



CCS-UC-1

SIP Endpoint with Mitel[®] MiVoice Business System 8.0PR3

Configuration Guide

Crestron Electronics, Inc.

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CCS-UC-1: SIP Endpoint with Mitel MiVoice Business System 8.0PR3

Introduction

This configuration guide describes the necessary procedure to configure the Crestron Mercury™ devices to register to the MiVoice Business (Mitel PBX) as a basic SIP endpoint.

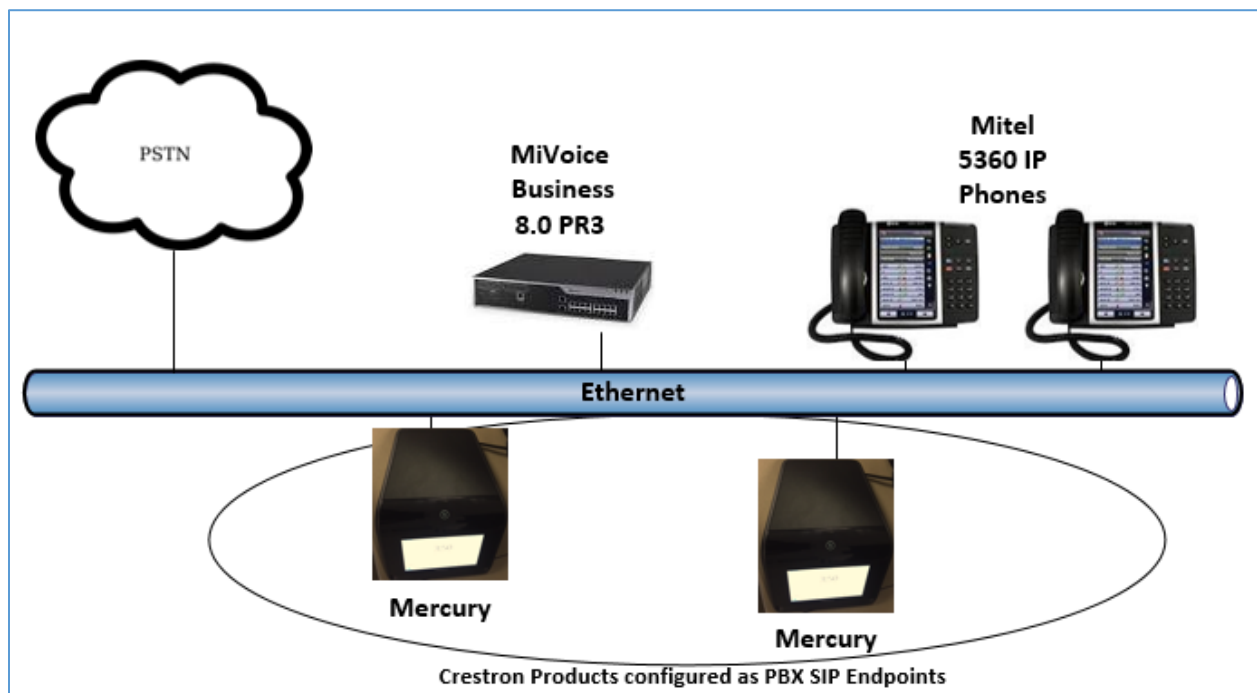
Audience

This document is intended for users attempting to configure and use the Crestron Mercury devices as SIP endpoints registering to MiVoice Business (Mitel PBX).

Topology

The network topology for the Crestron Mercury endpoint to interop with the MiVoice Business (Mitel PBX) is shown below.

SIP Endpoint Integration with MiVoice Business (Mitel PBX) - Reference Network



The lab network consists of the following components:

- Mitel PBX
- Mitel phones
- Crestron Mercury devices as the SIP endpoints

Software Requirements

- MiVoice Business (Mitel PBX): 8.0 PR3
- Crestron Mercury device v 1.3318.00019

Hardware Requirements

- MiVoice Business (Mitel PBX) either in a virtual environment or hardware server
- PSTN Gateway
- Mitel IP phone model 5360
- Crestron Mercury devices (2)

Product Description

The Crestron Mercury device is a complete solution for conference rooms. It acts as an all-in-one touch screen, speakerphone, and AirMedia® product for conference rooms that integrate microphones and speakers into the user interface at the table.

Crestron Toolbox™ software is used to discover and control all Crestron devices on the network.

The Crestron Mercury web interface is used to control the Crestron Mercury devices on the network.

Summary

The Crestron Mercury devices are configured on the Mitel as SIP users that successfully register to the Mitel PBX with digest authentication.

Features Supported

- Registration with digest authentication
- Basic calls with G711u, G711a, G722, and G729 codecs
- DTMF support
- Early media support
- Retrieval of a parked call
- Transferee in a call transfer
- Conference participant
- Member of hunt group
- Voice mail access and interaction

Features Not Supported

- Caller ID presentation
- Call hold and resume
- Call forwarding on the device (Forwarding can be configured on the PBX for the DN assigned to the endpoint.)
- Call waiting
- Conference
- Attended call transfer
- Early attended call transfer
- Blind call transfer
- Shared line (configuration of shared line on device)
- Call park (Initiating call park)
- Message waiting Indicator
- Do Not Disturb (DND)

Known Issues and Limitations

- While on an active call, if the Crestron Mercury device is power cycled, the first call to the device fails even though it is online. The subsequent calls, however, are successful. This issue is tracked via Crestron's Bugzilla™ software Defect: 126101.
- In a Mitel environment, a call declined by Crestron Mercury device doesn't provide appropriate treatment to the calling party. This issue is tracked via Crestron's Bugzilla software Defect: 127043.
- Caller ID is not supported on the Crestron Mercury device. Currently only the calling party number is displayed as the caller ID. This issue is tracked via Crestron's Bugzilla software Defect: 119006.
- The active call timer on the Crestron Mercury device does not reflect the correct call duration. The active call duration includes the time for which the unit was being alerted also. This issue is tracked via Crestron's Bugzilla software Defect: 124001.
- The first ringback heard on the Crestron Mercury device is stuttered. It resembles a mix of local and remote ringback. This issue is tracked via Crestron's Bugzilla software Defect: 122421.
- On the Crestron Mercury web user interface, there is currently no notification provided to the user when certain mandatory configurations are missing. This issue is tracked via Crestron's Bugzilla software Defect: 125193.
- On the Crestron Mercury web user interface, a configuration of DHCP OFF on the Network configuration page mandates configuration of both the adapters. The user is unable to save changes unless both the adapters are configured and is notified of an invalid IP against the default of 0.0.0.0 for an unused adapter. This issue is tracked via Crestron's Bugzilla software Defect: 126236.
- On the Crestron Mercury device, for certain called numbers that cannot be reached or are invalid, the user only hears a reorder tone and does not have the option to disconnect the call except by pressing the call button again. This issue is tracked via Crestron's Bugzilla software Defect: 122633.

- Message Waiting Indicator (MWI) is not supported on the Crestron Mercury device. This issue is tracked via Crestron’s Bugzilla software Defect: 116290.

Crestron Mercury Configuration

Setup

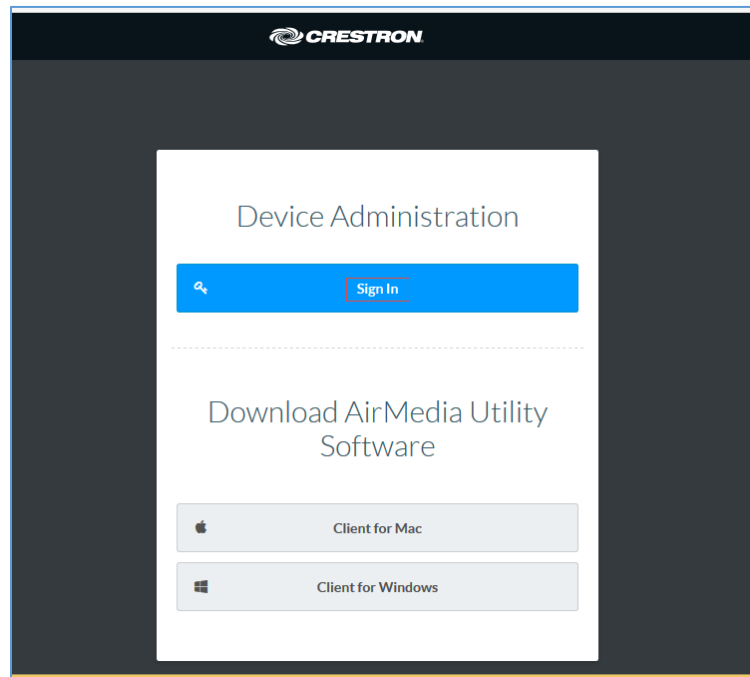
The LAN port of the Crestron Mercury device needs to be connected to one PoE+ port to power it up and network for connectivity with the Mitel PBX. The PoE+ switch that is used should have the LLDP functionality enabled for the device to power up and be completely functional. By default, the “poeplus” configuration is set to Off on the device.

