

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.

MiVoice Business Support for RAY BAUM'S Act Section 506 and Kari's Law

MiVoice Business, 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 MiVoice Business, 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 MiVoice Business is integrated RedSky as a provider in USA and Canada.

This guide describes the integration between MiVoice Business and RedSky Technologies E911 solutions (<https://www.redsky911.com>).

Solution: MiVoice Business - RAY BAUM High Level Architecture with RedSky

MiVoice Business implements RAY BAUM in conjunction with RedSky as the MiVoice Business 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 MiVoice Business 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 Point (PSAP) 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 MiVoice Business notifications (including Mitel Revolution) provide supplemental information and are not sufficient to satisfy Kari's Law on their own.

NOTE: The MiVoice Business solution primarily sends Location identifiers to RedSky during emergency calls. RedSky will look up 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. Redsky address validation includes all 50 states in the United States, as well as Puerto Rico, Guam, Virgin Islands and Canada. However, all calls from a Canadian location will first be routed to the National Call Center to verbally confirm the caller's location.

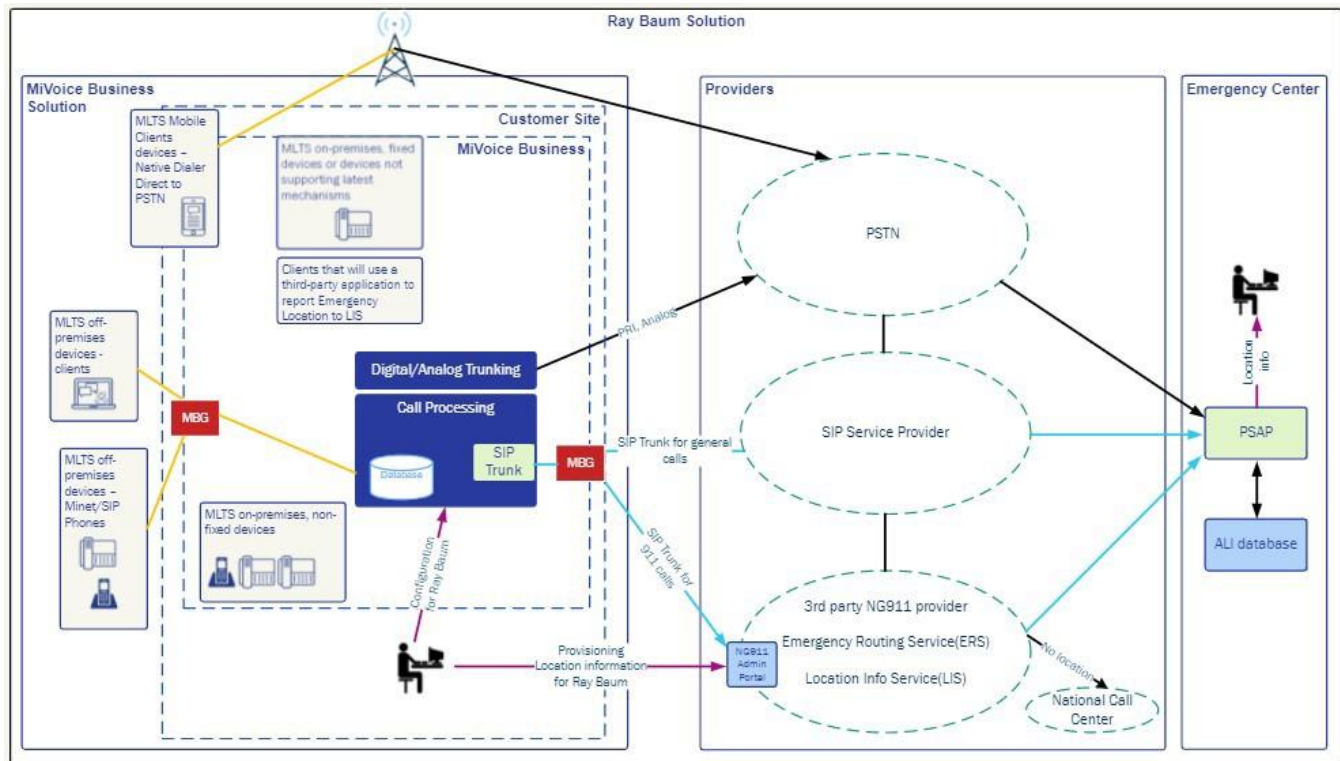
With the RAY BAUM's Act solution the Mitel MiVoice Border Gateway (MBG) is used as SBC (Session Border Controller) between MiVoice Business and RedSky. If a customer has an existing MBG this can be upgraded to release 11.3 and used for the connection to RedSky. Additionally, the MBG can be used for Remote 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 MiVoice Business Solution with RedSky will need to use CPN and DID features of the MiVoice Business to provide Emergency Callback support. In particular, the recommendation is to have a CPN and DID per user in order to provide emergency call-back 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 MiVoice Business RAY BAUM integration with RedSky using MiVoice Business.



The MiVoice Business 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
 - TLS v1.2+ on port 5061
 - 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 - These trunks must be pre-configured and tested during the implementation and integration between the MiVoice Business and RedSky. This can be validated by use of a 933 test number.

RedSky Horizon Mobility Portal

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 wire map (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 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

MiVoice Business

- 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

MiVoice Business Console

- Location Management via MyE911® application from RedSky

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

A SIP trunk is setup between MiVoice Business and MBG and between MBG and RedSky.

The MiVoice Business 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 are 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 on 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 MiVoice Business 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 MiVoice Business - RAY BAUM Integration with RedSky

Product	Minimum SW Release	Minimum Requirements/Comments
MiVoice Business	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 MiVoice Business instances 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 MiVoice Business instances 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 MiVoice Business instances 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 RFP 14 Single Cell Solution	RTX v530b6 RTX v610b1	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 MiVoice Business 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 number 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., MiVoice Business Console, 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 MiVoice Business, and SIP Trunk for the MBG.
Secondary Gateway	Identifies the Secondary SIP Peer for the MiVoice Business, 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
 primevgw1.lab.e911cloud.com
SIP Port: 5060 (TCP/UDP)
 5061 (TLS)
RTP Port Range: 30000 – 60000

Secondary Gateway
Interface: 3.134.4.224
 primevgw2.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 MiVoice Business 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 sentback.

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

NOTE: For the MiVoice Business 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 MiVoice Business solution you will need to:

1. Identify the Organization ID, used when setting up the MiVoice Business SIP Peer Profile, and MiCollabServer.

The screenshot shows the RedSky Dashboard with a sidebar menu on the left containing options like Dashboard, Administration, Configuration, Alerts & Emails, Locations, Users, Network Discovery, Call Monitoring, Monitoring, Reporting, Reports, Client Installers, and Manuals. The main content area is titled 'Dashboard' and includes a 'Summary' section with statistics: Administrators 3, Users 2, EON Users 0, and No. of Locations 1. Below this are several data tables:

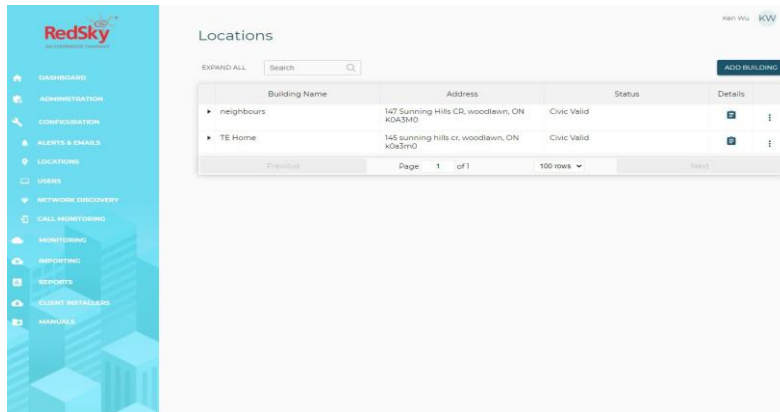
- Recent Issues:** A table with 4 columns: MyE911 Users without Locations (2), Network Elements without Locations (2), HELD Devices with no Location (2), and a fourth column with a value of 2.
- Recent Emergency Calls:** A table with 4 columns: Time, Phone Number / ID, Location, and a fourth column. It lists several calls with timestamps and locations like '8 Elk Island Crt, Kanata, ON K2M 2V3'.
- License Information:** A table with 3 columns: License Type, Total, and a third column. It lists license types like 'Basic User', 'Common Area', 'Enhanced Notification', and 'Enterprise User'.
- Recent Events:** A table with 4 columns: Time, Event Type, Username, and a fourth column. It lists events like 'CALL_ROUTE_DEFAULT', 'E911CALLMADE', 'BUILDING_DELETED', and 'UNDEFINED_NETWORK_LOCATION'.
- Recent Import Status:** A table with 3 columns: Created, Import Type, and Status. It shows 'No rows found'.
- IDs and Access Codes:** A table with 4 columns: Name, Value, Copy/View, and a fourth column. It lists 'HELD Company ID' and 'HELD Secret Key'.

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 sidebar menu and main content area. The 'Summary' section shows Administrators 3, Users 2, EON Users 0, and No. of Locations 1. The data tables (Recent Issues, Recent Emergency Calls, License Information, Recent Events, Recent Import Status, and IDs and Access Codes) contain the same information as in the previous screenshot.

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

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



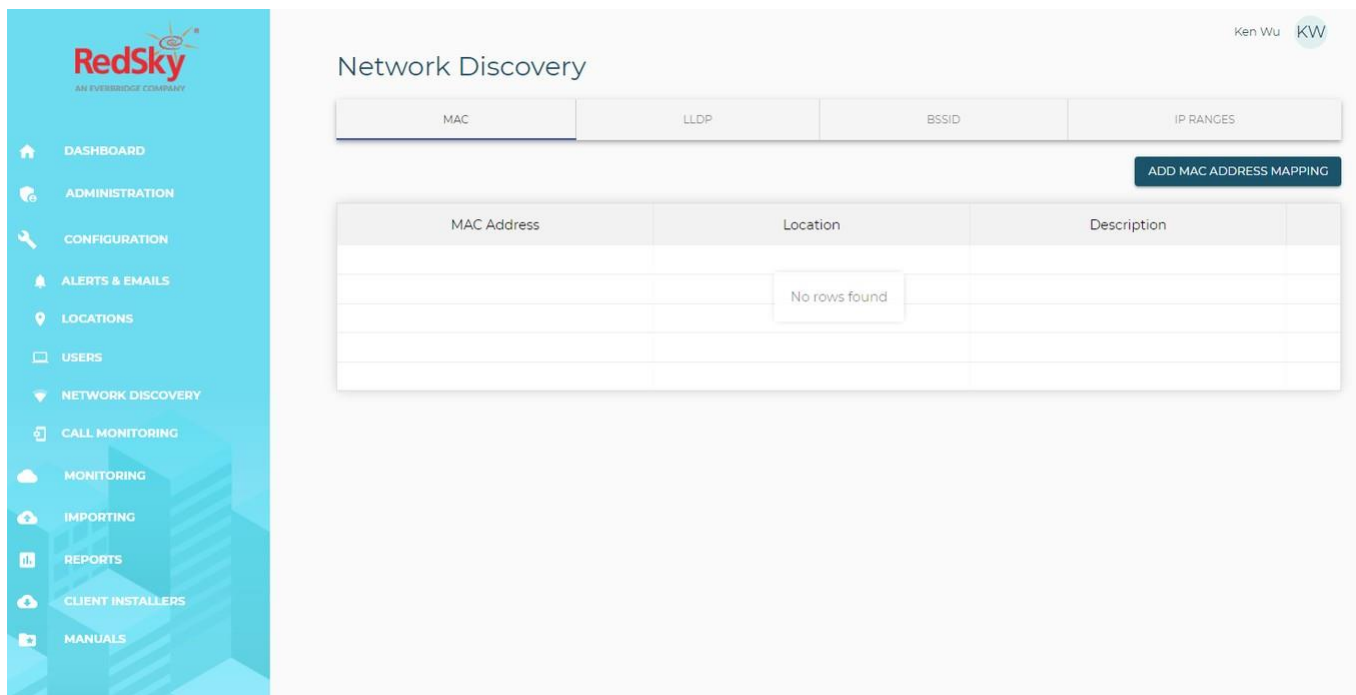
4. Configure the On-Premise wire map via Network Discovery. This is used by On-Premise HELD and MyE911:registered: clients.

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

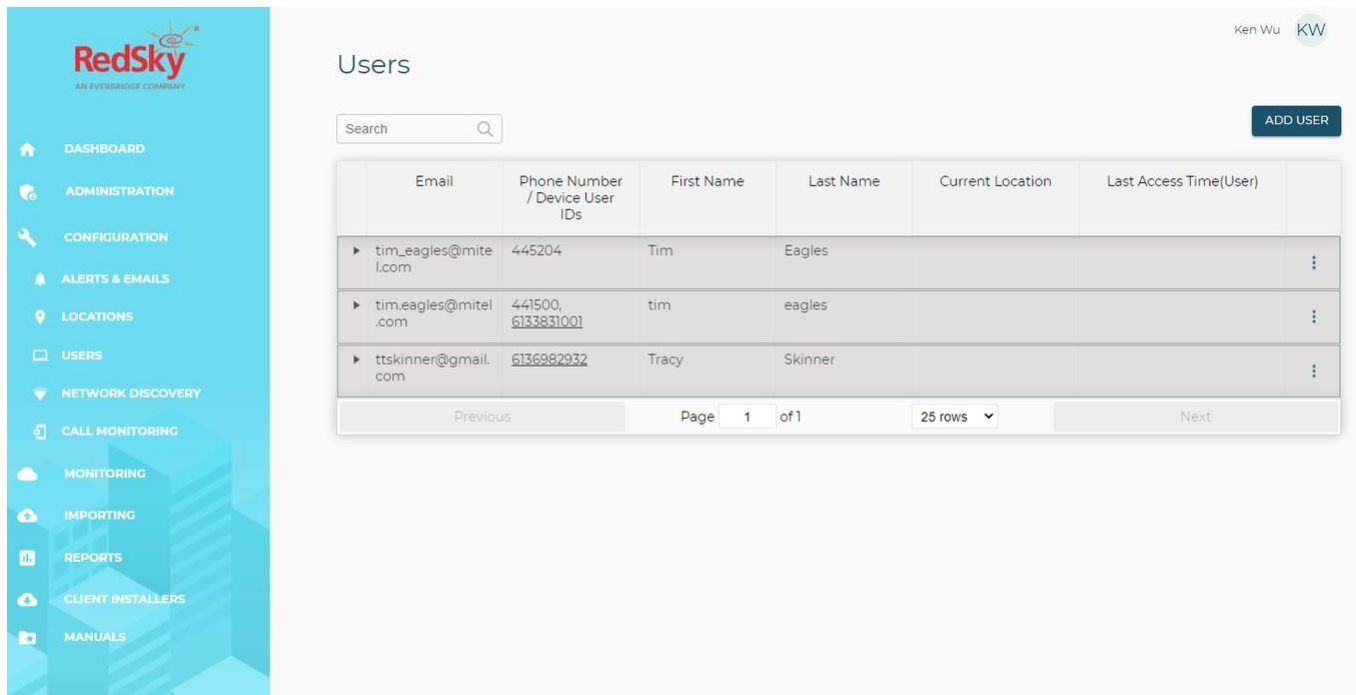
NOTE: The IP Ranges form has two lists:

- Private IP Range - Defines the association between a location and an 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., MiVoice Business Console), and HELD users (e.g., MiCollab SIP Softphone Clients).



