

MiVoice Business

RAY BAUM'S Act Solution Deployment Guide for Intrado

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Kari's Law and RAY BAUM'S Act

In August 2019, the USA government adopted rules for implementing two federal laws that strengthen the 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 are described at the following link:

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

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

The RAY BAUM's Act classifies devices into the following categories:

- Fixed MLTS devices - Devices that connect to a single end point (for example, a desk or office phone) and are not capable of being moved to another endpoint by the end user, although they might 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 Section 506 of RAY BAUM'S Act and Kari's Law

MiVoice Business, as an 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.

For MiVoice Business, we have the following device categories:

- Fixed MLTS Devices e.g., Analog Devices
- Non-Fixed MLTS devices - IP Devices, SIP Devices, softphones, all teleworkers, and so on

In order to provide full support of the requirements above, MiVoice Business is integrated with Intrado in USA, https://www.west.com/en_ca/safety-services/enterprise-e911-solutions/.

Solution: MiVoice Business - RAY BAUM's Act High Level Architecture with Intrado

MiVoice Business implements the RAY BAUM's Act requirements in conjunction with Intrado as the MiVoice Business 911 solution alone does not satisfy the legislated requirements for the RAY BAUM's Act for all non-fixed devices.

For Kari's Law conformance, MiVoice Business can be pre-configured to support 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 Intrado and Intrado redirects the call to the appropriate Public Safety Answering Points (PSAPs) based on the Civic Address of the location as identified by Intrado. Intrado's email notification system is sufficient for Kari's Law local notification requirements as laid down by 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 Intrado during emergency calls. Intrado looks up these Location identifiers to determine the ERL (Emergency Routing Location - including Civic Address), which they then use for signaling to the PSAP. Intrado also validates the Civic Address when the location is first created in their database. Intrado address validation includes all 50 states in the United States, as well as Puerto Rico and Canada. However, all calls from a Canadian location will be routed to Intrado's Emergency Call Relay Center (ECRC). The ECRC will answer the emergency call and transfer it to the local emergency services.

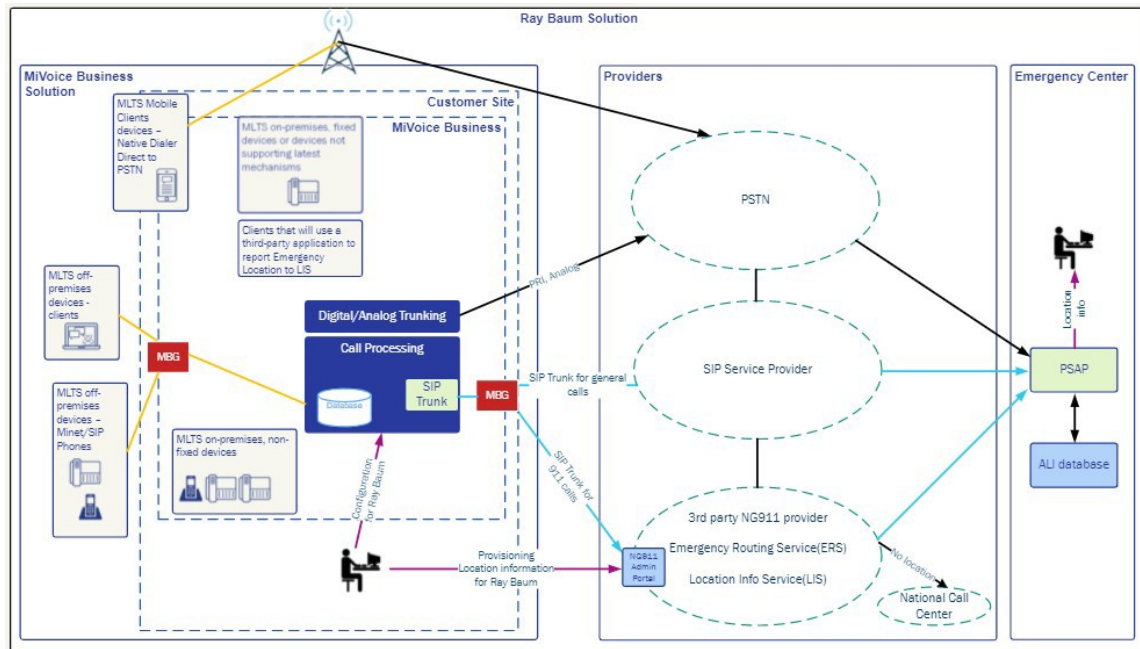
With the RAY BAUM's Act solution, the Mitel MiVoice Border Gateway (MBG) is used as the Session Border Controller (SBC). If a customer has an existing MBG, this can be upgraded to Release 11.3 and used for the connection to Intrado. Additionally, the MBG can be used for Remote Users (Teleworkers). Standard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