Configuring the device

To configure the Crestron Mercury device, follow this procedure:

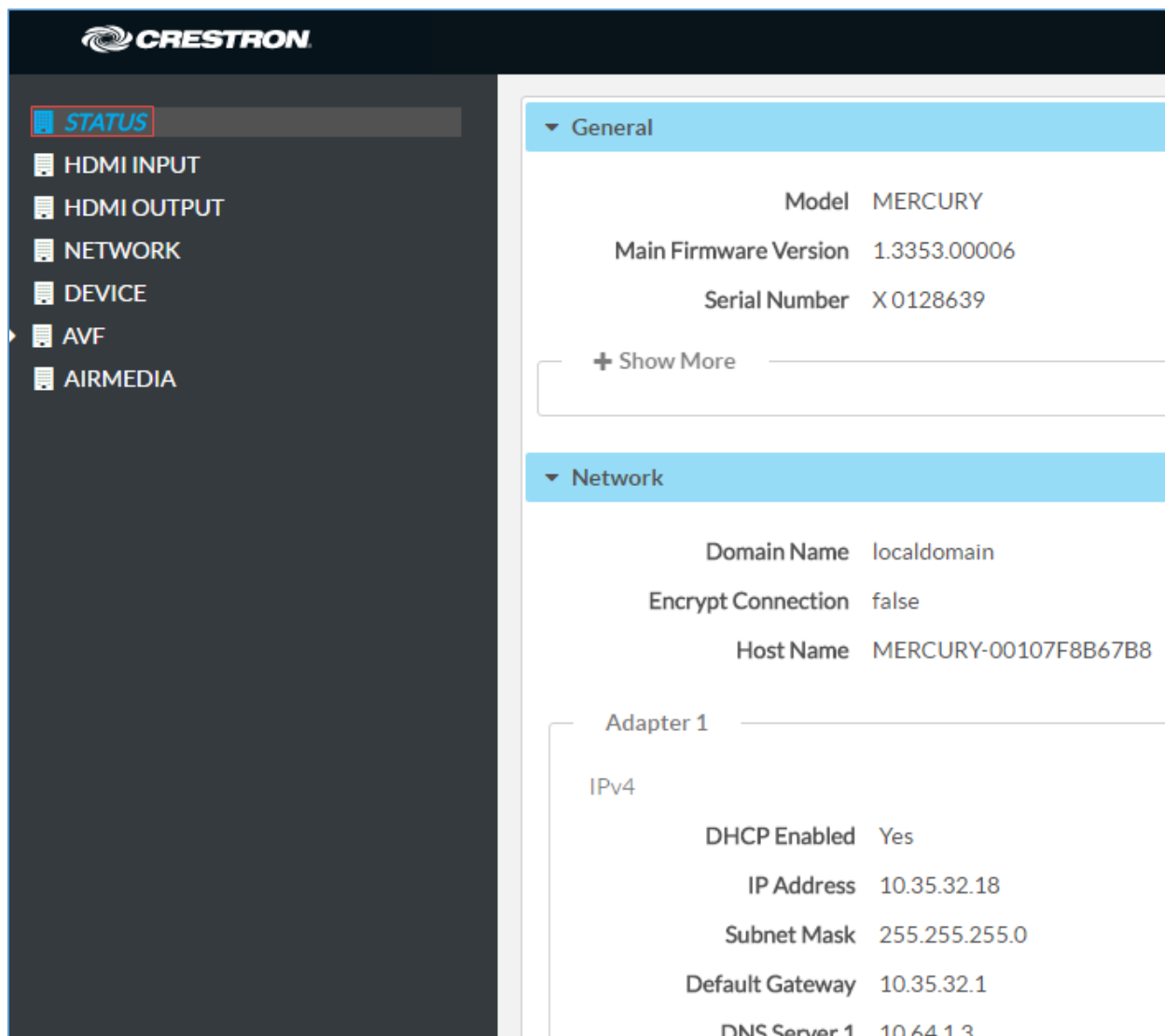
1. Access the web GUI for the device by using an http session with the device’s IP address. The device IP address used in this example was *10.35.32.18*.

Crestron Mercury Configuration: Login to Web GUI



2. Click **Sign In** and log in to the device. For information on device administration, refer to the CCS-UC-1 Supplemental Guide (Doc. 7844) at www.crestron.com/manuals.

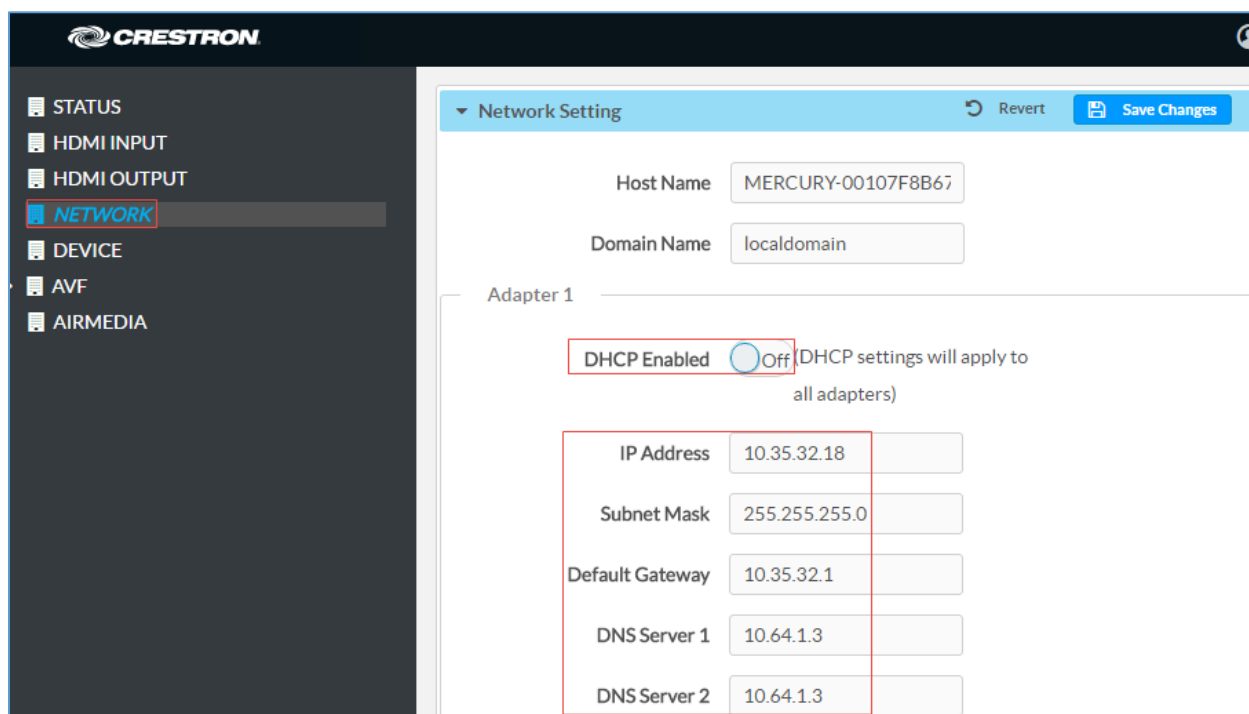
The Status screen that appears displays basic information on the device.



The device can be configured from the **Network** page.

3. On the web GUI, navigate to **Network**.

Crestron Mercury Configuration: Network Setting: DHCP Off: Static IP Configured



4. Enter the following parameters in the **Adapter 1** section to configure the Crestron Mercury device.
 - **Domain Name:** *lab.tekvizion.com* was used in this example.
 - **DHCP:** Choose either of the following:
 - Obtain an IP address automatically.
 - Use the following IP address.
 - For this example, a static IP was configured-
 - **IP Address:** *10.35.32.18* was used in this example.
 - **Subnet Mask:** *255.255.255.0* was used in this example.
 - **Default Gateway:** *10.35.32.1* was used in this example.
 - **DNS Servers:** *10.64.1.3* was used in this example.
5. Click **Save Changes**.

Configuring the SIP Parameters

To configure the SIP parameters, follow this procedure:

1. On the web GUI, navigate to **Device > SIP Calling**.

Crestron Mercury: Device Configuration: SIP Calling Parameters

The screenshot displays the Crestron Mercury web GUI for configuring SIP parameters. The left sidebar shows a navigation menu with 'DEVICE' selected. The main content area is titled 'SIP Calling' and contains the following configuration fields:

- Enable SIP:** On (checked)
- Transport Type:** UDP
- Server IP Address:** 10.35.32.2
- Port:** 5060
- Server Username:** 5000
- Server Password:** ••••••
- Server Realm:** *
- Local Extension:** 5000
- Proxy Server:** NONE

At the bottom of the configuration area, the **SIP Server Status** is shown as **Online**.

2. Enable the check box for **Enable SIP**.
3. Configure the **Server IP Address**. Enter the IP Address of the MiVoice Business (Mitel PBX). *10.35.32.2* was used in this example.
4. Configure the **Port**. *5060* was used in this example.
5. Configure the **Server Username**. Enter the end user configured on MiVoice Business (Mitel PBX) for this device. *5000* (and *5005*) was used in this example.
6. Configure the **Server Password**. Enter the password as configured on MiVoice Business (Mitel PBX) for this end user.
7. Configure the **Local Extension**. Enter the directory number that was configured for this device on MiVoice Business (Mitel PBX). *5000* (and *5005*) was used in this example.
8. Retain all other default configurations.
9. Click **Save Changes**.

Once the device successfully registers with the Mitel PBX, the **SIP Server Status** updates its status to show *Online*.