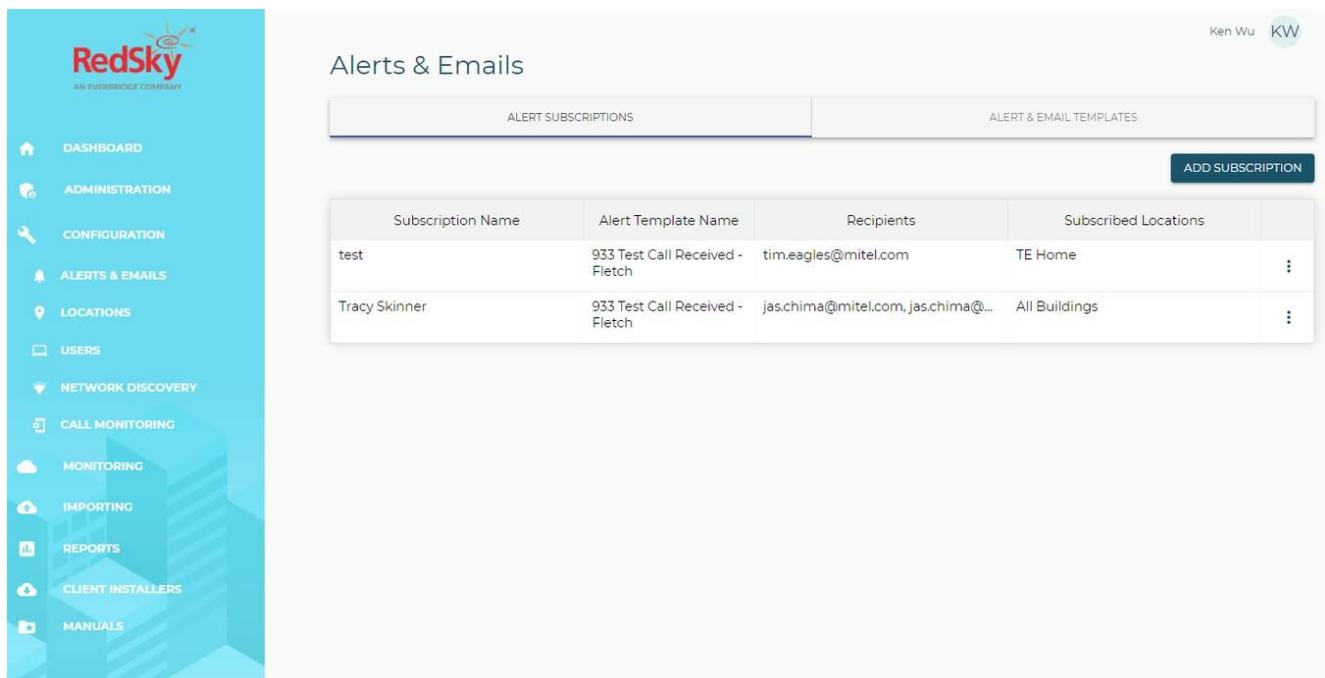
The screenshot shows the RedSky 'Users' management interface. On the left is a sidebar with navigation links: DASHBOARD, ADMINISTRATION, CONFIGURATION, ALERTS & EMAILS, LOCATIONS, USERS, NETWORK DISCOVERY, CALL MONITORING, MONITORING, IMPORTING, REPORTS, CLIENT INSTALLERS, and MANUALS. The main content area is titled 'Users' and includes a search bar, an 'ADD USER' button, and a table of existing users.

Email	Phone Number / Device User IDs	First Name	Last Name	Current Location	Last Access Time(User)
tim_eagles@mitel.com	445204	Tim	Eagles		
tim.eagles@mitel.com	441500, 6133831001	tim	eagles		
ttskinner@gmail.com	6136982932	Tracy	Skinner		

At the bottom of the table, there are pagination controls: 'Previous', 'Page 1 of 1', '25 rows', and 'Next'.


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

- 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.
- 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.
- Add an Alert Template - For Kari's Law, the standard Emergency Call Alert Template is enough.



The screenshot shows the RedSky 'Alerts & Emails' management interface. The sidebar is identical to the previous screenshot. The main content area is titled 'Alerts & Emails' and has two tabs: 'ALERT SUBSCRIPTIONS' (selected) and 'ALERT & EMAIL TEMPLATES'. There is an 'ADD SUBSCRIPTION' button and a table of existing subscriptions.

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



- [DASHBOARD](#)
- [ADMINISTRATION](#)
- [CONFIGURATION](#)
- [ALERTS & EMAILS](#)
- [LOCATIONS](#)
- [USERS](#)
- [NETWORK DISCOVERY](#)
- [CALL MONITORING](#)
- [MONITORING](#)
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- [REPORTS](#)
- [CLIENT INSTALLERS](#)
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Alerts & Emails

ALERT SUBSCRIPTIONS
ALERT & EMAIL TEMPLATES

[ADD SUBSCRIPTION](#)

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.




- [DASHBOARD](#)
- [ADMINISTRATION](#)
- [CONFIGURATION](#)
- [MONITORING](#)
- [IMPORTING](#)
- [REPORTS](#)
- [CLIENT INSTALLERS](#)
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Manuals

Please click one of links below to view/download the manuals







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



- DASHBOARD
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- CONFIGURATION
- ALERTS & EMAILS
- LOCATIONS
- USERS
- NETWORK DISCOVERY
- CALL MONITORING
- MONITORING
- IMPORTING
- REPORTS
- CLIENT INSTALLERS
- MANUALS

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

NOTE: MiVoice Business uses a priority order on the Emergency Info:

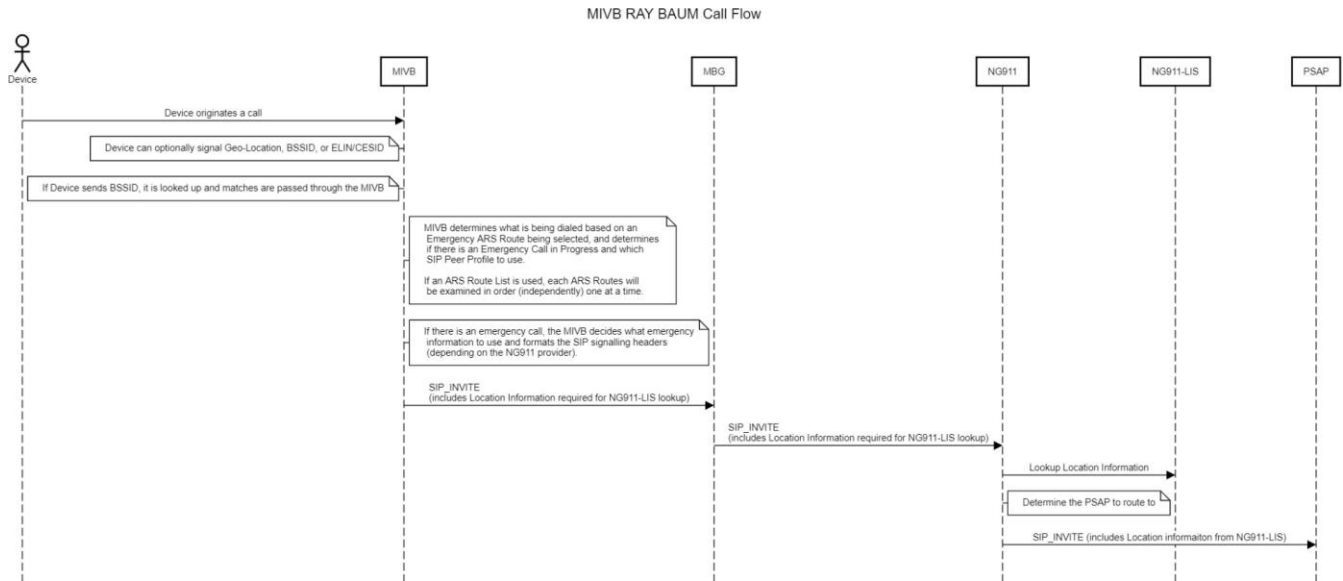
- Geolocation – provided by HELD enabled devices.
- BSSID – provided by Wi-Fi Base Stations in the SIP INVITE (PANI header) or 200 OK
- CESID – provided by SIP DECT and IP DECT in the SIP INVITE (FROM header) or 200 OK
- L2 to CESID
- Manual/Automatic CESID
- Zone CESID(IP to Zone to CESID Mapping and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

Sending Data to RedSky

After MiVoice Business 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. These calls to the National Call Center incur an extra cost. In addition, all calls from a Canadian location will first be routed to the National Call Center to verbally confirm the caller's location, but these calls do not incur 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 MiVoice Business will use the programmed CESID. This information needs to be added in the system by the system admin.

Sending Data to RedSky

After MiVoice Business 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 data 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 an Emergency Callback Number. For the RAY BAUM enabled SIP Trunks, the MiVoice Business 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: MiVoice Business Location ID Definition

The Location ID is a reference/identification used to identify a device or several devices in the MiVoice Business that is to be sent to RedSky and will (for the most part) be the CESID assigned to the device. The

MiVoice Business provides forms for various methods of associating 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 for associating a CESID with a device because it is based on the physical connection rather than on a logical one. In the CESID assignment form, the CESID Updating field should be set to Automatic. However, this option requires specialized hardware, which might 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 MiVoice Business to find the associated MAC address. This option requires manual updating whenever the Wireless Access Point is moved.
- IP to Zone to CESID mapping - Allows a device in each IP range to be associated with a CESID (by associating the IP range to a Zone in the Location Specification form and then assigning a CESID to the Zone in the Network Zone form). This option requires that the IP Address ranges can be sufficiently segmented to provide sufficient granularity to satisfy RAY BAUM requirements.
- Zone to CESID mapping – Similar to IP to Zone to CESID mapping, except the Zone is not determined by the IP address range in the Location Specification form, but rather the zone statically assigned to the device. This option is not recommended for non-fixed IP devices because if the device is moved to another zone, the move will not automatically be detected.
- CESID Assignment - Allows a device to be assigned a CESID directly, where the CESID Updating field should be set to Manual. NOTE: Hot Desk Users will use the CESID of the registered directory number of the based device (RegDN). This option should only be used by fixed devices, such as analog devices, or teleworkers.

NOTE: Devices that support HELD will obtain their Location ID directly from RedSky, and will be sent through the MiVoice Business, as such there doesn't need to be any Location ID programmed on the MiVoice Business. 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 MiVoice Business. As such there doesn't need to be any Location ID programmed on the MiVoice Business. However, the CESID must match a RedSky Location.

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

Solution: MiVoice Business 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
MiVoice Business Console	MyE911® Application IP to Zone 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 12/14 Single Cell Solution (Programmed as Generic SIP on the MiVoice Business)	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 Wi-Fi	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 Zone 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: MiVoice Business Functions with RAY BAUM Support

Beyond the devices, the MiVoice Business supports many functions that might be used to make an emergency 911 call. The supported MiVoice Business functions:

MiVoice Business 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

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

- MiVoice Business Console
- MiCollab
- MBG – MiVoice Border Controller
- MiCC-B - MiContact Center Business for MiVoice Business
- MiCC-B - MiContact Center Business for SIP
- SIP DECT
- IP DECT (Ascom) OIG (via MiTAI)
- RFP 12/14 Single Cell Solution

Solution: Mitel Applications Without RAY BAUM Support

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

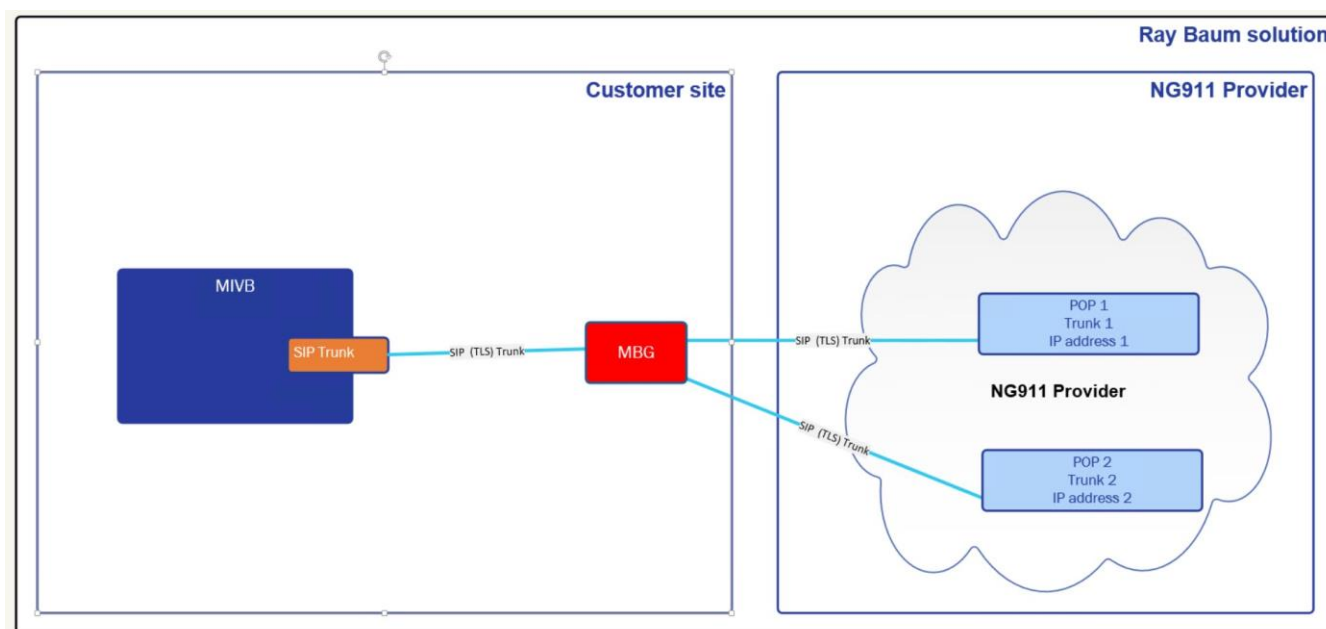
- MiCAM - MiCollab Advanced Messaging
- MIR - Mitel Interaction Recording
- NPM – NuPoint Unified Messaging
- MPA - Mitel Performance Analytics
- Mitel Revolution

Solution: Deployment Diagrams

This chapter covers possible deployments setup between MiVoice Business and RedSky.

MiVoice Business and MBG in a Customer Site

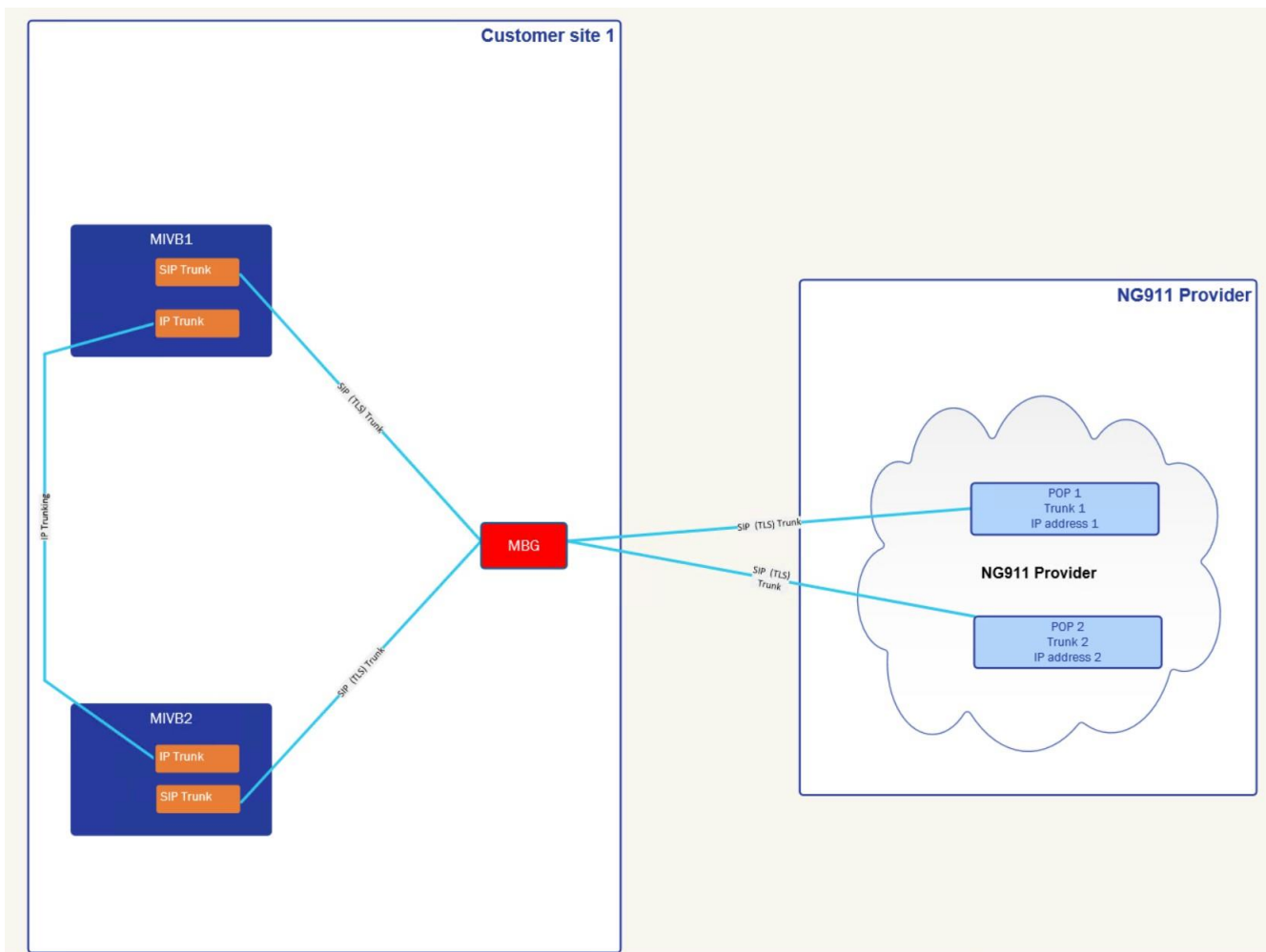
The architecture view below shows the most basic setup between MiVoice Business and RedSky. An emergency route is setup over SIP trunk between MiVoice Business and a single MBG, then MBG has two SIP trunks towards RedSky SIP gateways for redundancy purpose. The double SIP trunks between the customer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



Refer to MBG documentation for MBG Redundancy SIP trunk configuration.

