

MiVoice Business

MiVoice Business RAY BAUM'S Act Solution Deployment Guide for RedSky

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Kari's Law and RAY BAUM'S Act

In August 2019, the USA government has adopted rules for implementing two federal laws that strengthen emergency calling: Kari's Law and Section 506 of RAY BAUM'S Act.

The Multi-line Telephone Systems (MLTS) – Kari's Law and RAY BAUM'S Act 911 Direct Dialing, Notification, and Dispatchable Location Requirements is described in the following link.

<https://www.fcc.gov/mlts-911-requirements>

FAQ about RAY BAUM's Act can be found in the following link. <https://www.fcc.gov/files/mltsfaqspdf> RAY BAUM classifies devices into:

- Fixed MLTS devices - devices that connect to a single end point (e.g., a desk or office phone) and are not capable of being moved to another endpoint by the end user, although they may be capable of being moved to a different endpoint by a professional installer or network manager.
- Non-Fixed MLTS devices - devices that the end user can move from one endpoint to another without assistance.

Introduction of MIVB support for RAY BAUM'S Act Section 506 and Kari's law

MiVoice Business (MIVB), as a MLTS, implements Section 506 of RAY BAUM Act and Kari's law support in conjunction with third party Next Generation of 911 emergency services providers in the USA.

NOTE: In this document, Section 506 of RAY BAUM'S Act and Kari's law is called RAY BAUM for simplification.

For the MIVB, we have the following device categories:

- Fixed MLTS Devices - Analog Devices
- Non-Fixed MLTS devices - IP Devices, SIP Devices, softphones, all teleworkers, etc

In order to provide full support of the requirements above, the MIVB is integrated RedSky as a providers in USA and Canada.

This guide describes the integration between MIVB and RedSky Technologies E911 solutions (<https://www.redskye911.com>).

Solution: MiVB - RAY BAUM High Level Architecture with RedSky

MIVB implements RAY BAUM in conjunction with RedSky as the MiVB 911 solution alone does not satisfy the legislated requirements for RAY BAUM for all non-fixed devices.

For Kari's Law direct dialing of 911, the MIVB can be pre-configured for the direct dialing of 911 (emergency calls), without having to dial any suffix, prefix or access code. The 911 calls are sent via SIP trunk to RedSky and RedSky will redirect the call to the appropriate Public Safety Answering Points (PSAPs) based on the Civic Address of the location as identified by RedSky. Any Horizon Mobility® notification methods, including SMS, email, or Emergency On-Site Notification (EON) will meet Kari's Law. The MIVB notifications (including Mitel Revolution) provide supplemental information and are not sufficient to satisfy Kari's Law on their own.

NOTE: The MIVB solution primarily sends Location identifiers to RedSky during emergency calls. RedSky will lookup these Location identifiers to determine the Civic Address which they then use in the signaling to the PSAP. RedSky also validates the Civic Address when the location is first created in their database.

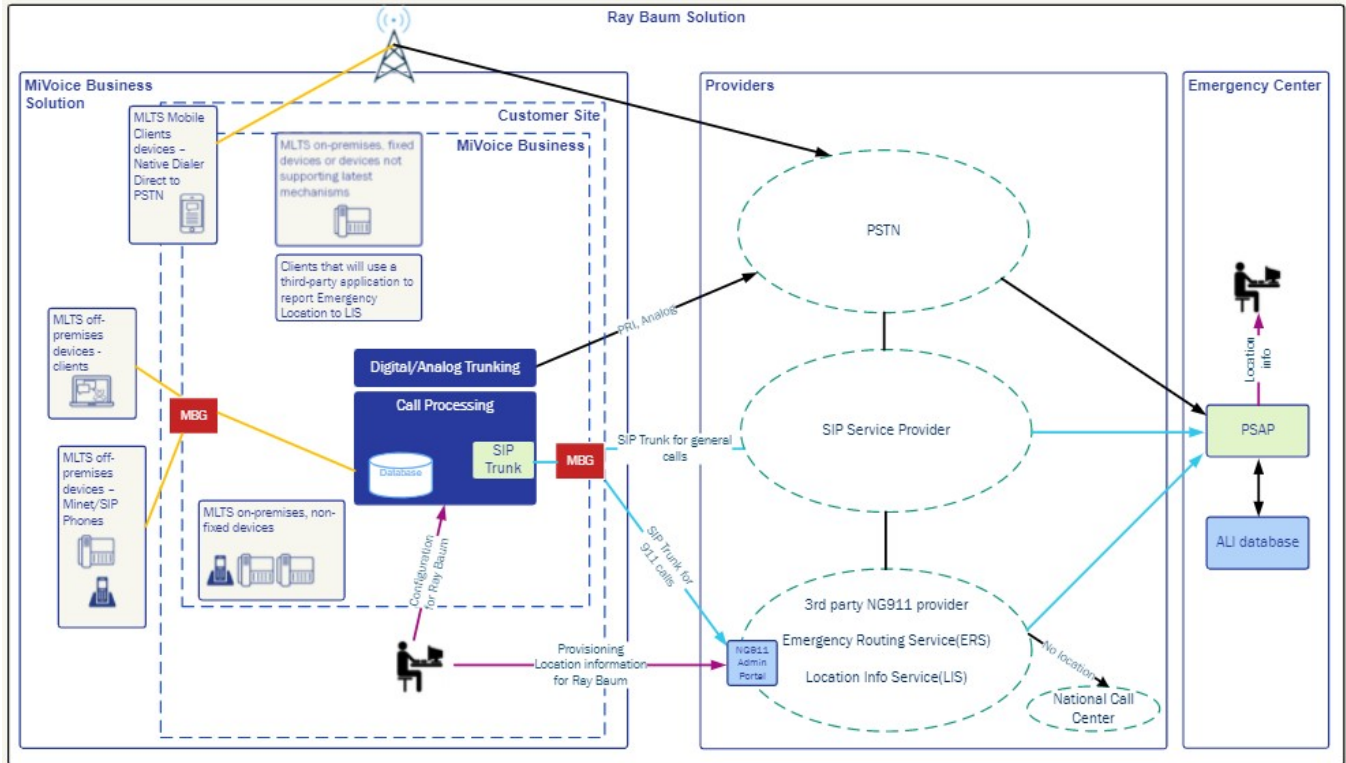
With the RAY BAUM's Act solution the Mitel MiVoice Border Gateway (MBG) is used as SBC (Session Border Controller) between MIVB and RedSky. If a customer has an existing MBG this can be upgraded to release 11.3 and used for the connection to RedSky. Additionally, the MBG can be used for Remote User (Teleworkers). Standard engineering guidelines apply.

The integration described in this guide also requires that the customer has a valid service agreement with RedSky. Please note that Mitel does not provide this service agreement directly.

RedSky does not have any integrated DID server for Emergency Callbacks. As a result the MIVB Solution with RedSky will need to use CPN and DID features of the MIVB to provide Emergency Callback support. In particular, the recommendation is to have a CPN and DID per user in order to provide emergency callback to the actual device that made the emergency call.

NOTE: While having a CPN/DID per location may suffice, the emergency callback would only be routed to a single device for that area, which may not be ideal.

The figure 1, below shows a high-level architectural view of the MIVB RAY BAUM integration with RedSky using MIVB.



The MIVB RAY BAUM solution with RedSky Solution is composed of the following components:

RedSky

- A valid commercial agreement with RedSky. Part of setting up this agreement involves:
 - Pre-authorization of the MBG(s) External Internet address with RedSky
 - Identification of the transport protocol to use with RedSky,
 - UDP on port 5060
 - TCP on port 5060
 - From this agreement, you will need to obtain the following information from RedSky:
 - i. Pre-authorization of the MBG(s) External Internet address with RedSky
 - ii. RedSky SIP Gateways - Primary and Secondary SIP Gateways using UDP/TCP (5060) or TLS 1.2+ (5061) that the MIVB/MBG will use for emergency calls. These trunks must be pre-configured and tested during the implementation and integration between the MIVB and RedSky. This can be validated by use of a 933 test number.

RedSky Horizon MobilityPortal

The main configuration portal for RedSky.

- Define Users - In particular:
 - Emergency On-Site Notification (EON) Users, required for notifications
 - Basic User/Enterprise Users, required for devices that will use the MyE911® application for location identification.
- Define Locations
- Guides to RedSky applications, in particular the RedSky Horizon User Guide, MyE911® User Guides (for Windows/Mac).

- Define the On-Premise wiremap (MAC, LLDP, BSSID, IP Ranges) for On-Premise HELD clients and On-Premise MyE911® application clients.
- Downloadable applications for:
 - MyE911® application - RedSky provided application to run along-side select softphone devices.
 - Emergency On-Site Notification application - RedSky provided application that provides a alerts/histories of emergency calls.

Organization ID - This is used by RedSky to isolate one Organization's locations from another. This information is also available in the RedSky Portal.

HELD URL - This is used by some devices to update their location directly to RedSky LIS (Location Information Server).

HELD+ Secret - This is used by RedSky to authenticate client access to the RedSky LIS. This information is also available in the RedSky Portal.

MBG

- SIP Trunking to/from RedSky
- Network Definition - MiVoice Business Systems
- Teleworker support

MiVB

- Network Elements - SIP Peer for MBG, Outbound Proxy for MBG
- Emergency ARS Dialed Digits - Going out an Emergency ARS Route using SIP Trunks to MBG.
 - include 933 for testing
- (optional) ARS Route List to support resilient routing over SIP to multiple MBGs. Each emergency call route to the MBG must be marked as Emergency.
- (optional) ARS Route List with non-emergency TDM Route. As a last resort (if both SIP Trunks to the MBGs and/or RedSky SIP Gateways are down).
- DID and CPN Substitution per device (or location) that can make 911 calls.
- SIP Peer Profile dedicated to signaling with RedSky.
- SIP Devices Capabilities - For devices SIP Devices that provide information.
- Class of Service - For devices that are going to use the MyE911 application from RedSky.
- Class of Service - For MINET teleworker devices.

MiCollab

- MiCollab Server:
 - Defining the Location Service Configuration in MiCollab Server
 - Defining the emergency numbers for the MiCollab Mobile SIP softphone (including 911 and 933)
- MiCollab Client:
 - Installing the Mitel Network Helper
 - Adding/Managing their Location

MiVB-Console

- Location Management via MyE911® application from RedSky

The Mitel MiVoice Border Gateway (MBG) is used as SBC (Session Border Controller) between MiVB and RedSky.

A SIP trunk is setup between MiVB and MBG and between MBG and RedSky.

The MiVB contains emergency identification information for select devices that is used with the overall RAY BAUM'S Act solution. More details on the supported devices and location identification is provided later in this document.

With Horizon Mobility portal is used to setup the information required to the solution to work properly, the information required depends of the provider, but some information is mandatory, for example civic address, valid DID for callback calls (10 digits), valid DID number, extension number or alternate identification of a device or a user.

The majority of devices that are supported in the MiVB portfolio are supported for RAY BAUM. The exception is off-premise 52xx and prior generation devices.

Additional MBGs are used for Remote Users (Teleworkers) using 53xx/69xx MINET, MiCollab clients and SIP Phones (6900 series).

The remainder of this document describes the additional programming requirements for RedSky. Additional steps are required for the overall solution as a whole, but are not specific to RedSky and are thus outside the scope of this document.

Solution: Requirements for MiVB - RAY BAUM Integration with RedSky

Product	Minimum SW Release	Minimum Requirements/Comments
MiVB	9.2	At least one SIP Trunk route is required, including the SIP Channel licenses for connecting to the MBG. NOTE: While, it's not the minimum requirements, it is recommended to have two MiVBs for redundancy.
MBG	11.3	Minimum 1 MBG in the solution with the appropriate SIP Trunk licenses. NOTE: While, it's not the minimum requirements, it is recommended to have two MiVBs for redundancy.
cMBG	11.1 SP1	Minimum 1 MBG in the solution with the appropriate licenses. NOTE: While, it's not the minimum requirements, it is recommended to have two MiVBs for redundancy.
MiCollab	9.4	Geo Location Support via HELD from RedSky's Location Information Server
69xx MiNET (6905, 6910, 6920, 6930, 6940, 6970)	1.7	Pop-up support (for supporting teleworker devices)
53xx MiNET (5304,5312,5320,5320e,5330e,5340e,5540 only)	6.5.1	Pop-up support (for supporting teleworker devices)
SIP DECT 6xx	8.3 SP1	Device based provisioning of a CESID that is to be sent during calls.

Product	Minimum SW Release	Minimum Requirements/Comments
IP DECT 56xx (ASCOM)	11.1.6	Device based provisioning of a CESID that is to be sent during calls.
RFP 12 Single Cell Solution	RTX V620B1	Device based provisioning of a CESID that is to be sent during calls.
5634 Wireless (ASCOM)	3.0.2	Device based provisioning to enable sending of the MAC Address of connected Wireless Base Station during calls.

Establishing a Contract with RedSky

The channel partner/customer must have an agreement with RedSky. They should be prepared with the following information:

Item	Comments
MBG(s) External IP Address	RedSky maintains an Access Control List to limit access to their SIP Gateways. The MIVB solution will require the MBG(s) External IP Addresses to be added to the Access Control List
SIP Transport Protocol	RedSky's Access Control List limits the Transport Protocol allowed for the SIP Gateway.
Buildings/Locations	The quantity of locations required to satisfy RAY BAUM's Law.
HELD Clients	These are the number of devices/subscribers that will provide Geolocation (e.g. MiCollab SIP Softphones, etc).
MyE911 ® application	The number of users/devices that will require the NG911 application (e.g. MiVB-C, MiCollab MINET Softphones, etc)
EON clients	The number of EON application installs required to satisfy Kari's Law. NOTE: RedSky also provides email/SMS notifications that do not require EON clients.

During the initial setup with RedSky the following connectivity Worksheet is typically used.

Info	
IP Address of Termination Point	MBG(s) WAN FQDN or IP Address. This is used by RedSky’s Access Control List (see below)
Transport Method	RedSky only supports a single transport protocol for their SIP Trunk, and will need to be determined at setup time.
Primary Gateway	Identifies the Primary SIP Peer for the MIVB, and SIP Trunk for the MBG.
Secondary Gateway	Identifies the Secondary SIP Peer for the MIVB, and SIP Trunk for the MBG



SIP Connectivity

Network Information:

RedSky assumes that the customer has the appropriate level of expertise required to configure their own devices. Customers are responsible for the configuration and operation of their own equipment.

1) Method of Connectivity to RedSky Lab

IP Address of Termination Point: _____
 (Public IP the SIP Invite is coming from)

Transport Method: UDP
 TCP
 TLS

2) RedSky Gateway Information

RedSky IP address / port range that the customer will connect to:

Primary Gateway
 Interface: 18.189.128.222
 primegw1.lab.e911cloud.com
 SIP Port: 5060 (TCP/UDP)
 5061 (TLS)
 RTP Port Range: 30000 – 60000

Secondary Gateway
 Interface: 3.134.4.224
 primegw2.lab.e911cloud.com
 SIP Port: 5060 (TCP/UDP)
 5061 (TLS)
 RTP Port Range: 30000 – 60000

Access Control List of the MBG Servers with RedSky

RedSky SIP Gateways will only accept calls from pre-authorized customers. For the MIVB solution, this means that customers must have RedSky pre-authorize the MBG(s) external IP/FQDN. If the RedSky SIP Gateway receives a SIP INVITE from an unknown SIP client, a "403", "Forbidden" will be sent back.

This also must include which Transport Protocol is being used (UDP vs TCP vs TLS 1.2+).

NOTE: For the MIVB solution, the MBG(s) are required to be allowed to RedSky.

Horizon Mobility Setup - RedSky Portal

The RedSky Portal is available via the web. The URL will come from the RedSky via a welcome email. For more detailed information on the use of this portal, see **Horizon Mobility® User Guide.pdf** available from RedSky.

This is the main RedSky portal for configuration of the customer’s location information. In order to program the MIVB solution you will need to:

1. Identify the Organization ID, used when setting up the MIVB SIP Peer Profile, and MiCollab

The screenshot shows the RedSky Dashboard with the following sections:

- Summary:** Administrators 3, Users 2, EON Users 0, No. of Locations 1
- Recent Issues:** MyE8T Users without Locations (2), Network Elements without Locations (2), HELD Devices with no Location (2)
- Recent Emergency Calls:**

Time	Phone Number / ID	Location
08/05/2021 03:47:10 PM	442110	8 Elk Island Crt, Kanata, ON K2M 2V3
08/05/2021 12:33:48 PM	442110	8 Elk Island Crt, Kanata, ON K2M 2V3
08/05/2021 11:37:43 AM	442130	73 Evarshen Cres, Kanata, ON K2K 2Z7
08/05/2021 11:25:51 AM	442116	37 Rue Voltaire, Gatineau, QC J93 2P2
08/05/2021 11:24:55 AM	442116	37 Rue Voltaire, Gatineau, QC J93 2P2
- License Information:**

License Type	Total
Basic User	0
Common Area	0
Enhanced Notification	0
Enterprise User	0
- Recent Events:**

Time	Event Type	Username
08/05/2021 03:47:11 PM	CALL_ROUTE_DEFAULT	Unknown
08/05/2021 03:47:11 PM	E911_CALL_MADE	Unknown
08/05/2021 03:05:05 PM	BUILDING_DELETED	kenwu@mitel.com
08/05/2021 01:50:36 PM	UNDEFINED_NETWORK_LOCATION	
08/05/2021 12:33:49 PM	CALL_ROUTE_DEFAULT	Unknown
- Recent Import Status:** Table with columns: Created, Import Type, Status. No rows found.
- IDs and Access Codes:**

Name	Value	Copy/View
HELD Company ID	[REDACTED]	[Copy/View]
HELD Secret Key	*****	[Copy/View]

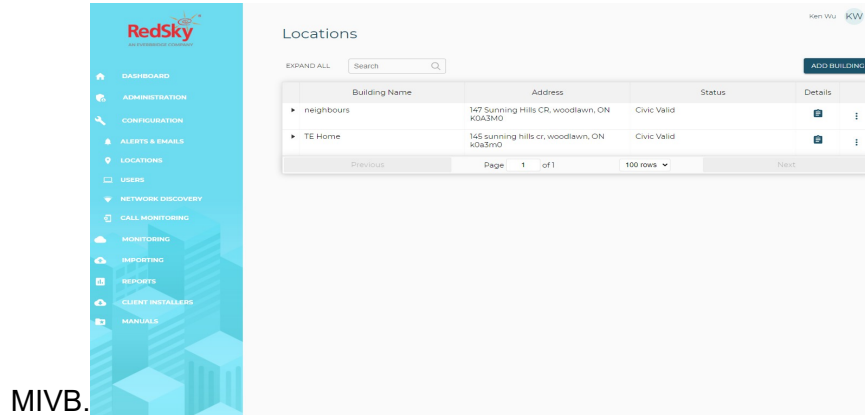
Server.

2. Identify the HELD URL and HELD credentials for your HELD enabled clients

This screenshot is identical to the one above, showing the RedSky Dashboard with the same sections and data tables.

NOTE: The HELD URL will come from RedSky via welcome email.

3. Configure Buildings/Locations with the alternate ID using the CESID from the



MIVB.