Mitel Configuration

This section describes the configuration necessary on the MiVoice Business system (Mitel PBX) to support registration of the Crestron Mercury devices and connectivity to PSTN.

NOTE: It is assumed that the general installation and basic Mitel configuration have already been administered.

Verify Licenses

Ensure that adequate licenses are available in the MiVoice Business system to support the Mitel Phones and Crestron Devices.

To verify that licenses are available, navigate to **Licenses > License and Option Selection** in the MiVoice Business controller. Each Crestron device will consume one IP Users license.

Mitel: License Verification

The screenshot shows the Mitel MiVoice Business web interface. The top navigation bar includes the Mitel logo, 'MiVoice Business', and node information: 'Node 'Local_2' Alarm Status: Clear 2017-Apr-04 09:20:07'. The left sidebar contains a menu with 'Licenses' highlighted, and sub-items like 'License and Option Selection', 'System Capacity', 'Dimension Selection', and 'Application Group Licensing'. The main content area is titled 'License and Option Selection on Local_2' and includes a 'Change' button, 'Print...', and 'Import...' buttons. Below this, it shows 'Online Licensing with the Application Management Center' and 'Application Record ID 26682859'. A table displays system details:

System Type	License Sharing	Hardware Identifier
Enterprise	No	0000003a1a4f

Below the table, there is a section for 'Licensed Options' with a sub-section for 'Users'. A table shows the following data:

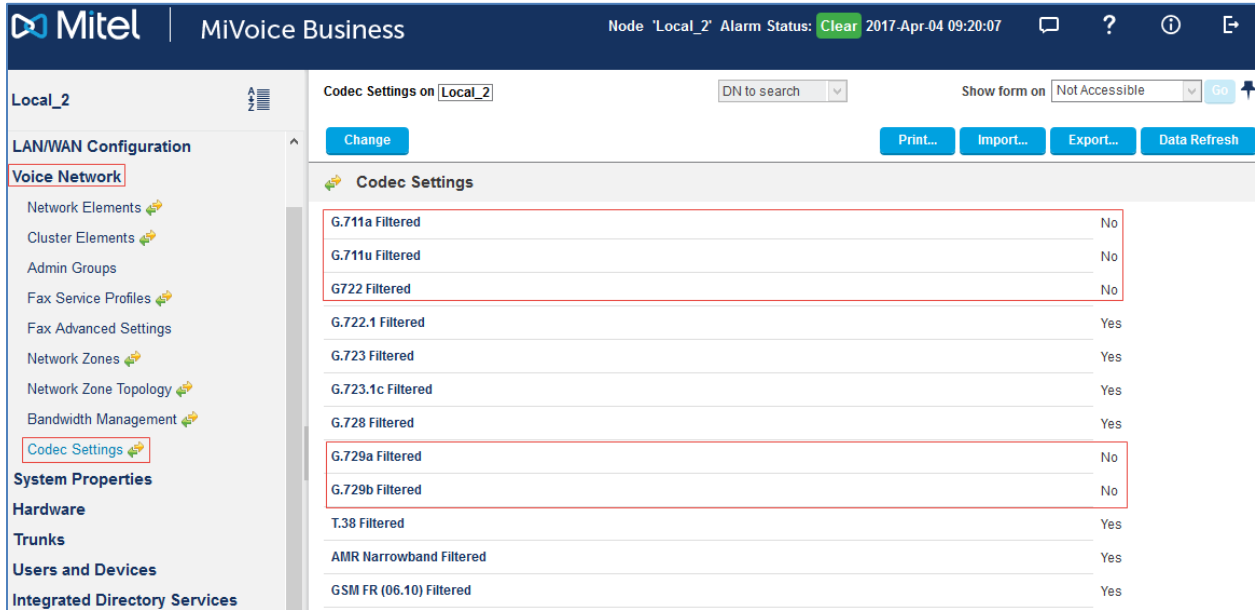
Licensed Options	Locally Consumed	Locally Allocated	Available for Allocation	Purchased
IP Users	11	16	0	16

Configure Codec Settings and Network Zones

Codec Settings are configured to allow the G711u, G711A, G722, and G729 codecs to be negotiated during this example. To change the codec settings, follow this procedure:

1. Navigate to **Voice Network > Codec Settings**.
2. Configure the Codec filtering.

Mitel: Codec Settings

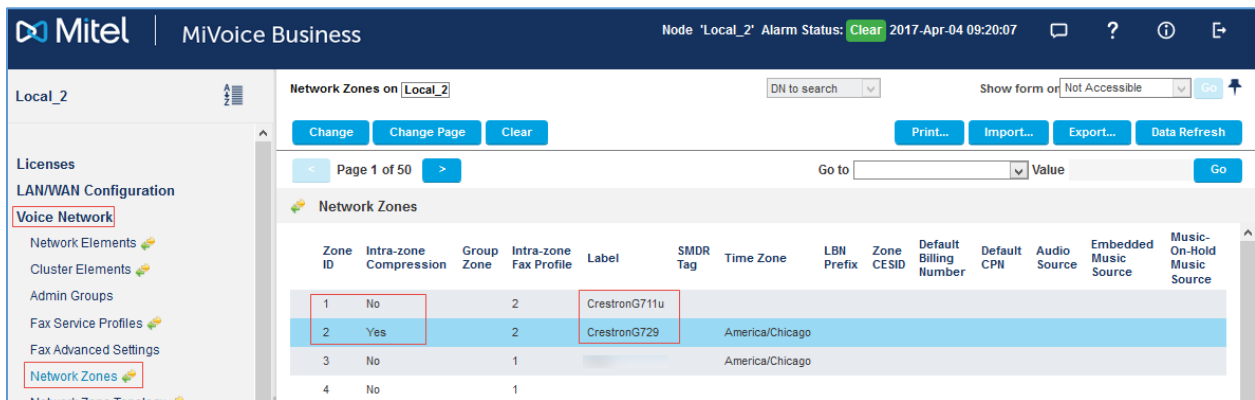


Codec	Filtered
G.711a Filtered	No
G.711u Filtered	No
G.722 Filtered	No
G.722.1 Filtered	Yes
G.723 Filtered	Yes
G.723.1c Filtered	Yes
G.728 Filtered	Yes
G.729a Filtered	No
G.729b Filtered	No
T.38 Filtered	Yes
AMR Narrowband Filtered	Yes
GSM FR (06.10) Filtered	Yes

Network Zones 1 and 2 were configured to offer preferred codecs as G711u and G729 respectively.

3. Navigate to **Voice Network > Network Zones**.

Mitel: Configure Network Zones



Zone ID	Intra-zone Compression	Group Zone	Intra-zone Fax Profile	Label	SMDR Tag	Time Zone	LBN Prefix	Zone CESID	Default Billing Number	Default CPN	Audio Source	Embedded Music Source	Music-On-Hold Music Source
1	No	2		CrestronG711u									
2	Yes	2		CrestronG729		America/Chicago							
3	No	1				America/Chicago							
4	No	1											

4. Select a zone to modify: 2 was used for this example.
5. Set the **Intra-zone compression** to Yes.

NOTE: Zone 2 was used when G729 was required as the preferred codec. By default, Zone 1 was used, which negotiated G711u as the preferred codec.

Configure Network Element

Create a network element for the PSTN GW. This is done in the Network Element assignment form.

1. Navigate to **Voice Network > Network Elements**.
2. Click **Add**.

Mitel: Configure Network Elements

The screenshot shows the Mitel MiVoice Business configuration interface. The left sidebar contains a navigation menu with categories like Licenses, LAN/WAN Configuration, Voice Network, Cluster Elements, Admin Groups, Fax Service Profiles, Fax Advanced Settings, Network Zones, Network Zone Topology, Bandwidth Management, Codec Settings, System Properties, System Settings, System Feature Settings, System Administration, Hardware, Trunks, Users and Devices, Integrated Directory Service, Voice Mail, Call Routing, Music On Hold, and Emergency Services Management. The main content area is titled 'Network Elements on Local_2' and includes a search bar, a 'Show form or' dropdown, and buttons for Add, Change, Delete, Start Sharing, Sync, Print..., Import..., Export..., and Data Refresh. A table lists network elements, with one entry for 'PSTN_GW' highlighted. Below the table, a configuration form shows the following details:

Name	PSTN_GW
Type	Other
FQDN or IP Address	10.64.1.72
Data Sharing	NO
Local	False
Version	
Zone	1
ARID	
SIP Peer Specific	
SIP Peer Transport	default
SIP Peer Port	5060
External SIP Proxy FQDN or IP Address	
External SIP Proxy Transport	default
External SIP Proxy Port	0
SIP Registrar FQDN or IP Address	
SIP Registrar Transport	default
SIP Registrar Port	0
SIP Peer Status	Auto-Detect/Normal

3. Set **Name**. *PSTN_GW* was used in this example.
4. Set **Type**: *Other*.
5. Set **FQDN or IP Address**: *10.64.1.72* was used in this example. This is the IP address of the PSTN GW.
6. Set **Zone**: *1* was used in this example. This setting ensures a codec of G711. To change it to G729, modify the network zone to *2*.
7. Check the **SIP Peer** check box.
8. Set the **SIP Peer Transport**: *Default* was used in this example.
9. Set the **SIP Peer Port**: *5060* was used in this example.
10. Retain all other default configurations.
11. Click **Save**.