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

Emergency Callbacks with Intrado use their Extension Bind feature, which temporarily maps a DID number owned by Intrado to the DN of the emergency caller. If the emergency call drops, the PSAP will use the "bound" DID to call the user back.

NOTE: It is recommended that the MiVoice Business integration use the Extension Bind feature. If this feature is not used, the customer must program CPN/DID in order to route the call back through the PSTN network to the PBX. The procedure for this is described in this document.

Figure 1 shows a high-level architectural view of the MiVoice Business RAY BAUM's Act integration with Intrado.



The MiVoice Business RAY BAUM's Act solution with Intrado Solution is composed of the following components:

- Intrado
 - A valid commercial agreement with Intrado. Part of setting up this agreement involves:
 - Intrado's Extension BIND feature
 - From this agreement, you will need to obtain the following information from Intrado:
 - Account ID - This is used by Intrado to isolate one Organization's locations from those of another.
 - Identification of the transport protocol to use with Intrado
 - UDP on port 5060
 - **NOTE:** This must be the configuration if Intrado's Extension Bind feature is enabled.
 - TCP on port 5060
 - TLS 1.2+ on port 5061 – **Currently not supported on Intrado**
 - SIP Gateways
 - HELD Service URL + Credentials
 - 911 Location Manager - An application provided by Intrado that runs on select softphone devices.
 - Access to the Intrado Portal - The main configuration portal
 - Define Locations (ERLS)
 - Define Subscribers (used to identify a caller specifically for callback purposes)
 - Define the On-Premises wire map (Subnets, Wireless Access Points, Switches) to be used by On-Premises HELD clients and On-Premise 911 Location Manager clients.
- MBG
 - SIP Trunking to/from Intrado
 - 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
- DID and CPN Substitution per device (or location) that can make 911 calls.
- SIP Peer Profile dedicated to signaling with Intrado
- SIP Device Capabilities - For SIP Devices that provide location information.
- Class of Service - For devices that are going to use the 911 Location Manager application from Intrado.
- Class of Service - For MINET teleworker devices.
- (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 Intrado SIP Gateways are down).
- 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 911 Location Manager application from Intrado

The Mitel MiVoice Border Gateway (MBG) is used as the SBC between MiVoice Business and Intrado in the solution. A SIP trunk each is set up between MiVoice Business and MBG and between MBG and Intrado.

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 Intrado, a web portal is used to set up the information required for 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 for an alternate identification of a device or a user.

The majority of devices that are supported in the MiVoice Business portfolio are supported for the RAY BAUM's Act. The exception is off-premises 52xx and earlier 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 Intrado. Additional steps are required for the overall solution as a whole but are not specific to Intrado and are thus outside the scope of this document.

Solution: Requirements for MiVoice Business - RAY BAUM Integration with Intrado

Product	Minimum SW Release	Minimum Requirements/Comments
MiVoice Business	9.2	At least one SIP Trunk route is required, along with the SIP channel licenses for connecting to the MBG. NOTE: While it is not a minimum requirement, it is recommended to have two MiVoice Business instances for redundancy.
MBG	11.3	At least 1 MBG is required along with the appropriate SIP Trunk licenses. NOTE: While it is not a minimum requirement, it is recommended to have two MBGs for redundancy.
cMBG	11.1 SP1	At least 1 MBG along with the appropriate licenses. NOTE: While it is not a minimum requirement, it is recommended to have two MBGs for redundancy.
MiCollab	9.4 SP1	Geolocation Support via HELD from Intrado Location Information Server
69xx MiNET (6905, 6910, 6920, 6930, 6940, 6970)	1.7	Pop-up support (for supporting teleworker devices)
53xx MiNET (5304,5312,5320,5320 e,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.
IP DECT 56xx (ASCOM)	11.6	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 the sending of the MAC address of a connected Wireless Base Station during calls.

