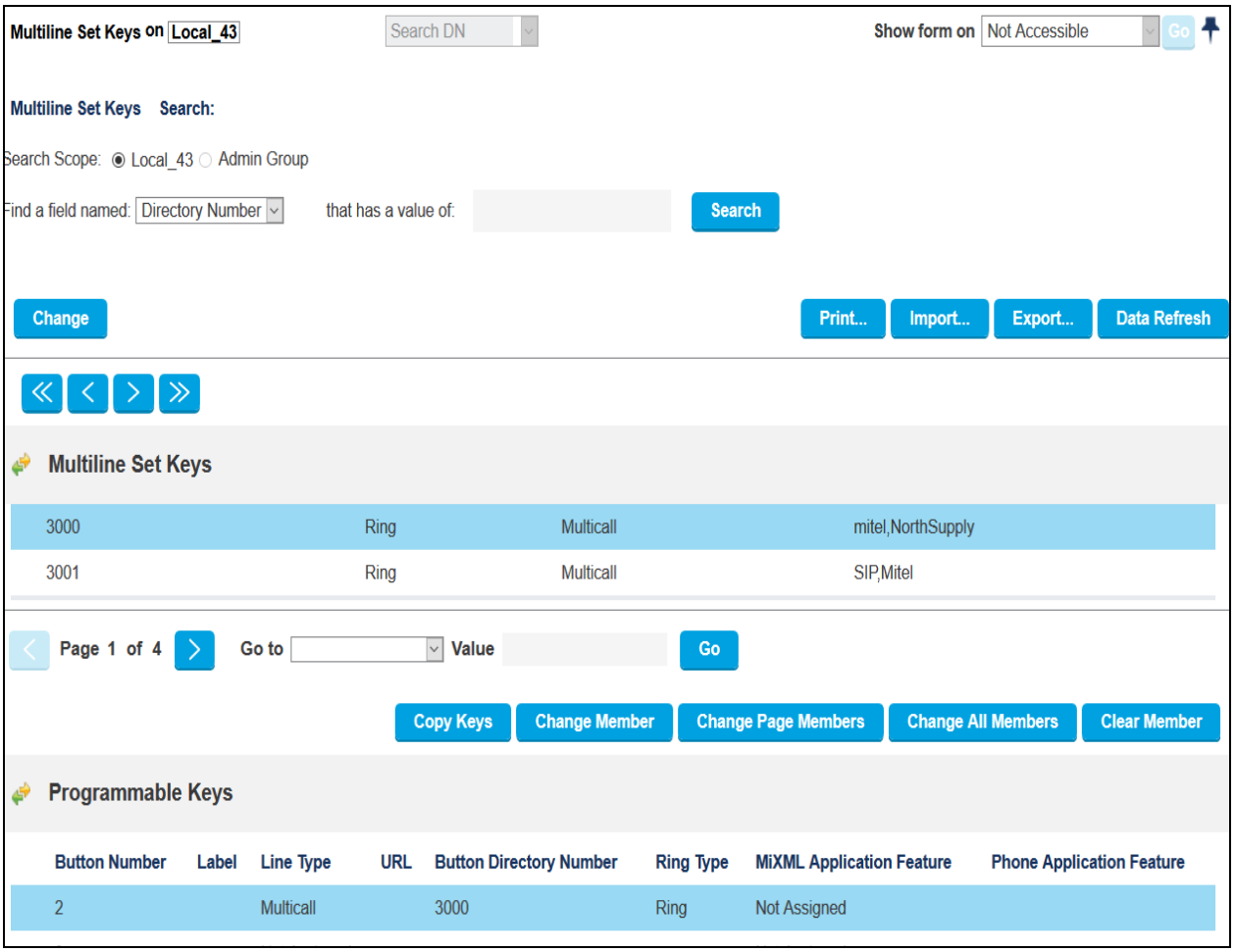


Figure 2 – Multiline Set Key Assignment

Class of Service Assignment

The Class of Service Options form is used to create or edit the Class of Service and specify its options. Classes of Service, identified by Class of Service numbers, are referenced by the Station Attributes form for the SIP device.

Many different options may be required for your site deployment, but the options below are required to be changed from the default for a Generic SIP Device to work with the MiVoice Business. (See example in Figure 5)

Under General tab:

Navigate to section HCI and ensure:

- HCI/CTI/TAPI Call Control Allowed set to **Yes**
- HCI/CTI/TAPI Monitor Allowed set to **Yes**

Under Advanced tab:

Navigate to section Conference and ensure:

- Conference Call set to **Yes**

Navigate to section Message Waiting and ensure:

- Message Waiting set to **Yes**

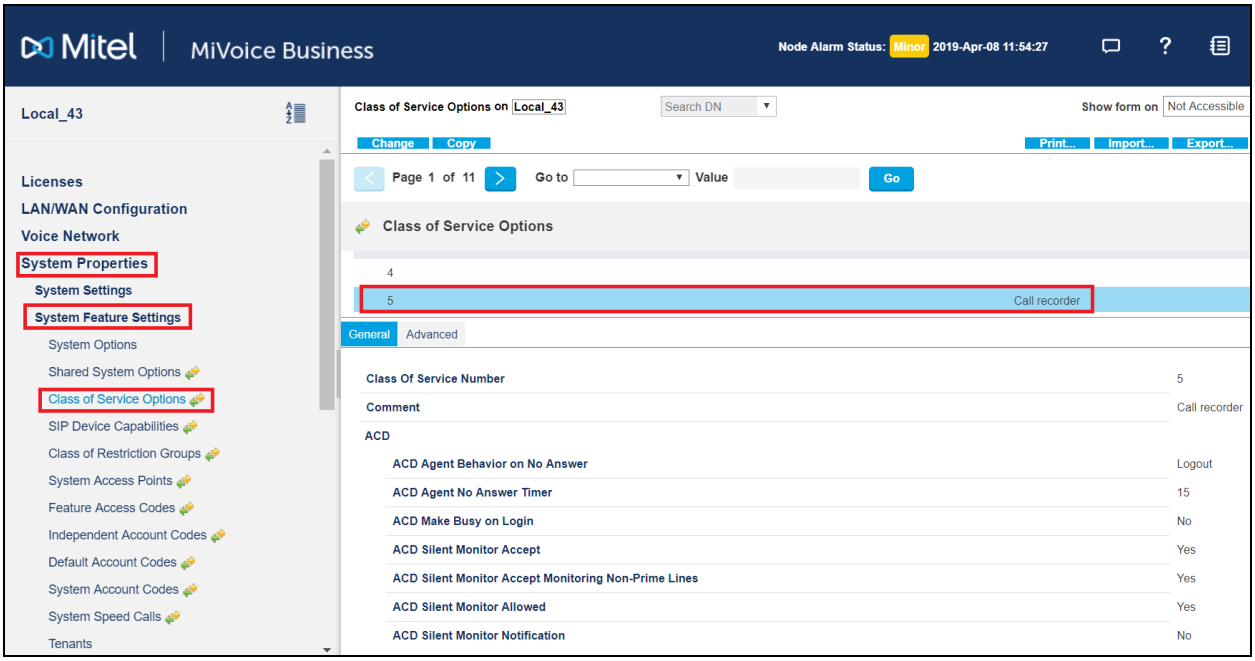


Figure 5 – Class of Service

SIP Device Capabilities

This form provides configuration options that can be applied to various types of SIP devices. The association between the SIP device and the form is like how the Class of Service options work. The SIP Device Capabilities number provides a SIP profile that can be applied to particular SIP devices to allow for alternate capabilities as recommended through the Mitel interop process.

In the SIP Device Capabilities form, program a SIP Device Capabilities Number for the SIP phone. The form below depicts how the options were set for the interop testing.