Configure Class of Service

To configure the class of service, follow this procedure:

1. Navigate to **System Properties > System Feature Settings > Class of Service Options**.

Mitel: Class of Service Options (1/9)

The screenshot displays the Mitel MiVoice Business configuration interface. The top navigation bar includes the Mitel logo, the text 'MiVoice Business', and a status indicator 'Note: Local_2 Alarm Status: Clear' with a timestamp '2017-Apr-04 09:20:07'. The left sidebar shows a tree view of configuration categories, with 'System Properties' and 'System Feature Settings' highlighted, and 'Class of Service Options' selected. The main content area is titled 'Class of Service Options on Local_2' and includes a search dropdown and a 'Show form on' dropdown. Below the title are buttons for 'Change', 'Copy', 'Print...', 'Import...', 'Export...', and 'Data Refresh'. At the bottom right of the main area are 'Save' and 'Cancel' buttons. The configuration is divided into 'General' and 'Advanced' tabs, with 'General' selected. The 'General' tab contains the following settings:

Class Of Service Number	10
Comment	Crestron
ACD	
ACD Agent Behavior on No Answer	Logout
ACD Agent No Answer Timer	15
ACD Make Busy on Login	<input type="radio"/> No <input type="radio"/> Yes
ACD Silent Monitor Accept	<input checked="" type="radio"/> No <input type="radio"/> Yes
ACD Silent Monitor Accept Monitoring Non-Prime Lines	<input checked="" type="radio"/> No <input type="radio"/> Yes
ACD Silent Monitor Allowed	<input checked="" type="radio"/> No <input type="radio"/> Yes
ACD Silent Monitor Notification	<input checked="" type="radio"/> No <input type="radio"/> Yes
Follow 2nd Alternate Reroute for Recall to Busy ACD Agent	<input checked="" type="radio"/> No <input type="radio"/> Yes
Work Timer	0
Announce	
Call Announce Line	<input checked="" type="radio"/> No <input type="radio"/> Yes
Off-Hook Voice Announce Allowed	<input checked="" type="radio"/> No <input type="radio"/> Yes
Handsfree AnswerBack Allowed	<input checked="" type="radio"/> No <input type="radio"/> Yes
Busy Override	
Busy Override Security	<input type="radio"/> No <input checked="" type="radio"/> Yes
Disable Executive Busy Override Tone	<input checked="" type="radio"/> No <input type="radio"/> Yes

Mitel: Class of Service Options (2/9)

General	Advanced
Call Control Timer	
Busy Tone Timer	30
Dialing Conflict Timer	3
First Digit Timer	15
Inter Digit Timer	10
Lockout Timer	45
Call Duration	
Call Duration	10
Call Duration Forced Cleardown Timer	0
Enable Call Duration Limit on External Calls	<input checked="" type="radio"/> No <input type="radio"/> Yes
Enable Call Duration Limit on Internal Calls	<input checked="" type="radio"/> No <input type="radio"/> Yes
Call Forwarding/Rerouting	
Call Forward - Delay	0
Call Forward No Answer Timer	15
Call Forward Override	<input checked="" type="radio"/> No <input type="radio"/> Yes
Call Forwarding (External Destination)	<input type="radio"/> No <input checked="" type="radio"/> Yes
Call Forwarding (Internal Destination)	<input type="radio"/> No <input checked="" type="radio"/> Yes
Call Forwarding Accept	<input type="radio"/> No <input checked="" type="radio"/> Yes
Call Reroute after CFFM to Busy Destination	<input checked="" type="radio"/> No <input type="radio"/> Yes
Call Forwarding Reminder Ring (CFFM and CFIAH only)	<input checked="" type="radio"/> No <input type="radio"/> Yes
Disable Call Reroute Chaining On Diversion	<input checked="" type="radio"/> No <input type="radio"/> Yes

Mitel: Class of Service Options (3/9)

General	Advanced
Follow Reroute on Disabled Forwarding	<input checked="" type="radio"/> No <input type="radio"/> Yes
Group Call Forward Follow Me Accept	<input checked="" type="radio"/> No <input type="radio"/> Yes
Group Call Forward Follow Me Allow	<input checked="" type="radio"/> No <input type="radio"/> Yes
Third Party Call Forward Follow Me Accept	<input checked="" type="radio"/> No <input type="radio"/> Yes
Third Party Call Forward Follow Me Allow	<input checked="" type="radio"/> No <input type="radio"/> Yes
Use Held Party Device for Call Re-routing	<input type="radio"/> No <input checked="" type="radio"/> Yes
Call Hold	
Call Hold	<input type="radio"/> No <input checked="" type="radio"/> Yes
Call Hold - Retrieve with Hold Key	<input type="radio"/> No <input checked="" type="radio"/> Yes
Call Hold Remote Retrieve	<input type="radio"/> No <input checked="" type="radio"/> Yes
Call Hold Timer	30
Local Music On Hold source	<input checked="" type="radio"/> No <input type="radio"/> Yes
Music on Hold on Transfer	<input type="radio"/> No <input checked="" type="radio"/> Yes
Use Called Party Call Hold Timer	<input checked="" type="radio"/> No <input type="radio"/> Yes
Call Park	
Call Park Timer	180
Call Park-Allowed To Park	<input type="radio"/> No <input checked="" type="radio"/> Yes
Call Pickup	
Allow Directed Call Pickup Of Attendant Call	<input checked="" type="radio"/> No <input type="radio"/> Yes
Call Pickup Dialed Accept	<input type="radio"/> No <input checked="" type="radio"/> Yes
Call Pickup Directed Accept	<input type="radio"/> No <input checked="" type="radio"/> Yes

Mitel: Class of Service Options (4/9)

General	Advanced
Call Pickup Display	<input checked="" type="radio"/> No <input type="radio"/> Yes
Call Privacy	
Call Privacy	<input checked="" type="radio"/> No <input type="radio"/> Yes
Calling Party Name Substitution	<input checked="" type="radio"/> No <input type="radio"/> Yes
Name Suppression on outgoing Trunk Call	<input checked="" type="radio"/> No <input type="radio"/> Yes
Privacy Released	<input checked="" type="radio"/> No <input type="radio"/> Yes
Public Network Identity Provided	<input type="radio"/> No <input checked="" type="radio"/> Yes
Call Waiting	
Call Waiting Swap	<input checked="" type="radio"/> No <input type="radio"/> Yes
ONS CLASS/CLIP: Visual Call Waiting	<input type="radio"/> No <input checked="" type="radio"/> Yes
Campon	
Auto Campon Timer	
Campon Recall Timer	10
Direct Voice Call	
Direct Voice Call - Accept	<input checked="" type="radio"/> No <input type="radio"/> Yes
Direct Voice Call - Allow	<input checked="" type="radio"/> No <input type="radio"/> Yes
Direct Voice Call - Maximize Volume	<input checked="" type="radio"/> No <input type="radio"/> Yes
Display	
After Answer Display Time	
Calling Name Display - Internal - ONS	<input type="radio"/> No <input checked="" type="radio"/> Yes

Mitel: Class of Service Options (5/9)

General	Advanced
Calling Number Display - Internal - ONS	<input type="radio"/> No <input checked="" type="radio"/> Yes
Display ANI/DNIS/ISDN Calling/Called Number	<input checked="" type="radio"/> No <input type="radio"/> Yes
Display ANI/ISDN Calling Number Only	<input checked="" type="radio"/> No <input type="radio"/> Yes
Display Caller ID on multicall/keylines	<input checked="" type="radio"/> No <input type="radio"/> Yes
Display Caller ID On Multicall/Keylines Timer	5
Display Caller ID On Single Line Displays For Forwarded Calls	<input checked="" type="radio"/> No <input type="radio"/> Yes
Display Dialed Digits during Outgoing Calls	<input checked="" type="radio"/> No <input type="radio"/> Yes
Display DNIS/Called Number Before Digit Modification	<input checked="" type="radio"/> No <input type="radio"/> Yes
Display DNIS on Key Label	<input checked="" type="radio"/> No <input type="radio"/> Yes
Display Held Call ID on Transfer	<input checked="" type="radio"/> No <input type="radio"/> Yes
Display Transfer Destination on Recall	<input checked="" type="radio"/> No <input type="radio"/> Yes
Hot Desk External User - Display Internal Calling ID	<input checked="" type="radio"/> No <input type="radio"/> Yes
Maintain Ringing Party During Recall	<input checked="" type="radio"/> No <input type="radio"/> Yes
Non-Prime Public Network Identity	<input checked="" type="radio"/> No <input type="radio"/> Yes
Originator's Display Update In Call Forwarding/Rerouting	<input checked="" type="radio"/> No <input type="radio"/> Yes
Prefer Call Forwarding/Rerouting Information	<input checked="" type="radio"/> No <input type="radio"/> Yes
Prefer Name for Call Information	<input checked="" type="radio"/> No <input type="radio"/> Yes
Suppress Delivery of Caller ID Display between Sets	<input checked="" type="radio"/> No <input type="radio"/> Yes
Suppress Delivery of Caller ID Display between Sets - Override	<input checked="" type="radio"/> No <input type="radio"/> Yes
Suppress Display Of Account Code Numbers	<input checked="" type="radio"/> No <input type="radio"/> Yes

Mitel: Class of Service Options (6/9)