Multiple MiVoice Business Instances Connected to a Single MBG

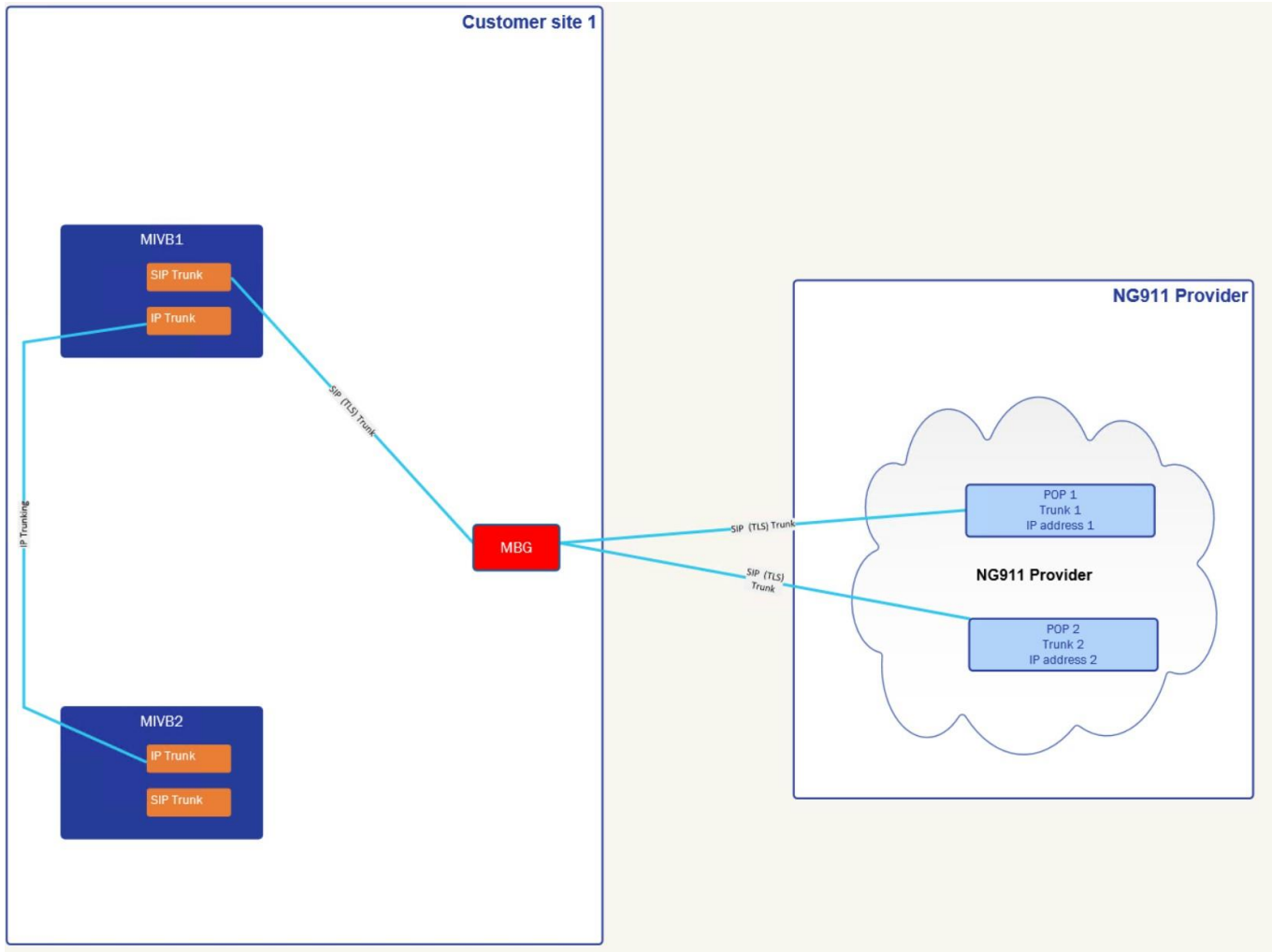
The architecture view below shows a more complicated setup between multiple MiVoice Business instances and a single MBG and RedSky. In this case, each MiVoice Business is setup with an emergency route over SIP Trunk directly to the MBG, then MBG has two SIP trunks towards RedSky SIP gateways for redundancy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



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

Multiple MiVoice Business Instances Using a Single MiVoice Business as a Trunking Gateway to a Single MBG

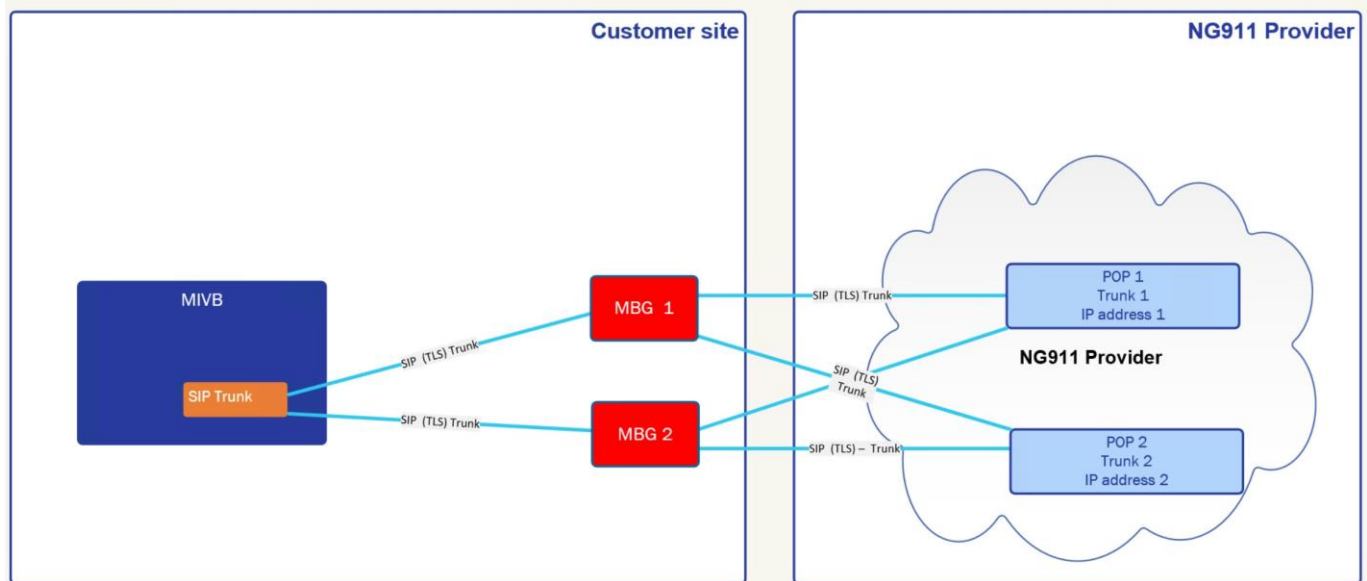
The architecture view below shows a more complicated setup between multiple MiVoice Business instances and a single MBG and RedSky that reduces the SIP Trunks (and thus licenses) required. In this case, multiple MiVoice Business are setup with an emergency IP Trunking route to a designated MiVoice Business 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.

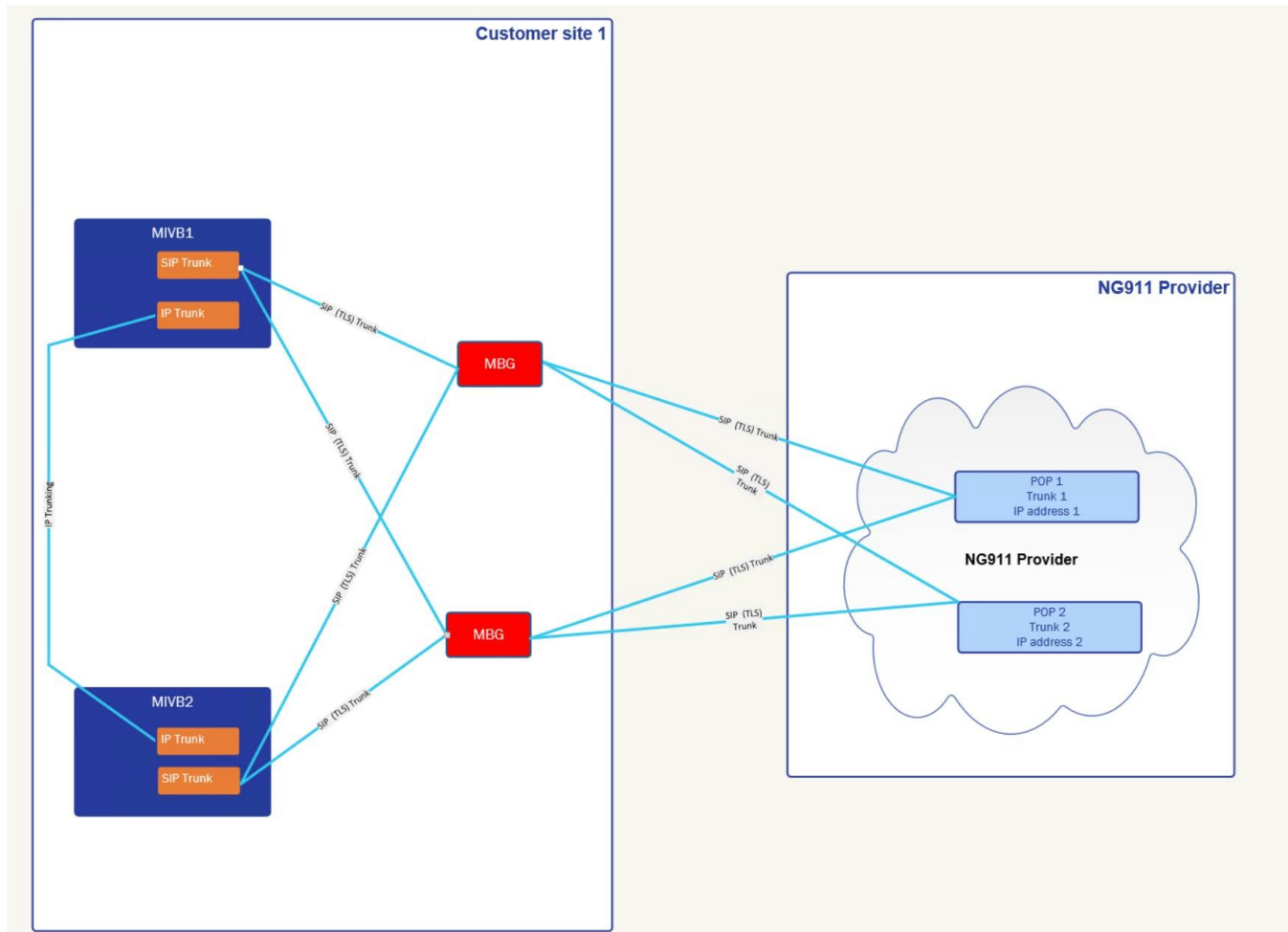
MiVoice Business and Two MBGs in a Customer Site

The architecture view below shows a redundant setup between MiVoice Business and RedSky. SIP trunks are setup between MiVoice Business 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 MiVoice Business Instances Using Multiple MiVoice Business as a Trunking Gateway to a Single MBG

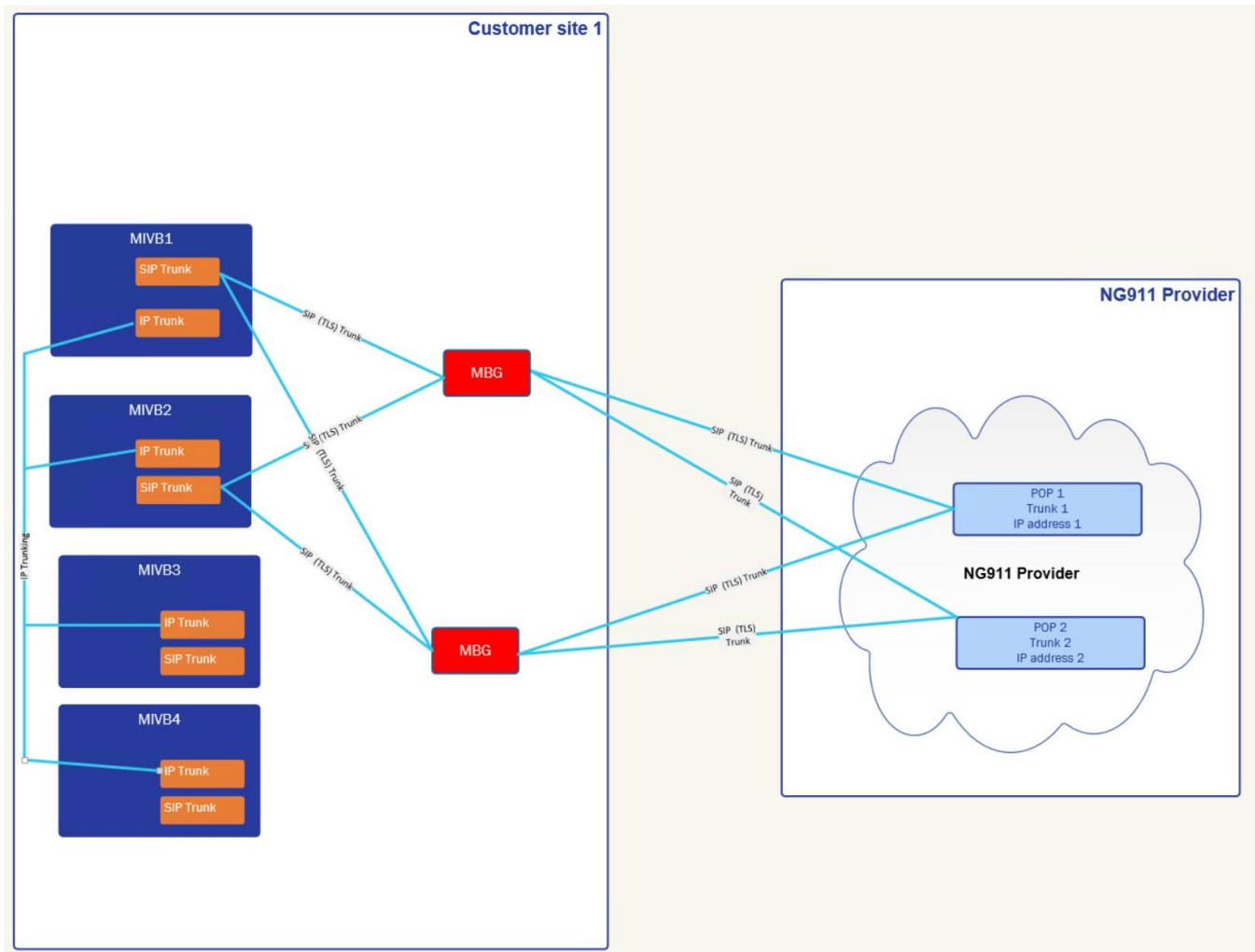
The architecture view below shows a redundant setup between multiple MiVoice Business and multiple MBGs and RedSky. SIP trunks are setup between MiVoice Business and the two MBGs, then each MBG has two SIP trunks towards RedSky SIP gateways for redundancy purpose. The double SIP trunks between the customer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



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

Multiple MiVoice Business Instances Using a Dedicated MiVoice Business as Gateway to Two MBGs

The architecture view below shows a more complicated setup between multiple MiVoice Business instances and a multiple MBGs and RedSky that reduces the SIP Trunks (and thus licenses) required. In this case, multiple MiVoice Business are setup with an emergency IP Trunking route to designated MiVoice Business 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 MiVoice Business instances, non-trunking gateway MiVoice Business instances will need an emergency IP Trunk route to MIVB1 and MIVB2

Deploying Guide: MiVoice Business SIP Trunking to RedSky (MBG as 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 SIP Options

SIP options

Certificate Mitel Export root cert

SIP support

Protocols

UDP ☒

TCP ☒

TCP/TLS ☒

Access profile

Public ▼

Public ▼

Public ▼

The SIP Options above can be found under System -> Settings -> SIP options. Ensure that the Access Profile values are set to Public for the Protocols you plan to support.

