A MITEL
PRODUCT
GUIDE

MiVoice Connect

RAY BAUM'S General Overview and Solution Deployment Guide for RedSky

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Contents

Kari’s Law and RAY BAUM’S Act 1

This chapter contains the following sections:

In August 2019, the United States Federal Communications Commission (FCC) 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 – Kari’s Law and RAY BAUM’S Act 911 Direct Dialing, Notification, and Dispatchable Location Requirements are described at the following link.

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

FAQ about RAY BAUM can be found at the following link. https://www.fcc.gov/files/mltsfaqspdf.

1.1 Introduction of MIVC Support for section 506 of RAY BAUM’S Act and Kari´s Law

MiVoice Connect implements Section 506 of RAY BAUM’S Act and Kari´s law support in conjunction with third-party Next Generation of 911 (NG911) emergency service providers. In this document, Section 506 of RAY BAUM’S Act and Kari´s law is called RAY BAUM for simplification.

MiVoice Connect is integrated with two well-known Next Generation 911 (NG911) service providers in USA; RedSky and Intrado.

MiVoice Connect can be preconfigured for direct dialing of emergency 911 calls without having to dial any prefix or access code. The 911 calls are sent through SIP trunk to the NG911 service provider selected by the customer and then, after validating the civic address, the call is redirected to the public safety answering points (PSAPs).

The notification system is provided by the NG911 service provider and uses email or SMS notifications.

MiVoice Connect has an Emergency Notification application that provides notification in emergency scenario to dedicated users. This application can be used in conjunction with NG911 notification through email or SMS messaging which give more granular location information. Mitel Emergency application provides location information based on the Jack number configuration in Connect Director and the NG911 service provider notification will provide location information based on what is configured in the location information service (LIS) database and presented to PSAP. If the administrator can sync the dynamic

location properly with the **Jack #** field in the **Users** page in Connect Director, then the existing emergency application can also satisfy Kari's law.

MIVC - RAY BAUM High Level Architecture with RedSky

2

This chapter contains the following sections:

The customers have some options for how they implement their solution to meet the RAY BAUM'S Act. The option selected would be primarily tied to the type of deployment in place, such as:

- The size of the physical location site. If small enough, there might only be one dispatchable location.
- The deployment is purely on-premises
- The deployment includes off-premises endpoints

Based on above requirements, the customer might:

- Need not upgrade, but rather use existing CESID mappings to allow for automatic move detection of IP phones.
- Need to upgrade to apply the new CESID mappings.
- Need to upgrade to apply the new CESID mappings. Also, must need to integrate with a third-party vendor.

To help illustrate the options, consider a customer with a large physical deployment that will require more than one dispatchable location. For example, a single floor of a large building might require four dispatchable locations, one to cover each corner:

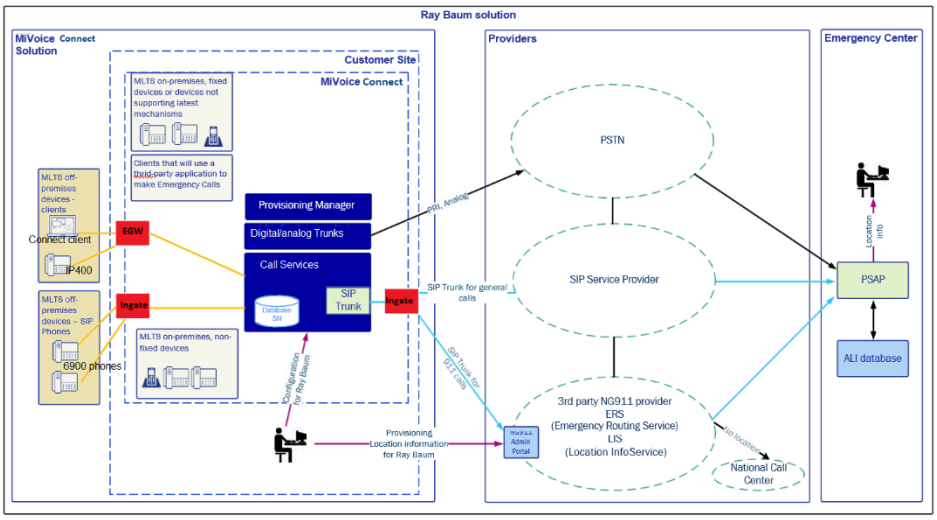
1. Customer has only on-premises IP4xx and/or 69xx and/or DECT devices. In this situation, the customer can order the required number of CESIDs (four in this example) from their service provider (provided the cost of CESID is less than the cost required to integrate with third-party NG911 vendor) and use the existing IP range and/or L2 CESID mapping features available on MiVoice Connect system without the need for any upgrade. Enabling these features provides a dynamic location update if the device is moved by the user within the premises.

2. If the customer adds Connect Client softphones on laptops or mobile phones or any kind of remote Teleworkers to their solution, the customer must upgrade and integrate with a Mitel-verified third-party vendor.

The solution required for third-party NG911 vendor integration will be discussed further in this document, while describing using the RAY BAUM feature without integrating NG911 vendors.

The following figure illustrates a high-level view of the MiVoice Connect RAY BAUM architecture.

Figure 1: MiVC system onsite - RAY BAUM high-level architecture



The MiVoice Connect RAY BAUM solution is composed of the components that are described in the following sections.

2.1 RedSky

A valid commercial agreement with RedSky is required. Part of setting up this agreement involves:

- Pre-authorization of the external internet address of Ingate(s) by RedSky.
- Identification of the following transport protocols to use with RedSky:
  - UDP on port 5060
  - TCP on port 5060
  - TLS v1.2 and later versions on port 5061

> **Note**:
> To use the TLS protocol, an Ingate is required.

From this agreement, you must obtain the following information from RedSky:

- Pre-authorization of the external Internet address of the Ingate(s) used by RedSky.
- RedSky SIP Gateways - Primary and secondary SIP gateways using UDP (5060) or TLS 1.2 or later versions (5061) that MiVoice Connect/Ingate will use for emergency calls. These gateways must be preconfigured and tested during the implementation and integration between MiVoice Connect and RedSky. The number 933 can be used as the test number.
- RedSky Horizon Mobility Portal - This is the main configuration portal for RedSky. You must:
  - Define users; in particular:
    - Emergency On-Site Notification (EON) users - This is required for notifications.
    - Basic user/Enterprise users - This is required for devices that will use the MyE911 application for location identification.
  - Define Locations
  - Refer to the RedSky applications guides, in particular the ***RedSky Horizon User Guide***, ***MyE911 User Guides*** (for Windows/Mac).
  - The downloadable applications for MyE911 application - The RedSky-provided application that runs along with select third-party softphone devices (Vendor app method for location).
- HELD Company ID - This is used by RedSky to isolate one organization's locations from that of another. This information is available in the RedSky Portal.
- HTTP-enabled location discovery (HELD) URL - This is used by HELD-enabled devices to update their location directly to RedSky location information server (LIS).
- HELD+ Secret - This is used by RedSky to authenticate client access to the RedSky LIS. This information is available in the RedSky Portal.