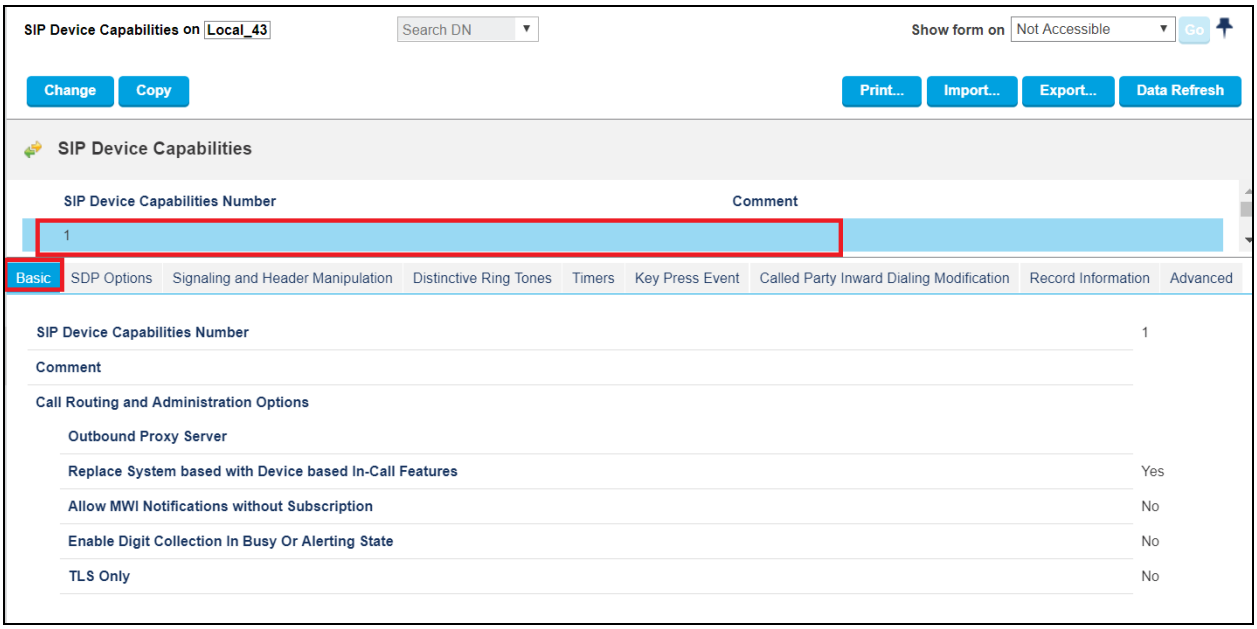


Figure 6– SIP Device Capabilities – Basic

Set SDP Options as shown in Figure 7.

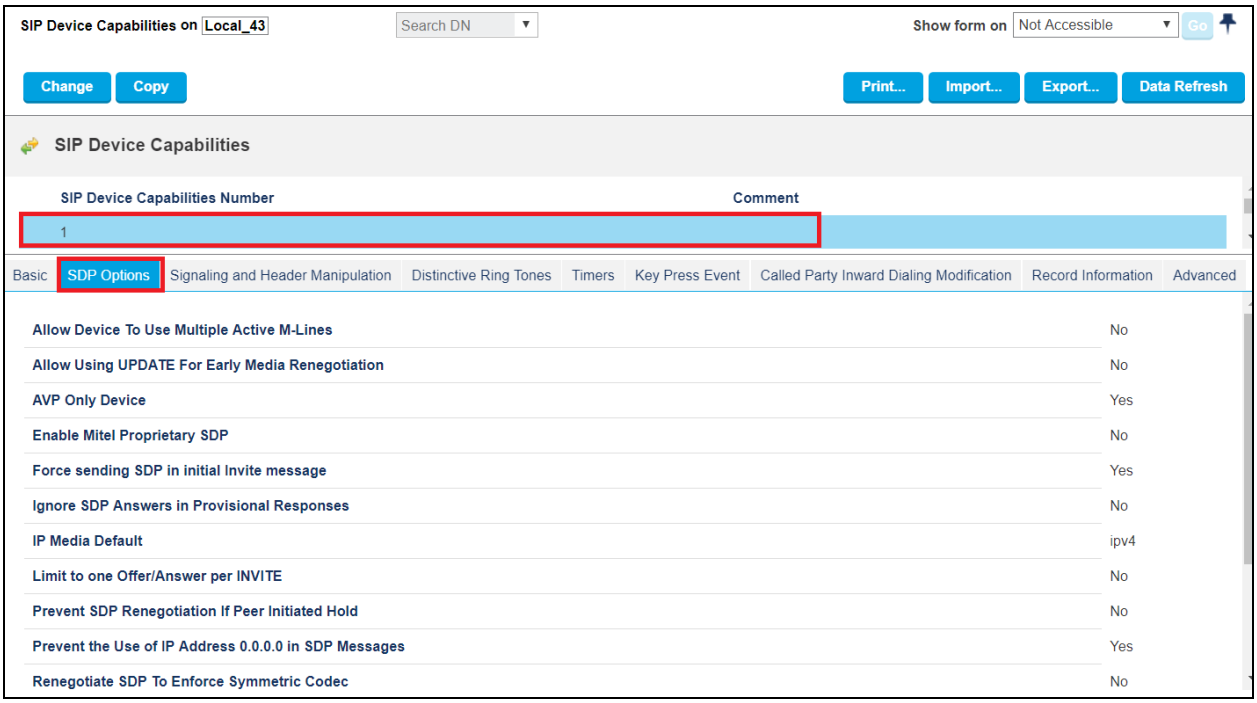


Figure 7 – SIP Device Capabilities – SDP Options

Note:

Disable Force Sending for Secure RTP calls, if not disable Secure calls will fail

Set Signaling and Header Manipulation as shown in Figure 8.