Configure MBG Definition for MiVoice Business Instances

Mitel | MiCollab

admin@ottawa.design.mitel.com Status: Ready

Applications

- Users and Services
- Audio, Web and Video Conferencing
- MiVoice Border Gateway
- NuPoint Web Console
- HiCollab Client Service
- HiCollab Client Deployment
- Licensing Information

ServiceLink

- Installer Applications
- Status

Administration

- Web services
- Backup
- Restore
- View log files
- Event viewer
- SSS Distribution Errors
- System information
- System monitoring
- System users
- Shutdown or reboot
- Virtualization

Configuration

- Integrated Directory Service
- HiCollab Client Integration Wizard
- Reasonable Wizard
- HiCollab Settings
- HiCollab Language
- VoIP Settings
- Networks
- E-mail settings
- Google Apps
- Cloud Service Provider
- DMCP
- Date and Time
- Hostnames and addresses
- Domains
- IPv6-on-IPv4 Tunnel
- State
- Ethernet Cards
- Review configuration

Security

- Remote access
- Port forwarding
- Staging
- Web Server
- MBG client certificates

Miscellaneous

- Support and licensing
- Help

ICP Information

Default for Minet	Default for SIP	Name	Hostname or IP address	Type	Installer password	SIP capabilities	Indirect call recording capable	Associated connectors	Associated sets (Minet/SIP)	Associated trunk rules (pri/sec)			
<input checked="" type="radio"/>	<input checked="" type="radio"/>	ipbx005	10.34.20.105	MiVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	5/0	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="radio"/>	<input type="radio"/>	ipbx006	10.46.28.73	MiVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	1/2	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="radio"/>	<input type="radio"/>	ipbx008	10.36.146.20	MiVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	1/1	<input type="text"/>	<input type="text"/>	<input type="text"/>
<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="text"/>	<input type="text"/>	<input type="text"/>
<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="text"/>	<input type="text"/>	<input type="text"/>
<input type="radio"/>	<input type="radio"/>	ipbx465	10.36.159.200	MiVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	1/0	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="radio"/>	<input type="radio"/>	ipbx470	10.36.101.70	MiVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	1/0	<input type="text"/>	<input type="text"/>	<input type="text"/>

[Update default ICPs](#)

MiVoice Border Gateway 11.3.0.29
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NOTE: This doesn't have to be all MiVoice Business instances, as that would require SIP Trunk licenses on each MiVoice Business. However, it is recommended that at least a pair of MiVoice Business instances be able to route directly to the MBG(s). **NOTE:** The MBG should set the

MiVoice Business's SIP capabilities as "UDP, TCP, TLS"

Configure MBG SIP Trunking to RedSky

Page updated: Thu Aug 02 2021 14:53:12 GMT-0400 (Eastern Daylight Time)
 This interface provides the ability to edit a SIP trunk's details. Edit below, and click the "Save" button to commit the changes. If you do not wish to save, simply navigate elsewhere.

Manage SIP trunk

Profile

Enabled ☒
 Name

Authentication

Authentication username
 Authentication password
 Confirm authentication password

Protocol

PRACK support
 Options keepalives
 Options interval
 Rewrite host in PAI ☒
 Idle timeout (s)

Trunk-side RTP security

Inbound
 Outbound
 Preferred cipher

SIP adaptation

Transport protocol
 Remote trunk endpoint address
 Remote trunk endpoint port

Media

Local streaming between trunk calls ☐
 RTP address override

Binding rules

Note: If you modify your routing rules, you must save them before changing pages or navigating elsewhere, or those changes will be lost.

Search Next Previous

Page 1 of 1
 Rules per page 10
 Jump to page 1

Match	Prev	Rule	Primary	Secondary	Description	Next	Last
1 Request LRS			global	global			

NOTE: Transport protocol

MBG does not support translating transport protocols to a given SIP Service provider. So, the MiVoice Business (Network Elements for both the MBG Outbound Proxy and RedSky), MBG (MiVoice Business + 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 MiVoice Business 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 MiVoice Business 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 MiVoice Business Trunking Gateways to Use MBG as RedSky Outbound Proxy

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	RedSky1
Type	Other
FQDN or IP Address	18.189.128.222
Local	False
Version	
Zone	1
ARID	
SIP Peer	<input checked="" type="checkbox"/>

SIP Peer Specific

SIP Peer Transport	TCP
SIP Peer Port	5060
External SIP Proxy FQDN or IP Address	
External SIP Proxy Transport	default
External SIP Proxy Port	0
SIP Registrar FQDN or IP Address	
SIP Registrar Transport	default
SIP Registrar Port	0
SIP Peer Status	Auto-Detect/Normal

Save

Cancel

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.

MiVoice Business Field	Tab	Setting
SIP Peer Profile Label	Basic	Mandatory. Enter an alphanumeric string up to nine characters for the SIP Peer Profile.
Network Element	Basic	Mandatory. Select the appropriate Network Element name (programmed in the Network Elements form) from the pull-down list.
Maximum Simultaneous Calls and Minimum Reserved Call Licenses	Basic	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.
Outbound Proxy Server	Basic	The Network Element for the MBG Outbound Proxy
Private SIP Trunk	Call Routing	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 MiVoice Business has their own unique DID number.
Trunk Group Label	Signaling and Header Manipulation	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	Signaling and Header Manipulation	Use E911 Headers
Multilingual Name Display	Signaling and Header Manipulation	Optional if customer wants to see the UTF-8 names of users in the Redsky notifications.
User-Defined Header Name	Signaling and Header Manipulation	E911-Organization-ID
User-Defined Header Value	Signaling and Header Manipulation	Organization ID provided by RedSky and available on the Redsky Portal Dashboard in the <i>IDs and Access Codes pane</i> - > <i>HELD Company ID</i>

The screenshot displays the Mitel MiVoice Business administration console. The left sidebar contains a navigation menu with categories like Licenses, LAN/WAN Configuration, Voice Network, System Properties, Hardware, Trunks, IP/XNET, SIP, Users and Devices, 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 'SIP Peer Profile on |ipbx405|'. It includes a search bar and buttons for 'Add', 'Change', 'Delete', 'Print...', 'Import...', 'Export...', and 'Data Refresh'. Below this is a table listing SIP Peer Profiles:

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

Below the table, there are tabs for '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 selected, showing the following configuration details:

- SIP Peer Profile Label:** Vancouver
- Network Element:** Vancouver
- Local Account Information:**
 - Registration User Name:** (empty)
 - 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:** (empty)
 - Password:** (empty)
 - Confirm Password:** (empty)
 - Authentication Option for Incoming Calls:** No Authentication
 - Subscription User Name:** KPMIL
 - Subscription Password:** (empty)
 - Subscription Confirm Password:** (empty)

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 MiVoice Business 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 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**

Change Change Page Change All Clear

Print... Import... Export... Data Refresh

Page 7 of 14 Go to Value Go

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 **MN81**

Search DN

Show form on Not Accessible

ARS Route Lists Search:

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

Change Clear

Print... Import... Export... Data Refresh

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
1	15	8	Yes	11	Yes	12	No	13	No	14	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
3			No		No		No		No		No		No		No		No		No		No		No
4			No		No		No		No		No		No		No		No		No		No		No
5			No		No		No		No		No		No		No		No		No		No		No
6			No		No		No		No		No		No		No		No		No		No		No
7			No		No		No		No		No		No		No		No		No		No		No
8			No		No		No		No		No		No		No		No		No		No		No
9			No		No		No		No		No		No		No		No		No		No		No
10			No		No		No		No		No		No		No		No		No		No		No
11			No		No		No		No		No		No		No		No		No		No		No
12			No		No		No		No		No		No		No		No		No		No		No
13			No		No		No		No		No		No		No		No		No		No		No
14			No		No		No		No		No		No		No		No		No		No		No
15			No		No		No		No		No		No		No		No		No		No		No

NOTE: As a “last resort” non-emergency ARS route 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 MiVoice Business 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 administration interface. 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. Under Call Routing, the 'Automatic Route Selection (ARS)' section is expanded, showing options like ARS Call Progress Tone Detection, ARS Digit Modification Plans, ARS Maximum Dialed Digits, ARS Routes, ARS Route Lists, ARS Route Plans, ARS Digits Dialed (selected), ARS Leading Digits, ARS Day and Time Zones, and ARS Node Identities.

The main content area is titled 'ARS Digits Dialed on ipbx405'. It includes a search bar for 'Search DN' and a 'Show form on' dropdown set to 'ipbx405 (Login Node)'. Below this are buttons for 'Add', 'Change', and 'Delete', along with 'Print...', 'Import...', 'Export...', and 'Data Refresh'. A pagination bar shows 'Page 1 of 1' and a 'Go to' field.

The 'ARS Digits Dialed' table is displayed with the following data:

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

Configure Non-trunking Gateways to Use MiVoice Business Trunking Gateways to Access RedSky

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

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, Integrated Directory Services, Voice Mail, and Call Routing. Under Call Routing, the 'Automatic Route Selection (ARS)' section is expanded, showing options like 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, and ARS Node Identities. The main content area is titled 'ARS Routes on ipbx405'. It includes a search bar, a 'Show form on' dropdown set to 'ipbx405 (Login Node)', and buttons for 'Change', 'Change Page', 'Change All', 'Clear', 'Print...', 'Import...', 'Export...', and 'Data Refresh'. Below these is a table of ARS Routes. The table has 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. The table lists routes 91 through 105. Routes 98 and 99 are highlighted in blue, indicating they are Direct IP Routes.

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			406	65	805		Emergency	Auto
99	Direct IP Route			470	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 MiVoice Business Trunking Gateway(s).






The screenshot shows the Mitel MiVoice Business web interface for the 'ARS Route Lists' configuration page. The left sidebar is the same as the previous screenshot. The main content area is titled 'ARS Route Lists on ipbx405'. It includes a search bar, a 'Show form on' dropdown set to 'ipbx405 (Login Node)', and buttons for 'Change', 'Clear', 'Print...', 'Import...', 'Export...', and 'Data Refresh'. Below these is a table of ARS Route Lists. The table has columns: 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, and 13th Choice route. The table lists 15 route lists. All 'Warning Tone' columns are set to 'No'.

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
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
2			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
4			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
6			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
8			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
10			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
11			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
12			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
13			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
14			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
15			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

Licenses

LAN/WAN Configuration

Voice Network

System Properties

Hardware

Trunks

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

Maintenance and Diagnostics

ARS Digits Dialed on [Ipbx405]

Search DN

Show form on [Ipbx405 (Login Node)]

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., MiVoice Business 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.

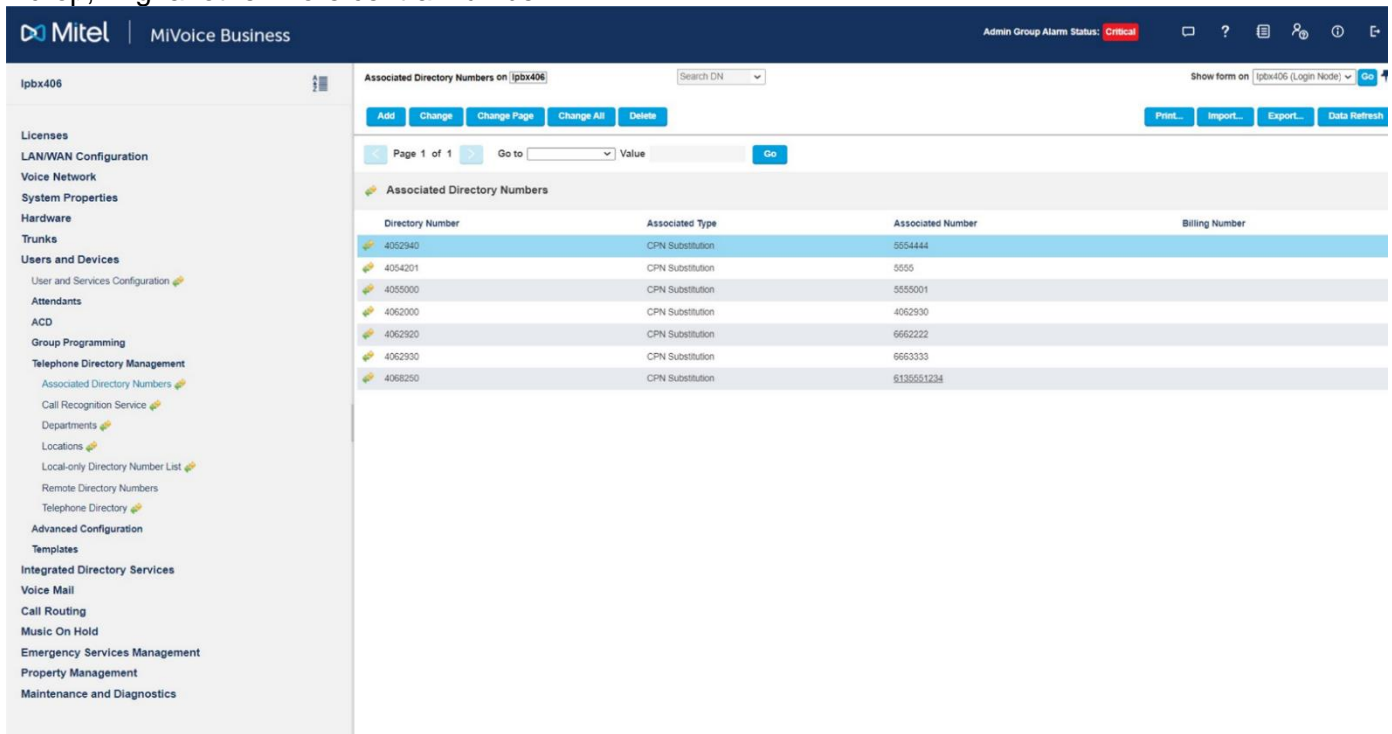
- CPN Substitution is used to identify the Calling Party Number and will be used as the Emergency Callback number when using RedSky.

NOTE: The same CPN will be used for non-emergency and emergency calls.