2.2 Edge Gateway

Edge Gateway is used for enabling Teleworker support for IP 400-Series phones and Connect Client.

2.3 Ingate SIParator

- Acts as Session Border Controller (SBC) and enables SIP trunking to and from the NG911 service provider.
- Enables Teleworker support for 6900-Series phones. (In pipeline for 2022 release).
- MiVoice Connect can be directly integrated with the without using Ingate by RedSky vendor using MIVC trunk switches. However, the deployment with Ingate is suggested for flexibility, security, management, and also for SRTP support.

2.4 MiVoice Connect

The following are the major network elements of MiVoice Connect:

- Provisioning interface
- Call servers
- SIP peer for Ingate
- Trunking nodes for PSTN or SIP trunks

MiVoice Connect enables the following features for RAY BAUM conformance:

- Location information by wire-map or by HTTP enabled location discovery (HELD).
- DID and calling party number (CPN) substitution for each device (or location) that can be used to make 911 emergency calls.
- SIP peer profile dedicated to signaling with NG911 vendors, which helps in vendor integrations.
- SIP device capabilities for devices that provide location information.
- Emergency number dialing and routing calls based on trunks configured.

The Ingate SIParator is commonly used as the Session Border Controller (SBC) between MiVoice Connect and the third-party NG911 service provider in the solution.

A SIP trunk is set up between MiVoice Connect and Ingate; and between Ingate and the third-party NG911 service provider.

MiVoice Connect contains emergency location identification information for devices that are used with the RAY BAUM’S Act solution.

2.5 Establishing a Contract with RedSky

The channel partner/customer must have an agreement with RedSky. The agreement must be prepared with the information listed in the following table.

Table 1: Required information for the contract with RedSky

Requirement	Description
Ingate(s) External IP Address	RedSky maintains an access control list to limit access to their SIP gateways. The MiVoice Connect solution will require the IP addresses of the Ingate(s) used by RedSky 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 users/devices that will provide Geolocation (currently, provided only by Connect Client).
MyE911® application	The number of users/devices that will require the NG911 application (for example, third-party soft phones such as XLite and so on)

During the initial setup with RedSky, the RedSky connectivity worksheet is typically used. See the RedSky worksheet for more details.

The following table describes the RedSky connectivity worksheet.

Table 2: RedSky worksheet

Information	Description
IP Address of Termination Point	IP address or WAN FQDN of the Ingate(s). This is used by RedSky's access control list (see Sample RedSky Access Control List for more information).

Information	Description
Transport Method	RedSky supports only a single transport protocol for their SIP trunk, and this protocol must be determined at the time of setup.
Primary Gateway	Identifies the primary SIP peer for MiVoice Connect and SIP trunk for Ingate.
Secondary Gateway	Identifies the Secondary SIP peer for MiVoice Connect and SIP trunk for Ingate.

Figure 2: Sample RedSky Access Control List

RedSky

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**

2.6 Access Control List of the Ingate Servers with RedSky

RedSky SIP gateways will accept calls only from pre-authorized customers. For the MiVoice Connect solution, RedSky must pre-authorize the IP address/FQDN of the Ingate(s) for customers. If the RedSky SIP gateway receives a SIP invite from an unknown SIP client, then a 403, Forbidden error will be sent back.

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

Note:
For the MiVoice Connect solution requiring SRTP support, the Ingate(s) are mandatory and required to be allowed to RedSky.

2.7 Horizon Mobility Setup - RedSky Portal

The RedSky Portal is available through the web. RedSky will provide this URL through a welcome email. For more detailed information about using this portal, see the ***Horizon Mobility User Guide*** available from RedSky.

The following are some of the methods for setting up location information in RedSky:

- Location based on CESID/Alternate ID.
- Location based on HELD.
- Location based on network discovery.
- Location based on device ID using MyE911 application.
- Location based on phone number.

MiVoice Connect based on the deployment and devices use subsets of the above methods for RAY BAUM conformance.

Following is a list of devices supported in MiVoice Connect and the respective methods used for location management with RedSky.

Table 3: List of devices supported with MiVoice Connect

Device Type	Location Management Method
69xx	Location based on CESID/Alternate ID

Device Type	Location Management Method
IP4xx/MGCP	Location based on CESID/Alternate ID
DECT handsets	Location based on CESID/Alternate ID
MIVC Connect Client Softphone	Location based on HELD
Analog phones	Location based on CESID/Alternate ID
ATA	Location based on CESID/Alternate ID
Any third-party softphones	Location based on device ID using MyE911 application

The RedSky Portal configuration for the above location management methods and other general steps to be followed for the MiVoice Connect solution to work with RedSky are as follows:

1. From the RedSky Portal, do the following:

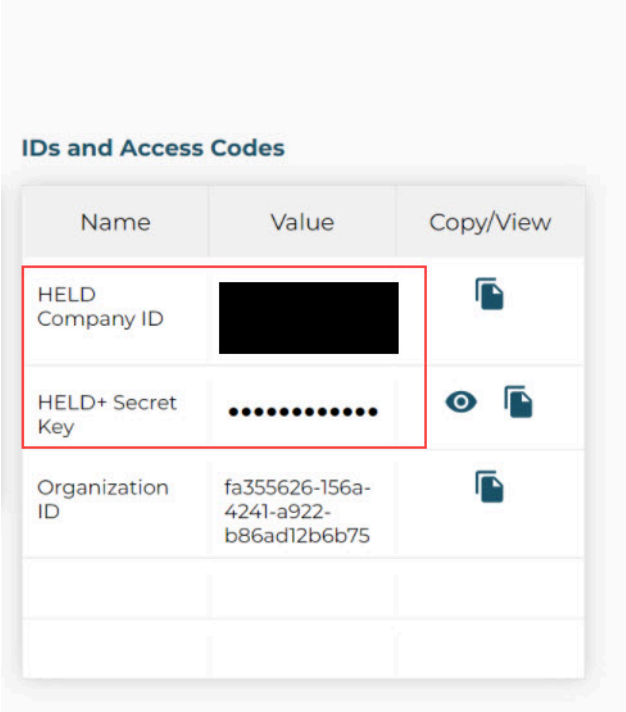
   a. Obtain the **HELD Company ID** and **Secret Key** information.
   b. Identify the HELD URL and HELD credentials for your HELD-enabled clients.