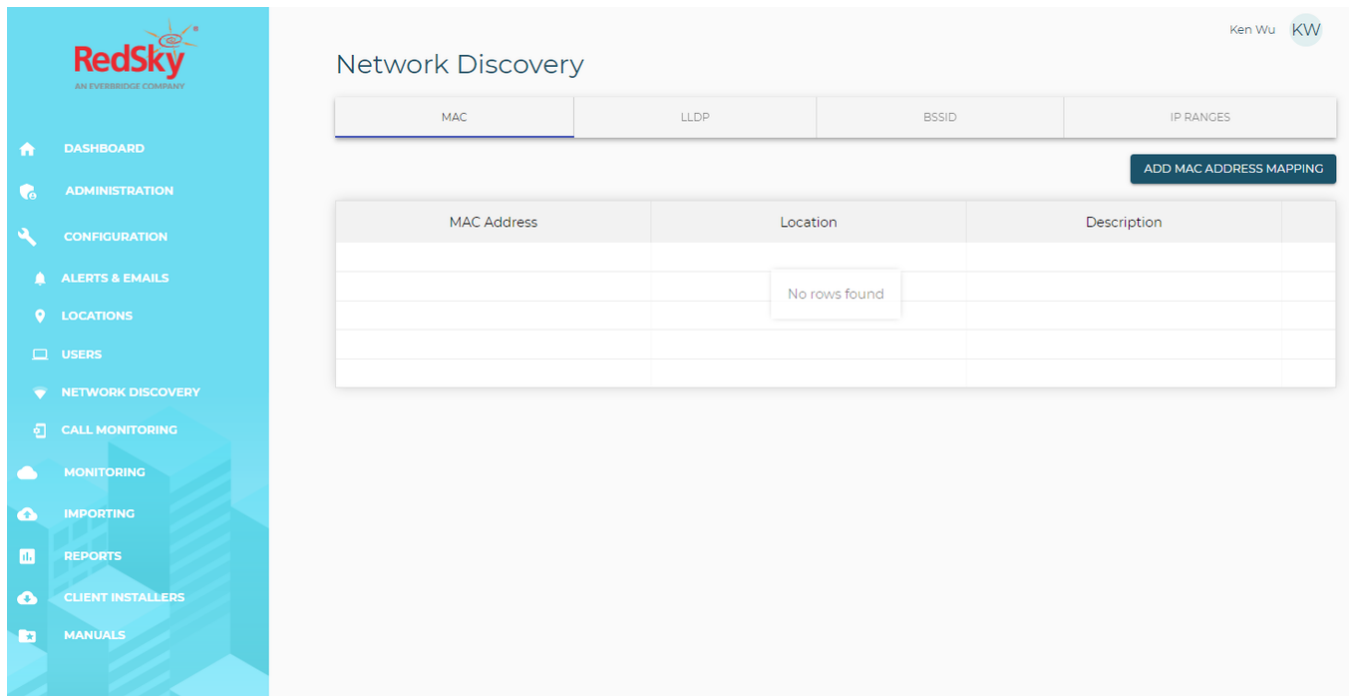
4. Configure the On-Premise wiremap via Network Discovery. This is used by On-Premise HELD and MyE911:registered: clients.

NOTE: RedSky prioritizes the Network Discovery order as: MAC, LLDP, BSSID, IP Ranges

NOTE: The IP Ranges form has two lists:

- Private IP Range - Defines the association between a location and a IP Address range (e.g. the PC's IP Address)
- Trusted IP Range - Used by RedSky as an Access Control List to only allow select devices to connect. This should be the PUBLIC address (e.g. from https://whatismyipaddress.com/).

For more information see Network Discovery Overview manual available in the RedSky portal.



5. Configure Device Users - for MyE911:registered: users (e.g. MiVB-C), and HELD users (e.g. MiCollab SIP Softphone Clients).

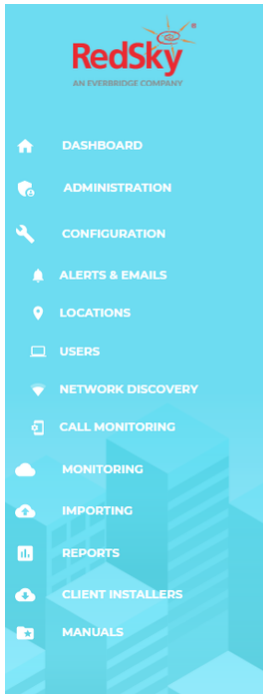
6. Configure Emergency On-Site Notifications (EON) Users

- a. Add Emergency On-Site Notifications Users - Users that can install/manage the EON client as well as receive Alerts. An EON User can only be added if you have purchased an Enhanced Notification License.
- b. Add an Alert Subscription - For Kari’s Law, you will need to create a subscription Alert Type of Emergency Call Received. Others are optional, but highly recommended. Add email and/or SMS recipients.
- c. Add an Alert Template - For Kari’s Law, the standard Emergency Call Alert Template is enough.

Subscription Name	Alert Template Name	Recipients	Subscribed Locations
test	933 Test Call Received - Fletch	tim.eagles@mitel.com	TE Home
Tracy Skinner	933 Test Call Received - Fletch	jas.chima@mitel.com, jas.chima@...	All Buildings

7. Provide Application installs/guides as needed.

Manual Name	View	Download
Administration Guide	View	Download
EON User Guide	View	Download
MyE911 for macOS User Guide	View	Download
MyE911 for Mobile User Guide	View	Download
MyE911 for Windows User Guide	View	Download
Network Discovery Overview	View	Download
Troubleshooting Guide	View	Download
User Guide	View	Download



Ken Wu KW

Client Installer Downloads

Client	Version	Release Date	OS	Size	Download	Copy Link
EON	4.5.0	May 19th 2021	Windows	281 MB		
MyE911	4.10.0	August 11th 2021	Windows	190 MB		
MyE911	4.10.0	August 11th 2021	macOS	120 MB		

Solution: How the integration works

Non-fixed devices

A non-fixed device is a device that the end user can move from one location to another without assistance.

Collecting Data

For non-fixed devices, the MiVB internal logic will check for Geo-location, BSSID, MAC address, ELIN/CESID, IP address. Additional information can be added in the MiVB database to complement the information received from the device. The additional information needs to be added in the system by the system admin.

NOTE: MiVB uses a priority order on the Emergency Info:

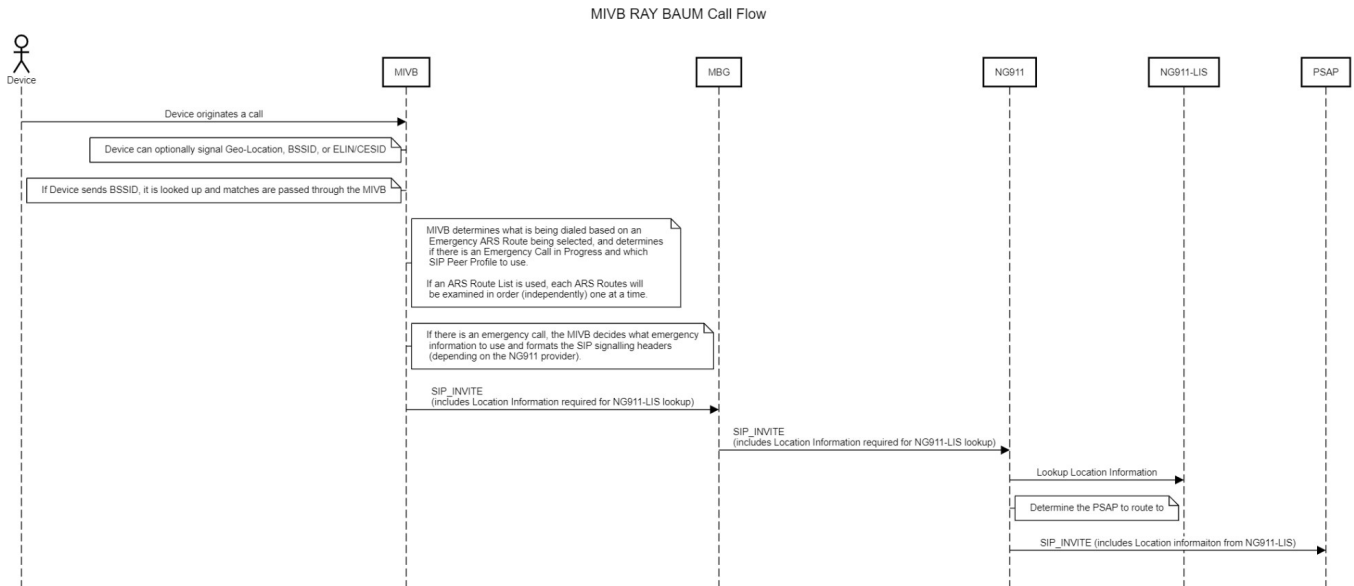
- Geolocation – provided by HELD enabled devices.
- BSSID – provided by WiFi Base Stations in the SIP INVITE (PANI header) or 200 OK
- CESID – provided by SIP DECT and IP DECT in the SIP INVITE (FROM header) or 200 OK
- L2 to CESID
- Manual/Automatic CESID
- Zone CESID
- Default CESID (should not be used as it is probably not sufficient to satisfy the US Law).

Sending data to RedSky

After MiVB has collected the information from the device side, it builds the information to be sent in the SIP trunk, including the appropriate SIP headers required by the provider (based on the SIP Peer configuration).

After that, the call is sent to MBG, which will transparently pass through the supported SIP Headers to RedSky.

To conclude the process, RedSky will validate the information received and will take the appropriate action, if data is correct the call is sent directly to the PSAP (Emergency Center). If the information is not correct, then the call is redirected to the National Call Center for further triage, note that this call has an extra cost.



NOTE: For emergency calls from Canadian locations RedSky will direct the call first through a national operator to verify the caller’s location and will transfer the call to the appropriate PSAP (with the location provided by RedSky).

Fixed devices (legacy TDM devices)

Fixed device is a device that cannot be moved to another place in the enterprise without assistance from a professional installer or network manager.

Collecting data

For fixed devices, as no information is provided by the device the MiVB will use the programmed CESID, this information needs to be added in the system by the system admin.

Sending data to RedSky

After MiVB has collected the information from the device side, it builds the information to be sent in the SIP trunk, including the appropriate SIP headers required by RedSky.

After that, the call is sent to MBG which will transparently pass through the supported SIP Headers to RedSky.

To conclude the process, RedSky will validate the information received and will take the appropriate action, if data is correct the call is sent directly to the PSAP (Emergency Center). If the information is not correct, then the call is redirected to the National Call Center for further triage

NOTE: Calls that are redirected to the National Call Center will be an extra cost to the customer.

Emergency Callback

Previously the CESID was considered a Location identifier AND a Emergency Callback Number. For the RAY BAUM enabled SIP Trunks, the MIVB will separate the two concepts:

- CESID remains the Location identifier for most devices (i.e. except Geo-Location enabled devices, and softphones that will use a RedSky provided application to provide location).
- The CPN Substitution/DID or DN of the device will be used to support Emergency Callback (required for RedSky).

RedSky does not support emergency callbacks, and requires that the PSAP route emergency calls back through the public PSTN.

Solution: MIVB Location ID Definition

The Location ID is a reference/identification used to identify a device or several devices in the MiVB that is to be sent to RedSky, and will (for the most part) be the CESID assigned to the device. The MiVB provides forms for various methods of associated a CESID:

- L2 to CESID mapping - Associates a device connected to a Layer 2 switch (either via LLDP-MED, CDP or STP) with a given CESID. This is the preferred method of associating a CESID with a device as it is based on the physical connection rather than on a logical one. However, this option requires specialized hardware, which may not be available for all devices.
- BSSID to CESID mapping - Allows a MAC Address of a Wireless Access Point (WAP) to be associated with a CESID. This allows the MiVB to find the associated MAC address. This option requires manual updating if the Wireless Access Point is moved.
- IP to CESID mapping - Allows a device in a given IP range to be associated with a CESID (by associating the IP range to a zone, and assigning a CESID to the zone). This option requires that the IP Address ranges can be sufficiently segmented to provide sufficient granularity to satisfy RAY BAUM requirements.
- CESID Assignment - Allows a device to assigned a CESID directly. NOTE: Hot Desk Users will use the CESID of the RegDN.

NOTE: Devices that support HELD will obtain their Location ID directly from RedSky, and will be sent through the MiVB, as such there doesn't need to be any Location ID programmed on the MiVB. The DN (or CPN) will be used to link the device to the location.

Devices that support sending the CESID/ELIN directly are programmed on the device, and will be sent through the MiVB, as such there doesn't need to be any Location ID programmed on the MiVB. However, the CESID must match a RedSky Location.

Devices that support MyE911:registered: application will update the location directly from the application itself, and will not need any Location ID programmed on the MiVB. The DN (or CPN) will be used to link the device to the location.

Solution: MIVB Device RAY BAUM Support Summary

The following table is a list of Supported Devices, and the available options they have for supporting RAY BAUM. Details on how to actually program each option follows later in the document.

Device	On-Premise	Off-Premise (teleworker)
69xx MINET	L2 to CESID mapping IP Address to CESID mapping	CESID Assignment
53xx MINET (5304, 5312, 5320, 5320e, 5330e, 5340e)	L2 to CESID mapping IP Address to CESID mapping	CESID Assignment
Legacy 53xx MINET (not covered above)	L2 to CESID mapping IP Address to CESID mapping	Not recommended
Legacy MINET (50xx, 51xx, 52xx), 5560 IPT, Navigator NOTE: Legacy MINET devices do not support LLDP-MED	L2 to CESID mapping IP Address to CESID mapping	Not recommended
5540	L2 to CESID mapping IP Address to CESID mapping	CESID Assignment
MiVB-C	MyE911® Application IP to CESID Mapping	MyE911
Generic SIP Device NOTE: Mitel will need to certify the solution with any Generic SIP Device.	Geo-Location CESID provided by the device BSSID to CESID Mapping IP Address to CESID mapping MyE911® Application	Geo-Location CESID provided by the device BSSID to CESID Mapping MyE911® Application
Single Cell DECT (6xx/56xx in a single node setup)	CESID provided by the device IP Address to CESID mapping	CESID provided by the Device
RFP 12 Single Cell Solution (Programmed as Generic SIP on the MiVB)	CESID provided by the device IP Address to CESID mapping	CESID provided by the device
Multi cell DECT 6xx	CESID provided by the Device	CESID provided by the Device
Multi cell DECT 56xx	CESID provided by the Device	CESID provided by the Device
5634 Wifi	BSSID to CESID Mapping	BSSID to CESID Mapping
Legacy SIP (5302, 5505, UC360, 5624)	IP Address to CESID mapping	Not recommended

Device	On-Premise	Off-Premise (teleworker)
MiCollab MINET Softphone (5020)	IP to CESID Mapping MyE911® Application	MyE911® Application
MiCollab SIP Softphone (UC Endpoint)	Geo Location	Geo Location
MiCollab Web Client	Geo Location	Geo Location
MiCollab Deskphone	Depends on the deskphone type	Depends on the deskphone type
MiCollab on Mobile	Uses Native Dialer	Uses Native Dialer
Analog	CESID Assignment	Manual CESID
SIP ATA (Analog Terminal Adaptors)	See Generic SIP	See Generic SIP
3rd Party WebRTC Client (via MBG)	See Generic SIP	See Generic SIP
WebRTC Anonymous Call (via MBG)	--	Dialing Not expected/supported. No additional location information is being sent.

Solution: MiVB functions with RAY BAUM support

Beyond the devices, the MiVB supports many functions that might be used to make an emergency 911 call, the supported MiVB functions:

MiVB Feature	Description
Multicall/Keyline	Depends on the physical device.
Auto DN Registration	Depends on the physical device type
MINET Hot Desking	Uses the CESID of the RegDN NOTE: The HDU obtains the CESID from the RegDN at login time. If the CESID of the RegDN is changed, the Hot Desk User should be logged out and logged back in.
SIP Hot Desking	Depends on the SIP Device that you are logged onto.
External Hot Desking	Will use the incoming CLI if they are proxied on a PUBLIC trunk. If they are proxied on a PRIVATE trunk, then we will use the CESID programmed against the EHDU.
MiTAI	Depends on the device that is being monitored.
MDUG/PRG	Depends on the device itself (not the MDUG/PRG Pilot). CPN/DID should be the PRG/MDUG pilot
Suites	Depends on the device itself (not the Suite) CPN/DID should be the Suite Pilot

Solution: Mitel Applications with RAY BAUM support

MiVB is integrated with different Mitel Application with RAY BAUM support. Supported applications with RAY BAUM support.

- MiVB-C - MiVoice Business Console
- MiCollab
- MBG – MiVoice Border Controller
- MiCC-B - MiContact Center Business for MiVB
- MiCC-B - MiContact Center Business for SIP
- SIP DECT
- IP DECT (Ascom) OIG (via MiTAI)
- RFP 12 Single Cell Solution

Solution: Mitel Applications without RAY BAUM support

There are some Mitel applications that does not require RAY BAUM support, they are:

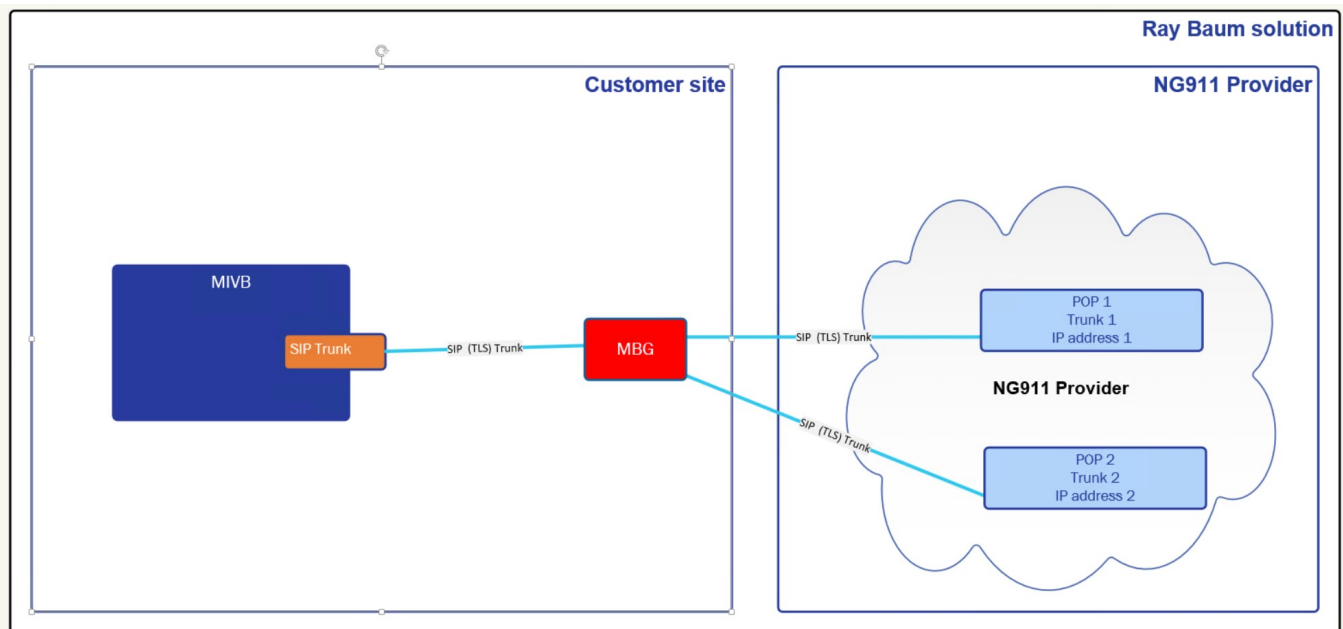
- MICAM - MiCollab Advanced Messaging
- MIR - Mitel Interaction Recording
- NPM – NuPoint Unified Messaging
- MPA - Mitel Performance Analytics
- Mitel Revolution

Solution: Deployment Diagrams

This chapter covers possible deployments setup between MiVB and RedSky.