- The DID number is used by the MiVoice Business 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 MiVoice Business 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 MiVoice Business, program the CPN Substitution for the device in the Associated Directory Number form(or alternatively the User and Services Configuration form). This is to program a number directly to an extension. CPN Substitution can also be configured in the Zone Assignment or DID Ranges for CPN Substitution form if it is desired the emergency callback, should the emergency call drop, ring another more central number.



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 Telephone Directory Management. The main content area is titled 'Associated Directory Numbers on |pbx406'. It includes a search bar and a table of directory numbers.

Directory Number	Associated Type	Associated Number	Billing Number
4062940	CPN Substitution	5554444	
4064201	CPN Substitution	5555	
4065000	CPN Substitution	5555001	
4062900	CPN Substitution	4062930	
4062920	CPN Substitution	6662222	
4062930	CPN Substitution	6663333	
4068250	CPN Substitution	8135551234	

On the MiVoice Business, program the DID for the device in the Direct Inward Dialing Service form (or alternatively the User and Services Configuration form)

The screenshot shows the Mitel MiVoice Business web interface. The top navigation bar includes the Mitel logo, the text 'MiVoice Business', and a 'License Violation Status: Critical' indicator. The left sidebar contains a list of navigation options: 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. The main content area is titled 'Direct Inward Dialing Service on MN81'. It includes a search bar with a dropdown menu for 'Search DN' and a 'Show form on' dropdown set to 'Not Accessible'. Below the search bar is a search filter section with a dropdown for 'Primary Node Id (PNI)' and a 'Search' button. There are buttons for 'Add', 'Change', and 'Delete' on the left, and 'Print...', 'Import...', 'Export...', and 'Data Refresh' on the right. The main table is titled 'Direct Inward Dialing Service' and has four columns: 'DID Number', 'Primary Node Id (PNI)', 'Destination Number', and 'DID Type'. The table contains 14 rows of data.

DID Number	Primary Node Id (PNI)	Destination Number	DID Type
5656	555	6910	Emergency DID
696969696969	555	7878	Emergency DID
4111800000	555	80000	Standard DID
9703329141	555	81001	Standard DID
381810020	555	81002	Standard DID
88888888	555	81002	Emergency DID
8100581005	555	81005	Standard DID
381810060	555	81006	Standard DID
0000081222	555	81222	Emergency DID
121212121212	555	81222	Emergency DID
0000081660	555	81660	Emergency DID
381817700	555	8177	Standard DID

NOTE: Since the MiVoice Business RedSky solution requires using the CPN Substitution number for Emergency Call-back, the MiVoice Business 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 MiVoice Business 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 MiVoice Business CESID.

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

Deployment Guide: Defining On-Premise Wire Maps

The MiVoice Business RedSky solution for On-Premise HELD clients (e.g., MiCollab SIP Softphone, etc.) and MyE911® clients (e.g., MiVoice Business Console, MiCollab MINET Softphones) 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 associate a location to a device based on wired connectivity to a L2 network switch.
- BSSID - Used to associate 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 its 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)

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

Add BuildingCLOSE

*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 MiVoice Business/device
Location Information	Description of location (e.g., Room/Floor/Apt/Suite).


Add LocationCLOSE

 Identification Type: ☐ Phone Number ☒ Alternate ID

*Name

Alternate ID

Location Information

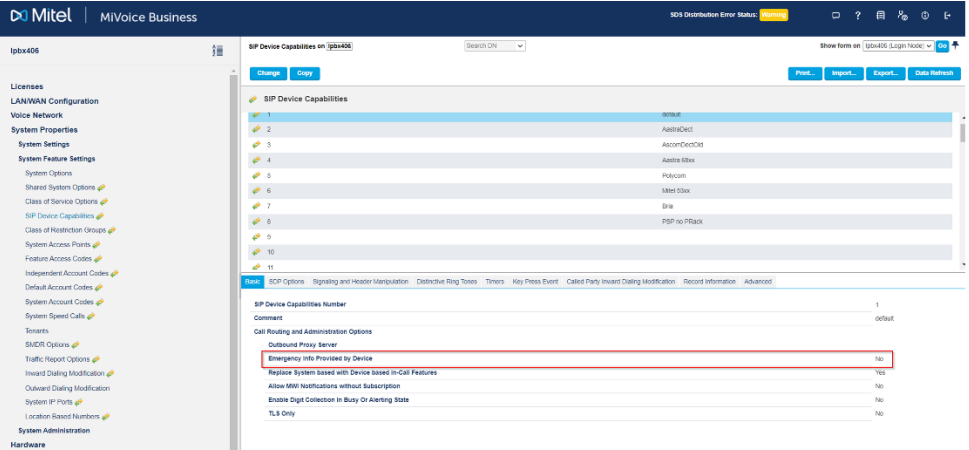


Override Organization Name ☐

HTML Link URL

SAVE

Step 3: Program the CESID information in the MiVoice Business.

CESID Alternatives	Configuration Steps
CESID sent by the device (limited to SIP devices)	<p>Program the CESID on the SIP device.</p> <p>NOTE: Configuration will depend on the device type.</p> <p>On the MiVoice Business, enable Emergency Info Provided by Device in the SIP Device Capabilities</p>  <p>NOTE: Valid CESIDs are digit strings of 1-12 digits and length and 0-9 are the only valid digits. While these devices themselves may allow other characters as they support multiple Mitel PBXs, the MIVOICE BUSINESS will not pass along the CESID it does not meet the MiVoice Business criteria.</p>

CESID Alternatives

BSSID to CESID Mapping (limited to 5634)

Configuration Steps

On the 5634 devices, enable the MAC Address of the Wireless Access Point to be sent on all calls.

NOTE: Configuration will depend on the device type.

On the MiVoice Business, enable Emergency Info Provided by Device in the SIP Device Capabilities.

The screenshot shows the 'SIP Device Capabilities' configuration page for 'ipbx400'. The left sidebar lists various configuration categories like Licenses, LAN/WAN Configuration, Voice Network, System Properties, System Settings, System Feature Settings, System Options, Shared System Options, Class of Service Options, SIP Device Capabilities (selected), Class of Restriction Groups, System Access Plans, Feature Access Codes, Independent Account Codes, Default Account Codes, System Account Codes, System Speed Codes, Trunks, SIP Trunk Options, Trunk Recall Codes, Inward Calling Modification, Outward Calling Modification, System IP Ports, Location Based Numbers, System Administration, Hardware, Trunks, Users and Devices, Integrated Directory Services, and Voice Mail.

The main content area shows 'SIP Device Capabilities' for 'ipbx400'. It includes a table of capabilities and a section for 'SIP Device Capabilities Number' and 'Emergency Info Provided by Device'.

Capability	Value
1	enable
2	enable
3	enable
4	enable
5	enable
6	enable
7	enable
8	enable
9	enable
10	enable
11	enable

Below the table, there are sections for 'SIP Device Capabilities Number' (1) and 'Emergency Info Provided by Device' (10). The 'Emergency Info Provided by Device' section is highlighted with a red border.

SIP Device Capabilities Number
1

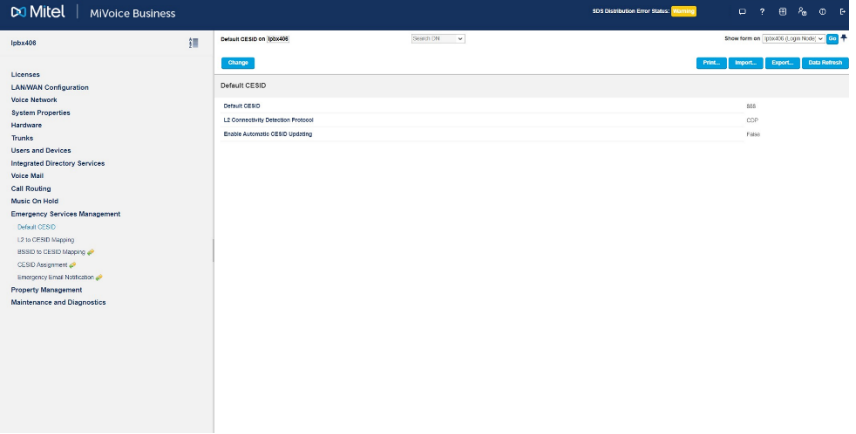
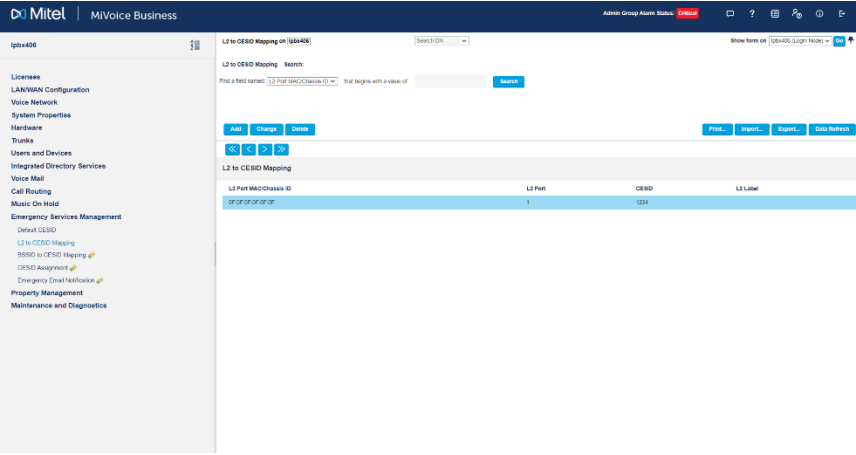
Emergency Info Provided by Device
10

On the MiVoice Business program the BSSID to CESID Mapping

The screenshot shows the 'BSSID to CESID Mapping' configuration page for 'ipbx400'. The left sidebar lists various configuration categories like Licenses, LAN/WAN Configuration, Voice Network, System Properties, System Settings, System Feature Settings, System Options, Shared System Options, Class of Service Options, SIP Device Capabilities, Class of Restriction Groups, System Access Plans, Feature Access Codes, Independent Account Codes, Default Account Codes, System Account Codes, System Speed Codes, Trunks, SIP Trunk Options, Trunk Recall Codes, Inward Calling Modification, Outward Calling Modification, System IP Ports, Location Based Numbers, System Administration, Hardware, Trunks, Users and Devices, Integrated Directory Services, Voice Mail, Call Routing, Music On Hold, Emergency Services Management, Default CESID, L2 to CESID Mapping, BSSID to CESID Mapping (selected), CESID Assignment, Emergency Call Modification, Property Management, and Maintenance and Diagnostics.

The main content area shows 'BSSID to CESID Mapping' for 'ipbx400'. It includes a table with columns for BSSID, CESID, and BSSID List.

BSSID	CESID	BSSID List

CESID Alternatives	Configuration Steps
L2 to CESID Mapping (limited to MINET sets)	<p>On the MiVoice Business, 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 MiVoice Business, configure the L2 to CESID Mapping</p>  <p>NOTE: The MiVoice Business only supports one device per L2 Port.</p>

Configuration Steps

- On the MiVoice Business, define the IP Address range to Zone ID in either the Location Specification or Location Specific IPv6 form.

[illegible]

CESID Alternatives

Configuration Steps

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

Zone ID	Intra-zone Compression	Group Zone	Intra-zone Fax Profile	Label	SMDR Tag	Time Zone	LBN Profile	Zone CESID	Default Billing Number	Default CPN	Audio Source	Embedded Music Source	Music-On-Hold Music Source
1	No		1										
2	No		1					655582722					
3	No		1										
4	No		1										
5	No		1										
6	No		1										
7	No		1										
8	No		1										
9	No		1										
10	No		1										
11	No		1										
12	No		1										
13	No		1										
14	No		1										
15	No		1										
16	No		1										
17	No		1										
18	No		1										
19	No		1										
20	No		1										

On the MiVoice Business, set the Zone Assignment to Default for the device in the User and Service Configuration form(or Station Attributes form)

Field	Value
External Hot Desking Enabled	<input type="checkbox"/> No / <input checked="" type="checkbox"/> Yes
External Hot Desking Dialing Profile	
External Hot Desking Number	
DID Service Number	
Use DID Number for Outgoing Calls	<input type="checkbox"/>
CPN Substitution Number	
Billing Number	
Personal Speedcall Allocation	
Zone Assignment Method	Default
Zone ID	111
SP Device Capabilities	7
Interconnect Number	10
Tenant Number	15
Local Default Configuration	<input type="checkbox"/> No / <input checked="" type="checkbox"/> Yes
Max Call History Records	1
Non-Busy Extension	<input type="checkbox"/> No / <input checked="" type="checkbox"/> Yes
Call Coverage Service Number	15
Call Routing - Day	1
Call Routing - Night1	1
Call Routing - Night2	1
Call Routing DND Type	AB
Call Routing - 1st AB	1

Zone to CESID Mapping

On the MiVoice Business, configure the CESID against the Zone in the Network Zone Assignment form.

Zone ID	Intra-zone Compression	Group Zone	Intra-zone Fax Profile	Label	BSCR Tag	Time Zone	LBN Profile	Zone CESID	Default Billing Number	Default CPE	Audio Source	Embedded Music Source	Music On-Hold Music Source
1	No		1										
2	No		1					510202102					
3	No		1										
4	No		1										
5	No		1										
6	No		1										
7	No		1										
8	No		1										
9	No		1										
10	No		1										
11	No		1										
12	No		1										
13	No		1										
14	No		1										
15	No		1										
16	No		1										
17	No		1										
18	No		1										
19	No		1										
20	No		1										

On the MiVoice Business, set the Zone Assignment to Default or Manual for the device in the User and Service Configuration form.

Access Details

External Hot Desking Enabled: ☐ No / ☒ Yes

External Hot Desking Number:

DID Service Number:

Use DID Number for Outgoing Calls: ☐

CPE Substitution Number:

Billing Number:

Personal Speedcall Allocation:

Zone Assignment Method:

Zone ID:

SP Device Capabilities:

Interconnect Number:

Taurus Number:

Lock Outcall Configuration: ☐ No / ☒ Yes

Max Call History Records:

Hold Music Extension: ☐ No / ☒ Yes

Call Coverage/Service Number:

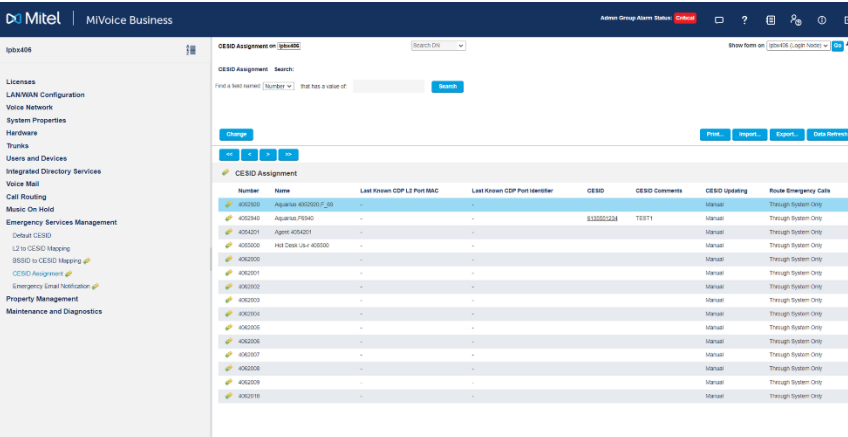
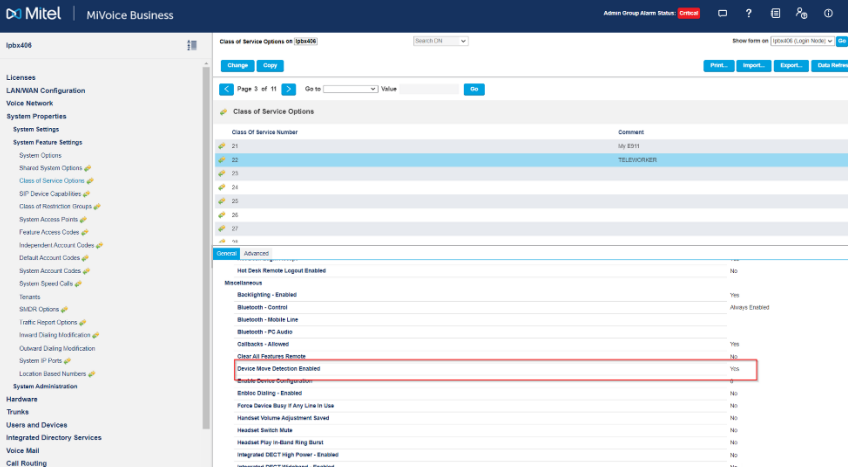
Call Remarking - Day:

Call Remarking - Night1:

Call Remarking - Night2:

Call Remarking - DND Type:

Call Remarking - TSLAL:

CESID Alternatives	Configuration Steps
<p>CESID Assignment</p>	<p>On the MiVoice Business, program the CESID against the device in the CESID Assignment form.</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. When enabled, a pop-up will be presented to the end user indicating the device has detected a possible change of location and to contact their administrator to provide the new location. Once acknowledged by the end user, the MiVoice Business will generate an Audit log indicating which device acknowledged the move.</p> 

Step 4: On the MiVoice Business, program the CPN Substitution for the device

Mitel | MiVoice Business

Admin Group Alarm Status: **Critical**

ipbx406

Associated Directory Numbers on ipbx406

Search DN

Show form on ipbx406 (Login Node) Go

Add Change Change Page Change All Delete

Print... Import... Export... Data Refresh

Page 1 of 1 Go to Value Go

Associated Directory Numbers

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	
4065250	CPN Substitution	5135551234	

Licenses
 LAN/WAN Configuration
 Voice Network
 System Properties
 Hardware
 Trunks
 Users and Devices
 User and Services Configuration
 Attendants
 ACD
 Group Programming
 Telephone Directory Management
 Associated Directory Numbers
 Call Recognition Service
 Departments
 Locations
 Local-only Directory Number List
 Remote Directory Numbers
 Telephone Directory
 Advanced Configuration
 Templates
 Integrated Directory Services
 Voice Mail
 Call Routing
 Music On Hold
 Emergency Services Management
 Property Management
 Maintenance and Diagnostics

Step 5: On the MiVoice Business, program the DID for the device.