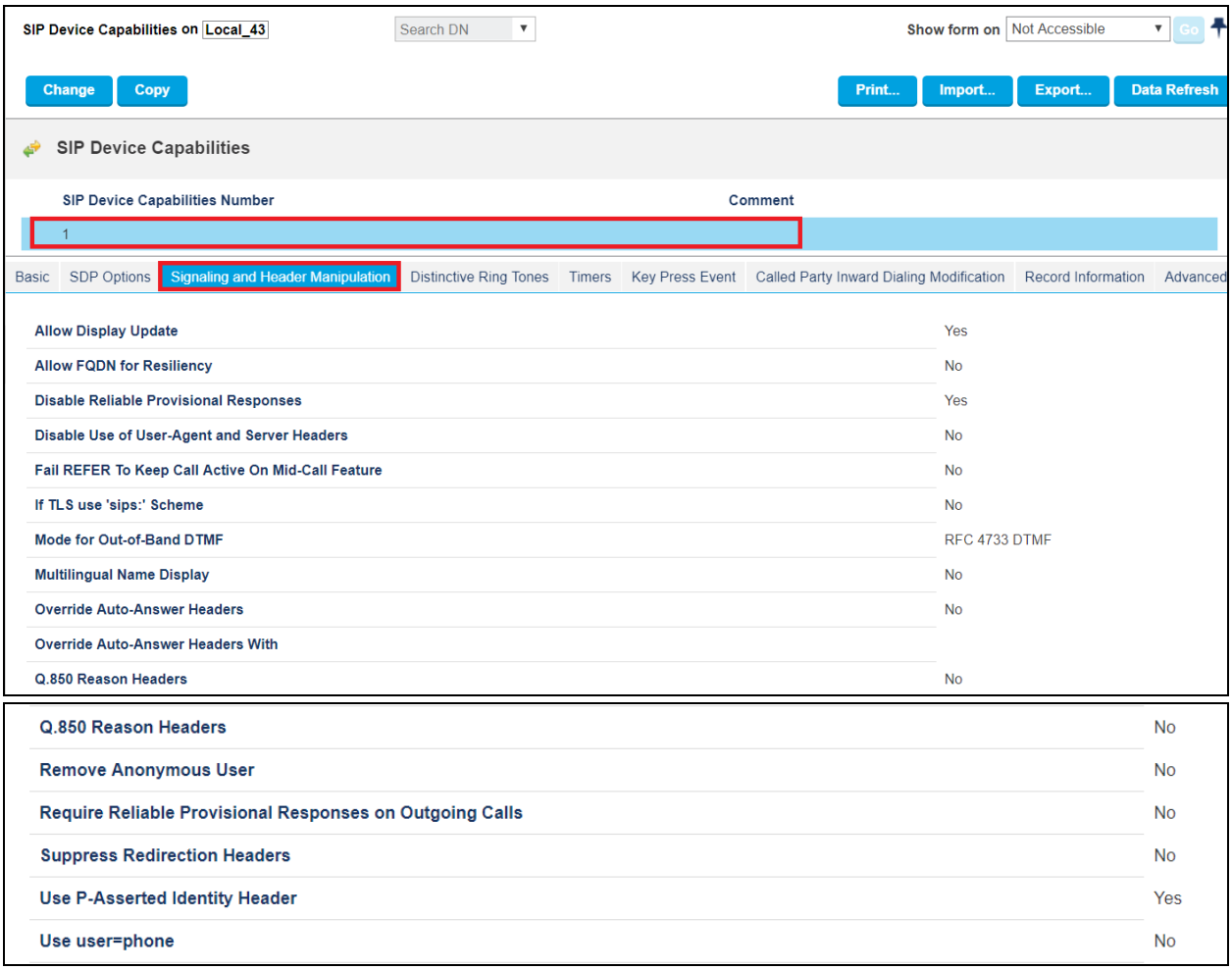


Figure 8 – SIP Device Capabilities – Signaling and Header Manipulation

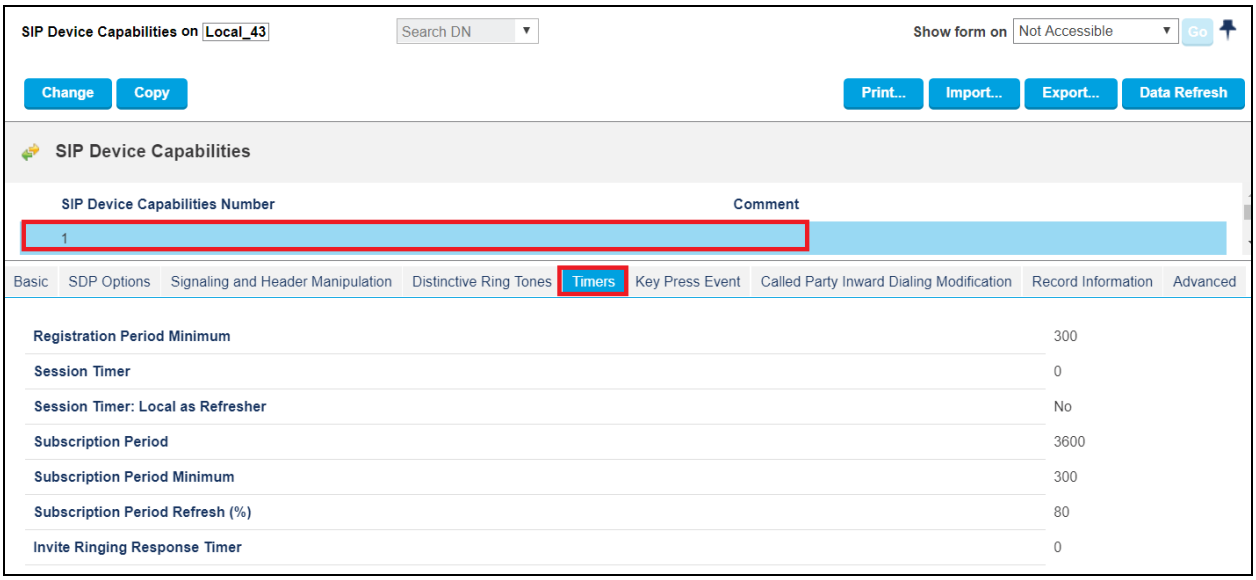


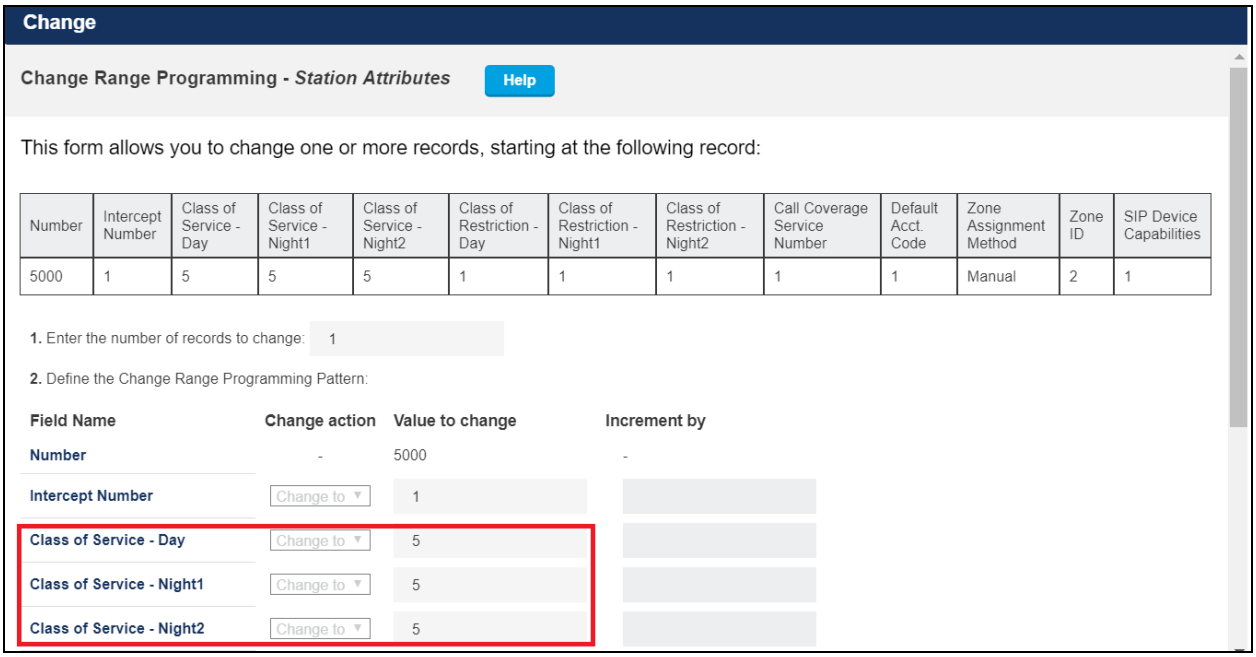
Figure 9 – SIP Device Capabilities – Timers

Station Attributes

Use the Station Attributes form to assign the previously configured Class of Service and SIP Device Capability number to each of the SIP phone in the MiVoice Business. This form utilizes Range Programming.

Select the SIP phone's number then select Change. Enter the previously configured SIP Device Capability number and Class of Service for Day, Night 1 & Night 2.

See an example in **Figure 10** below.