Establishing a Contract with Intrado

The channel partner/customer must have an agreement with Intrado. It must be prepared with the following information:

Item	Comments
Locations	The number of locations required to satisfy RAY BAUM's Law.
Subscribers	For the MiVoice Business solution, this will include all Users(and members of Personal Ring Groups(PRGs) and devices not associated with Users that can make emergency calls (for example, IP Device Only, Lobby Phone, MiVoice Business Console, and so on.).
HELD Subscribers	These are the number of devices/Subscribers that will provide Geolocation (for example, MiCollab SIP Softphones, and so on). If this service is required, a request to Intrado must be made to enable this support so that the Authentication Tokens option is available under the Administration tab to retrieve the token required.
911 Location Manager Clients	The number of users/devices that will require the NG911 application (for example, MiVoice Business Console and MiCollab MINET Softphones)
Notification Clients	The number of email address recipients for 911 Notifications to satisfy Kari's Law.
Network Maps feature	This is required to be able to configure on-premise Subnets and Wireless Access Points. I think we need this for 911 Location Manager based devices.
911 Location Manager	This optional application allows access to Intrado's 911 Location Manager application that is to be used for some softphones in the MiVoice Business solution. If this application is required, a request to Intrado must be made to enable this support so that the Authentication Tokens option is available under the Administration tab to retrieve the token required.
Callback Determination Preference: Extension BIND feature(XBind)	For Intrado to support emergency callbacks to Subscribers without a DID number, Intrado must be asked to set the Callback Determination Preference to Extension BIND feature (XBind). This optional feature binds an Intrado owned DID to an emergency caller's internal DN for use by a PSAP if an emergency call were to be dropped. The PSAP would call the Intrado DID, and Intrado will route back to the MiVoice Business. The SIP trunk to Intrado must also be configured as a private SIP trunk. NOTE: If this feature is enabled, the transport protocol of the SIP trunk between MiVoice Business and Intrado must be UDP.
Location Determination Preference: ERL ID in SIP header	For Intrado to properly associated a location from an emergency call from the MiVoice Business, Intrado must be asked to set the Location Determination Preference to <i>ERL ID in SIP header</i> .

NOTE: Without the Extension BIND feature, Intrado will expect the Subscriber ID (which identifies a user/callback destination) to be a 10-digit Subscriber ID (caller's DID) and an emergency callback will be made to the MiVoice Business via the public PSTN. In that case, the MiVoice Business must be set up to use CPN Substitution and DID for each end-point/user that can make an emergency call.

Additionally, if you are using a public PSTN trunk as a backup to Intrado, it is highly recommended to have a CPN/DID for each device that can make a 911 call.

Intrado Portal - ERS (Emergency Routing Service)

The Intrado Portal is available via the web. The URL comes from Intrado in a welcome email. For more detailed information about the use of this portal, see *Intrado ERS User Guide.pdf*, available from Intrado.

This is the main Intrado Portal for the configuration of the customer's emergency solution. In order to program the MiVoice Business solution, you will need to perform the following steps:

1. Identify the Account ID used when setting up the MiVoice Business SIP Peer Profile, and MiCollab Server.

Intrado Emergency Routing Service

File Manager ▾ Ken Wu (Administrator) ▾ ?

Dashboard ▾ Provisioning ▾ Monitoring ▾ Administration ▾

Home

Account Dashboard

GENERAL INFORMATION

MiVB Design

Account ID: [REDACTED]

NOC Contact: N/A

EMAIL NOTIFICATIONS

Type	Email Addresses
Emergency Calls:	Anilkumar.Yalawarmath@mitel.com (+ 1 Emails)

PROVISIONING STATISTICS

4 Locations

2 Subscribers

[VIEW PROVISIONING DETAILS](#)

911 CALL STATISTICS


	Current Month	Previous Month
Provisioned	0	0
Unprovisioned	0	0

2. Identify the HELD URL and HELD credentials for your HELD enabled clients. This will be provided to you by Intrado and there is more information in chapter Deployment Guide: MiCollab SIP Softphone.

3. Configure Locations (ERLS - Emergency Routing Locations)

- Step 1: Configure an *Emergency Response Location(ERL)* to be validated.
 - ERL Name - Customer-defined label to identify the location
 - House # - Civic Address provided to PSAP
 - Street/Road - Civic Address provided to PSAP
 - City - Civic Address provided to PSAP
 - Country - Civic Address provided to PSAP
 - State/Province - Civic Address provided to PSAP
 - Postal Code - Civic Address provided to PSAP
 - Location - The dispatchable location within the given civic address, provided to PSAP.