General		Advanced
Suppress Redial Display	<input checked="" type="radio"/> No	<input type="radio"/> Yes
Fax		
Campon Tone Security	<input type="radio"/> No	<input checked="" type="radio"/> Yes
External Trunk Standard Ringback	<input type="radio"/> No	<input checked="" type="radio"/> Yes
Fax Capable	<input checked="" type="radio"/> No	<input type="radio"/> Yes
Return Disconnect Tone When Far End Party Clears	<input checked="" type="radio"/> No	<input type="radio"/> Yes
HCI		
HCI/CTI/TAPI Call Control Allowed	<input type="radio"/> No	<input checked="" type="radio"/> Yes
HCI/CTI/TAPI Monitor Allowed	<input type="radio"/> No	<input checked="" type="radio"/> Yes
Hot Desk		
Green BLF Lamp for Logged in Hotdesk User	<input checked="" type="radio"/> No	<input type="radio"/> Yes
Hot Desk External User - Allow Mid-Call Features	<input type="radio"/> No	<input checked="" type="radio"/> Yes
Hot Desk External User - Answer Confirmation	<input type="radio"/> No	<input checked="" type="radio"/> Yes
Hot Desk External User - Dial Tone on Call Complete	<input type="radio"/> No	<input checked="" type="radio"/> Yes
Hot Desk External User - Permanent Login	<input checked="" type="radio"/> No	<input type="radio"/> Yes
Hot Desk External User - Remote MWI Enable Feature Access Code		
Hot Desk External User - Remote MWI Disable Feature Access Code		
Hot Desk Login Accept	<input type="radio"/> No	<input checked="" type="radio"/> Yes
Hot Desk Remote Logout Enabled	<input checked="" type="radio"/> No	<input type="radio"/> Yes
Miscellaneous		
Backlighting - Enabled	<input type="radio"/> No	<input checked="" type="radio"/> Yes

Mitel: Class of Service Options (7/9)

General	Advanced
Clear All Features Remote	<input checked="" type="radio"/> No <input type="radio"/> Yes
Enbloc Dialing - Enabled	<input checked="" type="radio"/> No <input type="radio"/> Yes
Force Device Busy If Any Line In Use	<input type="radio"/> No <input checked="" type="radio"/> Yes
Handset Volume Adjustment Saved	<input checked="" type="radio"/> No <input type="radio"/> Yes
Head Set Switch Mute	<input checked="" type="radio"/> No <input type="radio"/> Yes
Long Key Press Timer	0
Multi-Color LED Support - Disable	<input checked="" type="radio"/> No <input type="radio"/> Yes
Phone Lock	<input checked="" type="radio"/> No <input type="radio"/> Yes
Reseize Timer	180
Timed Reminder Allowed	<input type="radio"/> No <input checked="" type="radio"/> Yes
User Inactivity Timer	0
Paging	
Group Page Accept	<input checked="" type="radio"/> No <input type="radio"/> Yes
Group Page Allow	<input checked="" type="radio"/> No <input type="radio"/> Yes
Loudspeaker Pager Equivalent Zone Override Security	<input checked="" type="radio"/> No <input type="radio"/> Yes
Loudspeaker Pager Override	<input type="radio"/> No <input checked="" type="radio"/> Yes
Pager Access All Zones	<input type="radio"/> No <input checked="" type="radio"/> Yes
Pager Access Individual Zones	<input checked="" type="radio"/> No <input type="radio"/> Yes
PC Port	
PC Port On IP Device - Disable	<input checked="" type="radio"/> No <input type="radio"/> Yes

Mitel: Class of Service Options (8/9)

General	Advanced
RAD	
Answer Plus Delay To Message Timer	20
Answer Plus Expected Off-hook Timer	30
Answer Plus Message Length Timer	10
Answer Plus System Reroute Timer	0
Recorded Announcement Device	<input checked="" type="radio"/> No <input type="radio"/> Yes
Recorded Announcement Device - Advanced	<input checked="" type="radio"/> No <input type="radio"/> Yes
Ringling	
Delay Ring Timer	10
No Answer Recall Timer	17
Ringling Line Select	<input checked="" type="radio"/> No <input type="radio"/> Yes
Ringling Timer	180
SMDR	
SMDR External	<input checked="" type="radio"/> No <input type="radio"/> Yes
SMDR Internal	<input checked="" type="radio"/> No <input type="radio"/> Yes
Trunk	
ANI/DNIS/ISDN Number Delivery Trunk	<input checked="" type="radio"/> No <input type="radio"/> Yes
DASS II OLI/TLI Provided	<input checked="" type="radio"/> No <input type="radio"/> Yes
Public Network Access via DPNSS	<input type="radio"/> No <input checked="" type="radio"/> Yes

Mitel: Class of Service Options (9/9)

General	Advanced
Public Network To Public Network Connection Allowed	<input checked="" type="radio"/> No <input type="radio"/> Yes
Public Trunk	<input checked="" type="radio"/> No <input type="radio"/> Yes
R2 Call Progress Tone	<input checked="" type="radio"/> No <input type="radio"/> Yes
Suppress Simulated CCM after ISDN Progress	<input checked="" type="radio"/> No <input type="radio"/> Yes
Trunk Calling Party Identification	<input type="radio"/> No <input checked="" type="radio"/> Yes
Trunk Flash Allowed	<input checked="" type="radio"/> No <input type="radio"/> Yes
Two B-Channel Transfer Allowed	<input checked="" type="radio"/> No <input type="radio"/> Yes
Voice Mail	
COV/ONS/E&M Voice Mail Port	<input checked="" type="radio"/> No <input type="radio"/> Yes
ONS VMail-Delay Dial Tone Timer	5

2. Select the **Class of Service** number: 10 was used in this example.
3. Click **Change**.
4. In the **General** tab, change the following options:
 - **Public Network Access via DPNSS**: Select Yes.
 - **Auto Campon Timer**: Clear the value.
 - **Busy Override Security**: Select Yes.
 - **Call Park- Allowed to Park**: Select Yes.
 - **Music on Hold on transfer**: Select Yes.
5. Retain all other default configurations.
6. Click **Save**.

Configure SIP Device Capabilities

The SIP Device Capabilities form allows customization of the features and options that the Mitel MiVoice System uses and accepts when communicating with the Crestron Mercury devices. To configure the SIP device capabilities, follow this procedure.

1. Navigate to **System Properties > System Feature Settings > SIP Device Capabilities**.
2. Select **SIP Device Capabilities: 10**.
3. Click **Change**.
4. Configure the **Basic** tab:

Mitel: SIP Device Capabilities: Basic Tab

The screenshot shows the Mitel MiVoice Business System configuration interface. The left sidebar contains a navigation menu with 'System Properties' and 'System Feature Settings' highlighted. The main content area displays the 'SIP Device Capabilities' form for 'Local_2'. The form is in edit mode for capability 10, with the 'Basic' tab selected. The 'SIP Device Capabilities Number' field is set to 10, and the 'Comment' field is set to 'Crestron'. The 'Call Routing and Administration Options' section includes the following settings:

Option	Value
Outbound Proxy Server	[Dropdown]
Replace System based with Device based In-Call Features	<input checked="" type="radio"/> No <input type="radio"/> Yes
Allow MWI Notifications without Subscription	<input checked="" type="radio"/> No <input type="radio"/> Yes
Enable Digit Collection In Busy Or Alerting State	<input checked="" type="radio"/> No <input type="radio"/> Yes

- a. Configure **Comment**: Provide any name. *Crestron* was used in this example.
- b. Set the **Replace System based with Device based In-Call Features**: Yes.
- c. Retain all other default configurations.

5. Configure the **SDP Options** tab:

Mitel: SIP Device Capabilities: SDP Options Tab

Basic	SDP Options	Signaling and Header Manipulation	Distinctive Ring Tones	Timers	Key Press Event
Record Information	Advanced				
Allow Device To Use Multiple Active M-Lines					<input checked="" type="radio"/> No <input type="radio"/> Yes
Allow Using UPDATE For Early Media Renegotiation					<input type="radio"/> No <input checked="" type="radio"/> Yes
AVP Only Device					<input type="radio"/> No <input checked="" type="radio"/> Yes
Enable Mitel Proprietary SDP					<input checked="" type="radio"/> No <input type="radio"/> Yes
Force sending SDP in initial Invite message					<input checked="" type="radio"/> No <input type="radio"/> Yes
Ignore SDP Answers in Provisional Responses					<input checked="" type="radio"/> No <input type="radio"/> Yes
Limit to one Offer/Answer per INVITE					<input checked="" type="radio"/> No <input type="radio"/> Yes
Prevent SDP Renegotiation If Peer Initiated Hold					<input checked="" type="radio"/> No <input type="radio"/> Yes
Prevent the Use of IP Address 0.0.0.0 in SDP Messages					<input type="radio"/> No <input checked="" type="radio"/> Yes
Renegotiate SDP To Enforce Symmetric Codec					<input type="radio"/> No <input checked="" type="radio"/> Yes
Repeat SDP Answer If Duplicate Offer Is Received					<input checked="" type="radio"/> No <input type="radio"/> Yes
Send Answer only after renegotiation is complete					<input checked="" type="radio"/> No <input type="radio"/> Yes
Suppress Use of SDP Inactive Media Streams					<input type="radio"/> No <input checked="" type="radio"/> Yes

- a. Set the **Allow Using UPDATE for Early Media Renegotiation**: Yes.
 - b. Set the **Prevent the Use of IP Address 0.0.0.0 in SDP Messages**: Yes.
 - c. Set the **Renegotiate SDP to Enforce Symmetric Codec**: Yes.
6. Retain all other default configurations.
 7. Click **Save**.