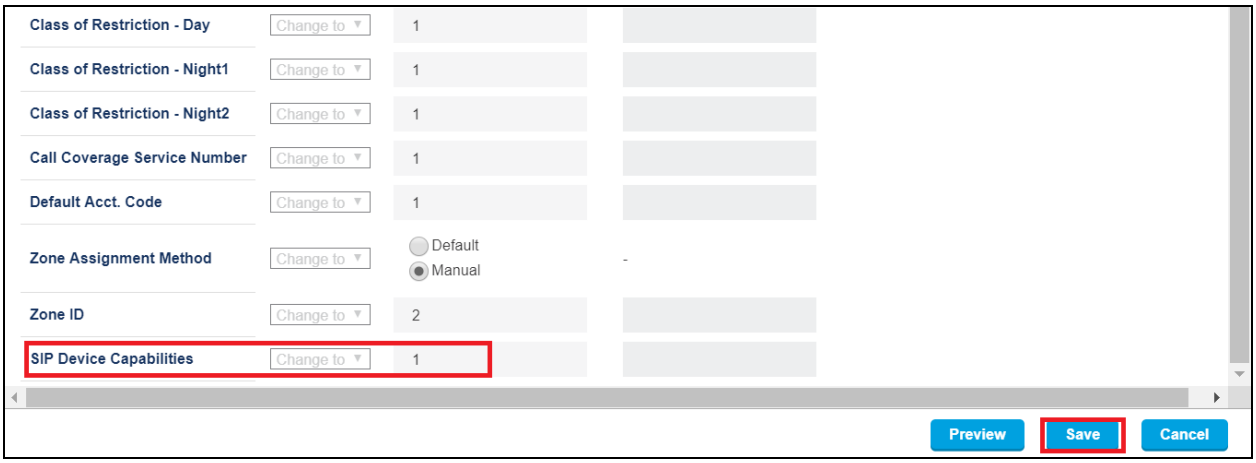
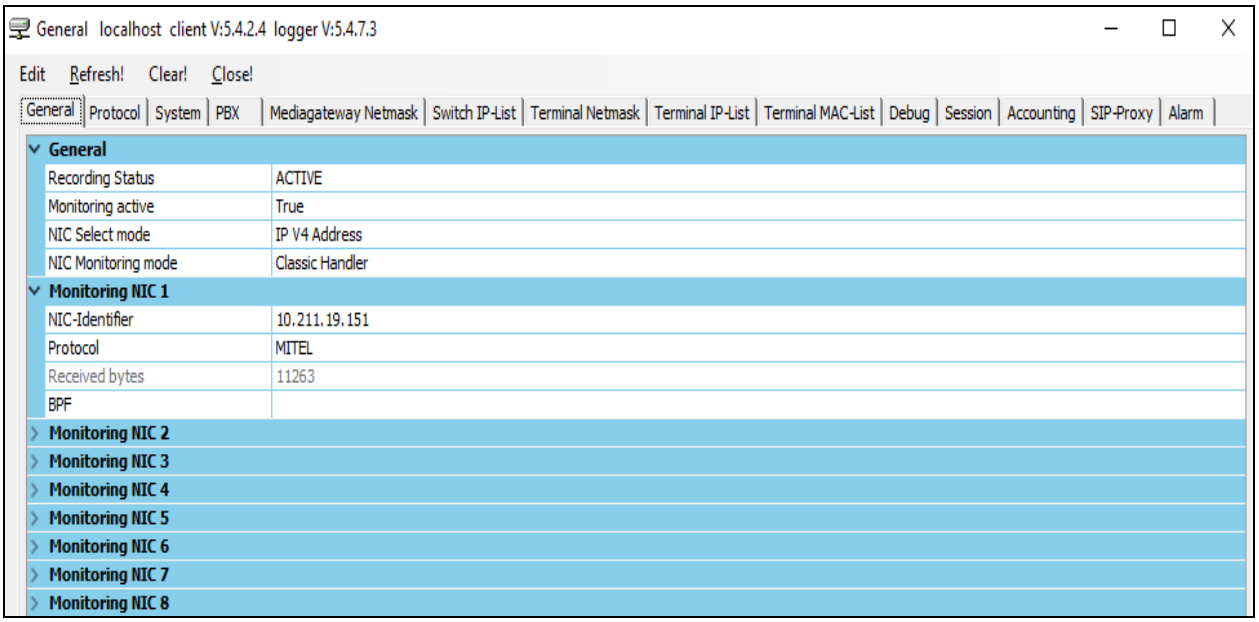