Mitel | MiVoice Business

SDS Distribution Error Status: **Warning**

ipbx406

Direct Inward Dialing Service on ipbx406

Search DN

Show form on ipbx406 (Login Node) Go

Direct Inward Dialing Service Search:

Find a field named Primary Node Id (PNI) that has a value of

Add Change Delete

Print... Import... Export... Data Refresh

Direct Inward Dialing Service

DID Number	Primary Node Id (PNI)	Destination Number	DID Type
1111			Standard DID
444	613	4052940	Emergency DID
4444	613	4052940	Standard DID
613552550	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	599500	Standard DID

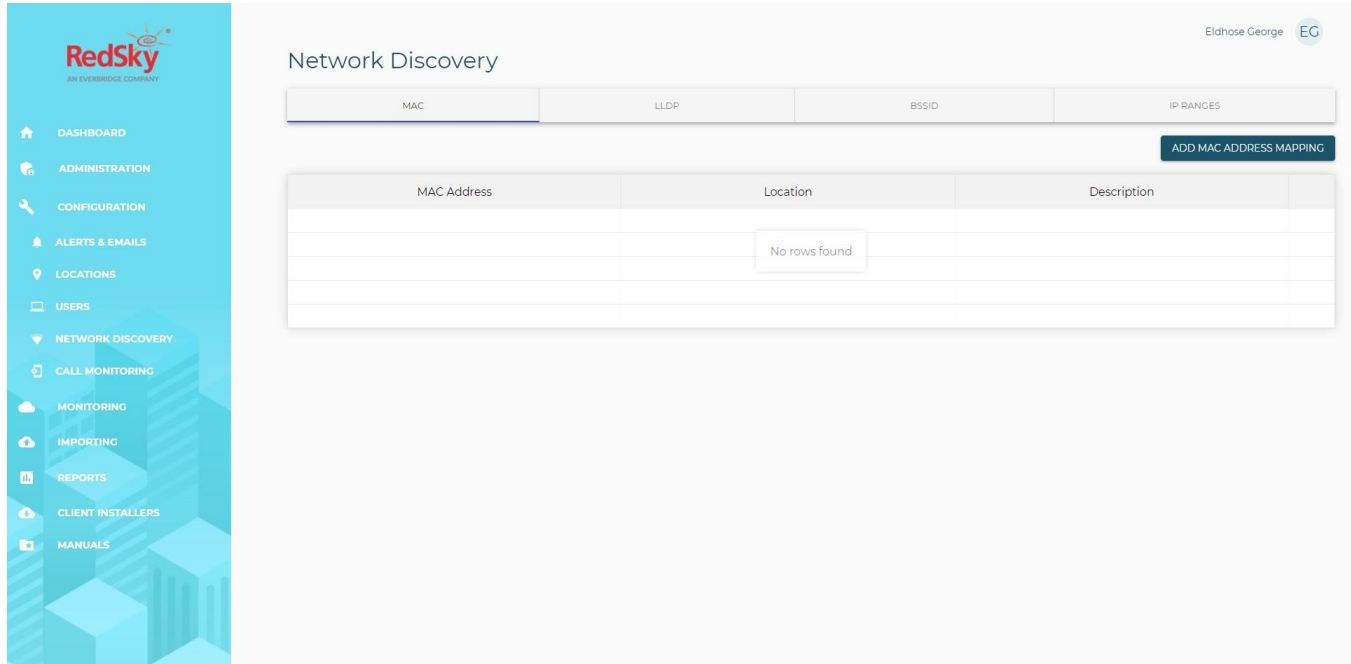
Licenses
 LAN/WAN Configuration
 Voice Network
 System Properties
 Hardware
 Trunks
 Users and Devices
 Integrated Directory Services
 Voice Mail
 Call Routing
 Automatic Route Selection (ARS)
 Call Handling
 Business Schedules
 Interconnect Restriction
 Intercept Handling
 Call Coverage Services
 Dial 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
 Maintenance and Diagnostics

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., MiVoice Business Console).

Step 1: Program the On-Premise wire map 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 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 2: Program a User in the RedSky Portal.

Add User

CLOSE

*Email

First Name

Last Name

i

Identification Type:

☒

Phone Number

☐

Device User ID

*Phone Number

SAVE

Add User

CLOSE

*Email

First Name

Last Name

Identification Type:

☐ Phone Number

☒ Device User ID

*Callback Number

*Device User ID

ADD

Device User IDs

No rows found

SAVE

RedSky Device User ID Field	Corresponding MiVoice Business Field	Notes
Email	--	Used by MyE911 application during registration to identify the Device User.
First Name	--	First name of the user. (Does not have to align with MiVoice Business)

RedSky Device User ID Field	Corresponding MiVoice Business Field	Notes
Last Name	--	Last name of the user. (Does not have to align with MiVoice Business)
Identification Type	Device User ID or Phone Number	Use Device User ID if there is no CPN/DID number for the device on the MiVoice Business. Otherwise, use Phone Number.
Phone Number	CPN of the device	
Callback Number	--	Not used, as the MiVoice Business 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 the customer has network of multiple MiVoice Business clusters, care needs to be taken on how to handle the Primary Node ID(PNI). 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 3: On the MiVoice Business, enable CESID not required for Emergency Calls on the device's COS option.

The screenshot shows the Mitel MiVoice Business console interface. The left sidebar contains a navigation menu with categories like Licenses, LAN/WAN Configuration, Voice Network, System Properties, System Settings, System Feature Settings, System Options, Shared System Options, Class of Service Options, SIP Device Capabilities, Class of Restriction Groups, System Access Points, Feature Access Codes, Independent Account Codes, Default Account Codes, System Account Codes, System Speed Calls, Tenants, SMDR Options, Traffic Report Options, Inward Dialing Modification, Outward Dialing Modification, System IP Ports, Location Based Numbers, 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 includes a search bar and buttons for 'Change', 'Copy', 'Print...', 'Import...', 'Export...', and 'Data Refresh'. Below this is a table of 'Class of Service Options' with columns for 'Class Of Service Number' and 'Comment'. The table lists options 21 through 27. Option 21 is highlighted with a blue background and has a comment 'My ES11'. Option 22 has a comment 'TELEWORKER'. Below the table are tabs for 'General' and 'Advanced'. The 'Advanced' tab is selected, and the 'Emergency' section is highlighted. The 'CESID Not Required for Emergency Call' option is set to 'Yes'. Other options in the 'Emergency' section include 'Emergency Call - Audio Level for Set' (Ringer), 'Emergency Call Notification - Audio' (No), 'Emergency Call Notification - Visual' (Yes), 'Group Presence' (No), 'Group Presence Control' (No), 'Group Presence Third Party Control' (No), 'Hotel' (Yes), and 'Hotel Room Monitor Setup Allowed' (Yes).

Step 4: On the MiVoice Business, program the CPN Substitution for the device.

Mitel | MiVoice Business

Admin Group Alarm Status: **Critical**

ipbx406

Associated Directory Numbers on ipbx406

Search DN

Show form on ipbx406 (Login Node)

Buttons: Add, Change, Change Page, Change All, Delete, Print, Import, Export, Data Refresh

Page 1 of 1

Go to Value Go

Associated Directory Numbers

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	

Left sidebar menu:

- Licenses
- LAN/WAN Configuration
- Voice Network
- System Properties
- Hardware
- Trunks
- Users and Devices
- User and Services Configuration
- Attendants
- ACD
- Group Programming
- Telephone Directory Management
- Associated Directory Numbers
- Call Recognition Service
- Departments
- Locations
- Local-only Directory Number List
- Remote Directory Numbers
- Telephone Directory
- Advanced Configuration
- Templates
- Integrated Directory Services
- Voice Mail
- Call Routing
- Music On Hold
- Emergency Services Management
- Property Management
- Maintenance and Diagnostics

Step 5: On the MiVoice Business, program the DID for the device.

Mitel | MiVoice Business

SDS Distribution Error Status: **Warning**

ipbx406

Direct Inward Dialing Service on ipbx406

Search DN

Show form on ipbx406 (Login Node)

Direct Inward Dialing Service Search:

Find a field named Primary Node Id (PNI) that has a value of:

Buttons: Add, Change, Delete, Print, Import, Export, Data Refresh

Direct Inward Dialing Service

DID Number	Primary Node Id (PNI)	Destination Number	DID Type
1111			Standard DID
444	613	4062940	Emergency DID
4444	613	4062940	Standard DID
6135552560	613	4065100	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

Left sidebar menu:

- 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
- Maintenance and Diagnostics

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 6: 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)

Step 1: Program the On-Premise wire map 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 Chassis/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 an automatic entry from the HELD client. This entry will persist in the RedSky database and take precedence over any Network Discovery entries.



AN EVIDENCE COMPANY

- DASHBOARD
- ADMINISTRATION
- CONFIGURATION
- MONITORING
- TEST CALL GENERATOR
- CALL HISTORY
- EVENTS
- HELD DEVICES
- IMPORTING
- REPORTS
- CLIENT INSTALLERS
- MANUALS

HELD Devices

Device Type: ALL

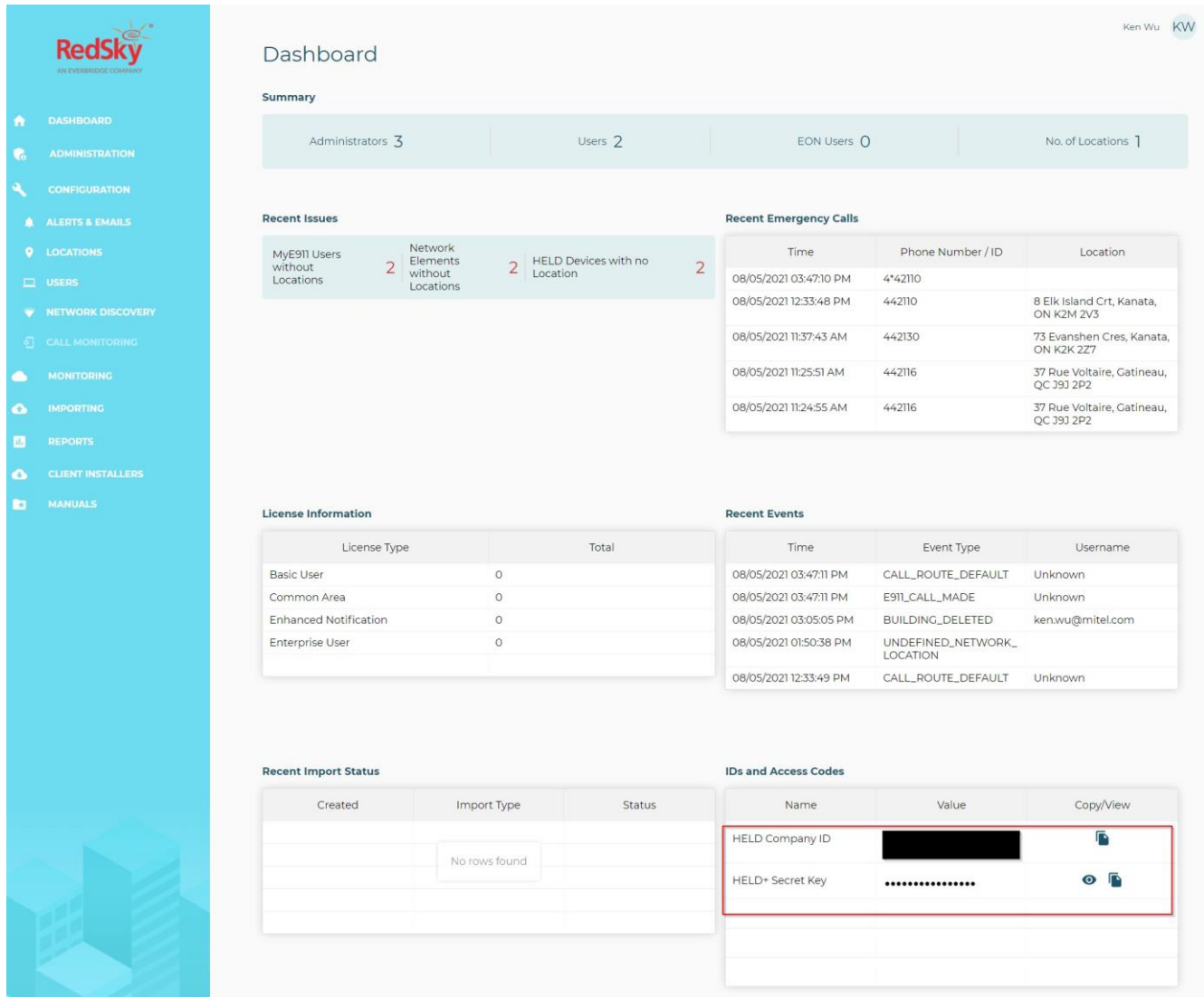
Device ID	Location	Discovery Method	Network Connectivity	Device Type	Details
mark.earle@mitel.com55fc354-cld8-44a3-8e9e-65c31bbe4694	Work - 2nd floor 4000 Innovation Drive 4000 Innovation Dr, Kanata, ON K2K 3K1	MANUAL	CHASSIS_ID: 00:00:0C:9F:FD:5C PORT_ID: G12/O/17		
ttskinner@gmail.com175b87f-8462-4e01-9709-d0ea5b402575	Home 109 Galway St, Dunrobin, ON K0A 1T0	LLDP	IP: 10.34.20.135 CHASSIS_ID: 00:00:0C:9F:FD:5C PORT_ID: G12/O/17		
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: G12/O/17		
jeff.mills@mitel.com992462d0-10a0-4031-b40e-f5c975f584ce	Home 73 Evanshen Cres, Kanata, ON K2K 2Z7	MANUAL	BSSID: E4:BF:FA:88:89:3E		
bruce.marshall@mitel.com4e2801ac-ab52-4bec-a74b-f277b5703909	Bruces home 37 Rue Voltaire, Gatineau, QC J9J 2P2	MANUAL	BSSID: 3A:66:85:E9:7B:59		
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		
12345					

Previous
Page 1 of 1
25 rows
Next

These HELD 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 MiVoice Business at call time, and the MiVoice Business will transparently pass Geo-Location onto RedSky.