> **Note**:
> RedSky will send the HELD URL through a welcome email.

Note:

- HELD configuration is used by devices that use the HELD protocol to manage location information. Currently, only Connect Clients use this protocol.
- The HELD configuration information is enough for devices to manage location using HELD. For these clients, no manual configuration is to be made in the RedSky Portal.

Figure 3: HELD Company ID and secret key

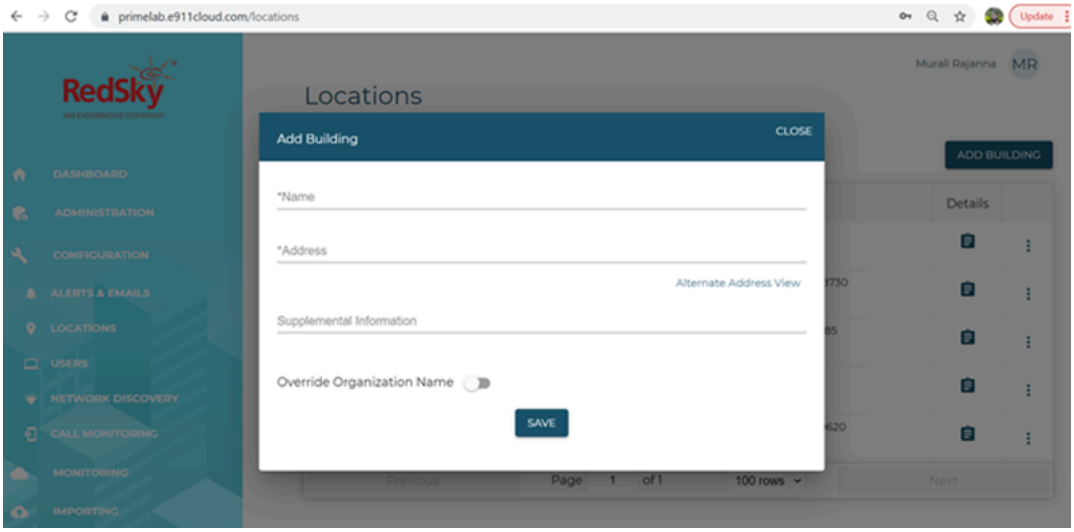


2. Create and map CESID/AlternateID to Location:

a. Configure Buildings/Locations with the Alternate ID. The Alternate ID configured is the CESID; the same CESID must be used to configure the location for devices in MiVoice Connect Director.

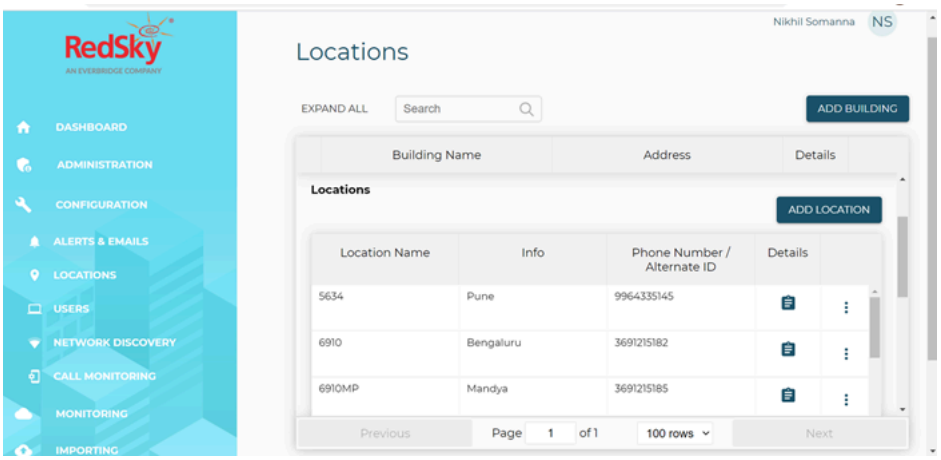
Note:
Any number of Alternate ID/CESID can be configured in RedSky depending on the number of unique dispatchable locations as required for RAY BAUM conformance.

Figure 4: Adding a building



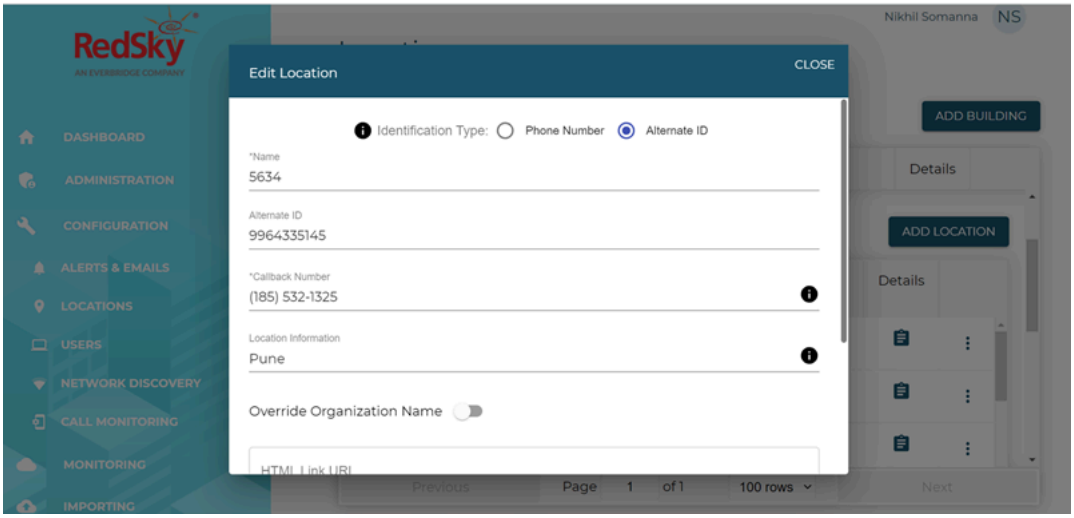
b. In the RedSky Portal, go to **Configuration** > **Location** > **Buildings** > **Add Location** to add the locations.

Figure 5: Adding a location



c. In the page that opens, provide the name, location, and other details, select **Alternate ID**, enter the 10-digit unique numeric ID (CESID), and click **Add**.