Figure 10 – Station Attributes

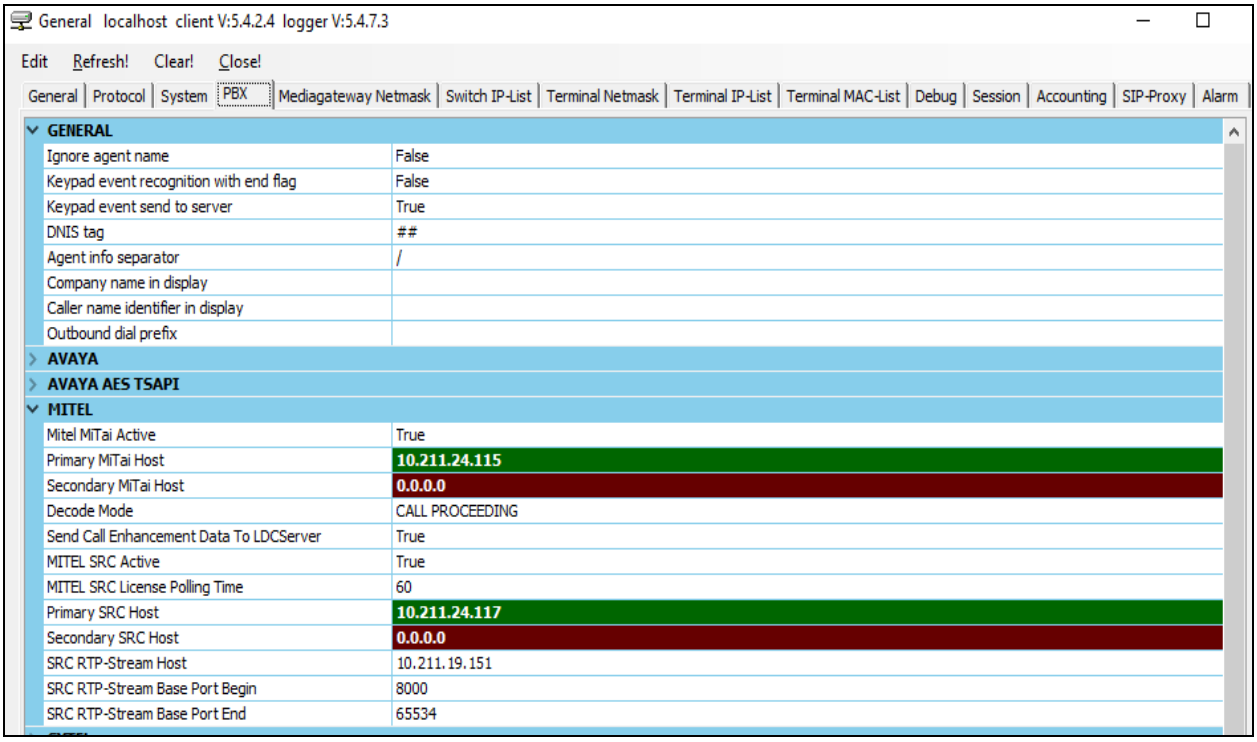
Configure North Supply Call Recording

- Login into Call Recording Admin



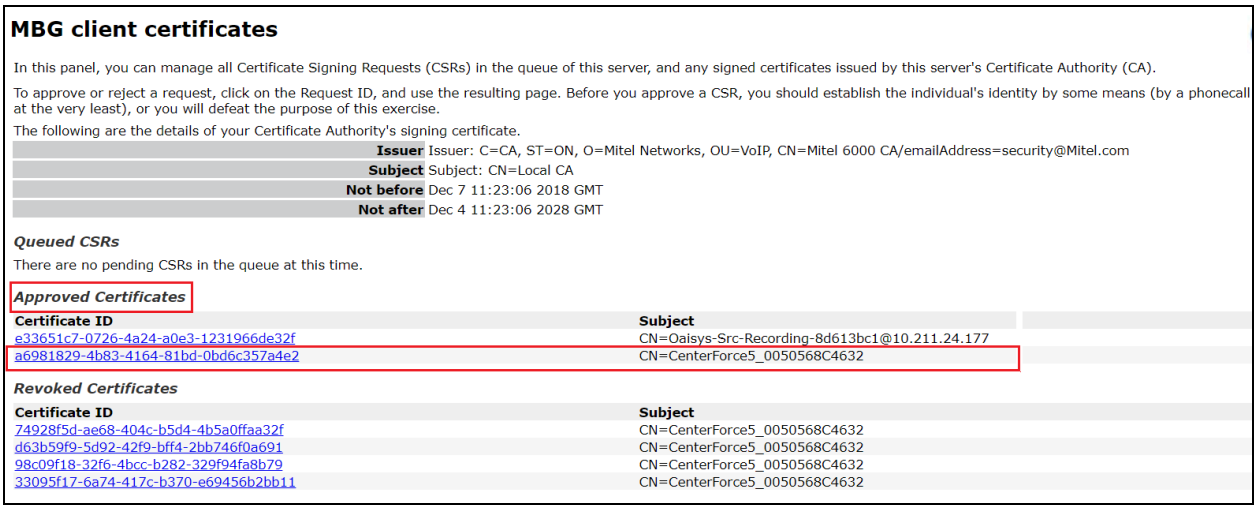
Configure SRC and MITAI

- Login into Call Recording Admin →PBX
- Enter the appropriate configuration information corresponding to the various settings.



- Login into the MBG web admin
- Navigate to **Security → MBG Client Certificates**
- In the **Queued CSRs** section, select the **CSR for the call recording server**
- Scroll down to the bottom and select **Approve**
- The following shows an example of an approved MBG certificate

  Note: In the call recording admin, the SRC status should turn Green



MBG client certificates

In this panel, you can manage all Certificate Signing Requests (CSRs) in the queue of this server, and any signed certificates issued by this server's Certificate Authority (CA).

To approve or reject a request, click on the Request ID, and use the resulting page. Before you approve a CSR, you should establish the individual's identity by some means (by a phonecall at the very least), or you will defeat the purpose of this exercise.

The following are the details of your Certificate Authority's signing certificate.

Issuer	Issuer: C=CA, ST=ON, O=Mitel Networks, OU=VoIP, CN=Mitel 6000 CA/emailAddress=security@Mitel.com
Subject	Subject: CN=Local CA
Not before	Dec 7 11:23:06 2018 GMT
Not after	Dec 4 11:23:06 2028 GMT

Queued CSRs

There are no pending CSRs in the queue at this time.

Approved Certificates

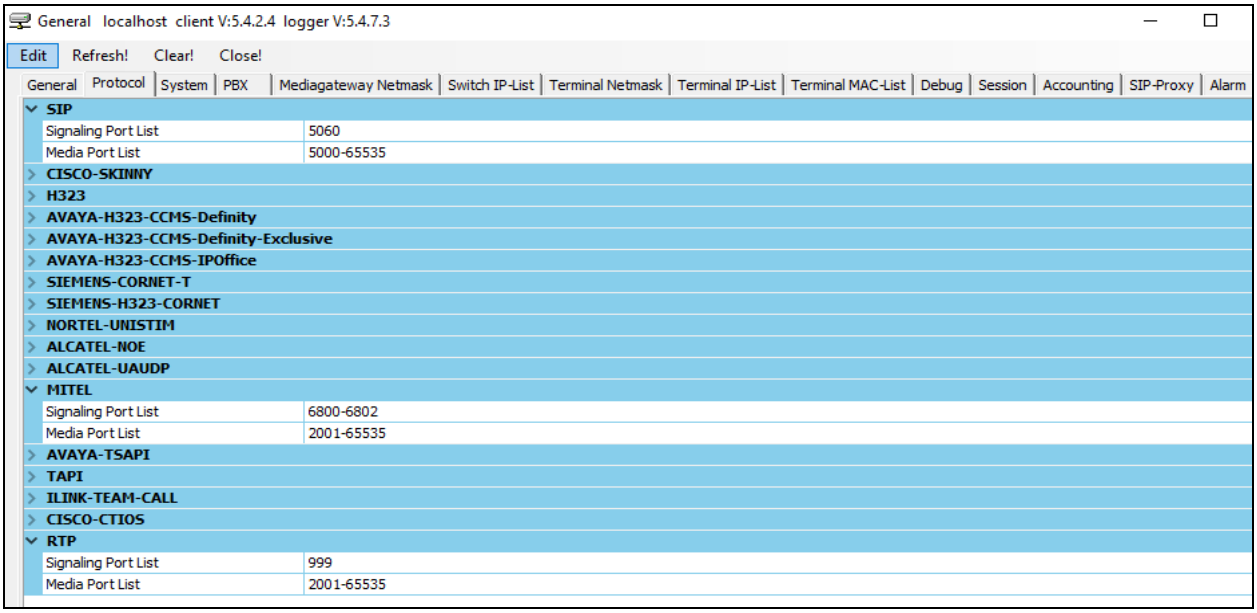
Certificate ID	Subject
e33651c7-0726-4a24-a0e3-1231966de32f	CN=Oaisys-Src-Recording-8d613bc1@10.211.24.177
a6981829-4b83-4164-81bd-0bd6c357a4e2	CN=CenterForce5_0050568C4632