MiVB and MBG in a customer site

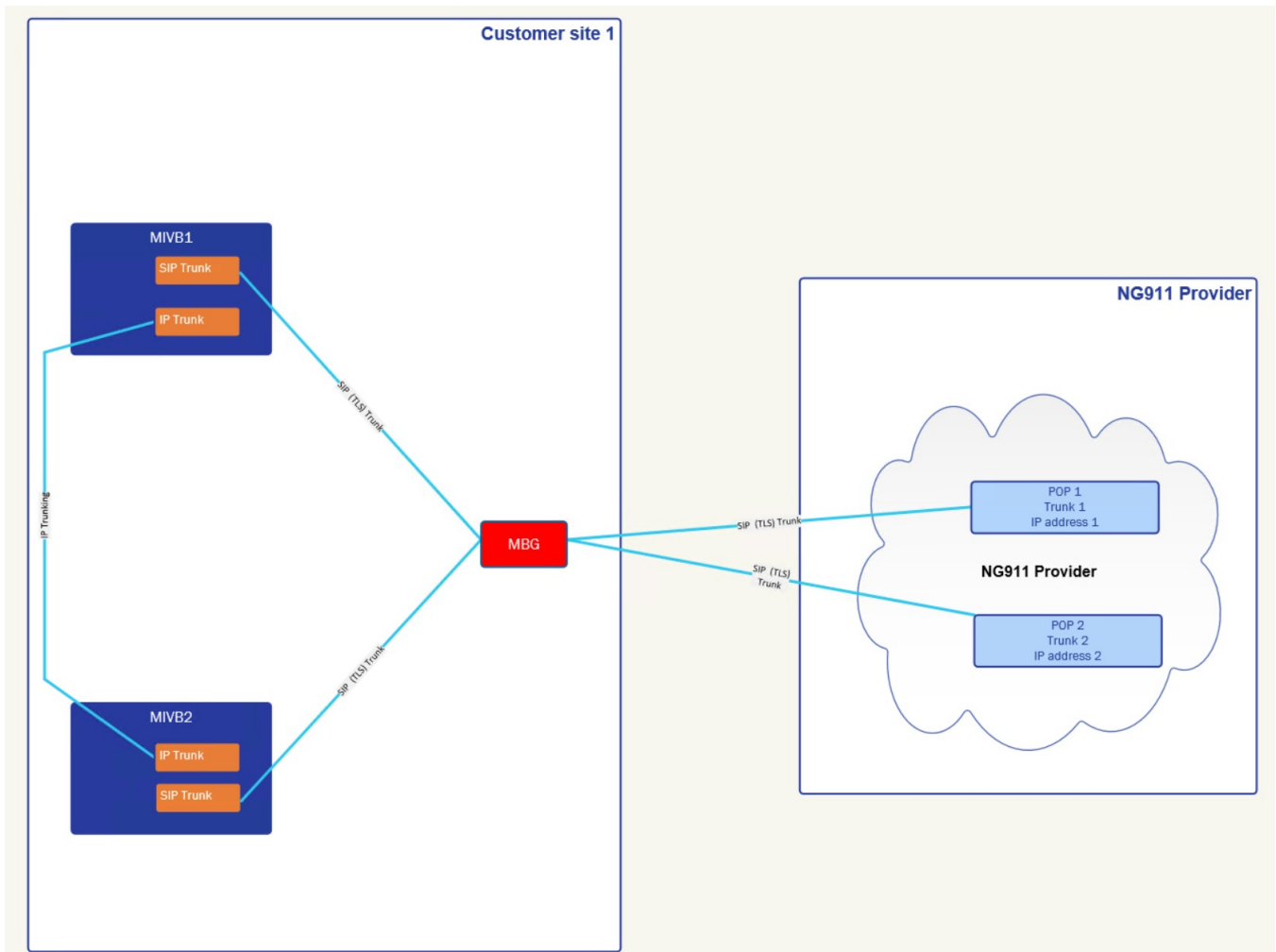
The architecture view below shows the most basic setup between MiVB and RedSky. An emergency route is setup over SIP trunk between MiVB and a single MBG, then MBG has two SIP trunks towards RedSky SIP gateways for redundancy purpose. The double SIP trunks between the customer site and RedSky are highly recommended.



Refer to MBG documentation for MBG Redundancy SIP trunk configuration.

Multiple MiVBs connected to a single MBG at a customer location

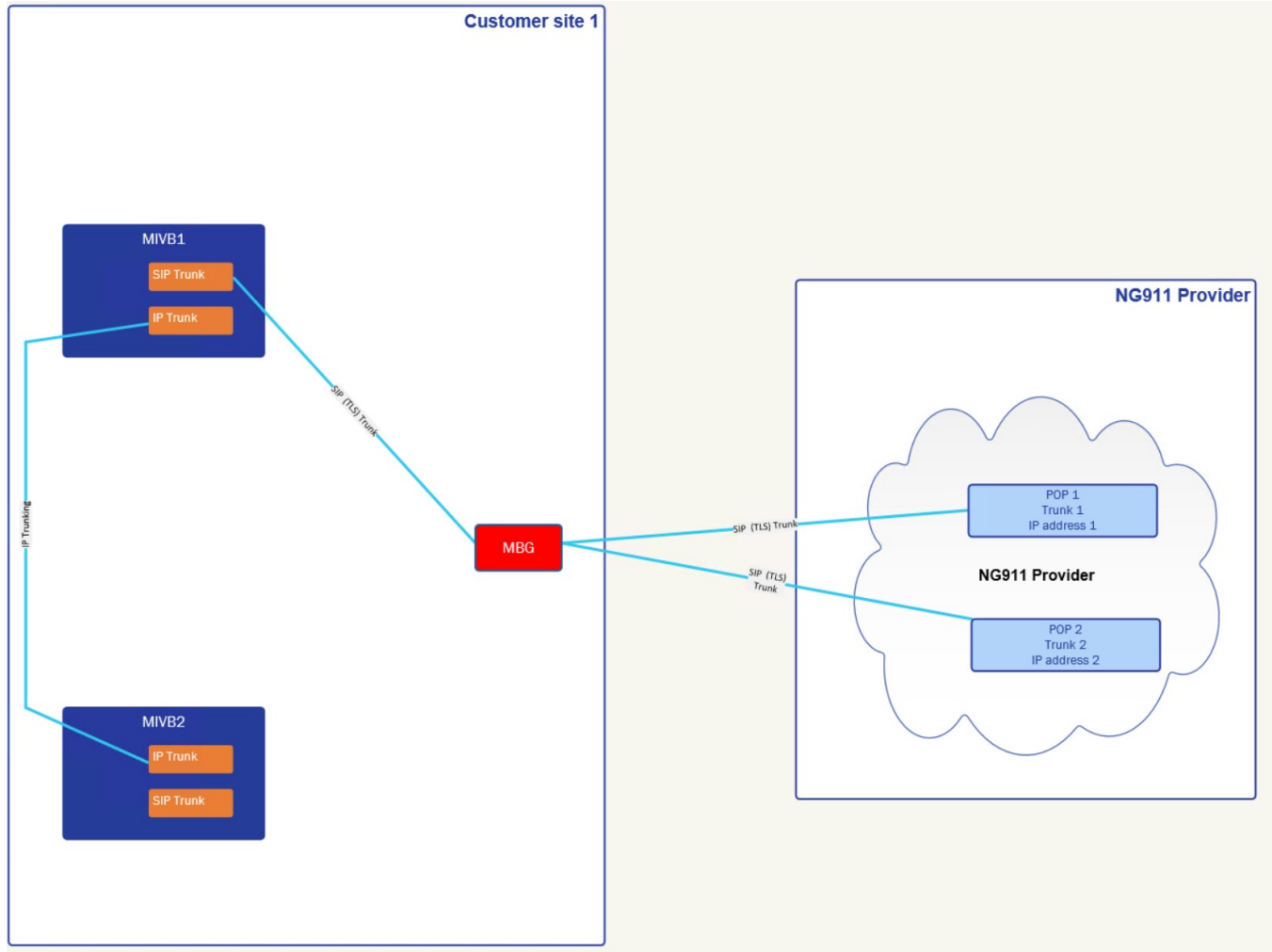
The architecture view below shows a more complicated setup between multiple MiVBs and a single MBG and RedSky. In this case, each MiVB is setup with an emergency route over SIP Trunk directly to the MBG, then MBG has two SIP trunks towards RedSky SIP gateways for redundancy purpose. The double SIP Trunks between the customer site and RedSky are highly recommended.



NOTE: In this case, a single IP Trunk between the MiVBs is all that is necessary, since every MiVB will have its own emergency route out to the MBG. This method may cost more as you will need SIP Trunk licenses from each MiVB.

Multiple MiVBs using a single MiVB as a Trunking Gateway to a single MBG in a customer site

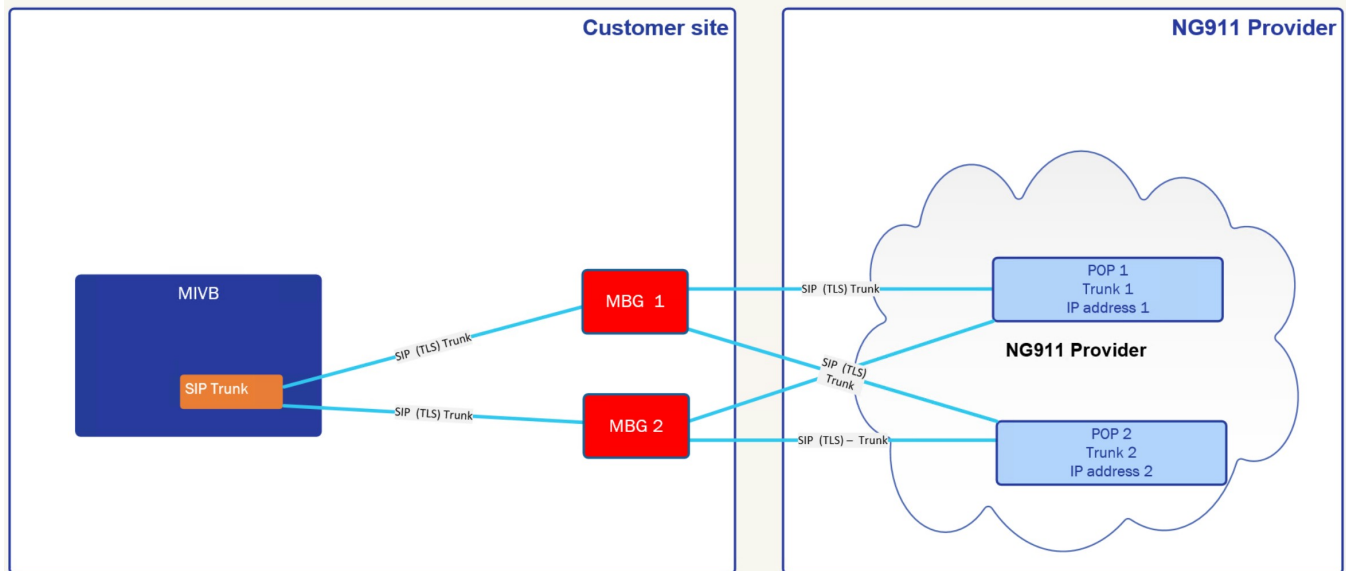
The architecture view below shows a more complicated setup between multiple MiVBs and a single MBG and RedSky that reduces the SIP Trunks (and thus licenses) required. In this case, multiple MiVB are setup with an emergency IP Trunking route to a designated MiVB setup with an emergency route over SIP Trunk directly to the MBG, then MBG has two SIP trunks towards RedSky SIP gateways for redundancy purpose. The double SIP Trunks between the customer site and RedSky are highly recommended.



NOTE: In addition to the normal IP Trunk route between MiVB1 and MiVB2, the MiVB2 will need a dedicated emergency IP Trunk route to MiVB1.

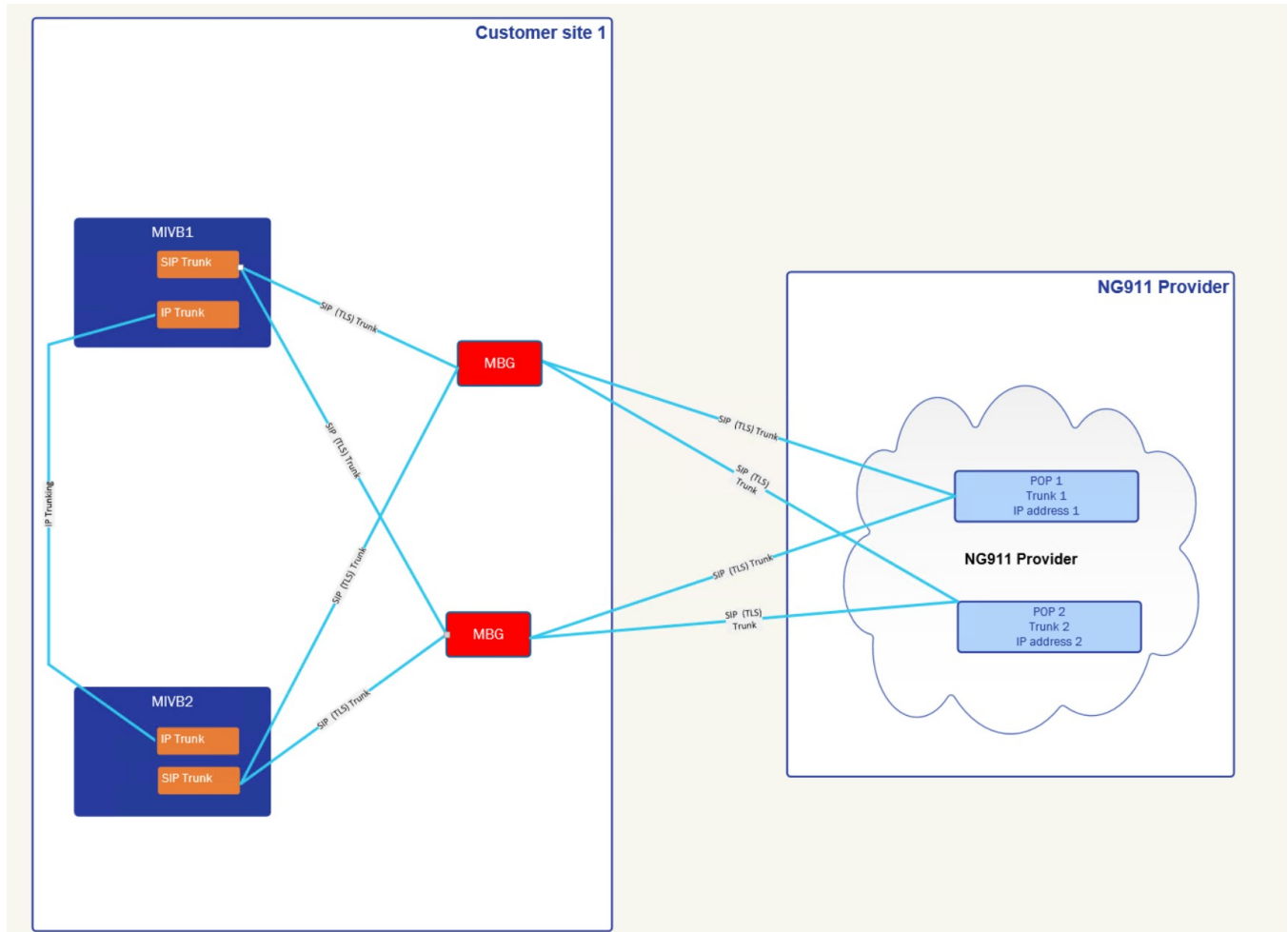
MiVB and two MBGs in a customer site

The architecture view below shows a redundant setup between MiVB and RedSky. SIP trunks are setup between MiVB and the two MBGs, then each MBG has two SIP trunks towards RedSky SIP gateways for redundancy purpose. The double SIP trunks between the customer site and RedSky are highly recommended.



Multiple MiVBs using multiple MiVB as a Trunking Gateway to a single MBG in a customer site

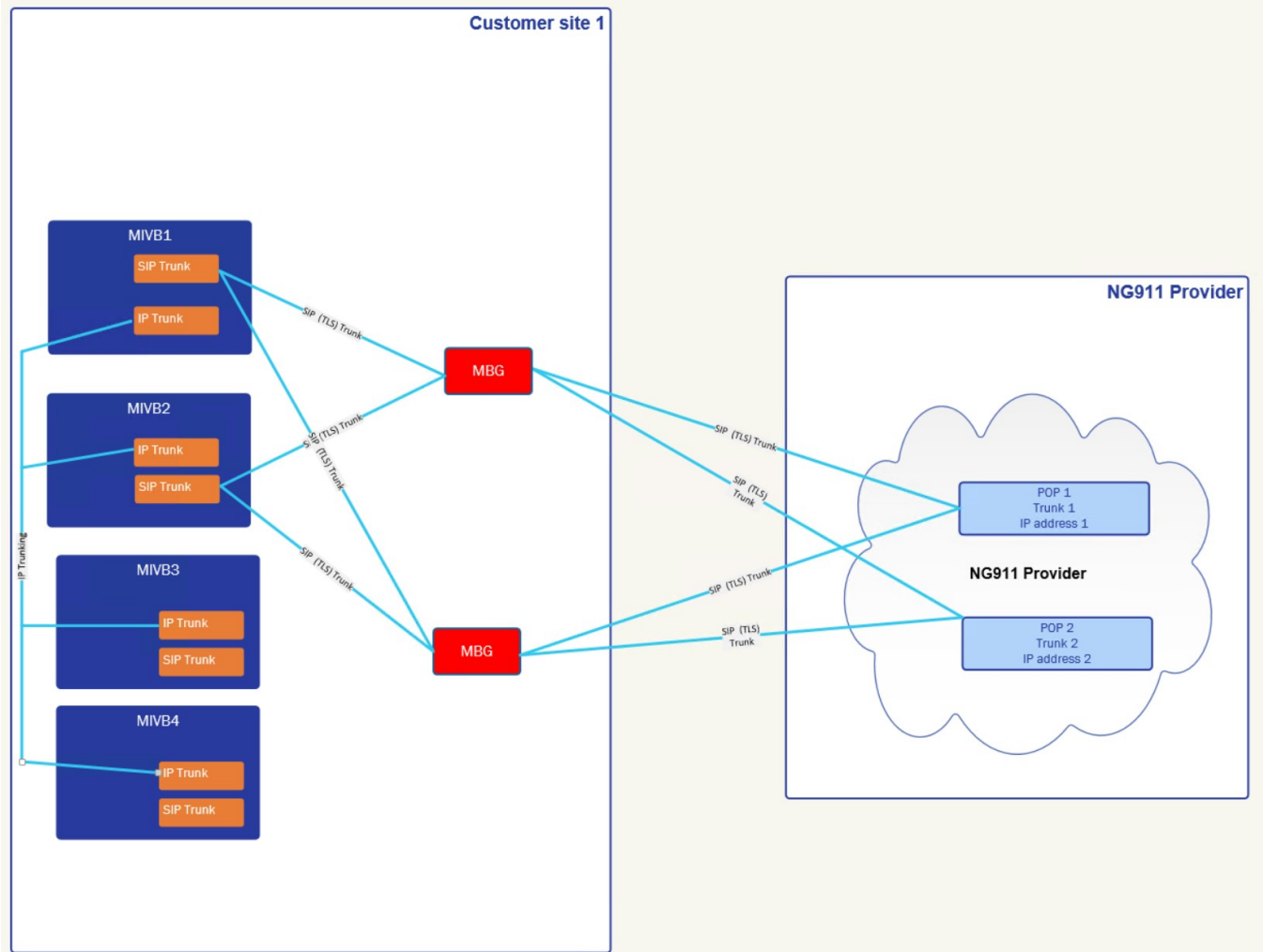
The architecture view below shows a redundant setup between multiple MiVB and multiple MBGs and RedSky. SIP trunks are setup between MiVB and the two MBGs, then each MBG has two SIP trunks towards RedSky SIP gateways for redundancy purpose. The double SIP trunks between the customer site and RedSky are highly recommended.