Configure Trunk Attributes

Trunk attributes must be defined for the trunk used for PSTN calls. To define a trunk attribute, follow this procedure:

1. Navigate to **Trunks > Trunk Attributes**.
2. Select **Trunk Service Number**: 10 was used in this example.
3. Click **Change**.
4. Assign the **Trunk Label**: *Crestron* was used in this example.
5. Set **Class of Service**: 10 (configured earlier) was used in this example.
6. Set **Dial In Trunks Incoming Digit Modification - Absorb**: 0 was used in this example. (The Mitel absorbs none of the incoming digits on an incoming PSTN call to reach the desired PBX extension based on the translation configured.)
7. Set **Dial In Trunks Incoming Digit Modification - Insert**: Leave blank.

Mitel: Configure Trunk Attributes

The screenshot shows the Mitel MiVoice Business web interface. The top navigation bar includes the Mitel logo, 'MiVoice Business', and system information: 'Local_2' Alarm Status: Clear, 2017-Apr-04 09:20:07. The left sidebar contains a navigation menu with 'Trunks' selected and 'Trunk Attributes' highlighted. The main content area displays 'Trunk Attributes on Local_2' with a search field and buttons for 'Change', 'Change Page', 'Change All', and 'Clear'. Below this is a table of Trunk Attributes:

ID	Service Number	Release Link Trunk	Call Recognition Service	Direct Inward Dialing Service	Class of Service	Class of Restriction	Baud Rate	Intercept Number	Trunk Label
8	No	Off	Off	1	1	300	1		
9	No	Off	Off	1	1	300	1		
10	No	Off	On	10	1	300	1		Crestron

The 'Trunk Attributes' form for Service Number 10 is shown below the table:

- Trunk Service Number: 10
- Release Link Trunk: No
- Call Recognition Service: Off
- Direct Inward Dialing Service: On
- Class of Service: 10
- Class of Restriction: 1
- Baud Rate: 300
- Intercept Number: 1
- Non-dial In Trunks Answer Point - Day: [blank]
- Non-dial In Trunks Answer Point - Night 1: [blank]
- Non-dial In Trunks Answer Point - Night 2: [blank]
- Dial In Trunks Incoming Digit Modification - Absorb: 0
- Dial In Trunks Incoming Digit Modification - Insert: [blank]
- Dial In Trunks Answer Point: [blank]
- Dial In Trunks Insert Forwarding Information: No
- Trunk Label: Crestron

Configure SIP Peer Profile

To configure the SIP peer profile, follow this procedure.

1. Navigate to **Trunks > SIP > SIP Peer Profile**.

Mitel: Add SIP Peer Profile

The screenshot displays the Mitel MiVoice Business configuration interface. The top navigation bar shows the Mitel logo, the system name 'MiVoice Business', and the node 'Local_2'. The alarm status is 'Clear' and the date/time is '2017-Apr-04 09:20:07'. The left sidebar contains a navigation menu with categories like System Settings, Hardware, and SIP. The 'SIP' category is expanded, and 'SIP Peer Profile' is selected. The main content area shows the 'SIP Peer Profile' configuration page for 'Local_2'. It includes a table with columns for Network Element, SIP Peer Profile Label, Outbound Proxy Server, CPN Restriction, Trunk Service, and Session Timer. A table row shows 'PSTN_GW' with 'Crestron' as the SIP Peer Profile Label, 'No' for CPN Restriction, and '10' for Trunk Service. Below the table, there are tabs for 'Basic', 'Call Routing', 'Calling Line ID', 'SDP Options', 'Signaling and Header Manipulation', 'Timers', and 'Key Press Event'. The 'Basic' tab is active, showing 'Outgoing DID Ranges' and 'Profile Information'. The 'Profile Information' section shows 'SIP Peer Profile Label' as 'Crestron' and 'Network Element' as 'PSTN_GW'. The 'Local Account Information' section shows 'Registration User Name'.

2. Click **Add**.

3. Configure the **Basic** tab:

Mitel: SIP Peer Profile: Basic Tab

SIP Peer Profile on **Local_2** DN to search Show form on Not Accessible Go

Add Change Delete Print... Import... Export... Data Refresh

Basic Call Routing Calling Line ID SDP Options Signaling and Header Manipulation Timers Key Press Event Outgoing DID Ranges Profile Information

SIP Peer Profile Label	Crestron
Network Element	PSTN_GW

Local Account Information

Registration User Name

Address Type	IP Address: 10.35.32.2
--------------	------------------------

Administration Options

Interconnect Restriction	1
Maximum Simultaneous Calls	100
Minimum Reserved Call Licenses	0
Outbound Proxy Server	
SMDR Tag	0
Trunk Service	10
Zone	1

Authentication Options

User Name	
Password	*****
Confirm Password	*****
Authentication Option for Incoming Calls	No Authentication
Subscription User Name	
Subscription Password	*****
Subscription Confirm Password	*****

- Enter a descriptive name for SIP Peer Profile Label: *Crestron* was used in this example.
- Select **Network Element**: *PSTN_GW* was used in this example.
- Local Account Information-Address Type**: IP Address: Select *10.35.32.2*.
- Configure **Trunk Service**: *10* (as configured earlier as Trunk Group) was used in this example.
- Retain all other default configurations.

- On the **Call Routing** tab, retain all default values.

Mitel: SIP Peer Profile: Call Routing Tab

SIP Peer Profile on **Local_2** DN to search Show form on Not Accessible Go

Add **Change** **Delete** **Print...** **Import...** **Export...** **Data Refresh**

Basic **Call Routing** Calling Line ID SDP Options Signaling and Header Manipulation Timers Key Press Event Outgoing DID Ranges Profile Information

Alternate Destination Domain Enabled	No
Alternate Destination Domain FQDN or IP Address	
Enable Special Re-invite Collision Handling	No
Only Allow Outgoing Calls	No
Private SIP Trunk	No
Reject Incoming Anonymous Calls	No
Route Call Using P-Called-Party-ID (if present)	Yes
Route Call Using To Header	No

- On the Calling Line ID tab, retain all default values.

Mitel: SIP Peer Profile: Calling Line ID Tab

SIP Peer Profile on **Local_2** DN to search Show form on Not Accessible Go

Add **Change** **Delete** **Print...** **Import...** **Export...** **Data Refresh**

Basic Call Routing **Calling Line ID** SDP Options Signaling and Header Manipulation Timers Key Press Event Outgoing DID Ranges Profile Information

Default CPN	
Default CPN Name	
CPN Restriction	No
Public Calling Party Number Passthrough	No
Strip PNI	No
Use Diverting Party Number as Calling Party Number	No
Use Original Calling Party Number If Available	No

- On the **SDP Options** tab, set **Allow Using UPDATE for Early Media Renegotiation** to **Yes**.

Mitel: SIP Peer Profile: SDP Options Tab

SIP Peer Profile on Local_2 DN to search Show form on Not Accessible Go

Add Change Delete Print... Import... Export... Data Refresh

Save Cancel

Basic Call Routing Calling Line ID **SDP Options** Signaling and Header Manipulation Timers Key Press Event Profile Information

Allow Peer To Use Multiple Active M-Lines	<input type="radio"/> No <input checked="" type="radio"/> Yes
Allow Using UPDATE For Early Media Renegotiation	<input type="radio"/> No <input checked="" type="radio"/> Yes
Avoid Signaling Hold to the Peer	<input type="radio"/> No <input checked="" type="radio"/> Yes
AVP Only Peer	<input type="radio"/> No <input checked="" type="radio"/> Yes
Enable Mitel Proprietary SDP	<input checked="" type="radio"/> No <input type="radio"/> Yes
Force sending SDP in initial Invite message	<input checked="" type="radio"/> No <input type="radio"/> Yes
Force sending SDP in initial Invite - Early Answer	<input checked="" type="radio"/> No <input type="radio"/> Yes
Ignore SDP Answers in Provisional Responses	<input checked="" type="radio"/> No <input type="radio"/> Yes
Limit to one Offer/Answer per INVITE	<input type="radio"/> No <input checked="" type="radio"/> Yes
NAT Keepalive	<input type="radio"/> No <input checked="" type="radio"/> Yes
Prevent the Use of IP Address 0.0.0.0 in SDP Messages	<input type="radio"/> No <input checked="" type="radio"/> Yes
Renegotiate SDP To Enforce Symmetric Codec	<input checked="" type="radio"/> No <input type="radio"/> Yes
Repeat SDP Answer If Duplicate Offer Is Received	<input checked="" type="radio"/> No <input type="radio"/> Yes
Restrict Audio Codec	No Restriction
RTP Packetization Rate Override	<input checked="" type="radio"/> No <input type="radio"/> Yes
RTP Packetization Rate	20ms
Special handling of Offers in 2XX responses (INVITE)	<input checked="" type="radio"/> No <input type="radio"/> Yes
Suppress Use of SDP Inactive Media Streams	<input checked="" type="radio"/> No <input type="radio"/> Yes