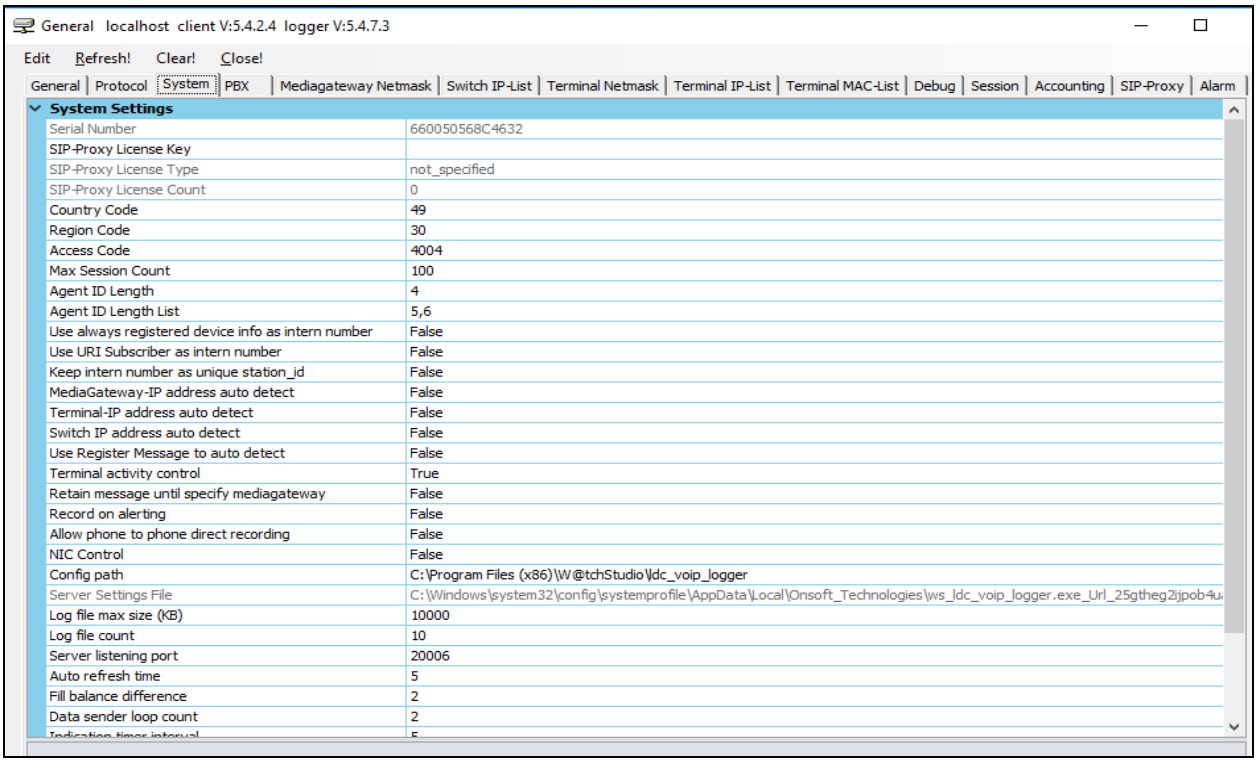
Revoked Certificates

Certificate ID	Subject
74928f5d-ae68-404c-b5d4-4b5a0ffaa32f	CN=CenterForce5_0050568C4632
d63b59f9-5d92-42f9-bff4-2bb746f0a691	CN=CenterForce5_0050568C4632
98c09f18-32f6-4bcc-b282-329f94fa8b79	CN=CenterForce5_0050568C4632
33095f17-6a74-417c-b370-e69456b2bb11	CN=CenterForce5_0050568C4632

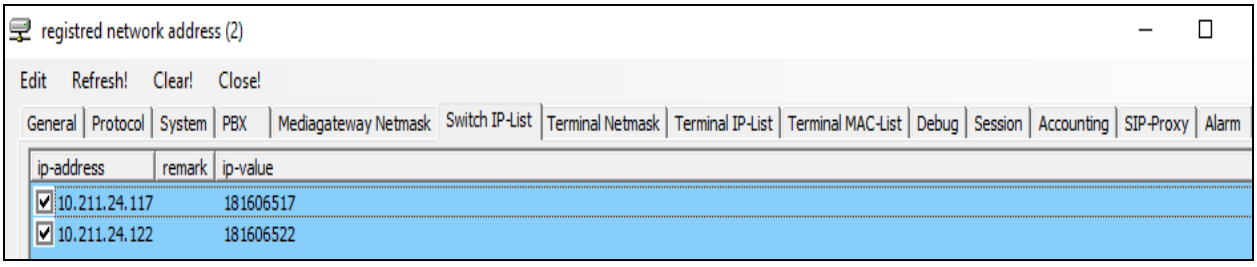
Configure Call Recording

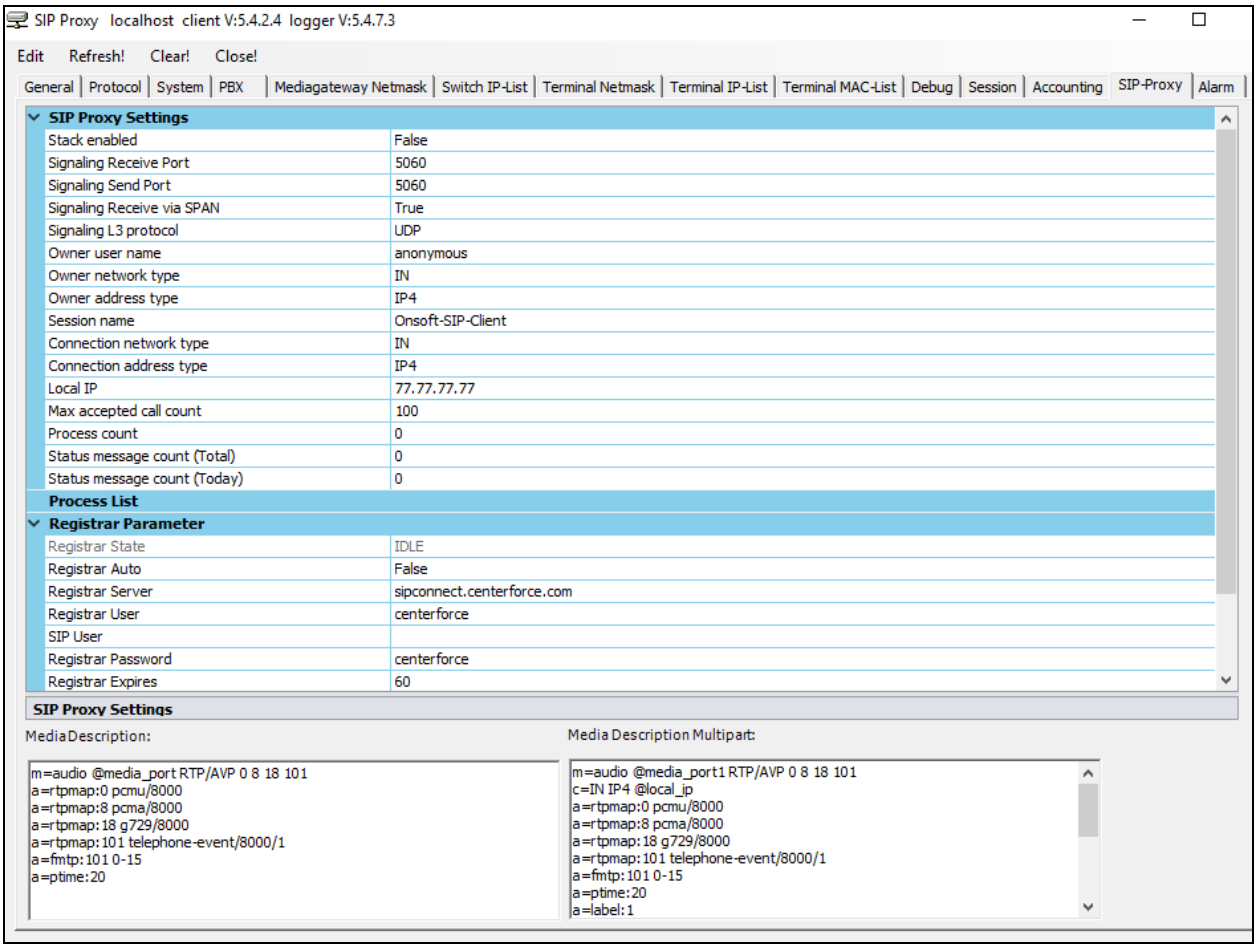
- Login into the Call Recorder admin
- Following Figure are Call Recorder setting configured for Lab Testing Environment





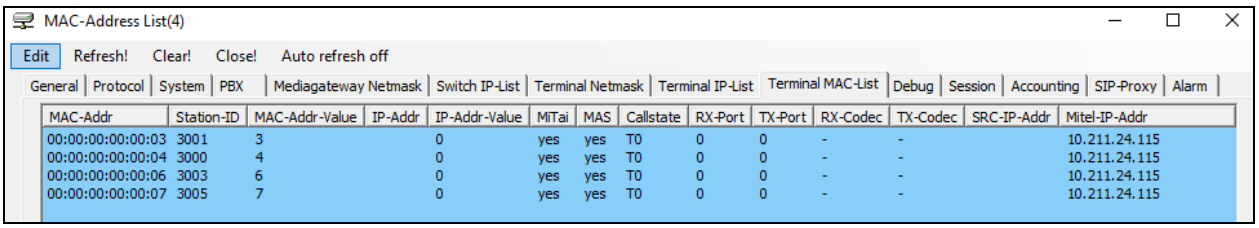
- Add SRC IP Address in Switch IP-List for Recording, If SRC address is missing then calls won't be recorded