NOTE: In this case, a single IP Trunk between the MiVBs is all that is necessary, since every MiVB will have its own emergency route out to the MBG. This method may cost more as you will need SIP Trunk licenses from each MiVB.

Multiple MiVBs using a dedicated MiVB as gateway to two MBGs in a customer site

The architecture view below shows a more complicated setup between multiple MiVBs and a multiple MBGs and RedSky that reduces the SIP Trunks (and thus licenses) required. In this case, multiple MiVB are setup with an emergency IP Trunking route to designated MiVBs setup with an emergency route over SIP Trunk directly to the MBG, then MBG has two SIP trunks towards RedSky SIP gateways for redundancy purpose. The double SIP Trunks between the customer site and RedSky are highly recommended.



NOTE: In addition to the normal IP Trunk route between the MiVBs, non-trunking gateway MiVBs will need an emergency IP Trunk route to MiVB1 and MiVB2

Deploying Guide: MIVB SIP Trunking to RedSky using MBG as an outbound-proxy

NOTE: RedSky only supports outbound calls, and does not support inbound calls. Additional SIP Trunks may be required for general PSTN access, including emergency callback numbers.

Configure MBG definition for MIVBs

The screenshot shows the Mitel MiCollab administration interface. At the top, there is a navigation bar with the Mitel logo, 'MiCollab', and user information 'admin@gottawa.design.mitel.com' and 'Status: Minor'. A red warning banner at the top states: 'Data for application MiCollab NuPoint UM Record a Call has been restored from backup but that application is not currently installed. The system may be unstable because of this. Please install that application as soon as possible.' Below this, there is a breadcrumb trail: 'System > Network > Teleworking > SIP trunking > Remote proxy > Call recording > Troubleshooting'. A search bar is visible on the right. The main content area is titled 'ICP Information' and contains a table with the following columns: Default for MNet, Default for SIP, Name, Hostname or IP address, Type, Installer password, SIP capabilities, Indirect call recording capable, Associated connectors, Associated sets (MNet/SIP), Associated trunk rules (pri/tec), and three action icons (edit, delete, refresh). The table lists several MIVB entries with their respective IP addresses and capabilities.

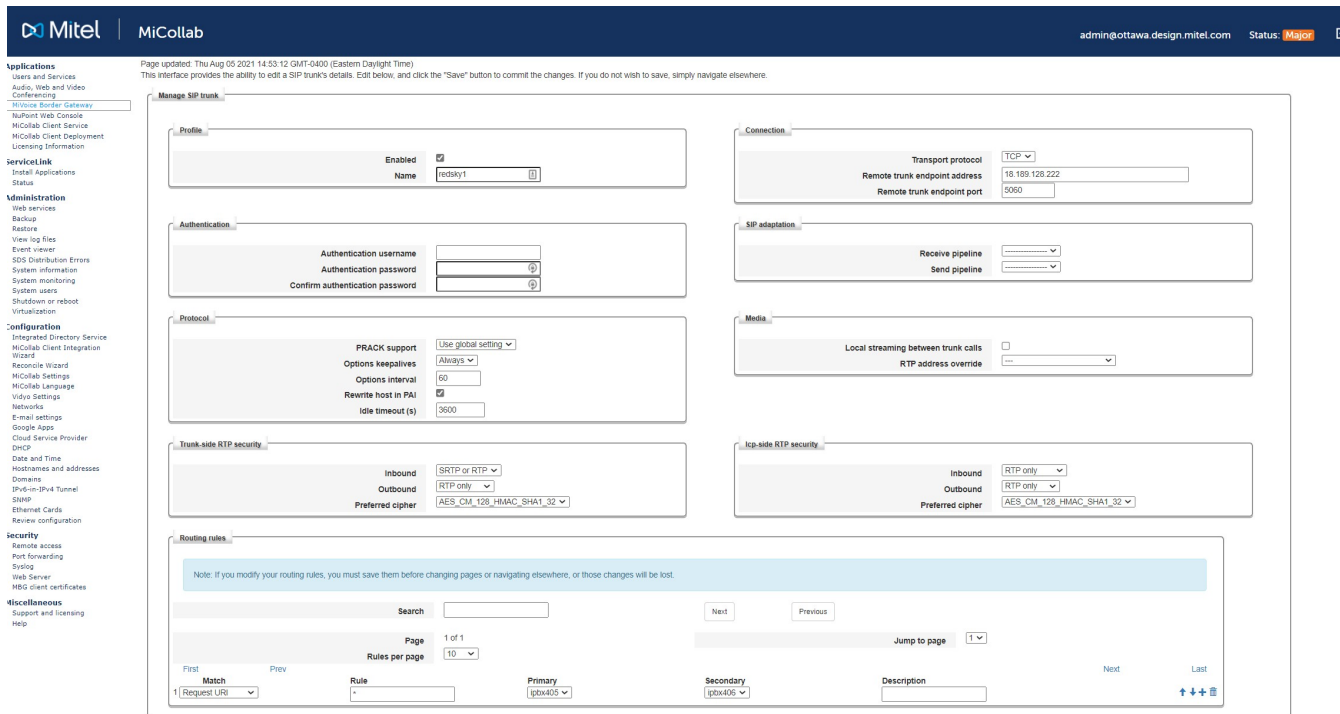
Default for MNet	Default for SIP	Name	Hostname or IP address	Type	Installer password	SIP capabilities	Indirect call recording capable	Associated connectors	Associated sets (MNet/SIP)	Associated trunk rules (pri/tec)			
<input checked="" type="radio"/>	<input checked="" type="radio"/>	ipbx405	10.34.20.106	MIVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	5/0			
<input type="radio"/>	<input type="radio"/>	ipbx406	10.46.28.73	MIVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	1/2			
<input type="radio"/>	<input type="radio"/>	ipbx408	10.38.146.20	MIVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	1/1			
<input type="radio"/>	<input type="radio"/>	ipbx418	10.35.124.97	MIVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	1/0			
<input type="radio"/>	<input type="radio"/>	ipbx441	10.40.90.41	MIVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	0/0			
<input type="radio"/>	<input type="radio"/>	ipbx465	10.38.159.200	MIVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	1/0			
<input type="radio"/>	<input type="radio"/>	ipbx470	10.38.101.70	MIVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	1/0			

At the bottom of the table, there is an 'Update default ICPs' button. Below the table, the footer text reads: 'MiCollab Border Gateway 11.3.8.20 Copyright 1999-2021 Mitel Corporation All rights reserved.'

NOTE: This doesn't have to be all MIVBs, as that would require SIP Trunk licenses on each MIVB. However, it is recommended that at least a pair of MIVBs be able to route directly to the MBG(s).

NOTE: The MBG should set the MIVB's SIP capabilities as "UDP, TCP, TLS"

Configure MBG SIP Trunking to RedSky



NOTE: Transport protocol

MBG does not support translating transport protocols to a given SIP Service provider. So, the MIVB (Network Elements for both the MBG Outbound Proxy and RedSky), MBG (MIVB + SIP Trunk), for Redsky must all use the same protocol for the given communication path.

If there is a need to support SIP Service Provider with other protocols as well, you can.

- On the MIVB create separate Outbound Proxies for each Transport Protocol (TCP, UDP, TLS) to the MBG(s).
- On the MBG define the ICP to allow all the SIP capabilities (i.e. “UDP, TCP, TLS”).
- On the MIVB create separate SIP Peer Profiles for each SIP Gateway with the appropriate Transport Protocol and corresponding Outbound Proxy.

NOTE: TLS Support (Port 5061)

When using TLS support RedSky will validate the SIP certificate used by MBG when using TLS as the Transport Protocol. By default the MBG will use a self-signed certificate which must be replaced with a publicly signed certificate using MSL --> Web Server → Configure Web Server.

Configure MIVB Trunking Gateways to use MBG as an outbound proxy to RedSky

Create an Outbound Proxy Network Element for the MBG. Separate Network Elements are required if there are multiple MBGs being used.

Change

Network Elements

Name	vMBG_TCP
Type	Outbound Proxy
FQDN or IP Address	10.46.28.70
Local	False
Version	
Zone	1
ARID	
Outbound Proxy Specific	
Outbound Proxy Transport Type	TCP
Outbound Proxy Port	5060


Save **Cancel**

NOTE: Ensure that the MBG Outbound Proxy uses the same Transport Protocol as the RedSky SIP Trunk.

NOTE: If Multiple Transport Protocols are required (i.e. for other SIP Gateways), then configure multiple outbound proxies to the same MBG for each protocol.

Create a Network Element(s) for the RedSky's SIP Gateways. Separate Network Elements are required if the RedSky provider has multiple SIP Gateways.

Add

 **Network Elements**

Name	<input type="text" value="RedSky1"/>
Type	<input style="border: 1px solid #ccc;" type="text" value="Other"/>
FQDN or IP Address	<input type="text" value="18.189.128.222"/>
Local	<input type="checkbox"/> False
Version	
Zone	<input type="text" value="1"/>
ARID	
SIP Peer	<input checked="" type="checkbox"/>
SIP Peer Specific	
SIP Peer Transport	<input style="border: 1px solid #ccc;" type="text" value="TCP"/>
SIP Peer Port	<input type="text" value="5060"/>
External SIP Proxy FQDN or IP Address	<input type="text"/>
External SIP Proxy Transport	<input style="border: 1px solid #ccc;" type="text" value="default"/>
External SIP Proxy Port	<input type="text" value="0"/>
SIP Registrar FQDN or IP Address	<input type="text"/>
SIP Registrar Transport	<input style="border: 1px solid #ccc;" type="text" value="default"/>
SIP Registrar Port	<input type="text" value="0"/>
SIP Peer Status	<input style="border: 1px solid #ccc;" type="text" value="Auto-Detect/Normal"/>

NOTE: Ensure that the MBG Outbound Proxy uses the same Transport Protocol as the RedSky SIP Trunk. Create a SIP Peer Profile for RedSky SIP Gateway(s) specifying the MBG(s) as the outbound proxy. Separate SIP Peer Profiles are required to support resilient routing to the primary and secondary RedSky SIP Gateways.

MIVB Field	Setting
User-Defined Header Name	E911-Organization-ID
User Defined Header Value	<Organization ID provided by RedSky>
Private SIP Trunk	This existing field may need to be configured to determine if we are sending Internal vs External numbers to the Vendors. The current recommendation is these trunks should always be PRIVATE. The only reason to keep PUBLIC would be if EVERY SINGLE USER and DEVICE on the MIVB has their own unique DID number.
Outbound Proxy Server	The Network Element for the MBG Outbound Proxy
Maximum Simultaneous Calls and Minimum Reserved Call Licenses	Depending how a customer has configured these values on their SIP trunks today, these may need to be modified on existing SIP Peer Profiles, not just the new ones for the Vendors. If a customer Reserved all their SIP trunks, they either need to get more licenses, use the “free” ones, or unreserve an amount they would like for emergency calls. If they have left some Unreserved, the customer may want to unreserve some more.
SIP Peer Profile Label	Mandatory. Enter an alphanumeric string up to nine characters for the SIP Peer Profile.
Network Element	Mandatory. Select the appropriate Network Element name (programmed in the Network Elements form) from the pull-down list.
Trunk Group Label	Enter the trunk group label to insert into the Contact header of SIP URIs. The "tgrp" tag is defined in RFC 4904.
Emergency Call Headers	Use E911 Headers

The screenshot shows the Mitel MiVoice Business administration interface. The left sidebar contains a navigation menu with categories like Licenses, LAN/WAN Configuration, Voice Network, System Properties, and Hardware. The main content area is titled 'SIP Peer Profile on [ipbx405]' and displays a table of SIP Peer Profiles. Below the table, there are tabs for configuration options: Basic, Call Routing, Calling Line ID, SDP Options, Signaling and Header Manipulation, Timers, Key Press Event, Outgoing DID Ranges, and Profile Information. The 'Basic' tab is active, showing fields for SIP Peer Profile Label, Network Element, Local Account Information, Administration Options, and Authentication Options.

Network Element	SIP Peer Profile Label	Outbound Proxy Server	CPN Restriction	Trunk Service	Session Timer	Zone
Vancouver	Vancouver	vMBG_UDP	No	6	90	1
pVancouver	pVancouver	vMBG_UDP	No	6	90	1

Configuration details for the 'Vancouver' profile:

- SIP Peer Profile Label: Vancouver
- Network Element: Vancouver
- Local Account Information:
 - Registration User Name: [blank]
 - Address Type: IP Address: 10.34.20.106
- Administration Options:
 - Interconnect Restriction: 1
 - Maximum Simultaneous Calls: 2000
 - Minimum Reserved Call Licenses: 0
 - Outbound Proxy Server: vMBG_UDP
 - SMDR Tag: 604
 - Trunk Service: 6
 - Zone: 1
- Authentication Options:
 - User Name: [blank]
 - Password: [blank]
 - Confirm Password: [blank]
 - Authentication Option for Incoming Calls: No Authentication
 - Subscription User Name: KPML
 - Subscription Password: [blank]
 - Subscription Confirm Password: [blank]

Define Emergency ARS Routes for each of the RedSky SIP Peer Profiles. Separate ARS Routes are required to support resilient routing to the primary and secondary RedSky SIP Gateways.

NOTE: ARS Routes are subject to COR restriction, so if you are restricting a device from calling an Emergency Route, the call will fail.

NOTE: For a full resiliency coverage, it is recommended that have at least 2 MIVB Trunking Gateways, and each should have 4 SIP Peer Profiles:

- RedSky1 using MBG1 as the outbound proxy
- RedSky1 using MBG2 as the outbound proxy
- RedSky2 using MBG1 as the outbound proxy
- RedSky2 using MBG2 as the outbound proxy.

The SIP Peers should be have a low Invite Ringing Response Timer (1-2 seconds) under the timer tab. Programming Emergency ARS Routes for each of these SIP Peer Profiles is required.

ARS Routes on ipbx406

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Route Number	Routing Medium	Trunk Group Number	SIP Peer Profile	PBX Number / Cluster Element ID	COR Group Number	Digit Modification Number	Digits Before Outpulsing	Route Type	Compression
91					1	1		Off	
92					1	1		Off	
93					1	1		Off	
94					1	1		Off	
95					1	1		Off	
96					1	1		Off	
97					1	1		Off	
98	SIP Trunk		redsky1		1	1		Emergency	Off
99	SIP Trunk		redsky2		1	1		Emergency	Off
100	SIP Trunk		Vancouver		1	1		Off	
101					1	1		Off	
102					1	1		Off	
103					1	1		Off	
104					1	1		Off	
105					1	1		Off	

Adding each of these ARS Routes to the Route List is required.

(RECOMMENDED) Define ARS Route List with the Emergency ARS Routes for the RedSky SIP Peer Profiles in order.

ARS Route Lists on ipbx406

Find a field named List Number that has a value of 99

Change Clear

List Number	1st Choice route	2nd Choice route	2nd Choice Warning Tone	3rd Choice route	3rd Choice Warning Tone	4th Choice route	4th Choice Warning Tone	5th Choice route	5th Choice Warning Tone	6th Choice route	6th Choice Warning Tone	7th Choice route	7th Choice Warning Tone	8th Choice route	8th Choice Warning Tone	9th Choice route	9th Choice Warning Tone	10th Choice route	10th Choice Warning Tone	11th Choice route	11th Choice Warning Tone	12th Choice route	12th Choice Warning Tone
99	98	99	No	100	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
100	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
101		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
102		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
103		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
104		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
105		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
106		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
107		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
108		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
109		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
110		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
111		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
112		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
113		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

NOTE: As a “last resort” non-emergency ARS routes can be added AFTER all RedSky Routes to handle a case where RedSky is completely down. These final ARS Routes in the list should be non-Emergency because the Emergency information programmed on the MIVB is incomplete, and cannot be relied upon for normal calls over the PSTN.

Define ARS Route Dialed Digits to use the previously defined ARS Route List. Ensure that 911 is dialable without any prefix or suffix digits.

NOTE: IFT/EFT sites may want to add a 933 ARS route for testing purposes.

The screenshot shows the Mitel MiVoice Business interface for configuration of 'ARS Digits Dialed' on device 'ipbx406'. The left sidebar contains a navigation menu with categories like Licenses, LAN/WAN Configuration, Voice Network, System Properties, Hardware, Trunks, Users and Devices, Integrated Directory Services, Voice Mail, and Call Routing. The main area displays a table of ARS Digits Dialed with columns: Digits Dialed, Number of Digits to Follow, Termination Type, and Termination Number.

Digits Dialed	Number of Digits to Follow	Termination Type	Termination Number
70405	Unknown	Route	5
70406	Unknown	Route	8
70418	Unknown	Route	18
70441	Unknown	Route	41
70455	Unknown	Route	65
70470	Unknown	Route	70
9	Unknown	Route	8
911	0	List	99

Configure non-Trunking Gateways to use MIVB Trunking Gateways to access RedSky

Create Emergency IP Trunking ARS Route to the MIVB Trunking Gateway, this is on top of any IP Trunking for regular calls. Separate ARS Routes are required for resilient routing to the MIVB Trunking Gateways.

The screenshot shows the Mitel MiVoice Business interface for configuration of 'ARS Routes' on device 'Local_80'. The left sidebar contains a navigation menu with categories like DID Ranges for CPN Substitution, SIP Peer Profile, SIP Peer Profile Assignment by Incoming DID, SIP Peer Profile Called Party Inward Dialing Modificat, SIP Peer Profile Calling Party Inward Dialing Modificat, SIP Peer Profile Called Party Outward Dialing Modificat, URINumber Translation, Users and Devices, Integrated Directory Services, Voice Mail, Call Routing, Automatic Route Selection (ARS), ARS Call Progress Tone Detection, ARS Digit Modification Plans, ARS Maximum Dialed Digits, ARS Routes, ARS Route Lists, ARS Route Plans, ARS Digits Dialed, ARS Leading Digits, ARS Day and Time Zones, ARS Node Identities, Call Handling, Music On Hold, Emergency Services Management, Property Management, and Maintenance and Diagnostics. The main area displays a table of ARS Routes with columns: Route Number, Routing Medium, Trunk Group Number, SIP Peer Profile, PBX Number / Cluster Element ID, COR Group Number, Digit Modification Number, Digits Before Outpulsing, Route Type, and Compression.