7. Configure the **Signaling and Header Manipulation** tab:

Mitel: SIP Peer Profile: Signaling and Header Manipulation Tab

Basic	Call Routing	Calling Line ID	SDP Options	Signaling and Header Manipulation	Timers	Key Press Event	Outgoing DID Ranges	Profile Information
Trunk Group Label								
Allow Display Update								Yes
Build Contact Using Request URI Address								No
De-register Using Contact Address not *								Yes
Disable Reliable Provisional Responses								No
Disable Use of User-Agent and Server Headers								No
Domain for Trunk Context								
E.164: Enable sending '+'								No
E.164: Add '+' if digit length > N digits								0
E.164: Do not add '+' to Emergency Called Party								No
E.164: Do not add '+' to Called Party								No
Force Max-Forward: 70 on Outgoing Calls								No
If TLS use 'sips:' Scheme								No
Ignore Incoming Loose Routing Indication								No
Include Diversion Header for EHDU								No
Multilingual Name Display								No
Only use SDP to decide 180 or 183								Yes
Prefer From Header for Caller ID								No
Require Reliable Provisional Responses on Outgoing Calls								No
Signal Privacy (if enabled) on Emergency Calls								No
Suppress Redirection Headers								No
Use Fixed Retry Time for 491								No
Use Privacy: none								No
Use P-Asserted Identity Header								Yes
Use P-Asserted Identity for Billing								No
Use P-Call-Leg-ID Header								No
Use P-Early-Media Header								No
Use P-Preferred Identity Header								No
Use Restricted Character Set For Authentication								No
Use To Address in From Header on Outgoing Calls								No
Use user=phone								No
Use user=phone for Diversion Header								No

- a. Set Allow Display Update: Yes.
- b. Set Require Reliable Provisional Responses on Outgoing Calls: No.

- Retain all other default configurations.

SIP Peer Profile Assignment by Incoming DID

This form is used to assign incoming digits from the PSTN to the Mitel. To configure a SIP peer profile assignment, follow this procedure:

- Navigate to **Trunks > SIP > SIP Peer Profile by Incoming DID**.

Mitel: SIP Peer Profile Assignment by Incoming DID

- Click **Add**.
- Configure the **Incoming DID Range**: 9722657277-9722657279 was used for this example.
- Select the **SIP Peer Profile Label**: *Crestron* was used in this example.
- Provide a **Comment** (optional): *PSTN-Crestron* was used in this example.

ARS Digit Modification Number

Digit Modification for outgoing calls on the SIP trunk to PSTN is configured to absorb or inject additional digits according to the dialing plan chosen. In the current example, one (1) digit was absorbed. To configure digit modification, follow this procedure:

- Navigate to **Call Routing > Automatic Route Selection (ARS) > ARS Digit Modification Plans**.

Mitel: ARS Digit Modification Number

2. Modify **Digit Modification Number**: 1, to absorb one digit while dialing out to PSTN.
3. Click **Save**.

ARS Routes

To configure a route for SIP trunk connectivity to PSTN, follow this procedure:

1. Navigate to **Call Routing > Automatic Route Selection (ARS) > ARS Routes**

Mitel: ARS Routes

The screenshot displays the Mitel MiVoice Business configuration interface. The left sidebar shows the navigation menu with 'ARS Routes' highlighted. The main content area shows the 'Change ARS Routes' form for 'Local_2'. The form includes the following fields:

- Route Number: 10
- Routing Medium: SIP Trunk
- Trunk Group Number: (empty)
- SIP Peer Profile: Crestron
- PBX Number / Cluster Element ID: (empty)
- COR Group Number: 1
- Digit Modification Number: 1
- Digits Before Outpulsing: (empty)
- Route Type: PSTN Access Via DPNSS
- Compression: Off

Buttons for 'Save' and 'Cancel' are visible at the bottom right of the form.

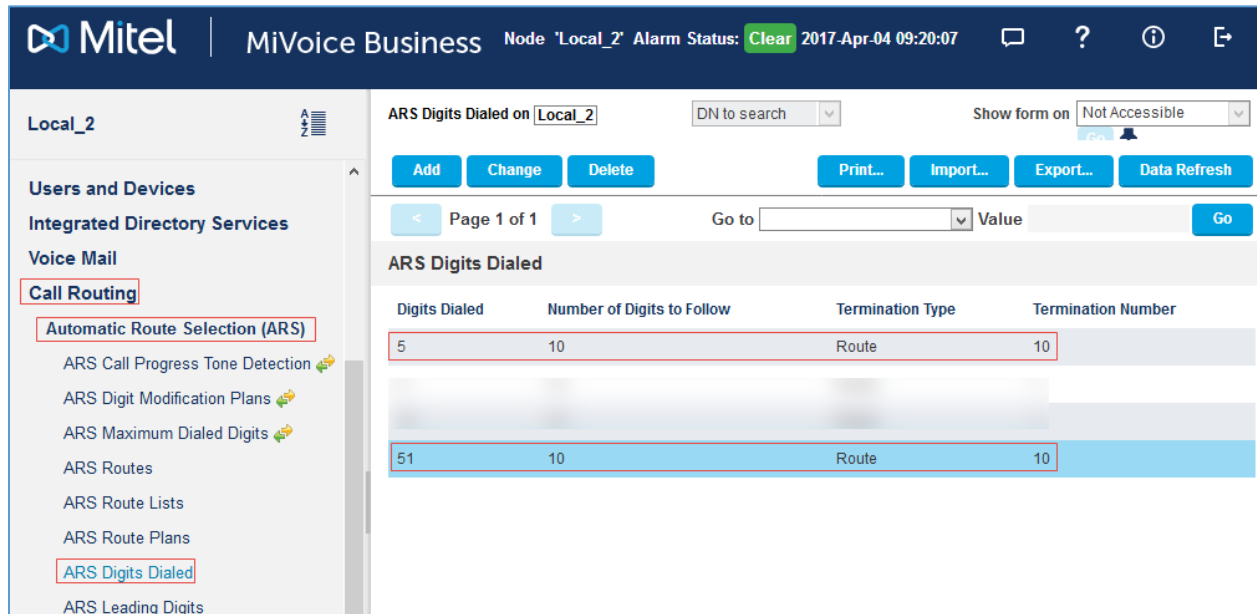
2. Select a route number that is not in use. 10 was used in this example.
3. Click **Change**.
4. Select **Routing Medium**: *SIP Trunk*.
5. Select **SIP Peer Profile**: *Crestron* was used in this example.
6. Configure **Digit Modification Number**: 1 was used in this example.
7. Choose **Route Type**: *PSTN Access Via DPNSS* was used in this example.
8. Click **Save**.

ARS Digits Dialed

ARS initiates the routing of trunk calls when certain digits are dialed from a station. In this example, the prefix 5 was used to route calls towards PSTN using the Route 10. To configure ARS digits, follow this procedure:

1. Navigate to **Call Routing > Automatic Route Selection (ARS) > ARS Digits Dialed**.

Mitel: ARS Digits Dialed



Digits Dialed	Number of Digits to Follow	Termination Type	Termination Number
5	10	Route	10
51	10	Route	10

2. Click **Add**.
3. Enter the number of records to add: *1*.
4. Configure **Digits Dialed**: *5* was used in this example.
5. Configure **Number of Digits to Follow**: *10*.
6. Configure **Termination Type**: *Route*.
7. Configure **Termination Number**: *10* was used in this example.

Similarly, another entry for starting digits *51* was added.

Configuring User for Each Device/Phone

The Crestron Mercury Device was configured as a Generic SIP phone that registers to the Mitel PBX. A user was configured for each phone and Crestron Mercury device used in the example. To configure a user, follow this procedure.

1. Navigate to **Users and Devices > User and Devices Configuration**.
2. Click **Add > Default User and Device**.
3. Configure the **User Profile** tab as follows:

Mitel: Add User: User Profile Tab

The screenshot displays the Mitel MiVoice Business configuration interface. The top navigation bar includes the Mitel logo, 'MiVoice Business', and system status information: 'Mode: Local_2 Alarm Status: Clear 2017-Apr-04 09:20:07'. The left sidebar contains a menu with 'Users and Devices' highlighted. The main content area is titled 'User and Services Configuration on Local_2' and includes an 'Add' button and 'Print...', 'Import...', 'Export...', and 'Data Refresh' buttons. A search bar is set to 'Last Name' with 'DUT1' entered. The search results list 13 matches, with 'DUT1, Mercury1' selected. The 'User Profile' tab is active, showing a form with the following fields: Last Name (DUT1), First Name (Mercury1), Department, Location, Role (dropdown), Language (English), Email, IDS-Manageable (checked), Prime Phone Service (Phone Service (5000)), Desktop Admin Access (unchecked), Login ID, Password, and Confirm Password. The 'Save Changes' and 'Cancel' buttons are visible at the top right of the form.

- Enter **Last Name:** *DUT1* was used in this example.
- Enter **First Name:** *Mercury1* was used in this example.