The screenshot shows the RedSky dashboard interface. On the left is a navigation menu with options: DASHBOARD, ADMINISTRATION, CONFIGURATION, ALERTS & EMAILS, LOCATIONS, USERS, NETWORK DISCOVERY, CALL MONITORING, MONITORING, IMPORTING, REPORTS, CLIENT INSTALLERS, and MANUALS. The main content area is titled 'Dashboard' and includes a user profile 'Ken Wu' with initials 'KW'.

Summary

Administrators 3	Users 2	EON Users 0	No. of Locations 1
------------------	---------	-------------	--------------------

Recent Issues

MyE911 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	4*42110	
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 Evanshen Cres, Kanata, ON K2K 2Z7
08/05/2021 11:25:51 AM	442116	37 Rue Voltaire, Gatineau, QC J9J 2P2
08/05/2021 11:24:55 AM	442116	37 Rue Voltaire, Gatineau, QC J9J 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	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

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]

Step 2: Configure the device's integration with the RedSky LIS.

NOTE: Configuration will depend on the actual device.

Step 3: On the MiVoice Business, enable Emergency Info Provided by Device in the SIP Device Capabilities

SIP Device Capabilities on lpx406

Search DN: [] Show form on: lpx406 (Login Node) [Go]

[Change] [Copy] [Print...] [Import...] [Export...] [Data Refresh]

Capability	Value
1	default
2	AastraDect
3	AscomDectOld
4	Aastra 680x
5	Polycorn
6	Mitel 530x
7	Bria
8	PSP no PRack
9	
10	
11	

[Back] [SDP Options] [Signaling and Header Manipulation] [Distinctive Ring Tones] [Timers] [Key Press Event] [Called Party Inward Dialing Modification] [Record Information] [Advanced]

SIP Device Capabilities Number 1

Comment default

Call Routing and Administration Options

Outbound Proxy Server	
Emergency Info Provided by Device	No
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
TL5 Only	No

Step 4: On the MiVoice Business, program the CPN Substitution for the device

Associated Directory Numbers on lpx406

Search DN: [] Show form on: lpx406 (Login Node) [Go]

[Add] [Change] [Change Page] [Change All] [Delete] [Print...] [Import...] [Export...] [Data Refresh]

Page 1 of 1 Go to [] Value [Go]

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	

Step 5: On the MiVoice Business, program the DID for the device.

Mitel | MiVoice Business

SOS Distribution Error Status: Warning

ipbx406

Direct Inward Dialing Service on ipbx406

Search DN

Show form on ipbx406 (Login Node) Go

Direct Inward Dialing Service Search:

Find a field named Primary Node Id (FNI) that has a value of: Search

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

Direct Inward Dialing Service

DID Number	Primary Node Id (FNI)	Destination Number	DID Type
1111			Standard DID
444	613	4052940	Emergency DID
4444	613	4052940	Standard DID
5135925660	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	4165001	Standard DID
6666	613	4165001	Standard DID
4058500	613	5958500	Standard DID

ipbx406

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

Maintenance and Diagnostics

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)	RedSky: <ul style="list-style-type: none"> • Program a Location to match the device's CESID. MiVoice Business: <ul style="list-style-type: none"> • Define the CESID Mapping • Define the Emergency Callback handling (CPN/DID) Device: <ul style="list-style-type: none"> • None.

Off Premise

Options Available	Programming Steps
CESID Assignment	RedSky: <ul style="list-style-type: none"> • Program a Location to match the device's CESID. MiVoice Business: <ul style="list-style-type: none"> • Define the CESID • Enable the <i>Device Move Detection</i> COS option. When enabled, the device user will be notified of a possible device move and will instruct them to contact the Administrator to correct the location in Redsky portal. The MiVoice Business will generate an Audit Trail when the notification has been acknowledged by the user • Define the Emergency Callback handling (CPN/DID) Device: <ul style="list-style-type: none"> • None.

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>MiVoice Business:</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 Zone to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Location match the CESID of the Zone. <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Define the IP Address Range to Zone in Location Specification form • Define Zone CESID in Network Zones form • Set device's Zone Assignment Method to Default in the User and Services Configuration form(or Station Assignment form. • 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>MiVoice Business:</p> <ul style="list-style-type: none">• Define the CESID of the device.• Enable the <i>Device Move Detection</i> COS option. When enabled, the device user will be notified of a possible device move and will instruct them to contact the Administrator to correct the location in Redsky portal. The MiVoice Business will generate an Audit Trail when the notification has been acknowledged by the user• Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none">• None

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>MiVoice Business:</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 Zone to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location match the CESID of the Zone. <p>MiVoice Business:</p> <ul style="list-style-type: none"> Define the IP Address Range to Zone in Location Specification form Define Zone CESID in Network Zones form Set device's Zone Assignment Method to Default in the User and Services Configuration form(or Station Assignment form. 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>MiVoice Business:</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 Zone to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location match the CESID of the Zone. <p>MiVoice Business:</p> <ul style="list-style-type: none"> Define the IP Address Range to Zone in Location Specification form Define Zone CESID in Network Zones form Set device's Zone Assignment Method to Default in the User and Services Configuration form(or Station Assignment form. 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: 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>MiVoice Business:</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 Zone to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location match the CESID of the Zone. <p>MiVoice Business:</p> <ul style="list-style-type: none"> Define the IP Address Range to Zone in Location Specification form Define Zone CESID in Network Zones form Set device's Zone Assignment Method to Default in the User and Services Configuration form(or Station Assignment form. 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>MiVoice Business:</p> <ul style="list-style-type: none">• Define the CESID of the device.• Enable the <i>Device Move Detection</i> COS option. When enabled, the device user will be notified of a possible device move and will instruct them to contact the Administrator to correct the location in Redsky portal. The MiVoice Business will generate an Audit Trail when the notification has been acknowledged by the user.• Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none">• None

Deployment Guide: MiVoice Business Console

On Premise

Options Available	Programming Steps
MyE911® Application (RECOMMENDED if device is wireless)	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Device User and ensure the Alternate ID matches the MiVoice Business' CPN/DID or DN for the device. <p>MiVoice Business:</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.
IP to Zone to CESID Mapping (RECOMMENDED if device is wired)	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location match the CESID of the Zone. <p>MiVoice Business:</p> <ul style="list-style-type: none"> Define the IP Address Range to Zone in Location Specification form Define Zone CESID in Network Zones form Set device's Zone Assignment Method to Default in the User and Services Configuration form(or Station Assignment form. Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <p>None</p>

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 MiVoice Business' CPN/DID or DN for the device. <p>MiVoice Business:</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	<p>RedSky:</p> <ul style="list-style-type: none"> • None <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by Device SIP Device Capability for the device. <p>Device:</p> <ul style="list-style-type: none"> • Program the RedSky HELD URL, organization ID, and secret. • Update the location
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>MiVoice Business:</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> <ul style="list-style-type: none"> • Program the CESID against the device. • NOTE: The string entered in the Location ID field must conform to the CESID rules of the MiVoice Business, where only digits 0-9 are valid, up to a maximum of 12 digits. Special characters or text is not supported and may result in a failed emergency call.

BSSID to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none">• Program a Location to match the CESID of the device. <p>MiVoice Business:</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.
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Options Available	Programming Steps
IP to Zone to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Location match the CESID of the Zone. <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Define the IP Address Range to Zone in Location Specification form • Define Zone CESID in Network Zones form • Set device's Zone Assignment Method to Default in the User and Services Configuration form(or Station Assignment form. • 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 MiVoice Business's CPN/DID or DN for the device. <p>MiVoice Business:</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>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by Device SIP Device Capability for the device. <p>Device:</p> <ul style="list-style-type: none"> • Program the RedSky HELD URL, organization ID, and secret. Update the location.

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>MiVoice Business:</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> <ul style="list-style-type: none"> Program the CESID against the device. NOTE: The string entered in the Location ID field must conform to the CESID rules of the MiVoice Business, where only digits 0-9 are valid, up to a maximum of 12 digits. Special characters or text is not supported and may result in a failed emergency call.
BSSID to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location to match the CESID of the device. <p>MiVoice Business:</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 MiVoice Business CPN/DID or DN for the device. <p>MiVoice Business:</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 (SIP 6xx / IP 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>MiVoice Business:</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> <ul style="list-style-type: none"> See the Multi-Cell DECT solution below based on 6xx vs 56xx device. NOTE: The string entered in the Location ID field must conform to the CESID rules of the MiVoice Business, where only digits 0-9 are valid, up to a maximum of 12 digits. Special characters or text is not supported and may result in a failed emergency call.
IP to Zone to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location match the CESID of the Zone. <p>MiVoice Business:</p> <ul style="list-style-type: none"> Define the IP Address Range to Zone in Location Specification form Define Zone CESID in Network Zones form Set device's Zone Assignment Method to Default in the User and Services Configuration form(or Station Assignment form. 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	<p>RedSky:</p> <ul style="list-style-type: none">• Program a Location to match the CESID of the device. <p>MiVoice Business:</p> <ul style="list-style-type: none">• Enable the Emergency Info Provided by the Device for the SIP Device Capability <p>Device:</p> <ul style="list-style-type: none">• See the Multi-Cell DECT solution below based on 6xx vs 56xx device.• NOTE: The string entered in the Location ID field must conform to the CESID rules of the MiVoice Business, where only digits 0-9 are valid, up to a maximum of 12 digits. Special characters or text is not supported and may result in a failed emergency call.

Deployment Guide: SIP DECT (6xx)

Starting from SIP-DECT release 8.3 SP1, SIP-DECT supports providing an Emergency Location Identification Number (ELIN) in the SIP signaling of incoming and outgoing calls. This helps the call server (SIP proxy) to determine the correct public-safety answering point (PSAP) depending on where the call was made.

An ELIN can be set for:

- The system
- A site
- A specific base station

The parameter value that is more specific among the three is used for accurate identification.

If ELIN support is enabled, the configured ELIN value is sent in the FROM header field of the SIP invite and the P-Asserted-Identity field of the 200 OK. The ELIN is a string of up to 31 characters. There is no specific limitation on character set. Characters are escaped in the SIP header if necessary.

Examples:

From: "Extension 5115"

```
<sip:5115@example.com;elin=0123456789>;tag=f-5899462600ef0a1cP-Asserted-Identity: <sip:5115@example.com;elin=0123456789>
```

The configuration can be done via the Open Mobility Manager (OMM) web service or via OM Management Portal (OMP). Only the general activation of this feature and the system-wide emergency location identification number can be set via the OMM configuration files.

NOTE: The string entered in the Location ID field must conform to the CESID rules of the MiVoice Business, where only digits 0-9 are valid, up to a maximum of 12 digits. Special characters or text is not supported and may result in a failed emergency call.

Parameter / Group	System emergency location identification number enabled
Description	The parameter "enabled" of the system emergency location identification number configuration enables the sending of the configured ELIN in the SIP signaling.

Format	Boolean
Range	1 or true (enable)0 or false (disable)
Default value	False
OMP	System/ Advanced settings / Emergency location / Emergency location identification number / Enabled
OMM Web	Advanced: System/ Advanced / Emergency location
MOM Web	N/A
OMM configuration files	<code><SetELIN enable="1"/></code>
DECT Phone	N/A
User configuration files	N/A




Parameter / Group	System emergency location identification number
Description	The system parameter "Emergency call identification number" provides the system-wide valid emergency call identification number. This value is used when a more specific ELIN set is not available. The parameter can be used for small systems in which the same ELIN must be used for all base stations.
Format	String
Range	Up to 31 characters
Default value	Empty
OMP	System/ Advanced settings / Emergency location / Emergency location identification number / Number
OMM Web	Advanced: System/ Advanced / Emergency location
MOM Web	N/A
OMM configuration files	<code><SetELIN enable="0123456"/></code>
DECT Phone	N/A
User configuration files	N/A

Parameter / Group	System emergency location identification number
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Description	The system parameter "Emergency call identification number" provides the system-wide valid emergency call identification number. This value is used when a more specific ELIN set is not available. The parameter can be used for small systems in which the same ELIN must be used for all base stations. NOTE: The number entered must conform to the CESID rules of the MiVoice Business, where only digits 0-9 are valid, up to a maximum of 12 digits. Special characters or text is not supported and may result in a failed emergency call.
Format	String
Range	Up to 31 characters.
Default value	Empty
OMP	Sites/ Emergency location identification number
OMM Web	Sites/ Emergency location identification number
MOM Web	N/A
OMM configuration files	N/A
DECT Phone	N/A
User configuration files	N/A

Parameter / Group	Base station's emergency location identification number
Description	The base station parameter "Emergency location identification number" provides an emergency location identification number for a specific base station.
Format	String
Range	Up to 31 characters.
Default value	Empty
OMP	DECT base stations/ Emergency location identification number
OMM Web	Base Stations/ Emergency location identification number
MOM Web	N/A
OMM configuration files	N/A
DECT Phone	N/A
User configuration files	N/A

Mitel



GeneralHelp

Configuration

Status

System

Sites

DECT base stations

WLAN

DECT phones

Conference rooms

System features

Licenses

Support

Overview

DECT base stations

Users

Devices

Sites

Conference

Provisioning

Provisioning health report

System

Uptime0 Day(s)00 h22 min

Licenses

Standby OMM (192.168.2.136)

Synchronization state

DECT base stations

DB import/export

Downloading new firmware to portable parts

Provisioning

OMM configuration file processing

Emergency location configuration

Features

OM Integrated Messaging & Alerting service

User data server

MOM control

802.1x state

OMM certificate server

Provisioning certificate server

802.1x certificate server

SIP certificate server


Emergency location identification number not provided for all DECT base stations!

If ELIN support is enabled and at least one RFP has no ELIN assigned, a warning is displayed on the status information page.

Deployment Guide: RFP 12/14 Single Cell Solution

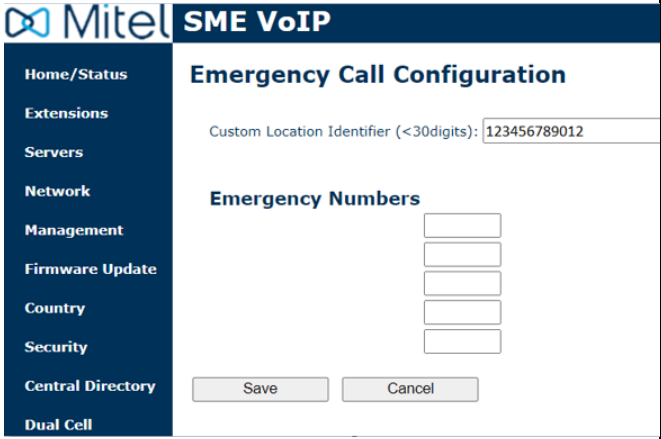
This is programmed as a Generic SIP Device on the MiVoice Business.

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>MiVoice Business:</p> <ul style="list-style-type: none"> Enable the Emergency Info Provided by the Device for the SIP Device Capability <p>Device:</p> <ul style="list-style-type: none"> The ELIN(CESID) must be configured on the Base Station web page called "Emergency Call Configuration". On the same page, valid emergency numbers can also be configured.  <p>NOTE: The string entered in the Location ID field must conform to the CESID rules of the MiVoice Business, where only digits 0-9 are valid, up to a maximum of 12 digits. Special characters or text is not supported and may result in a failed emergency call.</p>
IP to Zone to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location match the CESID of the Zone. <p>MiVoice Business:</p> <ul style="list-style-type: none"> Define the IP Address Range to Zone in Location Specification form Define Zone CESID in Network Zones form

	<ul style="list-style-type: none"> Set device's Zone Assignment Method to Default in the User and Services Configuration form(or Station Assignment form. <p>Device:</p> <ul style="list-style-type: none"> None
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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>MiVoice Business:</p> <ul style="list-style-type: none"> Enable the Emergency Info Provided by the Device for the SIP Device Capability <p>Device:</p> <ul style="list-style-type: none"> The ELIN(CESID) must be configured on the Base Station web page called "Emergency Call Configuration". On the same page, valid emergency numbers can also be configured.  <ul style="list-style-type: none"> NOTE: The string entered in the Location ID field must conform to the CESID rules of the MiVoice Business, where only digits 0-9 are valid, up to a maximum of 12 digits. Special characters or text is not supported and may result in a failed emergency call.