Route Number	Routing Medium	Trunk Group Number	SIP Peer Profile	PBX Number / Cluster Element ID	COR Group Number	Digit Modification Number	Digits Before Outpulsing	Route Type	Compression
91					1	1		Off	
92					1	1		Off	
93					1	1		Off	
94					1	1		Off	
95					1	1		Off	
96					1	1		Off	
97					1	1		Off	
98	Direct IP Route			436	65	805		Emergency	Auto
99	Direct IP Route			420	65	805		Emergency	Auto
100					1	1		Off	
101					1	1		Off	
102					1	1		Off	
103					1	1		Off	
104					1	1		Off	
105					1	1		Off	

NOTE: Direct IP Trunking is not required (IP/XNET Trunk Groups can be used, but is more finicky to program).

(Optional) Define ARS Route List. Recommended to provide resilient routing to MIVB Trunking Gateway(s).

Mitel | MiVoice Business Admin Group Alarm Status: Critical

ipbx405

ARS Route Lists on ipbx405

ARS Route Lists Search: Find a field named: List Number that has a value of: Search

Change Clear Print... Import... Export... Data Refresh

ARS Route Lists

List Number	1st Choice route	2nd Choice route	2nd Choice Warning Tone	3rd Choice route	3rd Choice Warning Tone	4th Choice route	4th Choice Warning Tone	5th Choice route	5th Choice Warning Tone	6th Choice route	6th Choice Warning Tone	7th Choice route	7th Choice Warning Tone	8th Choice route	8th Choice Warning Tone	9th Choice route	9th Choice Warning Tone	10th Choice route	10th Choice Warning Tone	11th Choice route	11th Choice Warning Tone	12th Choice route	12th Choice Warning Tone	13th Choice route	13th Choice Warning Tone
1	98	99	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
2			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
3			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
4			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
5			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
6			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
7			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
8			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
9			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
10			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

Define ARS Route Dialed Digits to use the previously defined ARS Route List.

Mitel | MiVoice Business Admin Group Alarm Status: Critical

ipbx405

ARS Digits Dialed on ipbx405

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

Page 1 of 1 Go to Value Go

ARS Digits Dialed

Digits Dialed	Number of Digits to Follow	Termination Type	Termination Number
70406	Unknown	Route	6
70408	Unknown	Route	8
70418	Unknown	Route	18
70441	Unknown	Route	41
70465	Unknown	Route	65
70470	Unknown	Route	70
9	Unknown	Route	8
911	0	List	1
96	Unknown	Route	21
98470	Unknown	Route	70
99	Unknown	Route	20

Deployment Guide: Emergency Callbacks

RedSky provides outgoing SIP Trunk support only (i.e. MIVB to MBG to RedSky to PSAP only). In order to provide Emergency Callback support, the PSAP must callback via the public PSTN Network. As a result, for RedSky, we require CPN Substitution and matching DID to be programmed based on their customer needs.

- CPN Substitution is used to identify the Calling Party Number, and will be used as the Emergency Callback number when using RedSky. NOTE: The same CPN will be used for non-emergency and emergency calls.

NOTE: The CESID would still replace the CPN substitution number for emergency calls going over a SIP Peer with the Emergency Call Header set to CESID in From, [and PAI] or Allow Privacy, CESID in PAI.

- The DID number is used by the MIVB to route an incoming call based on the Digits Dialed.

For a proper callback to occur the CPN sent to RedSky must be routable back to the MIVB where we will match the called digits to the DID number and route the call to the programmed destination. It is recommended to have a unique CPN/DID for each Device/User to ensure that the emergency callback is routed back to the device/user that originated the emergency call.

On the MIVB, program the CPN Substitution for the device

The screenshot shows the Mitel MIVoice Business administration interface. The main content area displays 'Associated Directory Numbers on Ipbx406'. Below the search bar, there are buttons for 'Add', 'Change', 'Change Page', 'Change All', and 'Delete'. A table lists the associated directory numbers with columns for Directory Number, Associated Type, Associated Number, and Billing Number.

Directory Number	Associated Type	Associated Number	Billing Number
4062940	CPN Substitution	5554444	
4054201	CPN Substitution	5555	
4055000	CPN Substitution	5555001	
4062000	CPN Substitution	4062930	
4062920	CPN Substitution	6662222	
4062930	CPN Substitution	6663333	

On the MIVB, program the DID for the device.

The screenshot shows the Mitel MiVoice Business interface. The top header includes the Mitel logo, 'MiVoice Business', and an 'Admin Group Alarm Status: Critical' indicator. The main content area is titled 'Direct Inward Dialing Service on ipbx406'. Below this, there is a search section with a dropdown menu for 'Search DN' and a search button. A search criteria field is visible: 'Find a field named: [Primary Node Id (PNI)] that has a value of: [] Search'. Below the search section are buttons for 'Add', 'Change', 'Delete', 'Print...', 'Import...', 'Export...', and 'Data Refresh'. A table titled 'Direct Inward Dialing Service' contains the following data:

DID Number	Primary Node Id (PNI)	Destination Number	DID Type
1111			Standard DID
4444	613	4052940	Standard DID
6135925660	613	4055100	Standard DID
6666	613	4185001	Standard DID
4058500	613	5998500	Standard DID

The left sidebar contains a navigation menu with categories such as Licenses, LAN/WAN Configuration, Voice Network, System Properties, Hardware, Trunks, Users and Devices, Integrated Directory Services, Voice Mail, Call Routing, Automatic Route Selection (ARS), Call Handling, Business Schedules, Interconnect Restriction, Intercept Handling, Call Coverage Services, Dial Out of Queue Lists, Call Rerouting Always Alternatives, Call Rerouting First Alternatives, Call Rerouting Second Alternatives, Call Rerouting, Call Park, Direct Inward Dialing Service, Caller Based Routing Service, Music On Hold, Emergency Services Management, Property Management, and Maintenance and Diagnostics. A 'MiWalkThru' button is located in the bottom right corner of the interface.

NOTE: Since the MiVB RedSky solution requires using the CPN Substitution number for Emergency Call-back, the MIVB Emergency DID Routing feature should be disabled in the Shared System Options form. The Emergency DID Routing feature uses the CESID the Emergency Callback, which is not what we want.

NOTE: If Direct Inward Dialing Service is used, the Trunk Attributes for the incoming trunk must have Direct Inward Dialing Service enabled.

Deployment Guide - Defining Locations

The MIVB RedSky solution requires that the administrator define buildings/locations as required in the RedSky Portal. These locations (Location Identification Type = alternate ID) will be typically linked to a MIVB CESID.

NOTE: The administrator is responsible for ensuring that the MIVB programming aligns with the RedSky programming.

Deployment Guide - Defining On-Premise wiremaps

The MIVB RedSky solution for On-Premise HELD clients (e.g. MiCollab SIP Softphone, etc) and MyE911® clients (e.g. MIVB-C, MiCollab MINET Softphones, etc) will use RedSky's Network Discovery configuration to identify their location.

- MAC Address - Used to associate a location to a device based on MAC Address
- LLDP - Used to associated a location to a device based on wired connectivity to a L2 network switch.
- BSSID - Used to associated a location to a device based on the MAC address of a Wireless Access Point.
- IP Ranges - Used to associate a location to a device based on IP Address configuration.


Deployment Guide - Device Overview

Basically this boils down to 3 different configuration models, depending on the device and it's location. Which devices uses which specific configuration model is detailed later in the document.

Devices that use CESID (e.g. 69xx, Single Cell DECT, 5623 Wireless, etc.)

Step 1: If required add a new building in the RedSky Portal.

Add Building
CLOSE

*Name 

*Address

[Alternate Address View](#)

Supplemental Information

Override Organization Name

SAVE

NOTE: When **Override Organization Name** is enabled, users can provide a different name for the building or additional information that will be shown at the public safety answering point (PSAP) when a 911 call is placed from any of its locations. The Organization Administrator can change the Name, Address, Supplemental Information, and the Organization Name Override value.

Step 2: Add a Location in the RedSky Portal.

RedSky Device User ID Field	Notes
Identification Type	Use Alternate ID
Alternate ID	CESID from the MIVB/device

RedSky Device User ID Field	Notes
Location Information	Description of location (e.g. Room/Floor/Apt/Suite).

Add Location
CLOSE

i Identification Type:
 Phone Number
 Alternate ID

*Name

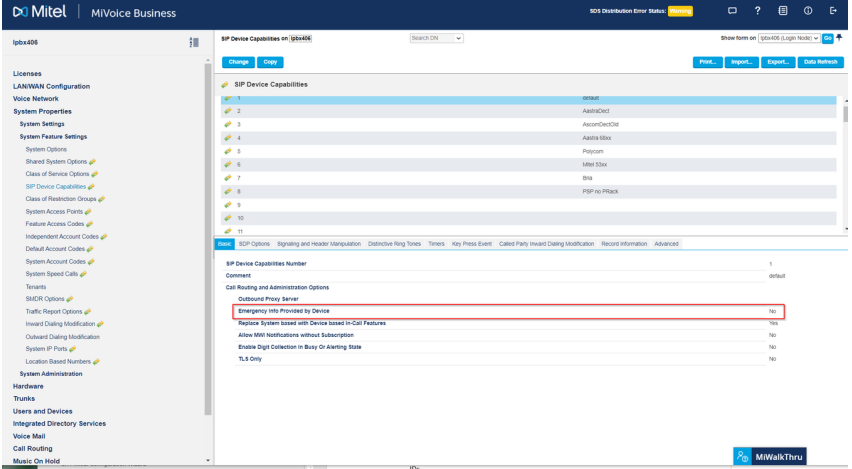
Phone Number

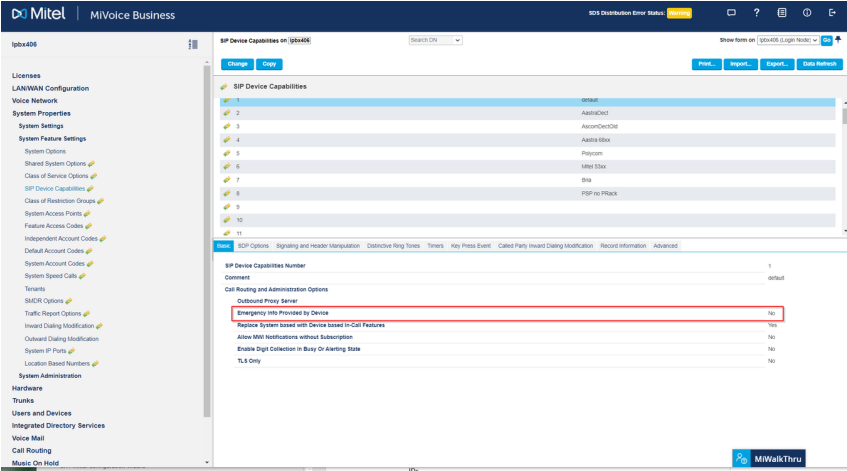
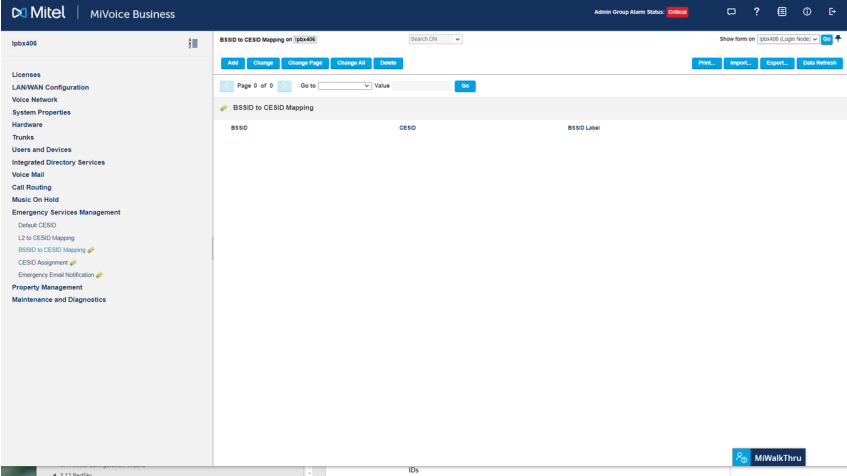
Location Information i

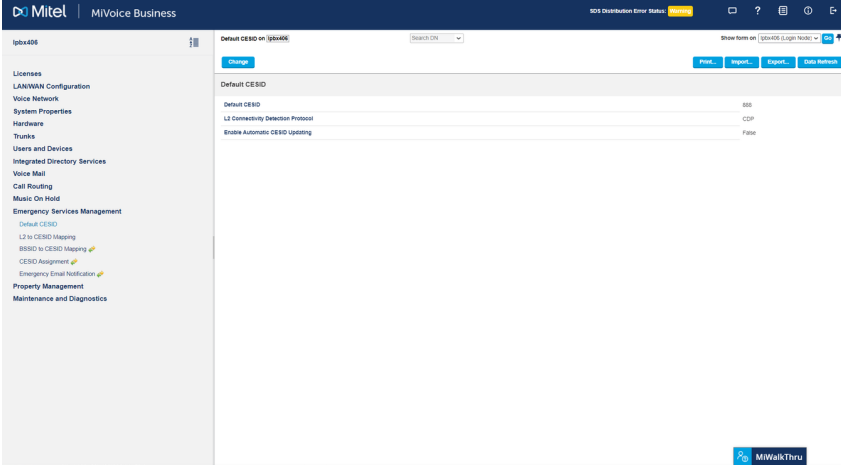
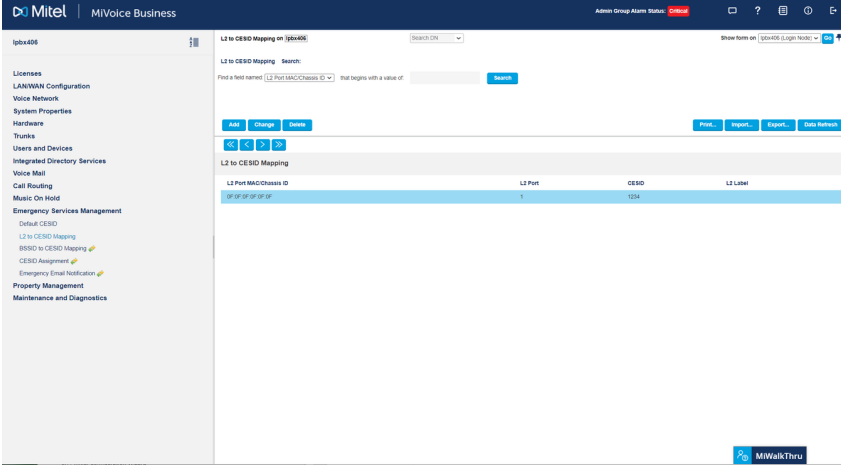
Override Organization Name

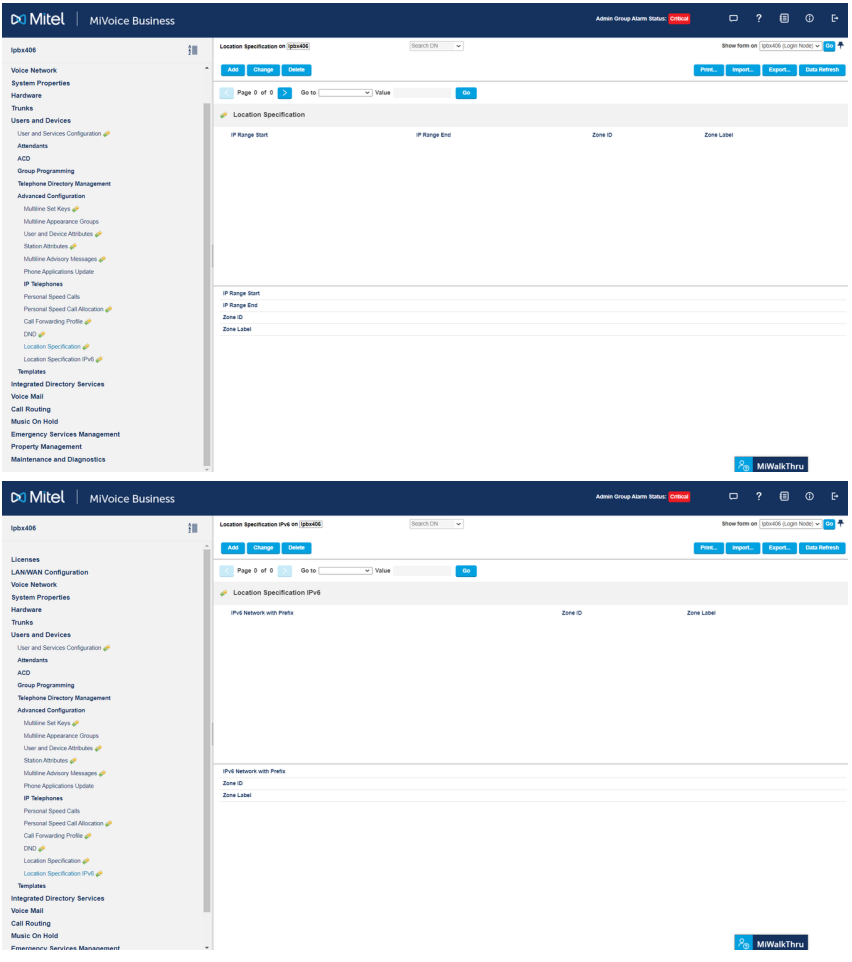
HTML Link URL

Step 3: Program the CESID information in the MIVB.