Figure 6: Adding alternate location ID

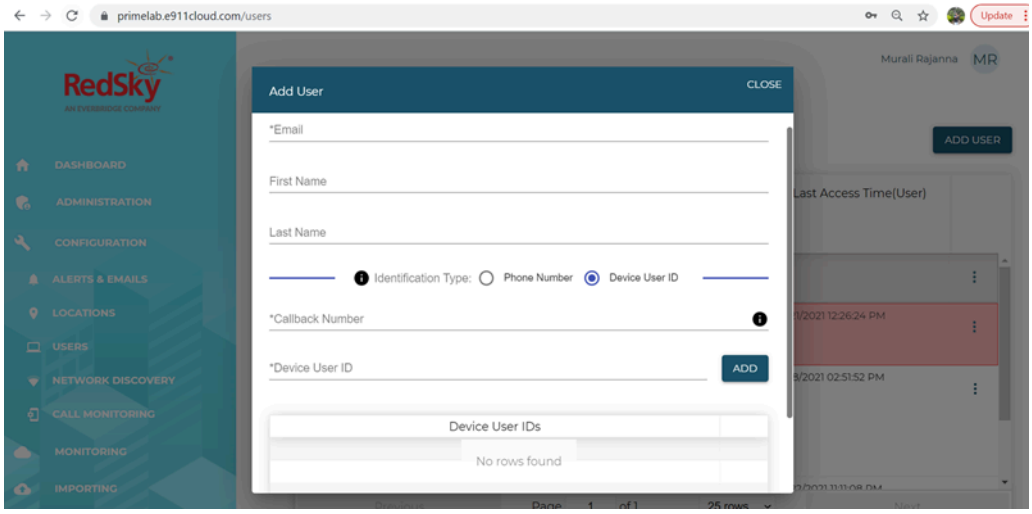


3. Obtain the location information using the device ID (MyE911 application):

   a. Configure the device users for MyE911 users (for example, X-Lite and other third-party softphone users).
   b. In the RedSky Portal, go to **Configuration** > **Users** > **Add User** and provide an email ID and other required details.
   c. Under **Device User ID**, provide the extension number for the user and click **Add**.

Note:
For systems using On-Net Dialing (OND) prefixes, while configuring the emergency 911 vendor application, do not add a hyphen in the extension while specifying the device user IDs. For example, for the extension, instead of 53000-50712, enter 5300050712 in the **Device User ID** field.

Figure 7: Vendor app details



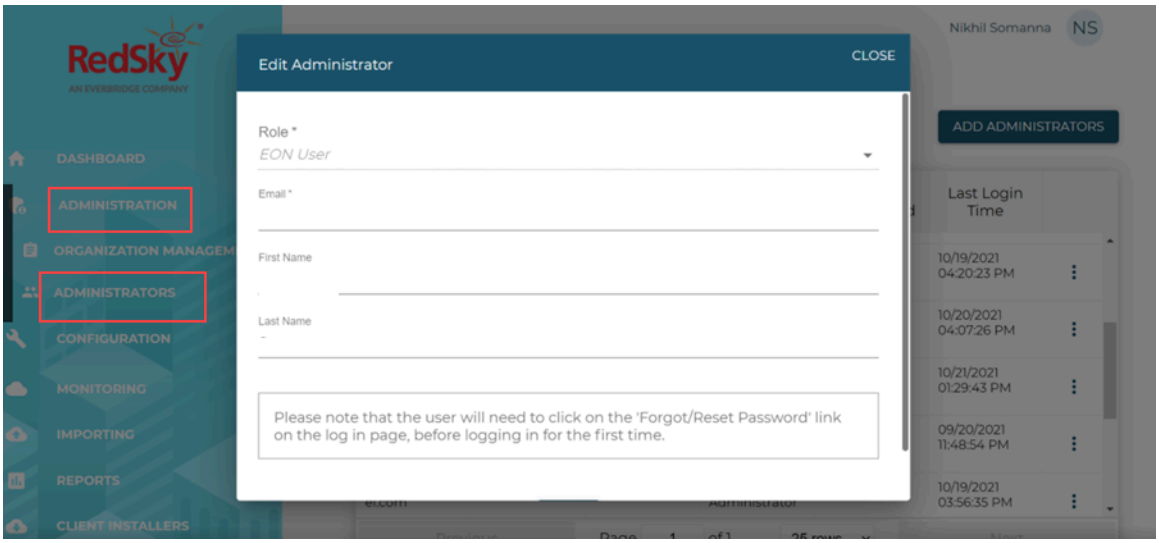
Note:
In the Redsky Portal, go to the **Manuals** section and refer to the *EON User Guide* for more details.

4. Configure the Emergency Notification application for Kari's law conformance:

   a. Add EON users:

      i. In the RedSky Portal, go to **Administration** > **Administrators** > **Add Administrators**.
      ii. In the page that opens, select the **Role** as **EON User**, enter the email address, first name, last name, and click **Save**.

Figure 8: Adding an EON user

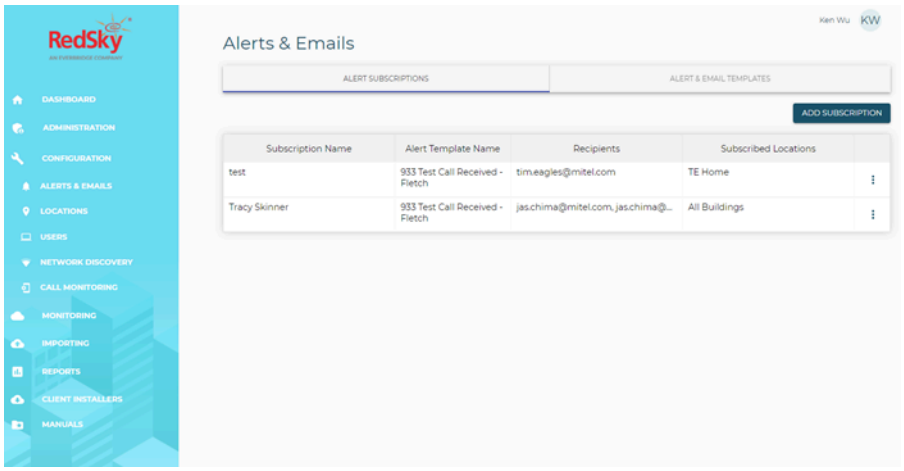


   b. Configure EON users:

      i. Add an Alert Subscription - For Kari's law conformance, create a subscription Alert Type of Emergency Call Received. Others are optional, but highly recommended. Add EON users, email and/or SMS message recipients.
      ii. While selecting buildings, select all buildings to get notification for all users. If a specific building is selected, then the notification will be sent only to phones located in that building.
      iii. Add an Alert Template - For Kari's law, the standard Emergency Call Alert Template is sufficient for an alert template.