VALIDATE ADDRESS

 **Emergency Response Location**

ERL Name *

* Required

Mitel Georgia

House # *

Street/Road *

6

Concourse Parkway

City *

Country *

Sandy Spring

US

State *


ZIP Code *

Georgia

30228

Location

1st Floor


 Add Label

CANCEL

VALIDATE ADDRESS


- Step 2: Configure the ERL's *Routing Options*
 - Delivery Method - The MiVoice Business solution supports only the PSAP delivery method.
 - Custom Callback – If configured, the ERS Custom Callback number will override the callback number sent by the MiVoice Business. It should be noted this callback is based on the location of the caller as it is tied to the CESID/ERL ID, rather than the caller's callback number.
 - Email Notifications - Recommended to use the Intrado Account-based email notifications instead of ERL-specific email notifications (see below).
 - ERL ID – This step is **VERY IMPORTANT**, it should be manually entered and should match the CESID that is associated the ERL configured in Step 1. This CESID must also be programmed on the MiVoice Business. The MiVoice Business will be sending this CESID for an emergency call in the SIP Invite for Intrado to link with the caller. The caller must match a Subscriber provisioned on Intrado, as provisioned in Step 3.

CONFIGURE ROUTING

 **Routing Options**

Delivery Method
☒ PSAP ☐ Security Desk ☐ Three way

Custom Callback

Email Notifications
 

ERL ID

- Step 3: Skip *Enter Associations*(optional)
 - This step is not required and should be skipped.

ADD ASSOCIATIONS

Enter Associations (optional)

SUBSCRIBERS
0

SUBNETS
0

ACCESS POINTS
0

SWITCHES
0

Enter ID(s)

☒ Subscriber ☐ DID Range ☐ Extension Range

Example (111) 111-1111 +

Search

Search Q

Showing 0 to 0 of 0 entries

SUBSCRIBERS	
No data available in table	

Records per page

10 ▼

Previous Next

4. Configure Subscribers. For the MiVoice Business solution, this includes all MiVoice Business Users and non-user devices that can make 911 calls (For example, IP Device Only, Lobby Phones, and MiVoice Business Console).
 - Subscriber ID - For the MiVoice Business solution, it is highly recommended that you use private SIP Trunks and Intrado's Extension BIND feature. The difference between a private SIP trunk versus and public SIP trunk it that a private SIP trunk will send information about the internal directory number where public will send an external number(caller's CPN/DID number). This configuration is controlled by an option in the SIP Peer Profile, see Deploying Guide: MiVoice Business SIP Trunking to Intrado using MBG as an Outbound- Proxy. for more details. So when using a private SIP trunk with Intrado it means the Subscriber ID is the caller's extensions provided in the <P-Asserted-Identity> SIP Header, rather than the caller's CPN/DID number. This is typically the caller's extension (or MDUG/Suite Pilot if the caller is a member of such groups). If they are using a Public SIP Trunk, then the Subscriber ID, and thus the P-Assert-Identity header, should be the device's CPN/DID substitution value. In the screenshot below, the Subscriber ID is of 1000 is an example of configuration for a PRIVATE SIP Trunk and 6136913499 is an example of configuration for a PUBLIC SIP Trunk. See
 - DID Range – Can be used to configure a range of 10 digit Subscribers. This would only be used if they are using a Public SIP Trunk.
 - Extension Range - Can be used to configure a range of non-10 digit Subscribers. This would only be used if they are using a Private SIP Trunk.

Dashboard Provisioning Monitoring Administration

Home / Provisioning

Provisioning

EXPORT BATCH PROVISIONING

FILTER

ERLS SUBSCRIBERS SUBNETS WIRELESS ACCESS POINTS SWITCHES

+ ADD SUBSCRIBER

Search

1 ENTER SUBSCRIBER(S)

Subscriber

SUBSCRIBERS DID RANGE

EXTENSION RANGE

Subscriber ID

Example (111) 111-1111

(613) 691-3499

1000

NEXT

2 SELECT ERL OPTION

What ERL to associate to

Associate to an existing ERL





Associate to a new ERL

☒ Do not associate to any ERL

ADD SUBSCRIBER(S)

When the Subscriber is created as described above, the *ERL Information* field for that user should be **Determined at Call Time**, as seen for Subscriber 56141 and 13901 below.