CESID Alternatives	Configuration Steps
<p>CESID sent by the device (limited to SIP devices)</p>	<p>Program the CESID on the SIP device. NOTE: Configuration will depend on the device type. On the MIVB, enable Emergency Info Provided by Device in the SIP Device Capabilities</p> 

CESID Alternatives	Configuration Steps
<p>BSSID to CESID Mapping (limited to 5634)</p>	<p>On the 5634 device, enable the MAC Address of the Wireless Access Point to be sent on all calls.</p> <p>NOTE: Configuration will depend on the device type.</p> <p>On the MIVB, enable Emergency Info Provided by Device in the SIP Device Capabilities.</p>  <p>On the MIVB program the BSSID to CESID Mapping</p> 

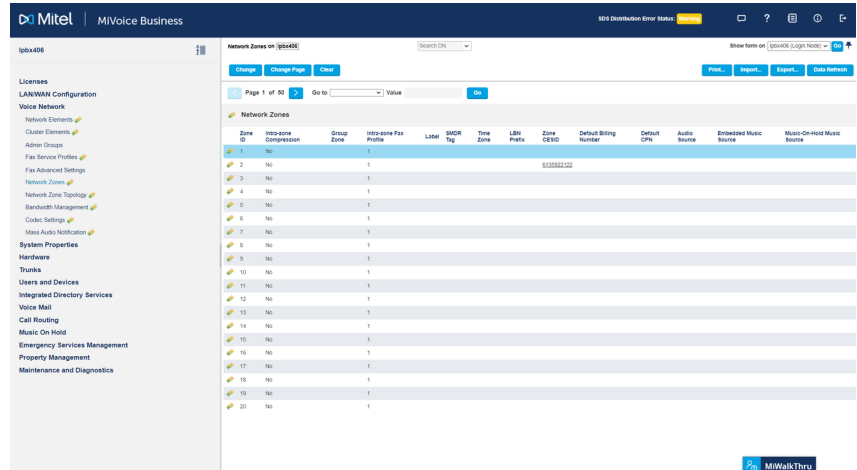
CESID Alternatives	Configuration Steps
<p>L2 to CESID Mapping (limited to MINET sets)</p>	<p>On the MIVB, configure the L2 Connectivity Detection Protocol in the Default CESID form. The available options are STP, CDP, or LLDP.</p> <p>NOTE: Not all MINET devices support LLDP</p>  <p>On the MIVB, configure the L2 to CESID Mapping</p>  <p>NOTE: The MIVB only supports one device per L2 Port.</p>

CESID Alternatives	Configuration Steps
<p>IP to CESID Mapping</p>	<p>On the MIVB, define the IP Address range to Zone ID in either the “Location Specification” or “Location Specific IPv6” form.</p>  <p>The top screenshot shows the 'Location Specification' form in the MIVoice Business interface. The form has a table with columns for 'IP Range Start', 'IP Range End', 'Zone ID', and 'Zone Label'. Below the table are input fields for 'IP Range Start', 'IP Range End', 'Zone ID', and 'Zone Label'. The bottom screenshot shows the 'Location Specification IPv6' form, which has a table with columns for 'IPv6 Network with Prefix', 'Zone ID', and 'Zone Label'. Below the table are input fields for 'IPv6 Network with Prefix', 'Zone ID', and 'Zone Label'.</p>

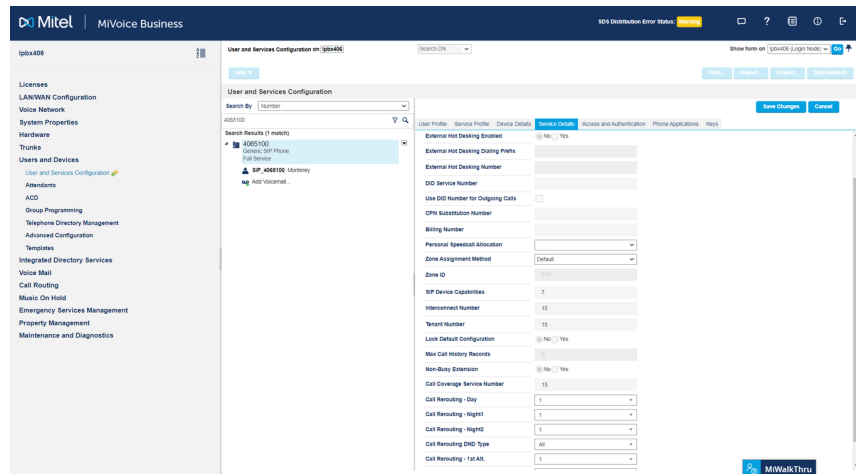
CESID Alternatives

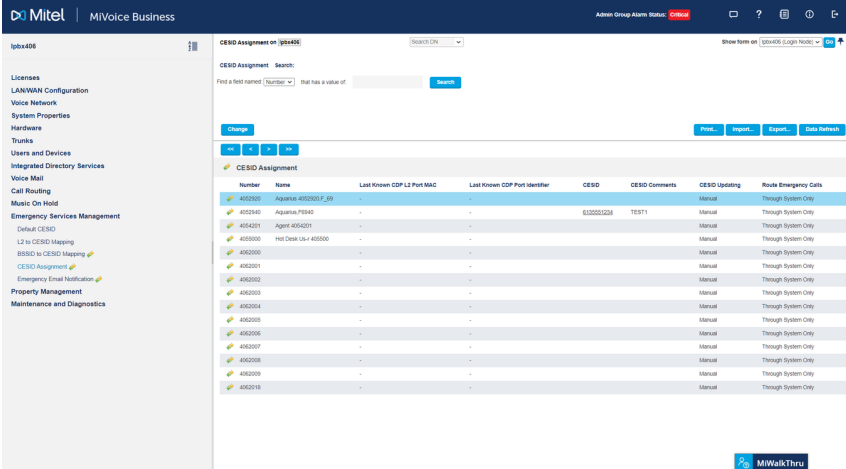
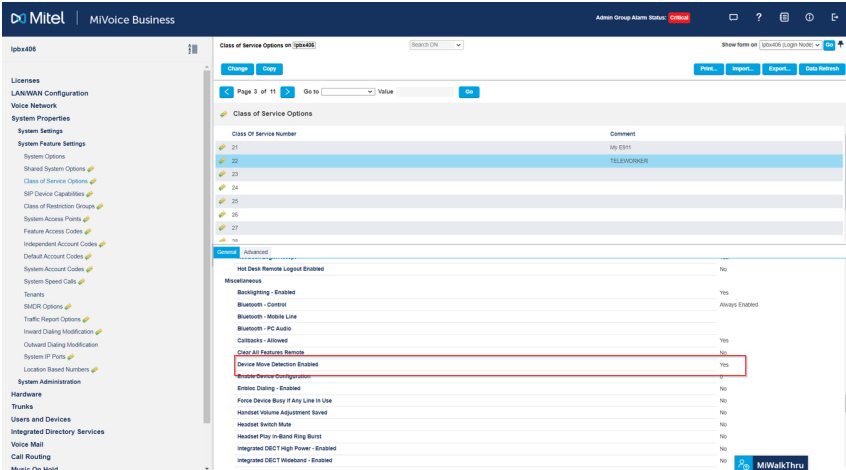
Configuration Steps

On the MIVB, configure the CESID against the Zone in the Network Zones form.



On the MIVB, set the Zone Assignment to Default for the device.



CESID Alternatives	Configuration Steps
<p>CESID Assignment</p>	<p>On the MIVB, program the CESID against the device.</p>  <p>Some Off-Premise MINET devices (e.g. select 53xx, 69xx) will also need to enable the Device Move Detection Class of Service Option</p> 

Step 4: On the MIVB, program the CPN Substitution for the device

The screenshot shows the Mitel MIVoice Business interface for device 'Ipbx406'. The left sidebar contains a navigation menu with categories like Licenses, LAN/WAN Configuration, Voice Network, System Properties, Hardware, Trunks, Users and Devices, Attendants, ACD, Group Programming, Telephone Directory Management, Advanced Configuration, Templates, Integrated Directory Services, Voice Mail, Call Routing, and Music On Hold. The main content area is titled 'Associated Directory Numbers on Ipbx406'. It features a search bar, a 'Show form on' dropdown set to 'Ipbx406 (Login Node)', and buttons for 'Add', 'Change', 'Change Page', 'Change All', 'Delete', 'Print...', 'Import...', 'Export...', and 'Data Refresh'. Below this is a table with the following data:

Directory Number	Associated Type	Associated Number	Billing Number
4052940	CPN Substitution	5554444	
4054201	CPN Substitution	5555	
4055000	CPN Substitution	5555001	
4062000	CPN Substitution	4062930	
4062920	CPN Substitution	6662222	
4062930	CPN Substitution	6663333	
4066250	CPN Substitution	6135551234	

Step 5: On the MIVB, program the DID for the device.

The screenshot shows the Mitel MIVoice Business interface for device 'Ipbx406' under the 'Direct Inward Dialing Service' section. The left sidebar is similar to the previous screenshot but includes 'Call Routing' and 'Emergency Services Management'. The main content area is titled 'Direct Inward Dialing Service on Ipbx406'. It includes a search bar and a 'Show form on' dropdown set to 'Ipbx406 (Login Node)'. Below the search bar is a search input field with the text 'Find a field named: Primary Node Id (FNI) that has a value of:'. There are buttons for 'Add', 'Change', 'Delete', 'Print...', 'Import...', 'Export...', and 'Data Refresh'. Below this is a table with the following data:

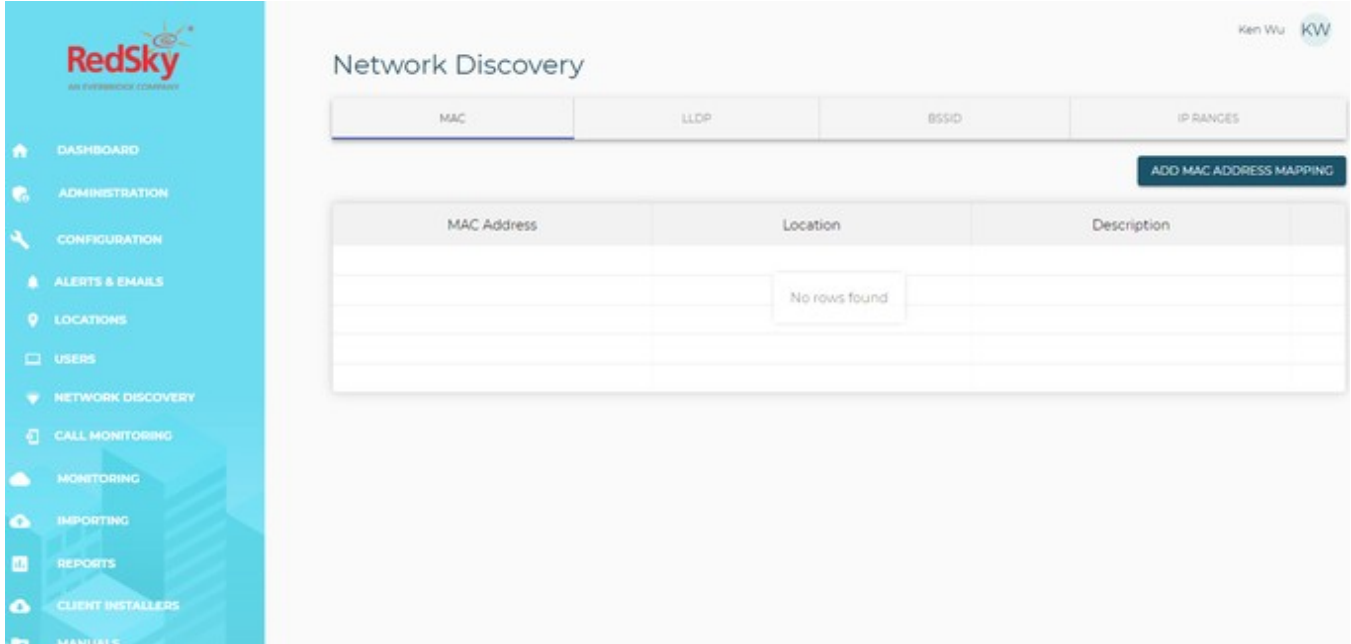
DID Number	Primary Node Id (FNI)	Destination Number	DID Type
1111			Standard DID
444	613	4052940	Emergency DID
4444	613	4052940	Standard DID
6135523560	613	4055100	Standard DID
1111	613	4062920	Emergency DID
333	613	4062920	Emergency DID
45454545	613	4062920	Emergency DID
34343434	613	4065100	Emergency DID
4441112222	613	4065100	Emergency DID
444111222212	613	4065100	Emergency DID
4441113333	613	4065100	Emergency DID
444111333312	613	4065100	Emergency DID
6665	613	4185001	Standard DID
6666	613	4185001	Standard DID
4058500	613	5998500	Standard DID

NOTE: If Direct Inward Dialing Service is used, the Trunk Attributes for the incoming trunk must have Direct Inward Dialing Service enabled.

NOTE: Using System Speed Calls is another means of providing DID access.

Devices that use the RedSky MyE911® Application (e.g. MIVB-C, etc.).

Step 0: Program the On-Premise wiremap via Network Discovery.



Add User
CLOSE

*Email 📧

First Name

Last Name

i Identification Type:
 Phone Number
 Device User ID

*Callback Number 📘

*Device User ID ADD

Device User IDs

No rows found

Network Discovery Mode	Comments
MAC Address	Used to associate a location to the MAC Address of a device

Network Discovery Mode	Comments
LLDP	Used to associate a location to the L2 Chassis/Port of a Layer 2 enabled network switch. MyE911 application must enable LLDP during the installation. If enabled during the installation, LLDP becomes a toggleable setting.
BSSID	Used to associate a location to the MAC Address of a Wireless Access Point
IP Ranges	Used to associate a location to an IP Address range of a given device.

The MyE911® Application can operate in two modes, and will automatically select the appropriate mode:

- On-Premise, where the application can query the RedSky LIS for a known location (see Network Discovery Mode)
- Off-Premise, where the application can update the RedSky LIS (Location Information Server) with the location information entered by the user.

The MyE911® Application will obtain the location information from the RedSky LIS and associate the location to the RedSky User associated when the application was installed. The softphone will be linked to the RedSky User based on the Identification Type.

®Step 1: Program a User in the RedSky

The screenshot shows a web form titled "Add User" with a "CLOSE" button in the top right. The form contains the following fields and options:

- *Email (required, with a copy icon)
- First Name
- Last Name
- Identification Type: Phone Number Device User ID
- *Phone Number (required)
- A "SAVE" button at the bottom center.

Portal

The screenshot shows a web form titled "Add User" with a "CLOSE" button in the top right. The form contains the following fields and options:

- *Email (required, with a copy icon)
- First Name
- Last Name
- Identification Type: Phone Number Device User ID
- *Callback Number (required, with a help icon)
- *Device User ID (required, with an "ADD" button)
- A table titled "Device User IDs" with the message "No rows found".
- A "SAVE" button at the bottom center.

RedSky Device User ID Field	Corresponding MIVB Field	Notes
Email	--	Used by MyE911 application during registration to identify the Device User.
First Name	--	Name of the User, does not have to align with MIVB
Last Name	--	Name of the User, does not have to align with MIVB
Identification Type	Device User ID or Phone Number	Use Device User ID if there is no CPN/DID number for the device on the MIVB. Otherwise, use Phone Number.
Phone Number	CPN of the device	

RedSky Device User ID Field	Corresponding MIVB Field	Notes
Callback Number	--	Not used, as the MIVB will provide the callback number
Device User ID	DN of the device	If the device is a member of a PRG /MDUG, then the CPN or DN of the PRG/MDUG pilot should be used.

NOTE: If using the DN of the device, the Device User ID should be PNI prefixed unless you have the Strip PNI SIP Peer option enabled.

NOTE: If using Device User ID, the SIP Peer Profile(s) for RedSky should be set to Private.

Step 2: On the MIVB, enable CESID not required for Emergency Calls on the device's COS option.

The screenshot shows the Mitel MIVoice Business administration console. The left sidebar contains a navigation menu with categories like Licenses, LAN/WAN Configuration, Voice Network, System Properties, System Settings, System Feature Settings, System Administration, Hardware, Trunks, Users and Devices, Integrated Directory Services, Voice Mail, Call Routing, and Music On Hold. The main content area is titled 'Class of Service Options on [lpx406]'. It features a table of Class of Service Numbers (21-27) with comments. Below the table, the 'Advanced' tab is active, showing various configuration options. In the 'Emergency' section, the option 'CESID Not Required for Emergency Call' is checked (Yes) and is highlighted with a red rectangular box. Other options include 'Do Not Disturb', 'DND Override', and 'Group Presence'.

Step 3: On the MIVB, program the CPN Substitution for the device

The screenshot shows the Mitel MiVoice Business web interface. The left sidebar contains a navigation menu with categories like Licenses, LAN/WAN Configuration, Voice Network, System Properties, Hardware, Trunks, Users and Devices, and Advanced Configuration. The main content area is titled 'Associated Directory Numbers on |pbx406|'. It features a search bar, a 'Show form on' dropdown set to 'pbx406 (Login Node)', and action buttons: Add, Change, Change Page, Change All, Delete, Print..., Import..., Export..., and Data Refresh. Below the buttons is a pagination control showing 'Page 1 of 1' and a 'Go to' field. The main data is presented in a table:

Directory Number	Associated Type	Associated Number	Billing Number
4052940	CPN Substitution	5554444	
4054201	CPN Substitution	5555	
4055000	CPN Substitution	5555001	
4062000	CPN Substitution	4062930	
4062920	CPN Substitution	6662222	
4062930	CPN Substitution	6663333	
4068250	CPN Substitution	6135551234	

At the bottom right of the interface, there is a 'MiWalkThru' icon.

Step 4: On the MIVB, program the DID for the device.

The screenshot shows the Mitel MiVoice Business web interface for 'Direct Inward Dialing Service on |pbx406|'. The left sidebar is similar to the previous screenshot. The main content area has a search bar and a 'Show form on' dropdown set to 'pbx406 (Login Node)'. Below the search bar is a search filter: 'Find a field named: Primary Node Id (PNI) that has a value of:'. Action buttons include Add, Change, Delete, Print..., Import..., Export..., and Data Refresh. The main data is presented in a table:

DID Number	Primary Node id (PNI)	Destination Number	DID Type
1111			Standard DID
444	613	4052940	Emergency DID
4444	613	4052940	Standard DID
6135529660	613	4055100	Standard DID
1111	613	4062920	Emergency DID
333	613	4062920	Emergency DID
45454545	613	4062920	Emergency DID
34343434	613	4065100	Emergency DID
4441112222	613	4065100	Emergency DID
444111222212	613	4065100	Emergency DID
4441113333	613	4065100	Emergency DID
444111333312	613	4065100	Emergency DID
6665	613	4185001	Standard DID
6666	613	4185001	Standard DID
4058500	613	5998500	Standard DID

At the bottom right of the interface, there is a 'MiWalkThru' icon.

NOTE: If Direct Inward Dialing Service is used, the Trunk Attributes for the incoming trunk must have Direct Inward Dialing Service enabled.

NOTE: Using System Speed Calls is another means of providing DID access.

®Step 5: Install the MyE911 application on the same hardware running the softphone client. For more instructions on the MyE911 application, see **MyE911® for Windows User Guide.pdf**, **MyE911® for macOS Guide.pdf**, or **MyE911® for Mobile User Guide.pdf**

Devices that use Geo-Location (e.g. MiCollab SIP Softphone Client, etc.)

Step 0: Program the On-Premise wiremap via Network Discovery.

Network Discovery Mode	Comments
MAC Address	Used to associate a location to the MAC Address of a device
LLDP	Used to associate a location to the L2 Chasis/Port of a Layer 2 enabled network switch.
BSSID	Used to associate a location to the MAC Address of a Wireless Access Point
IP Ranges	Used to associate a location to an IP Address range of a given device.

Devices that use HELD (http enabled location data) to get Geo-Location will automatically be detected in the RedSky Portal.

NOTE: If there are no Network Discovery entries for a given HELD device, the HELD device will create a manual entry from the HELD client. This entry will persist in the RedSky database, and take precedence over a Network Discovery entries.

The screenshot shows the 'HELD Devices' page in the RedSky interface. On the left is a navigation menu with options like DASHBOARD, ADMINISTRATION, CONFIGURATION, MONITORING, TEST CALL GENERATOR, CALL HISTORY, EVENTS, HELD DEVICES, IMPORTING, REPORTS, CLIENT INSTALLERS, and MANUALS. The main area displays a table of devices:

Device ID	Location	Discovery Method	Network Connectivity	Device Type	Details
mark.earle@mitel.com55fc354-cld8-44a3-8e9e-65c31bbe4694	Work - 2nd floor 4000 Innovation Drive 4000 Innovation Dr, Kanata, ON K2K 3K1	MANUAL	CHASSIS_ID: 00:00:0C:9F:FD:5C PORT_ID: Gi2/0/17	[Phone icon]	[Details icon]
ttskinner@gmail.coma175b87f-8462-4e01-9709-d0ea5b402575	Home 109 Galway St, Dunrobin, ON K0A 1T0	LLDP	IP: 10.34.20.135 CHASSIS_ID: 00:00:0C:9F:FD:5C PORT_ID: Gi2/0/17	[Phone icon]	[Details icon]
jaschima613@gmail.com18eb2f22-d6e0-44c6-8d32-9ded7c3546a2	Jas Chima 8 Elk Island Crt, Kanata, ON K2M 2V3	LLDP	IP: 192.168.1.117 CHASSIS_ID: 38:94:ED:CE:49:67 PORT_ID: Gi2/0/17	[Phone icon]	[Details icon]
jeff.mills@mitel.com992462d0-10a0-4031-b40e-f5c975f584ce	Home 73 Evanshen Cres, Kanata, ON K2K 2Z7	MANUAL	BSSID: E4:BF:FA:88:89:3E	[Phone icon]	[Details icon]
bruce.marshall@mitel.com4e2801ac-ab52-4bec-a74b-f277b5703909	Bruce home 37 Rue Voltaire, Gatineau, QC J9J 2P2	MANUAL	BSSID: 3A:66:85:E9:7B:59	[Phone icon]	[Details icon]
dick.keilty@mitel.com0c297b56-8e83-46c6-994c-1b274d09550e	UPS Ogdensburg 2981 Ford Street Ext, Ogdensburg, NY 13669	BSSID	IP: 192.168.229.17 BSSID: 6C:CD:D6:2E:EE:FC	[Phone icon]	[Details icon]
12345				[Phone icon]	[Details icon]

At the bottom of the table, it shows 'Page 1 of 1' and '25 rows'.