Note:
This EON notification is used in conjunction with MiVoice Connect Emergency Notification application.

Figure 9: Adding subscriptions and alerts

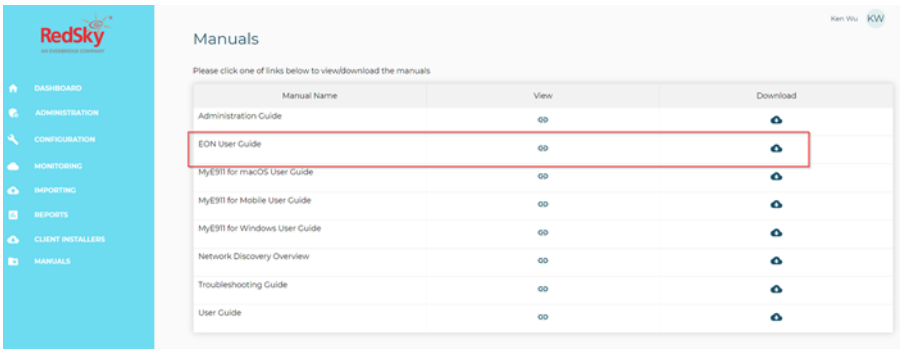


Note:
In the Redsky Portal, go to the **Manuals** section and refer to the *EON User Guide* for more details.

5. Provide documents for installation and application as required:

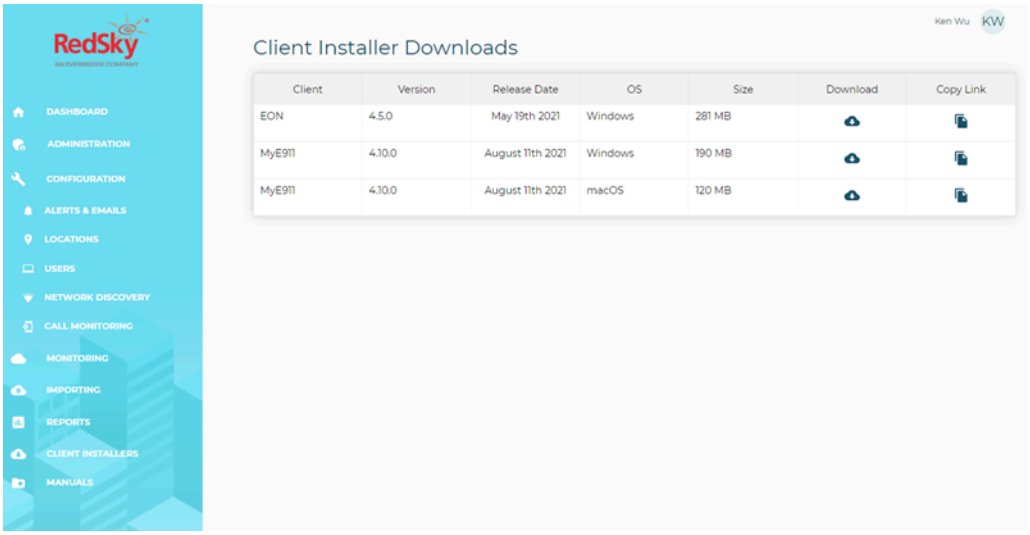
a. In the RedSky Portal, click **Manuals** to view the RedSky manuals.

Figure 10: RedSky manuals



b. In the RedSky Portal, click **Client Installers** to download the client installers.

Figure 11: Client installers



2.8 SIP Message Headers Used by MIVC to Support RedSky

Following are the SIP message headers used by MiVoice Connect to convey information to RedSky. RedSky uses this information to facilitate 911 emergency calls and also to derive the location and callback number (See SIP message headers for more details).

Table 4: SIP message headers

SIP Header	Purpose
E911-Organization-ID	This will be same as the Account ID obtained from the RedSky website. This will be used by RedSky to identify the organization and specific rules for processing the emergency calls.
<E911-Location-ID>	This header will contain the Location ID/Alternate ID used for deriving the location of the caller.
<E911-Callback-Number>	This header will contain the callback number to be used to reach the 911 caller in case of call discontinuation. This will be the extension number if the extension binding is enabled. Otherwise, this will be DID number through which caller/closest user to caller can be reached.
<E911-User-ID>	This header is used in place of <E911-Location-ID>, when the end device is using the Vendor application method for conveying the location. This field will be set to user extension number.
<GEO-LOCATION>	This header, if present, will convey the location information instead of the <E911-location-id> or <E911-User-ID>. This header is used only in case of HELD-enabled devices of MiVoice Connect (that is, Connect Client).

Solution: How the integration works 3

This chapter contains the following sections:

3.1 Non-Fixed Devices

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

3.2 Collecting Data

For non-fixed devices, MiVoice Connect will check for the Geolocation, MAC address, and IP address.

Additional information can be added in the MiVoice Connect database to complement the information received from the device. The additional information must be added in the system by the system administrator.

MiVoice Connect uses the following priority order for deriving the location information during an emergency call:

- Geolocation – provided by HELD-enabled devices
- L3 (IP address) to CESID mapping
- L2 to CESID mapping
- Manual/Automatic CESID based on the switch type
- Site/Zone CESID

3.3 Sending Data to RedSky

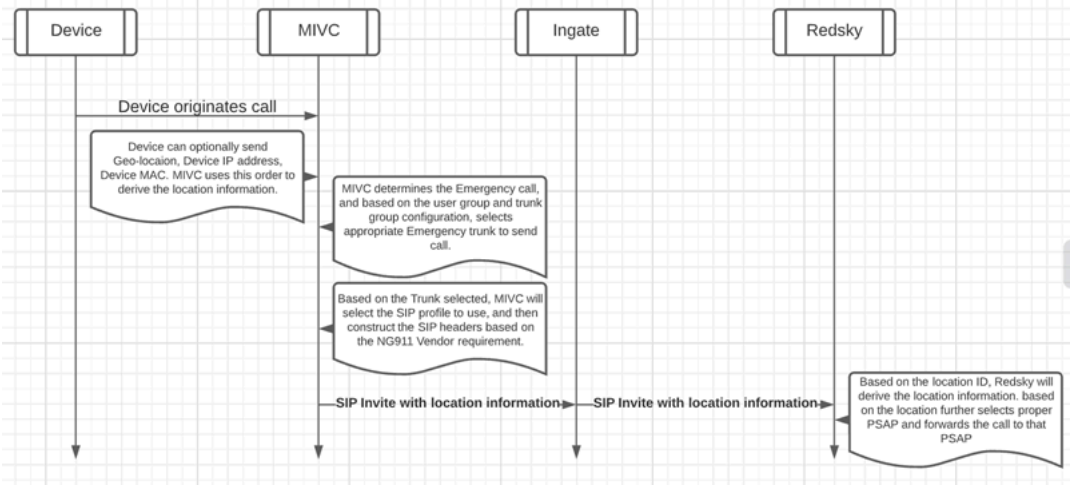
After MIVC has collected the information from the device side, it builds the information to be sent in the SIP trunk, including the appropriate SIP headers required by RedSky.