Showing 1 to 10 of 18 entries

RELOCATE	SUBSCRIBER ID	ERL INFORMATION	ERL NAME	RESPONDER TYPE	ROUTING STATUS	ADDRESS STATUS	ACCOUNT NAME	LAST UPDATED	DELETE
	14666	4000 Innovation Drive, kanata, ON K2K3K1 Third floor ERL ID: 6E12C562-D1B7-4232-AA9D-9F12D6736551	dattatraya	Response Center	Basic	Valid	MiVB Design	2021-11-22 @ 11:09:48	
	56141	Determined at call time					MiVB Design	2021-11-16 @ 11:36:49	
	13901	Determined at call time					MiVB Design	2021-11-15 @ 06:37:09	

For Subscriber 14666, this would have initially been **Determined at Call Time** as well but has been updated with a location reported by an end user using the 911 Location Application or MiCollab SIP Softphone as shown by the that the **ERL ID** is an Intrado generated Globally Unique Identifier(GUID).

- Configure the On-Premise wire map via Provisioning. This is used by the On-Premise HELD and 911 Location Manager clients.
 - Subnets - Allow clients to determine their location based on IP address.
 - Wireless Access Points - Allow clients to determine their location based on the MAC address of the Wireless Access Point.
 - Switches - Allow clients to determine their location based on L2 switch connectivity.

Intrado Emergency Routing Service

File Manager | Ken Wu (Administrator) | ?

Dashboard | Provisioning | Monitoring | Administration

Home / Provisioning

Provisioning

EXPORT | BATCH PROVISIONING

FILTER



ERLS | SUBSCRIBERS | SUBNETS | WIRELESS ACCESS POINTS | SWITCHES

+ ADD SUBNET

Search

Search by Subnet Name, IP or Subnet Mask

Showing 1 to 1 of 1 entries

EDIT	SUBNET NAME	SUBNET MASK	ERL INFORMATION	ACCOUNT NAME	LAST UPDATED	DELETE
	Test1	198.0.2.0/24	4000 Innovation Drive, Kanata, ON K2K 3K1 First Floor ERL ID: 8123456789	MiVB Design	2021-08-18 @ 14:23:18	

Records per page: 10

Previous 1 Next

- Obtain client installer/guides for HELD devices and 911 Location Manager clients provided by Intrado.

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 solution falls into three categories:

- Device's that update Intrado's LIS directly, and provide Geolocation data through the MiVoice Business.
- Device's that use Intrado's 911 Location Manager application to update the Intrado's LIS directly and use the Subscriber ID (DN or CPN) from the MiVoice Business to associate the location.
 - MiVoice Business Administrators will need to put a process in place to notify their end users on how to install this application as well as instructions on how to configure it during installation. When installed, user's will be prompted for a Subscriber ID which needs to match a Subscriber ID configured in the Intrado Portal. If using the Extension BIND feature, this will be the DN of the device the using the application, unless the device is in an MDUG, in which case the MDUG prime DN should be entered. If not using Extension BIND feature, this needs to be the user DID number.
- Devices that use CESID, which is then broken down further:
 - SIP Devices that provide a Wi-Fi Base Station MAC address in the SIP INVITE (PANIHeader) or 200 OK
 - SIP Devices that provide an ELIN/CESID in the SIP INVITE (FROM header) or 200 OK
 - MINET devices that support STP/CDP/LLDP-MED, where the MiVoice Business will use the L2 information to look up a CESID.
 - Devices that use the MiVoice Business pre-provisioned CESID
 - Devices that have an associated IP Range to Zone mapping, use the Zone's CESID (if programmed)

NOTE: Using the default CESID is not recommended.

MiVoice Business uses a priority order to determine which Emergency Information is used:

- 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 (must not be used as it might not be sufficient to satisfy the US Law).

In all cases, the Subscriber ID is used to determine the emergency callback destination and the caller's DN or CPN.

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, MiVoice Business uses the programmed CESID to identify the location of the caller, and the device's DN (or CPN) to determine the emergency callback destination.