4. Configure the **Service Profile** tab:

Mitel: Add User: Service Profile Tab

User Profile	Service Profile	Device Details	Service Details
Access and Authentication	Phone Applications	Keys	
Number	5000		
Service Label	Phone Service		
Directory Name	DUT1,Mercury1		
Prime Name	<input checked="" type="radio"/> No <input type="radio"/> Yes		
Privacy	<input checked="" type="radio"/> No <input type="radio"/> Yes		
Hot Desking User	<input checked="" type="radio"/> No <input type="radio"/> Yes		
Device Type	Generic SIP Phone		
Service Level	Full		
Home Element	Local_2		
Secondary Element	Not Assigned		
Local-only DN	<input type="checkbox"/>		
ACD Enabled	<input type="checkbox"/>		
Single Line Phone	<input type="checkbox"/>		

- Enter Number: 5000 (available DN) was used in this example.
- Enter **Device Type**: *Generic SIP Phone* was used in this example.

5. Configure the **Service Details** tab:

Mitel: Add User: Service Details Tab

	Day	Night 1	Night 2
Class of Service	10	10	10
Class of Restriction	1	1	1
External Hot Desking Enabled	<input checked="" type="radio"/> No <input type="radio"/> Yes		
External Hot Desking Dialing Prefix			
External Hot Desking Number			
DID Service Number	9722657278		
Use DID Number for Outgoing Calls	<input checked="" type="checkbox"/>		
CPN Substitution Number	9722657278		
Billing Number			
Personal Speedcall Allocation			
Zone Assignment Method	Default		
Zone ID	1		
SIP Device Capabilities	10		
Interconnect Number	1		
Tenant Number	1		
Lock Default Configuration	<input checked="" type="radio"/> No <input type="radio"/> Yes		
Max Call History Records	0		
Non-Busy Extension	<input checked="" type="radio"/> No <input type="radio"/> Yes		
Call Coverage Service Number	1		
Call Rerouting - Day	1		
Call Rerouting - Night1	1		
Call Rerouting - Night2	1		
Call Rerouting DND Type	All		
Call Rerouting - 1st Alt.	1		
Call Rerouting - 2nd Alt.	1		

- a. Enter **Class of Service**: 10 was used in this example.
- b. Enter **DID Service Number**: 9722657278 was used in this example.

- c. **Use DID Number for Outgoing Calls:** *Checked*
 - d. Enter **SIP Device Capabilities:** *10* was used in this example.
6. Configure the **Access and Authentication** tab as follows:

Mitel: Add User: Access and Authentication Tab

User Profile	Service Profile	Device Details	Service Details	Access and Authentication
User PIN		<input type="password" value="....."/>		
Confirm User PIN		<input type="password" value="....."/>		
SIP Password		<input type="password" value="....."/>		
Confirm SIP Password		<input type="password" value="....."/>		
Wireless PIN		<input type="password"/>		
Confirm Wireless PIN		<input type="password"/>		

- a. Enter **SIP Password:** *123456* was used in this example.
 - b. **Confirm Password:** Same password as above was entered.
7. Retain all other default configurations. on all tabs.

Mitel: Add User: Device Details Tab

User Profile	Service Profile	Device Details	Service Details	Access and Authentication
Phone Applications		Keys		
PKM		<input type="text" value="None"/>		
MAC Address		<input type="text"/>		
		Cabinet	Shelf	Slot
PLID		<input type="text"/>		
		<div style="border: 1px solid red; padding: 5px;"> <p>CESID digit length varies by country. Entering an incorrect number of digits could impair the ability of emergency services to respond. Consult the local public safety authority for CESID requirements in your area before changing.</p> </div>		
CESID		<input type="text"/>		

Mitel: Add User: Phone Applications Tab

User Profile	Service Profile	Device Details	Service Details	Access and Authentication	Phone Applications
Branding Application		<input type="text"/>			
Screen Saver Application		<input type="text"/>			
HTML Infrastructure Enabled		<input checked="" type="radio"/> No <input type="radio"/> Yes			
HTML GUI Application		<input type="text"/>			
New Page Application1		<input type="text"/>			
New Page Application2		<input type="text"/>			
New Page Application3		<input type="text"/>			
Notification Application1		<input type="text"/>			
Notification Application2		<input type="text"/>			
Notification Application3		<input type="text"/>			

Mitel: Add User: Keys Tab

User Profile	Service Profile	Device Details	Service Details	Access and Authentication	Phone Applications	Keys
						<input type="button" value="Copy Keys"/> <input type="button" value="Clear All Keys"/> <input type="button" value="Clear Key"/>
Button Number	Label	Line Type	URL	Button Directory Number	Ring Type	MiXML Application Feature
> 1		Single Line	5000		Ring	Not Assigned
> 2		Not Assigned				Not Assigned
> 3		Not Assigned				Not Assigned
> 4		Not Assigned				Not Assigned
> 5		Not Assigned				Not Assigned

Similarly, another user with DN 5005 was configured for this example.

Call Forwarding Profile

Call forwarding on the devices can be configured via the Call Forwarding profile. To configure a Call Forward Always from DN 5000 to DN 5005, follow this procedure:

1. Navigate to **User and Devices > Advanced Configuration > Call Forwarding Profile**.

Mitel: Call Forwarding Profile

Local_2

Call Forwarding Profile on Local_2

DN to search

Show form on

Add Change Delete Print... Import... Export... Data Refresh

Add

Add Range Programming - Call Forwarding Profile Help

This form allows you to add one or more records.

1. Enter the number of records to add: 1

2. Define the Add Range Programming Pattern:

Field Name	Value to Add	Increment by
Number	5000	
Call Forward Type	Always	-
Forwarding Destination	5005	
Forwarding Enabled	<input type="radio"/> Off <input checked="" type="radio"/> On	-

Preview Save Cancel

2. Click **Add**.
3. Enter the number of records to add: 1
4. Configure the **Define the Add Range Programming Pattern**:
 - a. **Number**: 5000.
 - b. **Call Forward Type**: *Always* was used in this example. It can be set to *Busy Internal/External* or *No Answer Internal/External*.
 - c. **Forwarding Destination**: 5005.
 - d. **Forwarding Enabled**: *On*.
5. Click **Save**.

Ring Group

To create a ring group, follow this procedure:

1. Navigate to **Users and Devices > Group Programming > Ring Groups**.

Mitel: Add Ring Group

Change

Change Range Programming - Ring Groups [Help](#)

This form allows you to change one or more records, starting at the following record:

Ring Group	Local-only DN	Ring Group Mode	Ring Group Name	Ring Group Type	Class of Service - Day	Class of Service - Night1	Class of Service - Night2	Zone ID	Home Element
5010	False	Ring All			10	10	10	1	Local_2

1. Enter the number of records to change:

2. Define the Change Range Programming Pattern:

Field Name	Change action	Value to change
Ring Group	-	5010
Local-only DN	Change to <input type="text"/>	<input type="checkbox"/>
Ring Group Mode	Change to <input type="text"/>	Ring All
Ring Group Name	-	
Ring Group Type	Change to <input type="text"/>	<input type="text"/>
Class of Service - Day	Change to <input type="text"/>	10
Class of Service - Night1	Change to <input type="text"/>	10
Class of Service - Night2	Change to <input type="text"/>	10
Zone ID	Change to <input type="text"/>	1

2. Click **Add**.
3. Enter the number of records to add: **1**
4. Configure **Define the Add Range Programming Pattern**:
 - a. **Ring Group**: 5010 was used in this example.
 - b. **Ring Group Mode**: Ring All was used in this example.
 - c. **Class of Service -Day/-Night1/-Night2**: 10 was used in these examples.
 - d. **Zone ID**: 1 was used in this example.
 - e. Retain all other default configurations.
 - f. Click **Save**.

5. Click **Add Member**.

Mitel: Add Members to Ring Group

The screenshot shows the 'Ring Groups' configuration page. At the top, there are fields for 'Ring Groups on' (set to 'Local_2'), 'DN to search', and 'Show form on' (set to 'Not Accessible'). Below these are buttons for 'Add', 'Change', 'Copy', 'Delete', 'Print...', 'Import...', 'Export...', and 'Data Refresh'. A pagination bar shows 'Page 1 of 1' and a 'Go to' field. The main table, titled 'Ring Groups', has columns: Ring Group, Ring Group Mode, Ring Group Name, Ring Group Type, Home Element, and Secondary Element. One row is visible with '5010' in the Ring Group column, 'Ring All' in Ring Group Mode, and 'Local_2' in Home Element. Below the table is a details section for the selected ring group, showing 'Ring Group' (5010), 'Local-only DN' (False), and 'Ring Group Mode' (Ring All). At the bottom of this section are buttons for 'Add Member', 'Change Member', and 'Delete Member'. The 'Ring Group Members' section below has columns: Member Index, Number, Presence, Name, Home Element, and Secondary Element. Three members are listed: 1 (5000, Present, DUT1,Mercury1, Local_2), 2 (5002, Present, Mitel 3,Mitel3, Local_2), and 3 (5005, Present, DUT2,Mercury2, Local_2). Red boxes highlight the '5010' in the Ring Group table and the first three rows of the Ring Group Members table.

- a. Enter the number of records to add: *1*
- b. Enter **Define the Add Range Programming Pattern**:
 - i. **Number**: *5000*.
 - ii. **Presence**: *Present*.

6. Click **Save**.

Similarly add other members. For this example, 5000, 5002 and 5005 were added as members.

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Crestron Electronics, Inc.
15 Volvo Drive Rockleigh, NJ 07647
Tel: 888.CRESTRON
Fax: 201.767.7576
www.crestron.com



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