Deployment Guide: Multi-Cell SIP 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>MiVoice Business:</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> <ul style="list-style-type: none"> ELIN must be configured on the Base Station->Advanced->Emergency->ELIN page. See section "Deployment Guide: SIP DECT 6xx" for more details. NOTE: The string entered in the Location ID field must conform to the CESID rules of the MiVoice Business, where only digits 0-9 are valid, up to a maximum of 12 digits. Special characters or text is not supported and may result in a failed emergency call.

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>MiVoice Business:</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> <ul style="list-style-type: none"> ELIN must be configured on the Base Station->Advanced->Emergency->ELIN page. See section "Deployment Guide: SIP DECT 6xx" for

	<p>more details.</p> <ul style="list-style-type: none">• NOTE: The string entered in the Location ID field must conform to the CESID rules of the MiVoice Business, where only digits 0-9 are valid, up to a maximum of 12 digits. Special characters or text is not supported and may result in a failed emergency call.
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Deployment Guide: Multi-Cell IP DECT (56xx)

As of IP-DECT 56xx Release 11.6, IP-DECT supports providing an Emergency Location Identification Number (ELIN) in the SIP signaling of incoming and outgoing calls. This helps the call server (SIP proxy) to determine the correct public-safety answering point (PSAP) depending on where the call has made.

The ELIN is configured on the Device Overview page of the base station by clicking on the device name.

Mitel IP-DECT Base Station

Configuration: Crypto Master | Mobility Masters | Standby Mobility Masters | Masters | Standby Masters | **Radios** | Logout

General | LAN | IP4 | IP6 | LDAP | DECT | Unite | Services | Advanced

Static Registrations

Name ↑	RFPI	IP Address	Sync	Region	Device Name	Version	Connected ↑
IPBS3-24-4d-6e	9014E02009	127.0.0.1	Master	Not in Sync	0	Mitel IP-DECT Base Station	[SEPeH/211108/1057/SEPeH/210511/1111/] 0d 0h 0m 3

Radios: 1, Registrations: 1

Which then opens a pop-up where the Location ID(ELIN tag in SIP Signaling) can be entered, as well as an option description which is only used as notes for a System Administrator.

NOTE: The string entered in the Location ID field must conform to the CESID rules of the MiVoice Business, where only digits 0-9 are valid, up to a maximum of 12 digits. Special characters or text is not supported and may result in a failed emergency call.

Emergency Location Info for Calls from IPBS3-24-4d-6e

RFP	Location ID	Description
Internal	abcdefg12345	Room 1

Apply Close Visible ASCII characters and space

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>MiVoice Business:</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> <ul style="list-style-type: none"> ELIN must be configured on the Base Station->Advanced->Emergency->ELIN page NOTE: The string entered in the Location ID field must conform to the CESID rules of the MiVoice Business, where only digits 0-9 are valid, up to a maximum of 12 digits. Special characters or text is not supported and may result in a failed emergency call.

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>MiVoice Business:</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> <ul style="list-style-type: none"> ELIN must be configured on the Base Station->Advanced->Emergency->ELIN page NOTE: The string entered in the Location ID field must conform to the CESID rules of the MiVoice Business, where only digits 0-9 are valid, up to a maximum of 12 digits. Special characters or text is not supported and may result in a failed emergency call.

Deployment Guide: 5634 Wi-Fi

On Premise

Options Available	Programming Steps		
BSSID to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location to match the CESID of the device. <p>MiVoice Business:</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> <tr> <td>Emergency call location method</td><td> <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>	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.</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>
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.</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>		

Off Premise

Options Available	Programming Steps		
BSSID to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none"> • Program a Location to match the CESID of the device. <p>MiVoice Business:</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"> <tr> <td data-bbox="621 722 818 768">Emergency call location method</td><td data-bbox="818 722 1451 1163"> <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>	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.</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>
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.</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>		

Deployment Guide: Legacy SIP (5302, 5505, 5624)

On Premise

Options Available	Programming Steps
IP to Zone to CESID Mapping	<p>RedSky:</p> <ul style="list-style-type: none">• Program a Location match the CESID of the Zone. <p>MiVoice Business:</p> <ul style="list-style-type: none">• Define the IP Address Range to Zone in Location Specification form• Define Zone CESID in Network Zones form• Set device's Zone Assignment Method to Default in the User and Services Configuration form(or Station Assignment form.• 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
MyE911® Application (RECOMMENDED if device is wireless)	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Device User and ensure the Alternate ID matches the MiVoice Business's CPN/DID or DN for the device. <p>MiVoice Business:</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.
IP to Zone to CESID Mapping (RECOMMENDED if device is wired)	<p>RedSky:</p> <ul style="list-style-type: none"> Program a Location match the CESID of the Zone. <p>MiVoice Business:</p> <ul style="list-style-type: none"> Define the IP Address Range to Zone in Location Specification form Define Zone CESID in Network Zones form Set device's Zone Assignment Method to Default in the User and Services Configuration form(or Station Assignment form. Define the Emergency Callback handling (CPN/DID) <p>Device:</p> <ul style="list-style-type: none"> None

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 MiVoice Business's CPN/DID or DN for the device. <p>MiVoice Business:</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 MiVoice Business.

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://api.primelab.e911clod.com

HeldOrgId: e4869f91-ecdd-4ba6-a1ff-53e14e9a64ba

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.

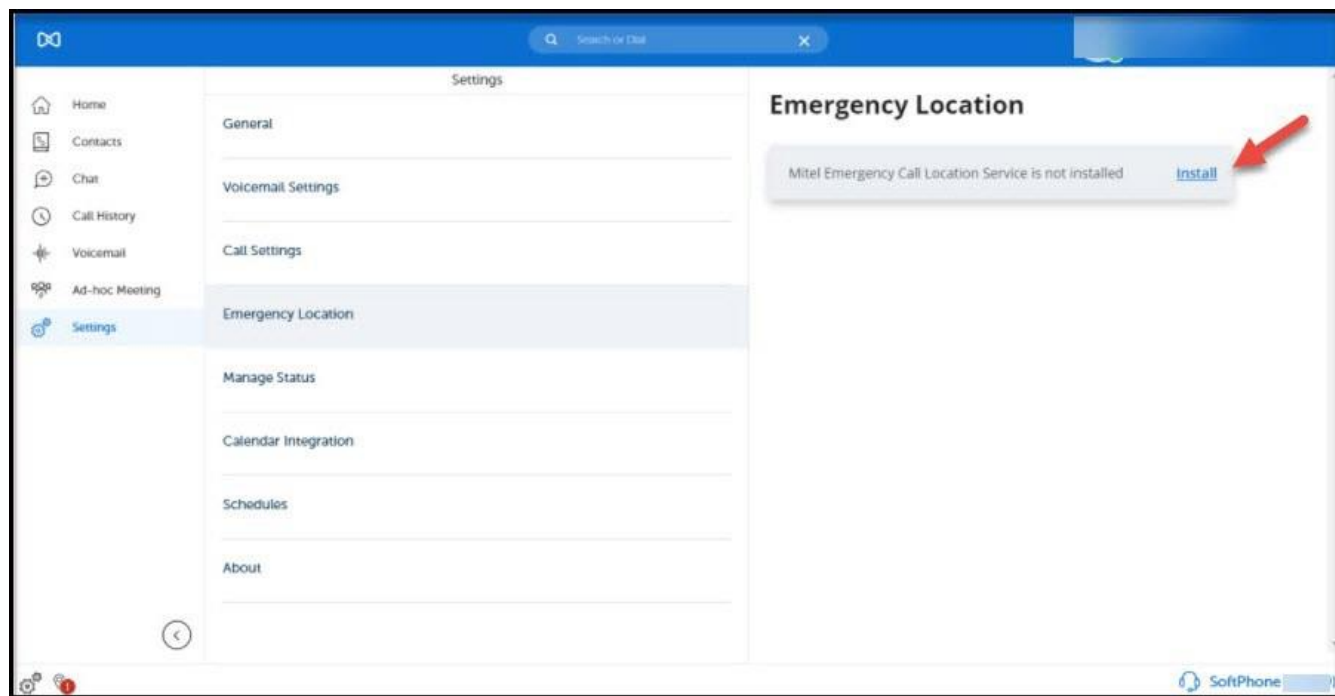
Field	Notes
Location Service	RedSky
URL	RedSky LIS Server URL
HeldOrgId	HELD Organization ID
Secret	HELD+ Secret Key
Confirm Secret	HELD+ Secret Key

Field	Notes
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.

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.gtscs.gts.ucs.mitel.io	Config download host *	MiCollab Server FQDN
		MBG SIP host *	Custom DNS SRV mbg.gtscs.gts.ucs.mitel.io
		MBG-WebRTC SIP host *	MBG's FQDN
Override user email	<input type="checkbox"/>	PBX SIP host	Custom DNS SRV mivb.gtscs.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.



The screenshot shows a form titled 'Emergency (911) Location'. Below the title is a message: 'We need to have a dispatchable location for you in the event of an emergency.' The form contains the following fields:

- Duplicate:** A dropdown menu.
- Or:** A horizontal line separator.
- Location Name:** A text input field.
- Location Info:** A text input field.
- Street:** A text input field.
- City:** A text input field.
- State:** A dropdown menu.
- Zip Code:** A text input field.

At the bottom right of the form, there is a 'SoftPhone' status bar.

NOTE: This may differ based on the MiCollab Client.

On Premise

Options Available	Steps
Geo-Location	<p>RedSky:</p> <ul style="list-style-type: none"> • None <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by Device SIP Device Capability for the device. <p>MiCollab Server:</p> <ul style="list-style-type: none"> • Define the Location Service Configuration. • Define the Emergency dial plan <p>MiCollab Client:</p> <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	<p>RedSky:</p> <ul style="list-style-type: none"> • None <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by Device SIP Device Capability for the device. <p>MiCollab Server:</p> <ul style="list-style-type: none"> • Define the Location Service Configuration. • Define the Emergency dial plan <p>MiCollab Client:</p> <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.

Location Service Configuration

Location Service: REDSKY

URL: https://api.primelab.e911clod.com

HeldOrgId: e4869f91-ecdd-4ba6-a1ff-53e14e9a64ba

Secret:

Confirm Secret:

Virtual Environment: ☐

Test Connection

Delete

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

Field	Notes
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.

Mitel | MiCollab admin@micollab.gtsca.gts.ucs.mitel.io Status: Clear

Manage MiCollab Client Deployment

Users **Deployment Profiles** Configuration Diagnostics

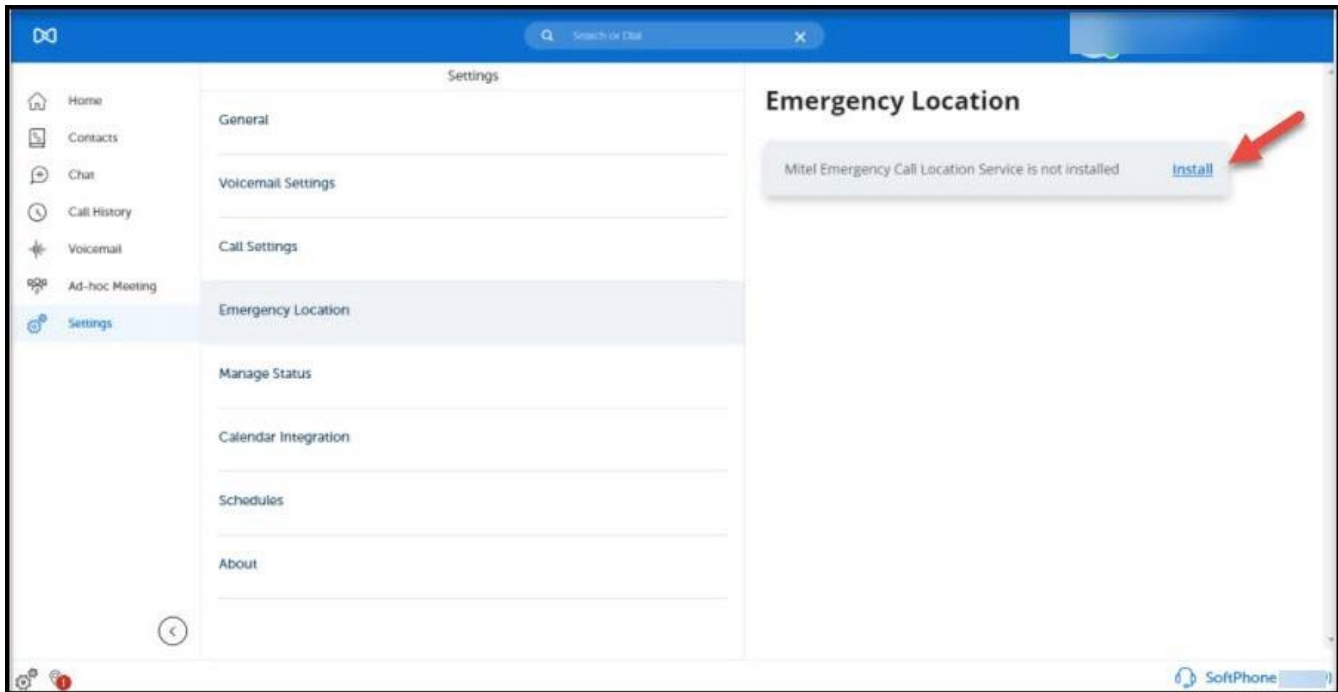
Profiles

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.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

On Premise

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

Deployment Guide: MiCollab Desk phone

Follow the instructions based on the device type of the Desk phone.

Deployment Guide: MiCollab Mobile

Uses native dialer, so there is no interaction with the MiVoice Business 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 MiVoice Business to an emergency destination and will NOT provide any location information.

Limitations

- Mobile phones – Mobile phones are not part of the MiVoice Business solution with RAY BAUM as they use the native phone function to provide the location services information during an emergency call.
- The MiVoice Business 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 CESID is sent to a PSAP during an emergency call and is used as a key in the Automatic Location Information (ALI) database to find a location for the caller and it is also the call back number should the emergency call drop and therefore must be a dialable PSTN number. In the Redsky solution, the CESID is only used as a location identifier by Redsky to map to an ERL ID to find a dispatchable Civic Address to send to the PSAP and the callback number is sent separately, not tied to the CESID.

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.

HELD- HTTP-Enabled Location Delivery. Protocol used for retrieving location information from a server within a network.

LIS - Location Information Server provided by Intrado that allows an organization to enter location information (including civic address, floor/room/suite/apt, and so on) 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

MOM- Multi OMM Manager. Multi-OMM-Manager (MOM) delivers full local site survivability for large geographical distributed multi-site-DECT networks with the benefit of central user management, roaming between sites and overall messaging. The MOM solution is scalable over small and large sites and expands the total system capacity for a managed SIPDECT network from 10,000 to 50,000 users

OMM- Open Mobility Manager. System configuration is managed through Mitel SIP-DECT's web service portal Open Mobility Manager (OMM), which features a status display with event logs, statistics and real-time monitoring. Parameter changes can be applied to multiple entries (such as RFPs) at once and statuses of SIP-DECT RFPs can be monitored for system alarm states

OMP- Om Management Portal. Mitel SIP-DECT reduces administrative effort by automatically creating handset data in large systems when a new subscription is added and allowing administrators to import user data from external sources.

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)

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

PAI header - P-Asserted-Identity header

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

PNI – Primary Node Id. MiVoice Business identifier to differentiate between different MiVoive Business clusters in the same MiVoice Business network.

PSAP 0- Public Safety Answering(or Access) Point. A call center where emergency calls (like police, fire brigade, ambulance) initiated telephony device are terminated.

SBC – Session Border Controller