Sending Data to Intrado

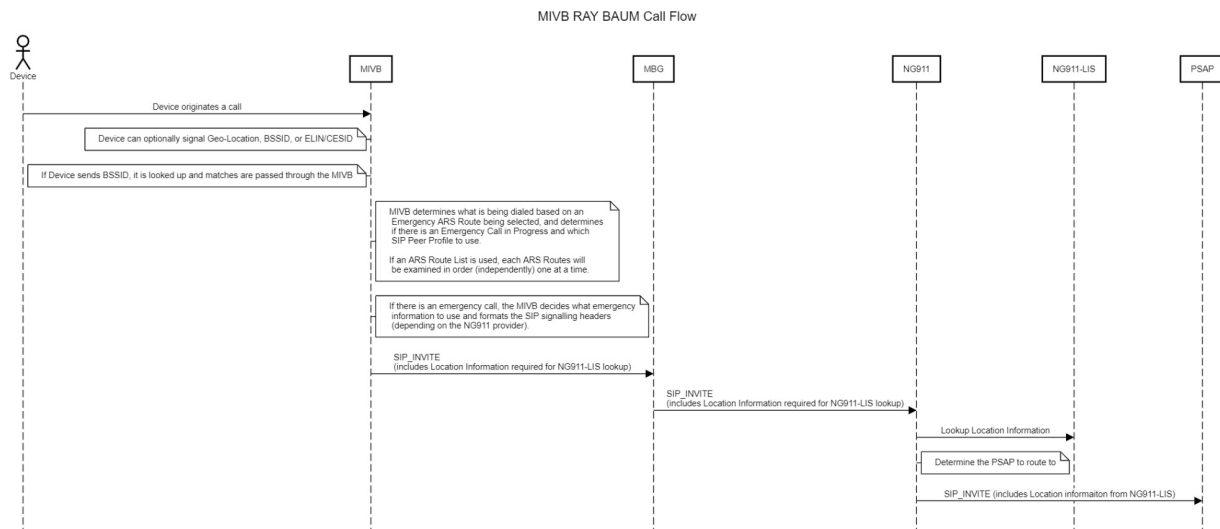
After the MiVoice Business has collected the information from the device side, it builds the information to be sent in the SIP trunk, including the appropriate SIP headers required by the provider (based on the SIP Peer configuration).

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

To conclude the process, Intrado will use the header information to look up the Location (Geo Location or FROM field) and Subscriber ID (P- ASSERT-IDENTITY).

- If the Geolocation/Subscriber are valid, then the call is routed to the PSAP with the proper location and callback information.
- If location/Subscriber are validated, then the call is routed to the PSAP with the proper location and callback information.
- If the Subscriber or location cannot be identified by Intrado, the emergency call will be directed to Intrado's Emergency Call Relay Center for further triage.

NOTE: As per your contract with Intrado, calls that are directed to Intrado's Emergency Call Relay Center(ECRC) will entail an extra cost to the customer.



Emergency Callback and Extension Bind

Previously, the CESID was considered as a Location identifier and an Emergency Callback Number. For RAY BAUM-enabled SIP Trunks, MiVoice Business separates the following two concepts:

- CESID remains the Location identifier for most devices (except Geolocation-enabled devices, and softphones that use the Intrado 911 Location Manager application).
- Using Intrado's Extension Bind feature allows them to provide an Intrado-owned DID to the PSAP, and if an emergency callback is required, the PSAP calls Intrado's DID, which they route back to the Subscriber using the SIP Trunk to the MBG (which forwards it to the MiVoice Business).

NOTE: If this feature is enabled, the transport protocol of the SIP trunk between MiVoice Business and Intrado must be UDP

Without Intrado's Extension Bind feature, MiVoice Business provides CPN/DID for all users/devices that can make 911 calls and the PSAP calls the MiVoice Business back directly through the public PSTN.

Solution: MiVoice Business Location ID Definition

The Location ID is a reference/identification used for identifying a device or several devices in MiVoice Business that must be sent to Intrado and is usually the CESID assigned to the device. MiVoice Business provides forms for various methods of associating a CESID with a device:

- 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 obtain their Location ID directly from Intrado, sent through the MiVoice Business. As such, CESID need not be programmed on MiVoice Business. The DN (or CPN) is used for linking the device to the location.

Devices that support sending the CESID/ELIN directly are programmed for this, and send the CESID/ELIN through the MiVoice Business, and the Location ID need not be programmed on the MiVoice Business. However, the CESID must match an Intrado ERL.