After that, the call is sent to Ingate, which will transparently pass the call with the supported SIP headers to RedSky.

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

Note:
The call to the National Call Center entails an extra cost for the customer.

Figure 12: Sending Data to RedSky



3.4 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.

3.5 Collecting Data

For fixed devices, as no information is provided by the device, MiVoice Connect will use the programmed CESID (switch port CESID, switch, or Site CESID). This information must be added in the system by the system administrator.

3.6 Sending Data to RedSky

After MiVoice Connect has collected the information from the device side, it checks which provider is used, and it builds the information to be sent in the SIP trunk, including the appropriate SIP headers as required by RedSky.

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

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

Note:
The call to the National Call Center entails an extra cost for the customer.

3.6.1 Emergency Callback

Previously the CESID was considered as the location identifier and an emergency callback number. For RAY BAUM enabled SIP trunks, MiVoice Connect will separate the two concepts:

- CESID remains the location identifier for most devices; except for devices for which geo-location is enabled, and softphones that will use a RedSky provided application to identify the location.
- The calling party number (CPN), the Substitution/DID, or the DN of the device will be used to support emergency callback (required for RedSky).

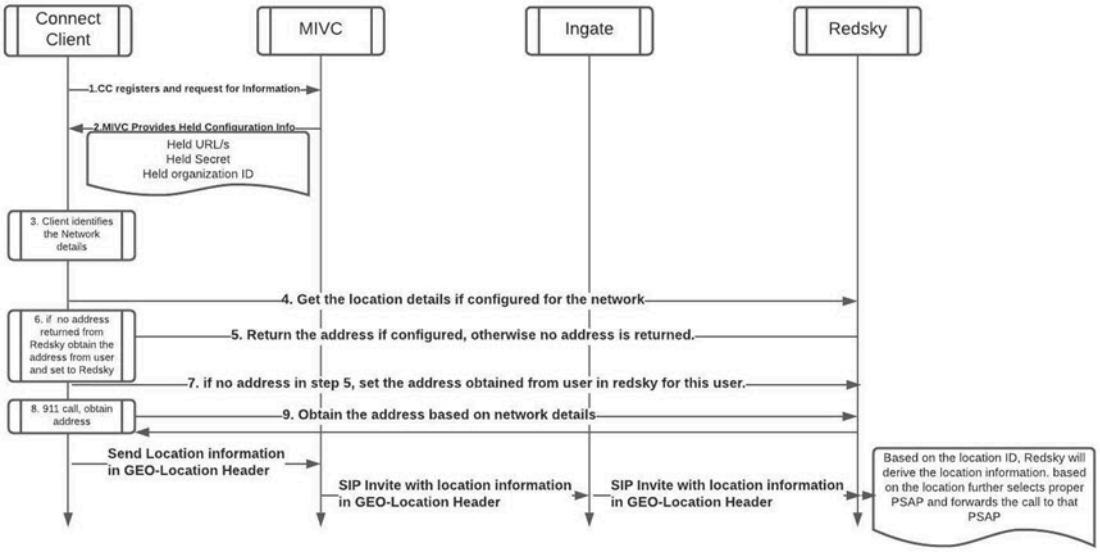
Note:
RedSky does not directly support emergency callbacks. These calls will go from the PSAP back through the public PSTN.

3.6.2 Connect Client Integration with RedSky

As mentioned earlier, Connect Client uses the HELD protocol to provide location information to RedSky. The location information when HELD is used, will be sent to RedSky using Geolocation SIP header rather than to the <E911-Location-id> or <E911-

User-id> headers. The following figure captures the connect client flow for location management.

Figure 13: Connect Client integration with RedSky



As shown in the figure Connect Client integration with RedSky, for Connect Client to work with RedSky, MiVoice Connect must provision the following parameters in PBX, which will be shared with Connect client when it registers with MiVoice Connect. To provision the parameters:

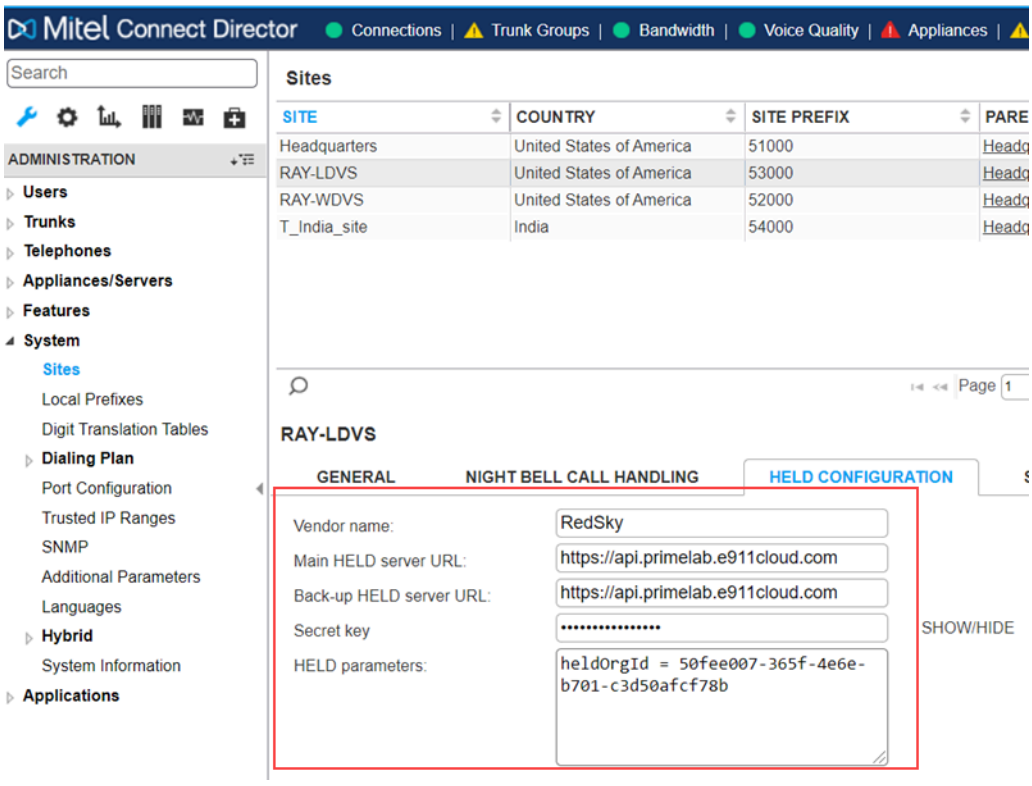
1. Launch Connect Director.
2. In the navigation pane, click **Administration** > **System** > **Sites**. The **Sites** page opens.
3. Select the site where the **Enable RAY BAUM** option is enabled.
4. To configure the third-party vendor, in the **HELD Configuration** tab, complete the fields as described in the table Sites Page: Parameters on the HELD Configuration Tab. See the figure HELD Configuration tab for more details.
5. Click **Save**.