These devices can operate in two modes:

- On-Premise, where they can query the RedSky LIS for a known location (see Network Discovery Mode)
- Off-Premise, where they can update the RedSky LIS (Location Information Server) with the location information entered by the user.

The device will obtain the location information from the RedSky LIS and then send this Geo-Location information to the MIVB at call time, and the MIVB will transparently pass Geo-Location onto RedSky.

The screenshot shows the configuration page for a device. On the left is the same navigation menu as in the previous screenshot. The main area contains several sections:

- License Information:** A table showing license types and their total counts.

License Type	Total
Basic User	0
Common Area	0
Enhanced Notification	0
Enterprise User	0
- Recent Events:** A table showing recent system events.

Time	Event Type	Username
08/05/2021 03:47:11 PM	CALL_ROUTE_DEFAULT	Unknown
08/05/2021 03:47:11 PM	E911_CALL_MADE	Unknown
08/05/2021 03:05:05 PM	BUILDING_DELETED	ken.wu@mitel.com
08/05/2021 01:50:38 PM	UNDEFINED_NETWORK_LOCATION	
08/05/2021 12:33:49 PM	CALL_ROUTE_DEFAULT	Unknown
- Recent Import Status:** A table showing import status, currently empty with the message 'No rows found'.

Created	Import Type	Status
No rows found		
- IDs and Access Codes:** A table showing configuration values.

Name	Value	Copy/View
HELD Company ID	[Redacted]	[Copy icon]
HELD+ Secret Key	[Copy icon]

Step 1: Configure the device's integration with the RedSky LIS.

NOTE: Configuration will depend on the actual device.

Step 2: On the MIVB, enable Emergency Info Provided by Device in the SIP Device Capabilities

The screenshot shows the Mitel MiVoice Business configuration page for SIP Device Capabilities on device ipbx406. The left sidebar contains a navigation menu with categories like Licenses, LAN/WAN Configuration, Voice Network, System Properties, System Settings, System Feature Settings, System Administration, Hardware, Users and Devices, Integrated Directory Services, Voice Mail, Call Routing, and Music On Hold. The main content area is titled 'SIP Device Capabilities on ipbx406' and includes a search bar and buttons for 'Change' and 'Copy'. Below this is a table of SIP Device Capabilities with columns for ID and Name. The table lists 11 entries, including 'default', 'AastraDect', 'AscomDectOld', 'Aastra 68xx', 'Polycom', 'Mitel 53xx', 'Bria', and 'PSP no PRack'. Below the table is a configuration section for 'SIP Device Capabilities Number' (set to 1) and 'Call Routing and Administration Options'. The 'Outbound Proxy Server' section contains a table of options, with 'Emergency Info Provided by Device' highlighted in red and set to 'No'. Other options include 'Replace System based with Device based In-Call Features' (Yes), 'Allow MWI Notifications without Subscription' (No), 'Enable Digit Collection in Busy Or Alerting State' (No), and 'TLS Only' (No). The bottom right corner features a 'MIWalkThru' button.

Step 3: On the MIVB, program the CPN Substitution for the device

The screenshot shows the Mitel MiVoice Business configuration page for Associated Directory Numbers on device ipbx406. The left sidebar contains a navigation menu with categories like Licenses, LAN/WAN Configuration, Voice Network, System Properties, Hardware, Trunks, Users and Devices, Attendants, ACD, Group Programming, Telephone Directory Management, Advanced Configuration, Templates, Integrated Directory Services, Voice Mail, Call Routing, Music On Hold, Emergency Services Management, Property Management, and Maintenance and Diagnostics. The main content area is titled 'Associated Directory Numbers on ipbx406' and includes a search bar and buttons for 'Add', 'Change', 'Change Page', 'Change All', and 'Delete'. Below this is a table of Associated Directory Numbers with columns for Directory Number, Associated Type, Associated Number, and Billing Number. The table lists six entries, all of type 'CPN Substitution'. The bottom right corner features a 'MIWalkThru' button.

Directory Number	Associated Type	Associated Number	Billing Number
4052940	CPN Substitution	5954444	
4054201	CPN Substitution	5555	
4055000	CPN Substitution	5555001	
4062000	CPN Substitution	4062930	
4062920	CPN Substitution	6662222	
4062930	CPN Substitution	6663333	
4068250	CPN Substitution	613551234	

Step 4: On the MIVB, program the DID for the device.

The screenshot shows the Mitel MIVoice Business interface for configuring Direct Inward Dialing (DID) services on the device 'ipbx406'. The interface includes a search bar, a table of DID entries, and a navigation menu on the left.

DID Number	Primary Node Id (PNI)	Destination Number	DID Type
1111			Standard DID
444	613	4052940	Emergency DID
4444	613	4052940	Standard DID
6135925660	613	4055100	Standard DID
1111	613	4062920	Emergency DID
333	613	4062920	Emergency DID
45454545	613	4062920	Emergency DID
34343434	613	4065100	Emergency DID
4441112222	613	4065100	Emergency DID
444111222212	613	4065100	Emergency DID
4441113333	613	4065100	Emergency DID
444111333312	613	4065100	Emergency DID
6665	613	4185001	Standard DID
6666	613	4185001	Standard DID
4056500	613	5968500	Standard DID

NOTE: If Direct Inward Dialing Service is used, the Trunk Attributes for the incoming trunk must have Direct Inward Dialing Service enabled.

Using System Speed Calls is another means of providing DID access.

Deployment Guide: 69xx MiNet

See the general Solution Deployment Guide - Devices for more details on programming each option.

On Premise

Options Available	Programming Steps
L2 to CESID Mapping (RECOMMENDED)	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location to match the device's CESID. <p>MIVB:</p> <ul style="list-style-type: none"> Define the CESID Mapping Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <p>None.</p>

Off Premise

Options Available	Programming Steps
CESID Assignment	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location to match the device's CESID. <p>MIVB:</p> <ul style="list-style-type: none"> Define the CESID Enable the Device Move Detection COS option. Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> None. <p>NOTE: MIVB Administrator will be notified when the user has acknowledged the device has been moved, and will need to update the location in NG911</p>

Deployment Guide: 53xx MINET (5304, 5312, 5320, 5320e, 5330e, 5340e)

On Premise

Options Available	Programming Steps
L2 to CESID Mapping (RECOMMENDED)	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Location to match the CESID of the L2 Port. <p>MIVB:</p> <ul style="list-style-type: none"> • Define the L2 to CESID Mapping • Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <p>None</p>
IP to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Location match the CESID of the Zone. <p>MIVB:</p> <ul style="list-style-type: none"> • Define the IP Address Range to Zone, and Zone CESID. • Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> • None

Off Premise

Options Available	Programming Steps
CESID Assignment	<p>RedSky:</p> <ul style="list-style-type: none">• Program a Location to match the CESID of the device <p>MIVB:</p> <ul style="list-style-type: none">• Define the CESID of the device. Enable the Device Move Detection COS option• Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none">• None <p>NOTE: MIVB Administrator will be notified when the user has acknowledged the device has been moved, and will need to update the location in RedSky</p>

Deployment Guide: Legacy MINET 53xx

On Premise

Options Available	Programming Steps
L2 to CESID Mapping (RECOMMENDED)	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location to match the CESID of the L2 Port. <p>MIVB:</p> <ul style="list-style-type: none"> Define the L2 to CESID Mapping Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> None
IP to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location match the CESID of the Zone. <p>MIVB:</p> <ul style="list-style-type: none"> Define the IP Address Range to Zone, and Zone CESID. Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> None

Off Premise

Not recommended as these devices do not support Device Move Detection

Deployment Guide: Legacy MINET (50xx, 51xx, 52xx, 5560 IPT, Navigator)

On Premise

Options Available	Programming Steps
L2 to CESID Mapping (RECOMMENDED)	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location to match the CESID of the L2 Port. <p>MIVB:</p> <ul style="list-style-type: none"> Define the L2 to CESID Mapping to be CDP (These legacy MiNET devices do not support LLDP-MED). Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> None
IP to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location match the CESID of the Zone. <p>MIVB:</p> <ul style="list-style-type: none"> Define the IP Address Range to Zone, and Zone CESID. Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> None

Off Premise

Not recommended as these device do not support device move detection.

Deployment Guide: 5540

On Premise

Options Available	Programming Steps
L2 to CESID Mapping (RECOMMENDED)	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Location to match the CESID of the L2 Port. <p>MIVB:</p> <ul style="list-style-type: none"> • Define the L2 to CESID Mapping Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> • None
IP to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Location match the CESID of the Zone. <p>MIVB:</p> <ul style="list-style-type: none"> • Define the IP Address Range to Zone, and Zone CESID. Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> • None

Off Premise

Options Available	Programming Steps
CESID Assignment	<p>RedSky:</p> <ul style="list-style-type: none">• Program a Location to match the CESID of the device <p>MIVB:</p> <ul style="list-style-type: none">• Define the CESID of the device. Enable the Device Move Detection COS option• Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none">• None <p>NOTE: MIVB Administrator will be notified when the user has acknowledged the device has been moved, and will need to update the location in RedSky</p>

Deployment Guide: MIVB-C

On Premise

Options Available	Programming Steps
IP to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location match the CESID of the Zone. <p>MIVB:</p> <ul style="list-style-type: none"> Define the IP Address Range to Zone, and Zone CESID. Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> None
MyE911® Application	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Device User and ensure the Alternate ID matches the MIVB's CPN/DID or DN for the device. <p>MIVB:</p> <ul style="list-style-type: none"> Enable the CESID not required for Emergency Calls COS option. Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> Install the MyE911® Application given the Device User email address. Manage the location via the MyE911® application.

Off Premise

Options Available	Programming Steps
MyE911® Application	<p>RedSky:</p> <ul style="list-style-type: none">• Program a Device User and ensure the Alternate ID matches the MIVB's CPN/DID or DN for the device. <p>MIVB:</p> <ul style="list-style-type: none">• Enable the CESID not required for Emergency Calls COS option.• Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none">• Install the MyE911® Application given the Device User email address.• Manage the location via the MyE911® application.

Deployment Guide: Generic SIP

NOTE: Since each Generic SIP Softphone may have different implementations, Mitel will need to certify the solution with each specific Generic SIP Set.

On Premise

Options Available	Programming Steps
Geo-Location	RedSky: <ul style="list-style-type: none"> • None MIVB: <ul style="list-style-type: none"> • Enable the Emergency Info Provided by Device SIP Device Capability for the device. Device: <ul style="list-style-type: none"> • Program the RedSky HELD URL, organization ID, and secret. Update the location
CESID provided by the device	RedSky: <ul style="list-style-type: none"> • Program a Location to match the CESID of the device. MIVB: <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device for the SIP Device Capability • Define the Emergency Callback handling (CPN/DID) Device: <ul style="list-style-type: none"> • Program the CESID against the device.
BSSID to CESID Mapping	RedSky: <ul style="list-style-type: none"> • Program a Location to match the CESID of the device. MIVB: <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device for the SIP Device Capability Define the BSSID to CESID Mapping Define the Emergency Callback handling (CPN/DID) Device: <ul style="list-style-type: none"> • Enable the MAC Address of the Wireless Access Point being used for the call to be sent.

Options Available	Programming Steps
IP to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location match the CESID of the Zone. <p>MIVB:</p> <ul style="list-style-type: none"> Define the IP Address Range to Zone, and Zone CESID. Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> None
MyE911® Application	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Device User and ensure the Alternate ID matches the MIVB's CPN/DID or DN for the device. <p>MIVB:</p> <ul style="list-style-type: none"> Enable the CESID not required for Emergency Calls COS option. Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> Install the MyE911® Application given the Device User email address. Manage the location via the MyE911® application.

Off Premise

Options Available	Programming Steps
Geo-Location	<p>RedSky:</p> <p>None</p> <p>MIVB:</p> <p>Enable the Emergency Info Provided by Device SIP Device Capability for the device.</p> <p>Device:</p> <p>Program the RedSky HELD URL, organization ID, and secret. Update the location</p>

Options Available	Programming Steps
CESID provided by the device	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Location to match the CESID of the device. <p>MIVB:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device for the SIP Device Capability • Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <p>Program the CESID against the device.</p>
BSSID to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Location to match the CESID of the device. <p>MIVB:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device for the SIP Device Capability • Define the BSSID to CESID Mapping • Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> • Enable the MAC Address of the Wireless Access Point being used for the call to be sent.
MyE911® Application	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Device User and ensure the Alternate ID matches the MIVB's CPN/DID or DN for the device. <p>MIVB:</p> <ul style="list-style-type: none"> • Enable the CESID not required for Emergency Calls COS option. • Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> • Install the MyE911® Application given the Device User email address. • Manage the location via the MyE911® application.

Deployment Guide: Single Cell DECT (6xx/56xx)

This is just a 6xx/56xx using a single cell.

On Premise

Options Available	Programming Steps
CESID provided by the device	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Location to match the CESID of the device. <p>MIVB:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device for the SIP Device Capability • Define the Emergency Callback handling (CPN/DID) <p>Device: See the Multi-Cell DECT solution below based on 6xx vs 56xx device.</p>
IP to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Location match the CESID of the Zone. <p>MIVB:</p> <ul style="list-style-type: none"> • Define the IP Address Range to Zone, and Zone CESID. • Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> • None

Off Premise

Options Available	Programming Steps
CESID provided by the device	RedSky: <ul style="list-style-type: none">• Program a Location to match the CESID of the device. MIVB: <ul style="list-style-type: none">• Enable the Emergency Info Provided by the Device for the SIP Device Capability Device: See the Multi-Cell DECT solution below based on 6xx vs 56xx device.

Deployment Guide: RFP 12 Single Cell Solution

This is programmed as a Generic SIP Device on the MIVB.

On Premise

Options Available	Programming Steps
CESID provided by the device	RedSky: <ul style="list-style-type: none"> Program a Location to match the CESID of the device. MIVB: <ul style="list-style-type: none"> Enable the Emergency Info Provided by the Device for the SIP Device Capability Device: <Need Info>
IP to CESID Mapping	RedSky: <ul style="list-style-type: none"> Program a Location match the CESID of the Zone. MIVB: <ul style="list-style-type: none"> Define the IP Address Range to Zone, and Zone CESID. Device: <ul style="list-style-type: none"> Need Info

Off Premise

Options Available	Programming Steps
CESID provided by the device	RedSky: Program a Location to match the CESID of the device. MIVB: Enable the Emergency Info Provided by the Device for the SIP Device Capability Device: How to you program the CESID against an RTX Device?

Deployment Guide: Multi-Cell DECT (6xx)

On Premise

Options Available	Programming Steps
CESID provided by the device	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Location to match the CESID of the device. <p>MIVB:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device for the SIP Device Capability • Define the Emergency Callback handling (CPN/DID) <p>Device: <Need Info></p> <p>NOTE: ELIN must be configured on the Base Station->Advanced->Emergency->ELIN page.</p>

Off Premise

Options Available	Programming Steps
CESID provided by the device	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Location to match the CESID of the device. <p>MIVB:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device for the SIP Device Capability • Define the Emergency Callback handling (CPN/DID) <p>Device: <Need Info></p> <p>NOTE: ELIN must be configured on the Base Station->Advanced->Emergency->ELIN page.</p>

Deployment Guide: Multi-Cell DECT (56xx)

On Premise

Options Available	Programming Steps
CESID provided by the device	RedSky: <ul style="list-style-type: none"> • Program a Location to match the CESID of the device. MIVB: <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device for the SIP Device Capability • Define the Emergency Callback handling (CPN/DID) Device: <Need Info> NOTE: ELIN must be configured on the Base Station->Advanced->Emergency->ELIN page.

Off Premise

Options Available	Programming Steps
CESID provided by the device	RedSky: <ul style="list-style-type: none"> • Program a Location to match the CESID of the device. MIVB: <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device for the SIP Device Capability • Define the Emergency Callback handling (CPN/DID) Device: <Need Info>

Deployment Guide: 5634 Wifi

On Premise

Options Available	Programming Steps		
<p>BSSID to CESID Mapping</p>	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Location to match the CESID of the device. <p>MIVB:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device for the SIP Device Capability • Define the BSSID to CESID Mapping <p>Define the Emergency Callback handling (CPN/DID) Device:</p> <p>In configuration manual there is a table under chapter "VoIP Protocol" with a table, this is our proposal for the entry for Ray Baum Solution:</p> <table border="1" data-bbox="586 953 1317 1348"> <tr> <td data-bbox="586 953 789 1348"> <p>Emergency call location method</p> </td> <td data-bbox="789 953 1317 1348"> <p>According to Ray Baum Act, a law requirement in US, the handset must be possible to localize at emergency calls. Different PBX vendors has different solutions to solve this requirement.</p> <p>When set to None (default), no solution is selected.</p> <p>When set to Register with SIP instance-id, the MAC address is send in SIP REGISTER message according to RFC 5626.</p> <p>When an emergency call is established, the SIP server authenticates the handset through the MAC Address of REGISTER message and forwards it to the system so that the handset's location is clearly identified.</p> <p>NOTE: This is a solution that Avaya PBX supports.</p> <p>When set to Send BSSID in SIP invite, the BSSID of the access point that handset is connected to at the time the call is established will be send in SIP invite and in SIP invite response 200 OK in PANI (P-Access-Network-Info) header. The BSSID is send in all calls, not only in emergency calls.</p> <p>NOTE: This is a solution that MiVoice PBX supports.</p> </td> </tr> </table>	<p>Emergency call location method</p>	<p>According to Ray Baum Act, a law requirement in US, the handset must be possible to localize at emergency calls. Different PBX vendors has different solutions to solve this requirement.</p> <p>When set to None (default), no solution is selected.</p> <p>When set to Register with SIP instance-id, the MAC address is send in SIP REGISTER message according to RFC 5626.</p> <p>When an emergency call is established, the SIP server authenticates the handset through the MAC Address of REGISTER message and forwards it to the system so that the handset's location is clearly identified.</p> <p>NOTE: This is a solution that Avaya PBX supports.</p> <p>When set to Send BSSID in SIP invite, the BSSID of the access point that handset is connected to at the time the call is established will be send in SIP invite and in SIP invite response 200 OK in PANI (P-Access-Network-Info) header. The BSSID is send in all calls, not only in emergency calls.</p> <p>NOTE: This is a solution that MiVoice PBX supports.</p>
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Off Premise