Devices that support Intrado's 911 Location Manager updates the location directly from the application, and do not need any CESID programmed on MiVoice Business. The DN (or CPN) is used for linking the device to the location.

Solution: MiVoice Business Device RAY BAUM Support Summary

The following table provides a list of supported devices, and the available options 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	Not recommended
5540	L2 to CESID mapping IP address to CESID mapping	CESID Assignment
MiVoice Business Console	Intrado's 911 Location Manager IP to Zone to CESID Mapping	Intrado's 911 Location Manager
Generic SIP Device NOTE: Mitel will need to certify the solution with any Generic SIP Device.	Geolocation/CESID provided by the device BSSID to CESID Mapping IP address to CESID mapping Intrado's 911 Location Manager	Geolocation/CESID provided by the device BSSID to CESID Mapping Intrado's 911 Location Manager
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 Intrado's 911 Location Manager	Intrado's 911 Location Manager
MiCollab SIP Softphone (UC Endpoint)	Geolocation	Geolocation
MiCollab Web Client	Geolocation	Geolocation
MiCollab Deskphone	Depends on the desk phone type	Depends on the desk phone type
MiCollab on Mobile	Uses Native Dialer	Uses Native Dialer
Analog	CESID Assignment	--
SIP ATA (Analog Terminal Adaptors)	See Generic SIP	See Generic SIP
Third-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

Apart from the devices, MiVoice Business supports many functions that might be used to make an emergency 911 call. The supported MiVoice Business functions are as follows:

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 must log out and then log in back.
SIP Hot Desking	Depends on the SIP Device that you are logged in to.
External Hot Desking	Uses the incoming CLI if they are proxied on a PUBLIC trunk. If they are proxied on a PRIVATE trunk, then the CESID programmed against the EHDU is used.
PRG	The Location ID depends on the device itself (not the PRG/MDUG Pilot); however, callbacks are directed back to the PRG member meaning that each member of the PRG needs to be configured as a Subscriber on Intrado.
MDUG	The Location ID depends on the device itself (not the MDUG Pilot); however, callbacks are directed back to the MDUG pilot.
Suites	The Location ID depends on the device itself (not the Suite Pilot); however, callbacks are directed back to the Suite pilot.

Solution: Mitel Applications with RAY BAUM's Act Support

MiVoice Business is integrated with different Mitel applications with RAY BAUM support. The following Mitel applications support RAY BAUM:

- 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
- RFP 12/14 Single Cell Solution

Solution: Mitel Applications without RAY BAUM Support

The following Mitel applications that do not support RAY BAUM:

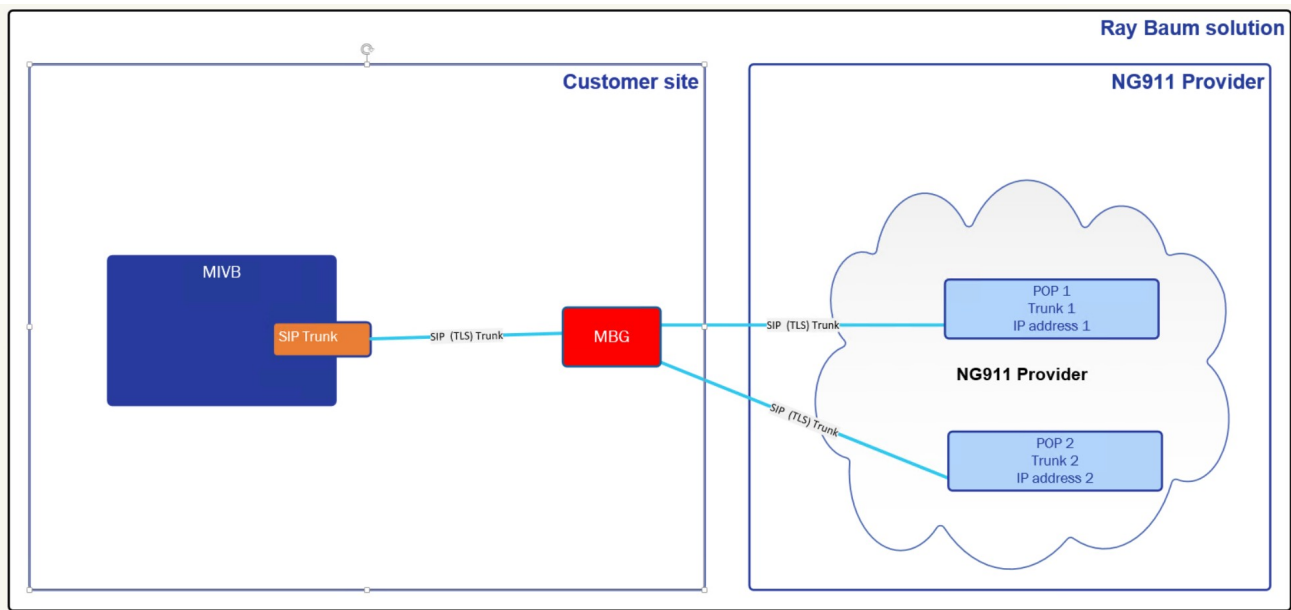
- MiCAM - MiCollab Advanced Messaging
- MIR - Mitel Interaction Recording
- NPM – NuPoint Unified Messaging
- MPA - Mitel Performance Analytics
- Mitel Revolution