Table 5: Sites Page: Parameters on the HELD Configuration Tab

Parameter	Description
Vendor Name	Name of the thrid-party vendor. You must enter **RedSky** here.
Main HELD Server URL	RedSky server URLs obtained from RedSky.

Parameter	Description
Back-up HELD Server URL	RedSky server URLs obtained from RedSky.
Secret Key	Secret Key is used by RedSky to validate any HELD-related exchanges with HELD clients. Without proper HELD secret key, the requests will fail. Therefore, the HELD clients must use the correct HELD secret key as part of HELD message exchange with RedSky. HELD secret key is obtained from **Account Dashboard** page of the RedSky Portal after the customer account has been set up.
HELD Parameters	This is the key=Value pair. The MiVoice Connect allows the administrator to add any key-value pair as required by clients to work with RedSky (any future parameter can be provisioned without PBX update).

Figure 14: HELD Configuration tab



You must configure the parameters as described in the table HELD parameters for RedSky.

Table 6: HELD parameters for RedSky

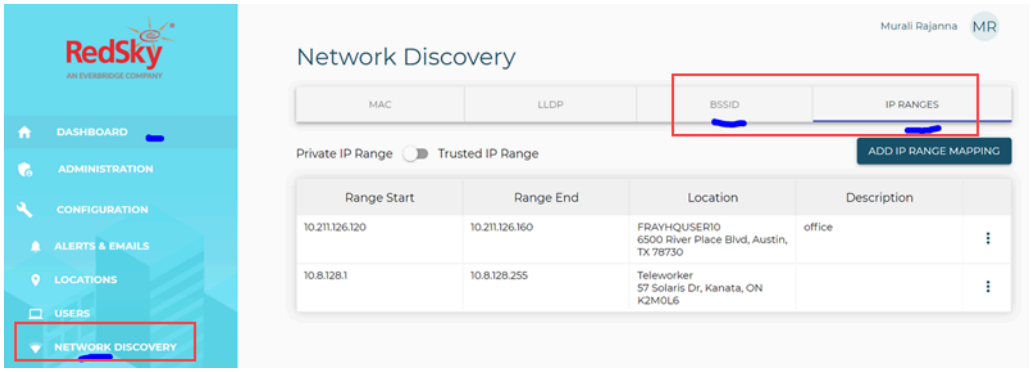
Parameter	Description
heldOrgId	This is the HELD company ID, which allows Redsky to provide accurate service based on specific license agreements. After the RedSky account is set up, the HELD company ID can be obtained by accessing the **Account Dashboard** from the Redsky Portal. **Note**: This parameter is case-sensitive and must exactly match as listed here in the Parameter column. For example, enter **heldOrgId = <HeldcompanyId>**.

3.6.3 Configuring Location for HELD Clients Using RedSky Wiremap

RedSky, as with MiVoice Connect IP address map, allows you to create a Wiremap based on IP ranges, wireless access points (BSSID), LLDP, and the MAC address. LLDP and MAC address are not suggested to be used with MiVoice Connect. The MiVoice Connect administrator can create a Wiremap and assign the location ID for each IP range or wireless access point/gateway MAC address. Therefore, the Connect Client users need not manually enter the address when they log in from the office network. Users who log in from a remote location must manually configure the location.

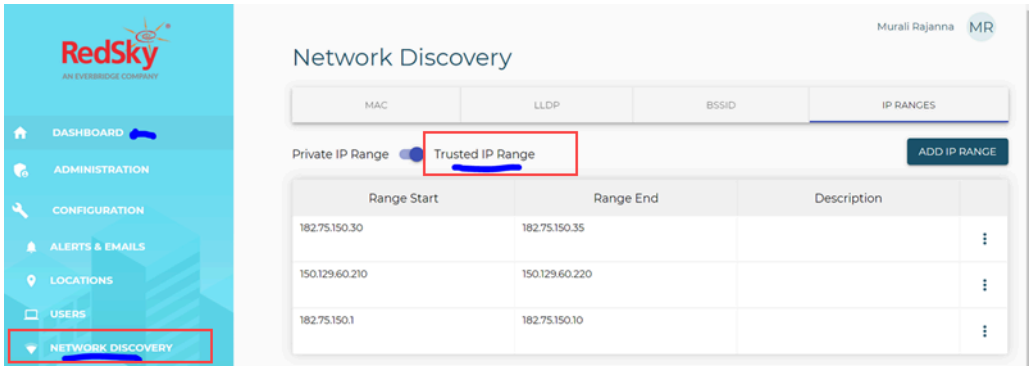
The Wiremap is relevant only for private networks (office networks). In a public network, it is not feasible to maintain the correct Wiremap. The Wiremap is applicable and can be used only for HELD clients (Connect Client and RedSky MyE911 Vendor Application) in MiVoice Connect. To create a Wiremap, the MiVoice Connect administrator must first collect network information such as IP ranges and their corresponding location in office, and wireless access point details/ Gateway MAC (LAN) details, and configure this information in the **Configuration** > **Network Discovery** page of RedSky Portal with each IP range or access points (which need not have the same Wiremap in MiVoice Connect).