Options Available	Programming Steps										
<p>BSSID to CESID Mapping</p>	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location to match the CESID of the device. <p>MIVB:</p> <ul style="list-style-type: none"> Enable the Emergency Info Provided by the Device for the SIP Device Capability Define the BSSID to CESID Mapping Define the Emergency Callback handling (CPN/DID) Device: <p>In configuration manual there is a table under chapter "VoIP Protocol" with a table, this is our proposal for the entry for Ray Baum Solution:</p> <table border="1" data-bbox="824 766 1372 1060"> <thead> <tr> <th data-bbox="831 766 971 798">Emergency call location method</th> <th data-bbox="971 766 1365 798"></th> </tr> </thead> <tbody> <tr> <td data-bbox="831 798 971 850"></td> <td data-bbox="971 798 1365 850"> <p>According to Ray Baum Act, a law requirement in US, the handset must be possible to localize at emergency calls. Different PBX vendors has different solutions to solve this requirement.</p> </td> </tr> <tr> <td data-bbox="831 850 971 892"></td> <td data-bbox="971 850 1365 892"> <p>When set to None (default), no solution is selected.</p> </td> </tr> <tr> <td data-bbox="831 892 971 976"></td> <td data-bbox="971 892 1365 976"> <p>When set to Register with SIP instance-id, the MAC address is send in SIP REGISTER message according to RFC 5626. When an emergency call is established, the SIP server authenticates the handset through the MAC Address of REGISTER message and forwards it to the system so that the handset's location is clearly identified. NOTE: This is a solution that Avaya PBX supports.</p> </td> </tr> <tr> <td data-bbox="831 976 971 1060"></td> <td data-bbox="971 976 1365 1060"> <p>When set to Send BSSID in SIP invite, the BSSID of the access point that handset is connected to at the time the call is established will be send in SIP invite and in SIP invite response 200 OK in PANI (P-Access-Network-Info) header. The BSSID is send in all calls, not only in emergency calls. NOTE: This is a solution that MiVoice PBX supports.</p> </td> </tr> </tbody> </table>	Emergency call location method			<p>According to Ray Baum Act, a law requirement in US, the handset must be possible to localize at emergency calls. Different PBX vendors has different solutions to solve this requirement.</p>		<p>When set to None (default), no solution is selected.</p>		<p>When set to Register with SIP instance-id, the MAC address is send in SIP REGISTER message according to RFC 5626. When an emergency call is established, the SIP server authenticates the handset through the MAC Address of REGISTER message and forwards it to the system so that the handset's location is clearly identified. NOTE: This is a solution that Avaya PBX supports.</p>		<p>When set to Send BSSID in SIP invite, the BSSID of the access point that handset is connected to at the time the call is established will be send in SIP invite and in SIP invite response 200 OK in PANI (P-Access-Network-Info) header. The BSSID is send in all calls, not only in emergency calls. NOTE: This is a solution that MiVoice PBX supports.</p>
Emergency call location method											
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Deployment Guide: Legacy SIP (5302, 5505, 5624)

On Premise

Options Available	Programming Steps
IP to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none">• Program a Location match the CESID of the Zone. <p>MIVB:</p> <ul style="list-style-type: none">• Define the IP Address Range to Zone, and Zone CESID.• Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none">• None

Off Premise

Not recommended.

Deployment Guide: MiCollab MINET Soft- phone

On Premise

Options Available	Steps
IP to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location match the CESID of the Zone. <p>MIVB:</p> <ul style="list-style-type: none"> Define the IP Address Range to Zone, and Zone CESID. Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> None
MyE911® Application	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Device User and ensure the Alternate ID matches the MIVB's CPN/DID or DN for the device. <p>MIVB:</p> <ul style="list-style-type: none"> Enable the CESID not required for Emergency Calls COS option. Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> Install the MyE911® Application given the Device User email address. Manage the location via the MyE911® application.

Off Premise

Options Available	Steps
MyE911® Application	<p>RedSky:</p> <ul style="list-style-type: none">• Program a Device User and ensure the Alternate ID matches the MIVB's CPN/DID or DN for the device. <p>MIVB:</p> <ul style="list-style-type: none">• Enable the CESID not required for Emergency Calls COS option.• Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none">• Install the MyE911® Application given the Device User email address.• Manage the location via the MyE911® application.

Deployment Guide: MiCollab SIP Softphone

NOTE: MiCollab clients installed on a mobile device with a native Dialer (e.g. Apple PHONE, Android PHONE ... not tablets), the native dialer will intercept emergency calls, and will not go through the MIVB.

Additional configuration is required for MiCollab SIP Softphones.

Via the MiCollab Server, configure the Location Service under MiCollab Client Service > Administrator Interface > Enterprise Tab > Location Service Configuration.

Location Service Configuration

Location Service: REDSKY

URL: https://abc.com

HeldOrgId: 123456789

Secret:

Confirm Secret:

Virtual Environment:

Buttons: Delete, Test Connection

Via the MiCollab Server, configure the Emergency Dial Plan under MiCollab Client Deployment > Deployment Profiles > Emergency Numbers.

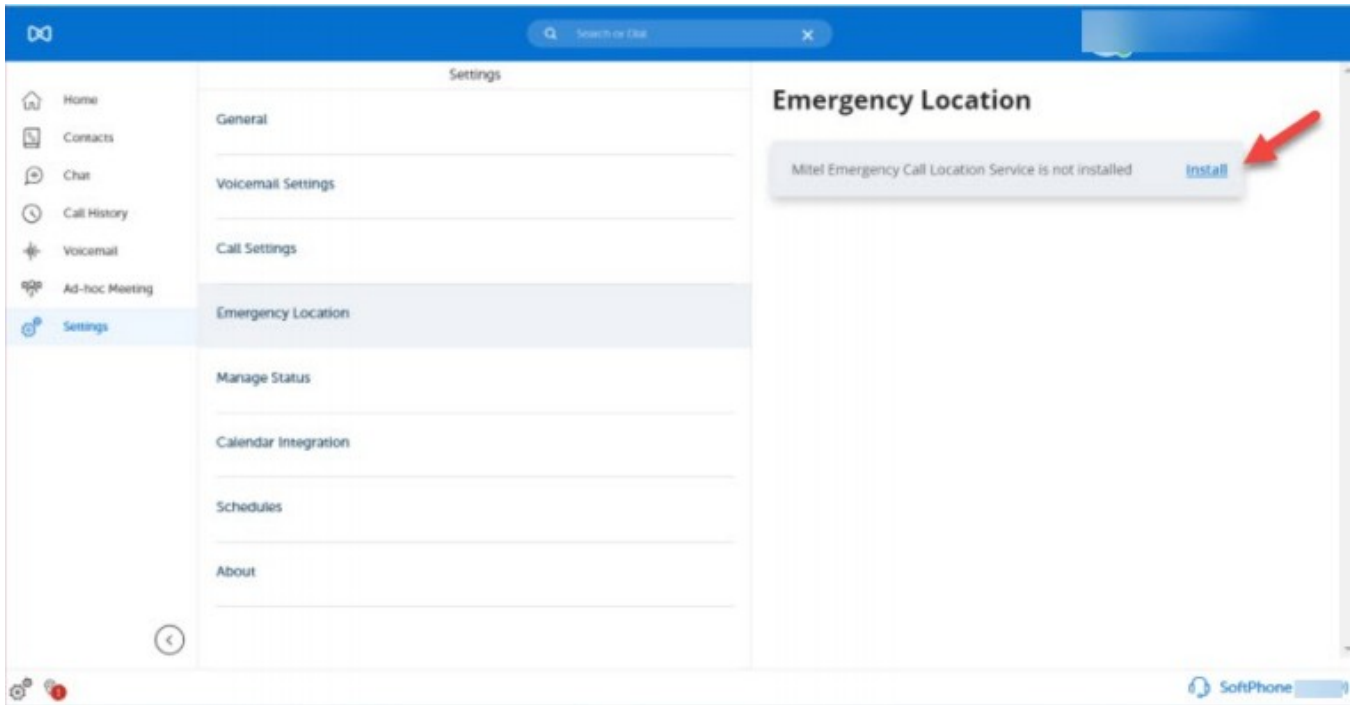
Field	Notes
Location Service	RedSky
URL	RedSky LIS Server URL
HeldOrgId	HELD Organization ID
Secret	HELD+ Secret Key
Confirm Secret	HELD+ Secret Key
Virtual Environment	If the Virtual Environment checkbox is checked, then the clients are virtualized. That means, the Virtual Environment checkbox will enable the administrator to declare whether their clients are running in a virtual environment or not, i.e. VMWARE Horizon, Citrix, or RDS.

NOTE: IFT/EFT sites should enable 933 in the emergency number list for testing/integration.

The screenshot shows the 'Deployment Profiles' section of the MiCollab Client Service interface. The 'General Settings' for the 'cDefault' profile are as follows:

Name *	cDefault	Log Level	DEBUG
Use Teleworker	on	Call mode	Audio
Use Softphone	on	Office number	6135922122
		Office number pause	2
MBG	mbg.gtsca.gts.ucs.mitel.io	Config download host *	MiCollab Server FQDN
		MBG SIP host *	Custom DNS SRV mbg.gtsca.gts.ucs.mitel.io
		MBG-WebRTC SIP host *	MBG's FQDN
Override user email	<input type="checkbox"/>	PBX SIP host	Custom DNS SRV mivb.gtsca.gts.ucs.mitel.io
Deployment email address	shawn.menard@mitel.com	Conference access code	"40
RTP timeout detection	<input checked="" type="checkbox"/>	Emergency numbers	000,110,112,118,119,911,999

Additionally, each MiCollab client will need to install the Mitel Network Helper, and enter/confirm their location in the MiCollab Client.



Emergency (911) Location

We need to have a dispatchable location for you in the event of an emergency.

Duplicate

Or

Location Name

Location Info

Street

City

State

Zip Code

 SoftPhone

NOTE: This may differ based on the MiCollab Client.

On Premise

Options Available	Steps
Geo-Location	RedSky: <ul style="list-style-type: none"> • None MIVB: <ul style="list-style-type: none"> • Enable the Emergency Info Provided by Device SIP Device Capability for the device. MiCollab Server: <ul style="list-style-type: none"> • Define the Location Service Configuration. • Define the Emergency dial plan MiCollab Client: <ul style="list-style-type: none"> • Install the Mitel Network Helper Enter/update their location in the MiCollab Client

Off Premise

Options Available	Steps
Geo-Location	RedSky: <ul style="list-style-type: none"> • None MIVB: <ul style="list-style-type: none"> • Enable the Emergency Info Provided by Device SIP Device Capability for the device. MiCollab Server: <ul style="list-style-type: none"> • Define the Location Service Configuration. • Define the Emergency dial plan MiCollab Client: <ul style="list-style-type: none"> • Install the Mitel Network Helper Enter/update their location in the MiCollab Client

Solution Deployment Guide - MiCollab Web Client

NOTE: IFT/EFT sites should enable 933 in the emergency number list for testing/integration.

Additional configuration is required for MiCollab SIP Softphones.

Via the MiCollab Server, configure the Location Service under MiCollab Client Service > Administrator Interface > Enterprise Tab > Location Service Configuration.

Via the MiCollab Server, configure the Emergency Dial Plan under MiCollab Client Deployment > Deployment Profiles > Emergency Numbers.

Field	Notes
Location Service	RedSky
URL	RedSky LIS Server URL
HeldOrgId	HELD Organization ID
Secret	HELD+ Secret Key
Confirm Secret	HELD+ Secret Key
Virtual Environment	If the Virtual Environment checkbox is checked, then the clients are virtualized. That means, the Virtual Environment checkbox will enable the administrator to declare whether their clients are running in a virtual environment or not, i.e. VMWARE Horizon, Citrix, or RDS.

Manage MiCollab Client Deployment

Users | **Deployment Profiles** | Configuration | Diagnostics

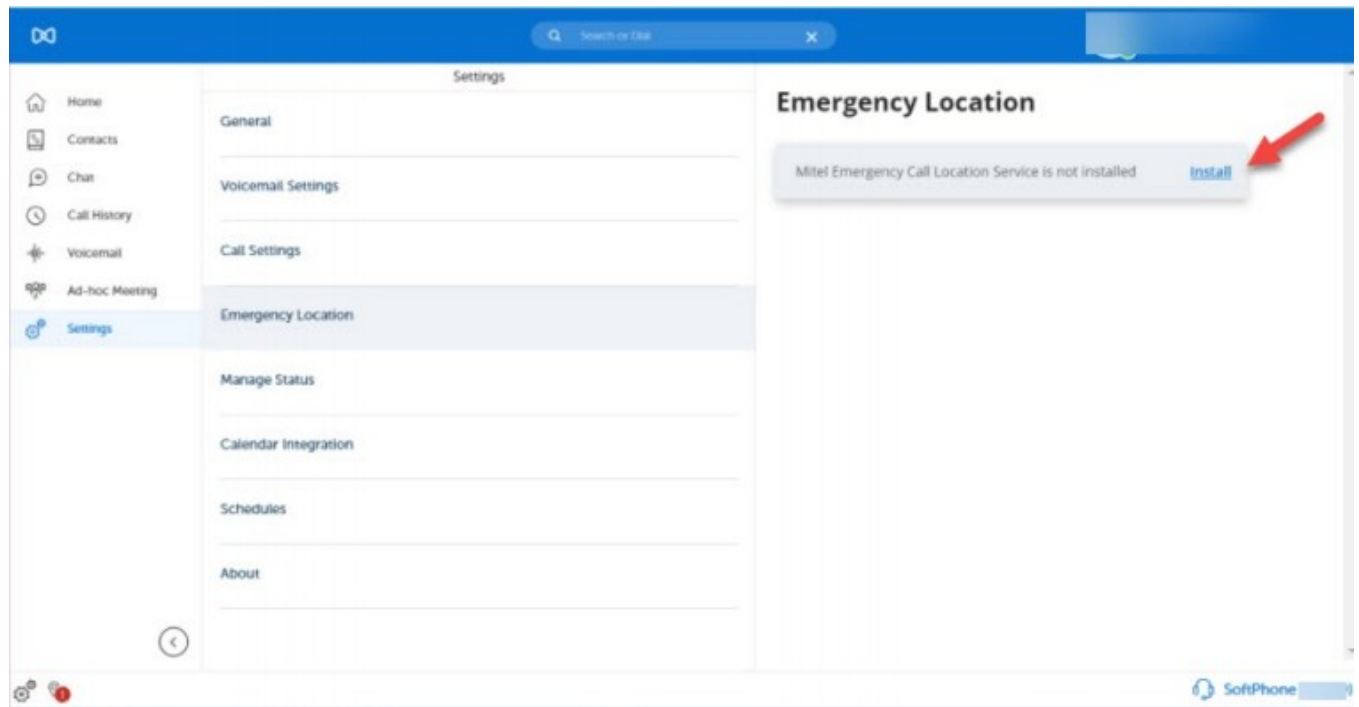
Profiles

Location: Deployment Profiles / Modify Show Info

General Settings

Name *	cDefault	Log Level	DEBUG
Use Teleworker	on	Call mode	Audio
Use Softphone	on	Office number	6135922122
		Office number pause	2
MBG	mbg.gtscgts.ucs.mitel.io	Config download host *	MiCollab Server FQDN
		MBG SIP host *	Custom DNS SRV mbg.gtscgts.ucs.mitel.io
		MBG-WebRTC SIP host *	MBG's FQDN
Override user email	<input type="checkbox"/>	PBX SIP host	Custom DNS SRV mivb.gtscgts.ucs.mitel.io
Deployment email address	shawn.menard@mitel.com	Conference access code	*40
RTP timeout detection	<input checked="" type="checkbox"/>	Emergency numbers	000,110,112,118,119,911,999

Additionally, each MiCollab client will need to install the Mitel Network Helper, and enter/confirm their location in the MiCollab Client.



Emergency (911) Location

We need to have a dispatchable location for you in the event of an emergency.

Duplicate

Or

Location Name

Location Info

Street

City

State

Zip Code

On Premise

Options Available	Steps
Geo-Location	RedSky: <ul style="list-style-type: none"> • None MIVB: <ul style="list-style-type: none"> • Enable the Emergency Info Provided by Device SIP Device Capability for the device. MiCollab Server: <ul style="list-style-type: none"> • Define the Location Service Configuration. • Define the Emergency dial plan MiCollab Client: <ul style="list-style-type: none"> • Install the Mitel Network Helper Enter/update their location in the MiCollab Client

Off Premise

Options Available	Steps
Geo-Location	RedSky: <ul style="list-style-type: none"> • None MIVB: <ul style="list-style-type: none"> • Enable the Emergency Info Provided by Device SIP Device Capability for the device. MiCollab Server: <ul style="list-style-type: none"> • Define the Location Service Configuration. • Define the Emergency dial plan MiCollab Client: <ul style="list-style-type: none"> • Install the Mitel Network Helper Enter/update their location in the MiCollab Client

Deployment Guide: MiCollab Deskphone

Follow the instructions based on the device type of the Deskphone.

Deployment Guide: MiCollab Mobile

Uses native dialer, so there is no interaction with the MIVB solution for emergency calls.

Deployment Guide - 3rd Party WebRTC Clients (via MBG)

NOTE: Since each 3rd Party WebRTC Client may have different implementations, Mitel will need to certify the solution with each specific 3rd Party WebRTC Client.

WebRTC is just a HTML wrapper around the SIP protocol, so it would behave like a Generic SIP device. See above.

Deployment Guide - WebRTC Anonymous Calls (via MBG)

WebRTC can provide anonymous calls support via a weblink. These web-links are not expected to be routed from the MiVB to an emergency destination, and will NOT provide any location information.

Limitations

- Mobile phones – Mobile phones are not part of the MiVB solution with RAY BAUM as they use the native phone function to provide the location services information during an emergency call.
- The MiVB does not support RedSky connections per tenant in the same system. E.g. RedSky needs to be used by all tenants in a given system.

Acronyms, Abbreviations, and Glossary

BSSID - Basic Service Set Identification. MAC address of a Wireless Access Point (WAP) CESID - Caller Emergency Service Identification, equivalent to ELIN.

CESID - Customer Emergency Service Identification – A number that uniquely identifies the device that dialed 911.

COR - Class of Restriction – To limit a station's access to certain Class of Service Options.

COS - Class of Service – A level of service defined by a specific set of features that controls an extension's access to these features.

CPN - Calling Party Number – A number to identify the device or user who initiated the call.

DID - Direct Dialing Inwards – Allows an external caller to dial an internal extension without having to go through an attendant or operator.

ELIN - Emergency Location Identification Number also known as CESID. ERS - Emergency Routing Services.

Fixed devices- Fixed device is a device that cannot be moved to another place in the enterprise without assistance from a professional installer or network manager.

LIS - Location Information Server provided by RedSky that allows an organization to enter location information (including civic address, floor/room/suite/apt, etc) to be used during emergency calls.

LLDP- Link Layer Discovery Protocol – An IEEE standard (801.1AB) that provides a vendor-neutral method for Ethernet network devices such as switches, routers, and wireless LAN access points to advertise and store the information about themselves to other nodes on the network.

LLDP-MED- Link Layer Discovery Protocol-Media Endpoint Discovery MBG – Mitel Border Gateway

MLTS - Multi Line Telephone System. Equivalent to a PBX, but is the nomenclature used in the RAY BAUM'S Act.

NANP – North American Numbering Plan (https://en.wikipedia.org/wiki/North_American_Numbering_Plan) PAI header - P-Asserted-Identity header

Non-fixed devices – A non-fixed device is a device that the end user can move from one endpoint to another without assistance.

PANI header- P-Access-Network-Info header PSAP - Public Safety Answering Points

SBC – Session Border Controller