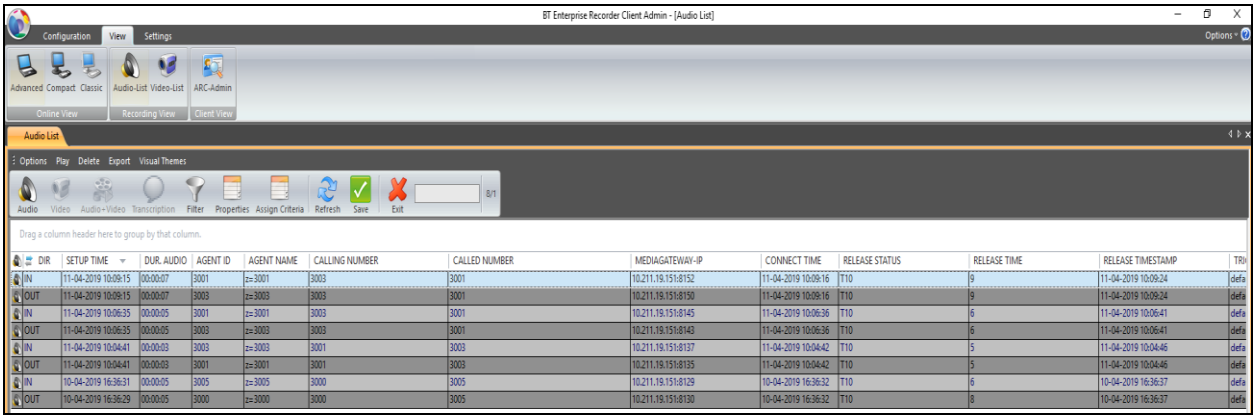
Configure Recording IP Endpoints

- Login into the Call Recording Admin → Terminal MAC-List
- Navigate to Server → IP Endpoints → Mitel SRC Devices
- Add an entry for each extension to be recorded



To Verify the Call Recording

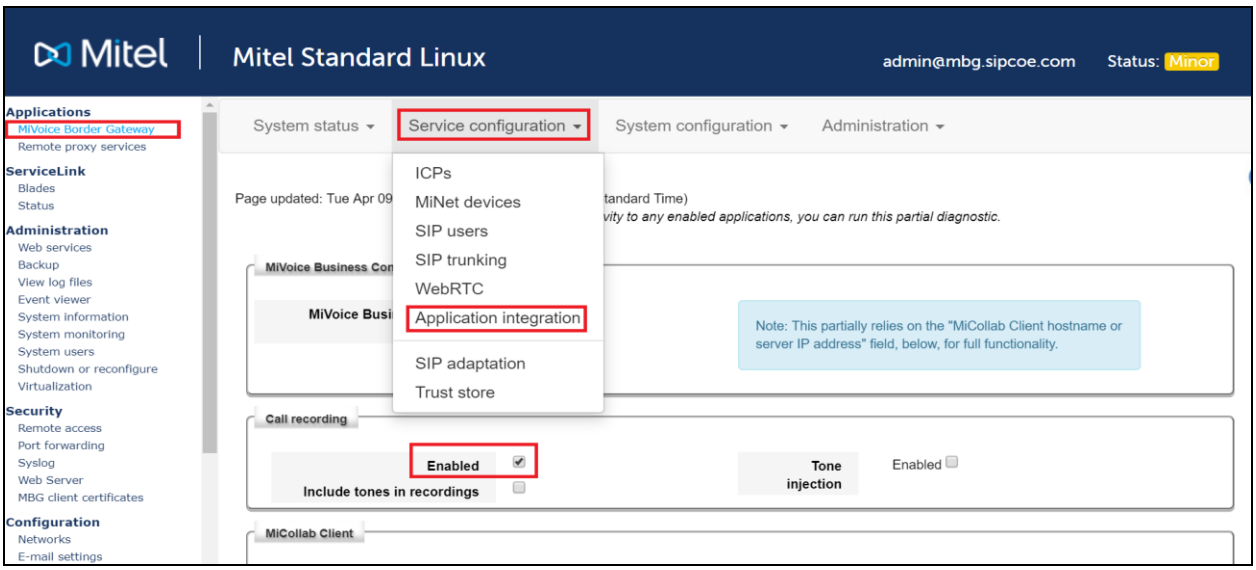
- *Place a call that should be recorded*
- *In the call recording Admin → **View** → **Audio Lists***



MiVoice Border Gateway Configuration for SRC

Enable Call Recording in MBG

- Login into the MBG web Admin
- Navigate to Applications → MiVoice Border Gateway → Service Configuration → Application Integration
- Under **Call Recording**, Click **Enabled** check box and click **Save**



For details on implementing MBG in VMware virtual machine environment, see the following Mitel documents. All documents are available on Mitel Online and InfoChannel.

- Virtual Appliance Deployment Solutions Guide
- VMware Virtual Appliance Quick Reference Guide

Add MiVoice Business as an ICP

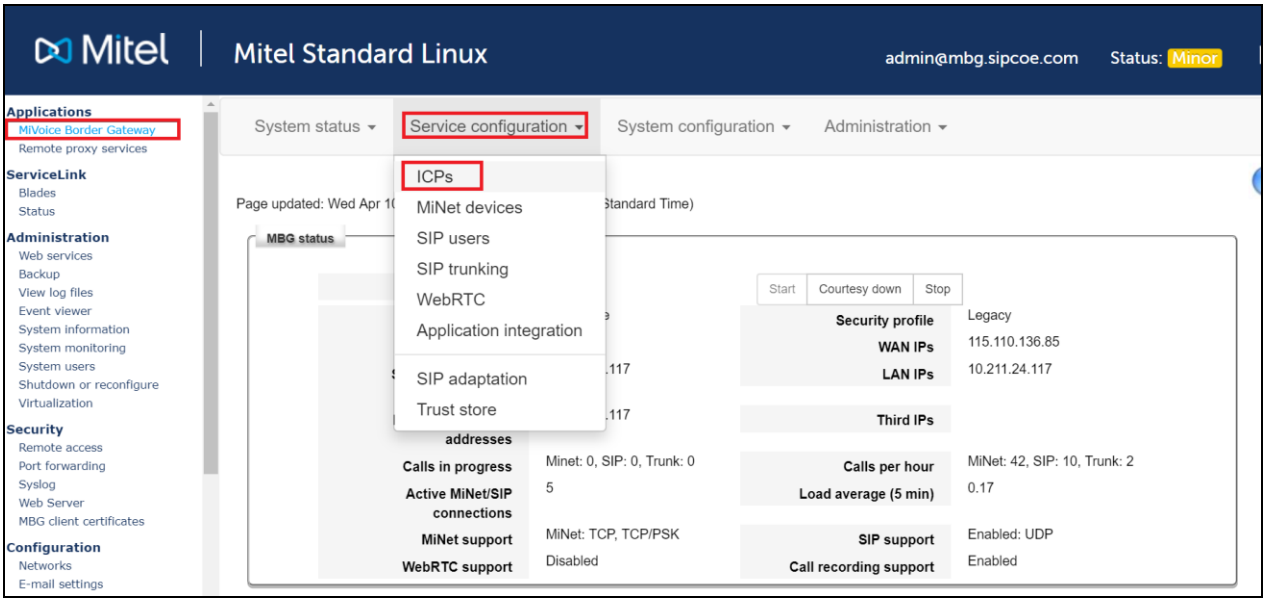
- Login to MBG and click **MiVoice Border Gateway**
- Navigate to Applications → MiVoice Border Gateway → Service Configuration → ICPs
- Add a new ICP with the following information