Figure 15: RedSky Wiremap For HELD and MyE911 Clients



With the private network Wiremap created and associated with the locations at the RedSky site, the Connect Client, when logging from the office/private network, will obtain the location from RedSky based on the subnet/access point information and the same will be used as the users location. The IP address range-based Wiremap is relevant only for office/private networks. Therefore, if the Connect Client tries to get the location from IP address range-based Wiremap, it should be able to get the location only if it is connecting from office network. RedSky identifies whether the Connect Client is logging from the office network based on the trusted IP address range configured in the RedSky Portal.

Figure 16: RedSky trusted IP range to identify office network



The **Trusted IP Range** must be configured to all the public IP addresses used by office endpoints to reach/access internet. After the Trusted IP Range is configured with the public IP address range of office, RedSky can identify where the HELD request has originated from. RedSky will try to get location based on the IP range mapping only for requests originating from office networks. For all other requests, the IP address range-based location resolution will not be applied. Therefore, it is important for the MiVoice Connect administrator to configure both the office IP address ranges and the public IP address of the office.

For users logged in to office network through VPN, the HELD request will be generated using the public IP address of the device and not using office Public IP address. Therefore, VPN-based clients will not get the location automatically.

Because Connect Client can get location details only from the office/private network, it allows the administrator to take responsibility for location management for HELD clients when they are in private/office network (Connect Client users are not required to enter the location). Connect Client users can still update or use a different location by changing the location in Connect Client if they want. If any Connect Client user updates/changes the location from the Connect Client UI, it will affect only that user and any IP Range to location mapping will not be affected in the Wiremap. This explicit location update will be preserved across multiple logins.

If the Wiremap feature is not used on RedSky, Connect Client users must enter the location details manually from the Connect Client UI.

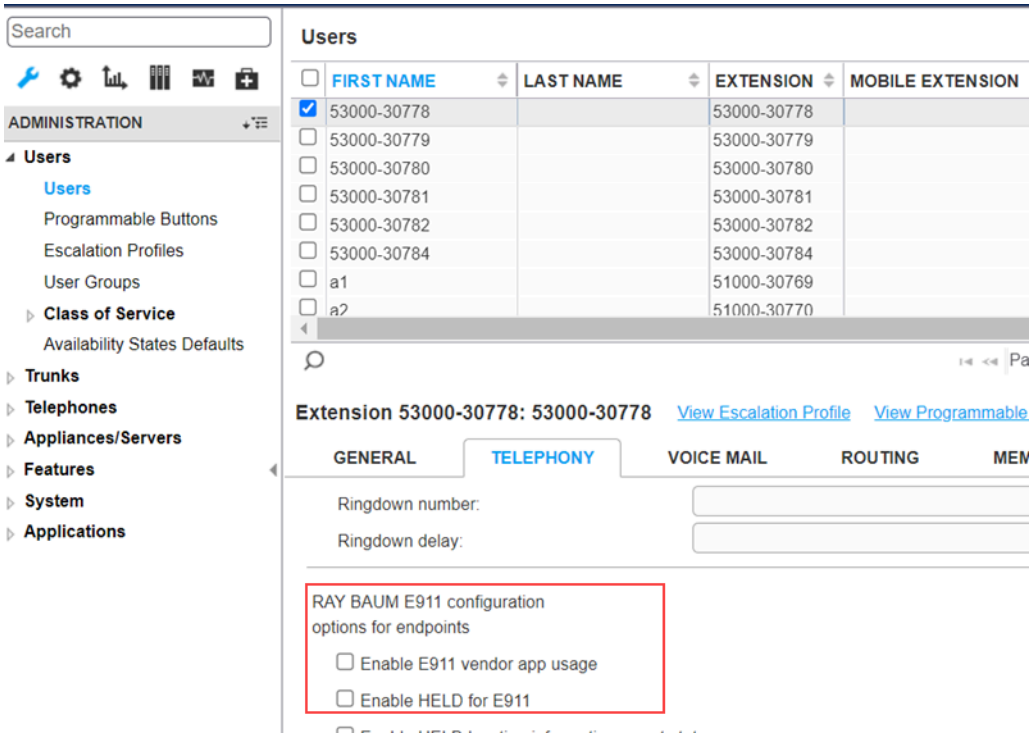
Refer to the ***Network Discovery Overview*** manual of the RedSky for more information about the Wiremap.

3.6.4 RedSky Vendor Application Usage - 911 Location Manager

As mentioned in the preceding section, third-party clients with MiVoice Connect use the vendor application based method to manage the location information.

To use the vendor application method for a user/extension, the administrator must enable the **Enable E911 vendor app usage** option in the **Telephony** tab of the **Users** page in Connect Director.

Figure 17: Enabling Vendor Application usage for a user



RedSky provides enhanced 911 coverage for nomadic subscribers through an add-on application called MyE911. This is a separate application that is installed on the subscriber's device and tracks their location.

When the vendor application is used for the user, <E911-User-ID> header of SIP message will be used to provide/derive the location. User must update the location using the vendor application which intern will update the RedSky location mapping for this user.

Refer to the MyE911 application user guides for configuring and using the Redsky MyE911 application.

3.6.5 Emergency Notification Configuration

To fully conform to Kari's law, the Mitel Emergency Notification application is such that it can be used in conjunction with the RedSky Emergency Notification application. RedSky provides a dedicated emergency client application called EON to manage the emergency notifications.

Refer the EON user guides available in the RedSky Portal for details on emergency notification management using EON.

3.6.6 Ports Used for Communicating with RedSky

The following ports will be used during communication with RedSky for 911 emergency calls:

- udp/tcp 5060
- rtp ports 10000-20000
- port - 443

Acronyms, Abbreviations, and Glossary

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- **ELIN** - Emergency Location Identification Number also known as CESID.
- **LIS** - Location Information Service
- **ERS** - Emergency outing Services.
- **CID** - Caller ID
- **CESID** - Caller's Emergency Service Identification
- **MAC** - Media Access Control
- **SRTP** - Secure Real-time Transport Protocol
- **CPN** - Calling Party Number
- **EON** - Emergency On-Site Notification
- **E911** - Enhanced 911
- **FQDN** - Fully Qualified Domain Name
- **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.
- **L2** - Layer 2
- **L3** - Layer 3 of the Open OSI model
- **MLTS**- Multi Line Telephone System. Equivalent to a PBX, but is the nomenclature used in the RAY BAUM'S Act.
- **NG911** – Next Generation 911
- **Non-fixed devices** – A non-fixed device is a device that the end user can move from one endpoint to another without assistance.
- **SBC**– Session Border Controller
- **SIP** - Session Initiation Protocol
- **TLS** - Transport Layer Security
- **TCP** - Transmission Control Protocol
- **HELD**– HTTP-enabled location discovery
- **UDP**– User Datagram Protocol