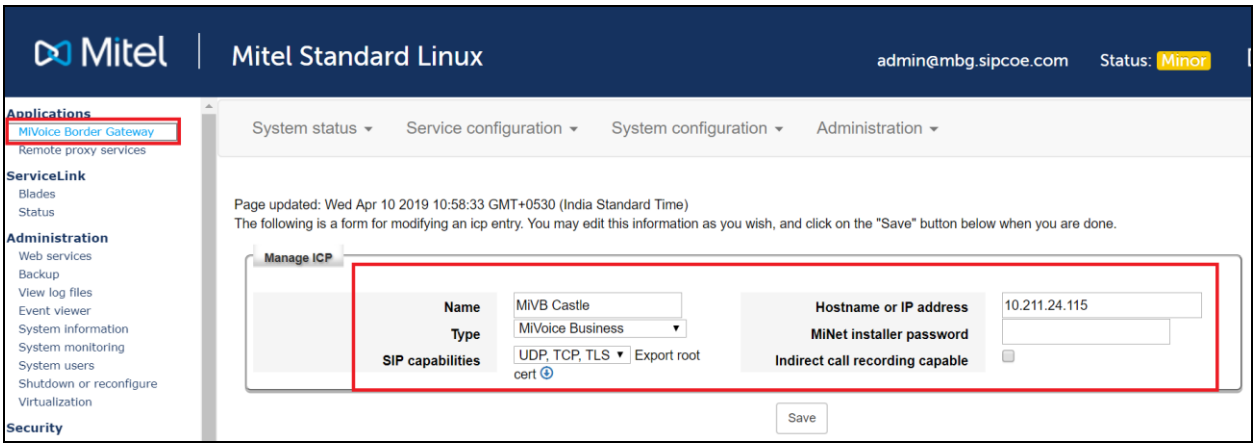
Name: Type the descriptive name

Hostname or IP Address: Type the IP address of the MiVB

Type: Select the MiVoice Business from the drop-down list

SIP Capabilities: Select TCP, UDP and TLS from the drop-down list





If using the Indirect Call Recording mode, click to select the Indirect Call Recording capable check box to match the settings to be configured with MiVoice Call Recording Admin.

Add the Mitel MiNET device for each extension to record

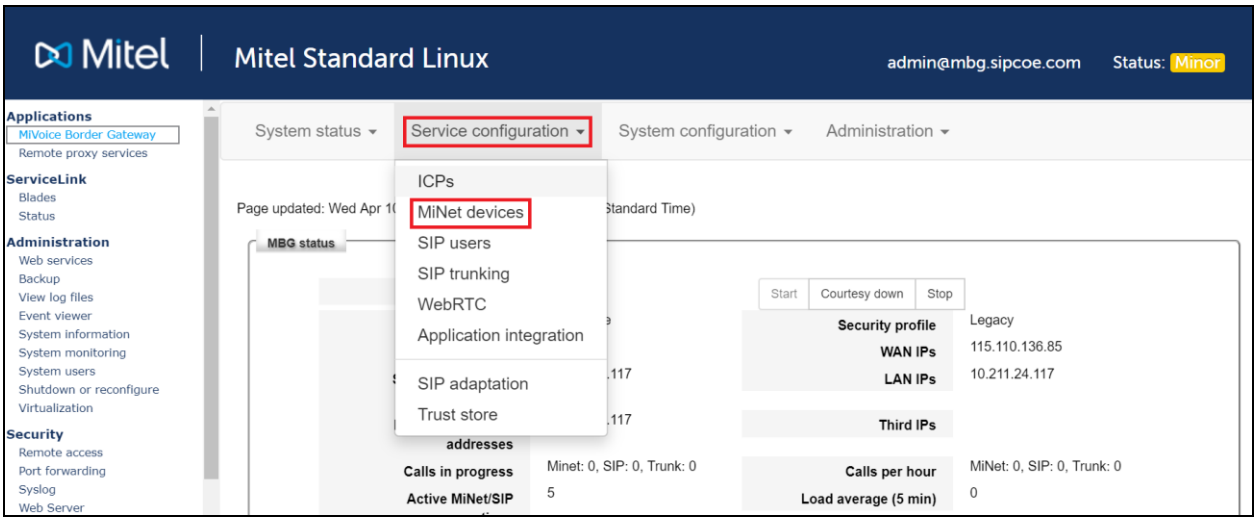
- Login into the MBG web Admin
- Navigate to Applications → MiVoice Border Gateway → Service Configuration
- Add a new device by configuring the following

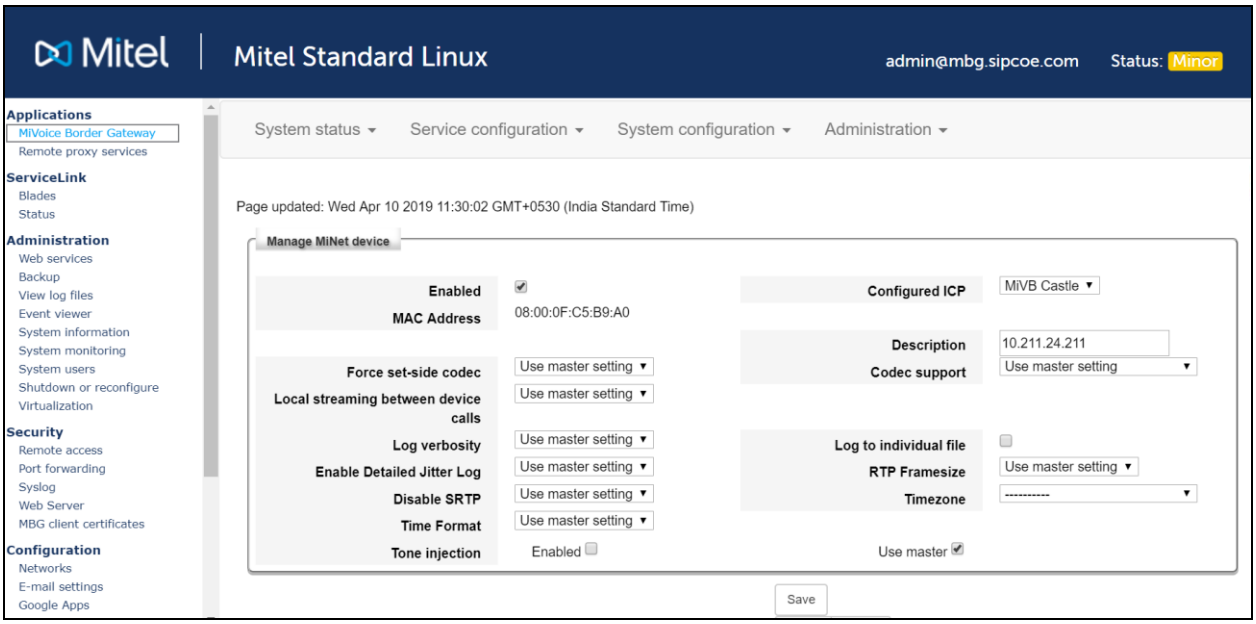
Enabled: Click to select Enabled check box

Configured ICP: Select previously added ICP for MiVB

MAC Address: Enter the MAC address of the device to be recorded

Description: Enter a descriptive name





You can provision multiple devices for recording on MBG. To simply this process, turn off the "**Restrict MiNET Devices**" in the MBG UI. This allows the devices to connect and forward to the default ICP. The ICP will redirect the devices to their home element. For more details, See MiVoice Border gateway Installation and Maintenance Guide.

Note: The devices may not get into service if the default ICP is down when they try to connect.

Glossary

MiVoice Business	MiVB
MiVoice Border Gateway	MBG
Mitel Solutions Alliance	MSA
Knowledge Management System	KMS
Interoperability Reference Guide	IRG
Not Applicable	NA
Secure Recording Connector	SRC
Call Recording Equipment	CRE