Solution: Deployment Diagrams

This chapter covers possible deployments setups between MiVoice Business and the NG911 provider.

MiVoice Business and MBG in a customer site

The following architecture view shows the most basic setup between MiVoice Business and Intrado. An emergency route is set up between MiVoice Business and Intrado's SIP gateways using the single MBG as an outbound proxy. A double SIP trunk between the customer site and Intrado is highly

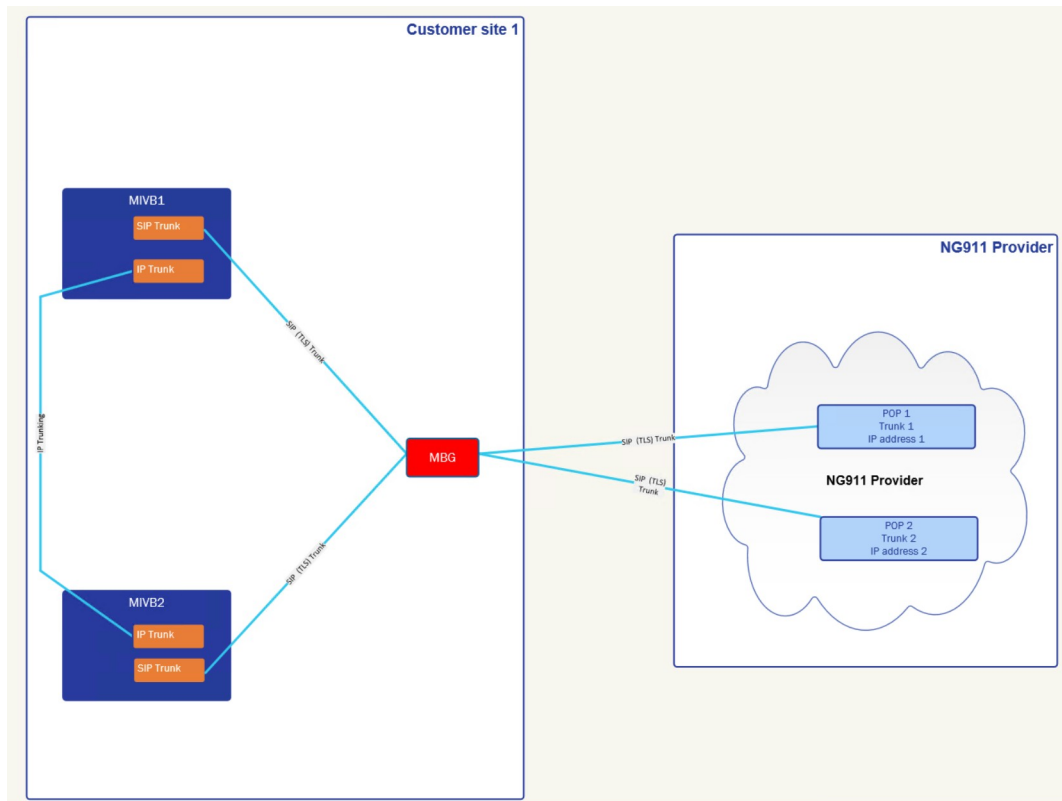


recommended.

Refer to MBG documentation for MBG Redundancy SIP trunk configuration.

Multiple MiVoice Business Instances each with connectivity to a single MBG in a customer site

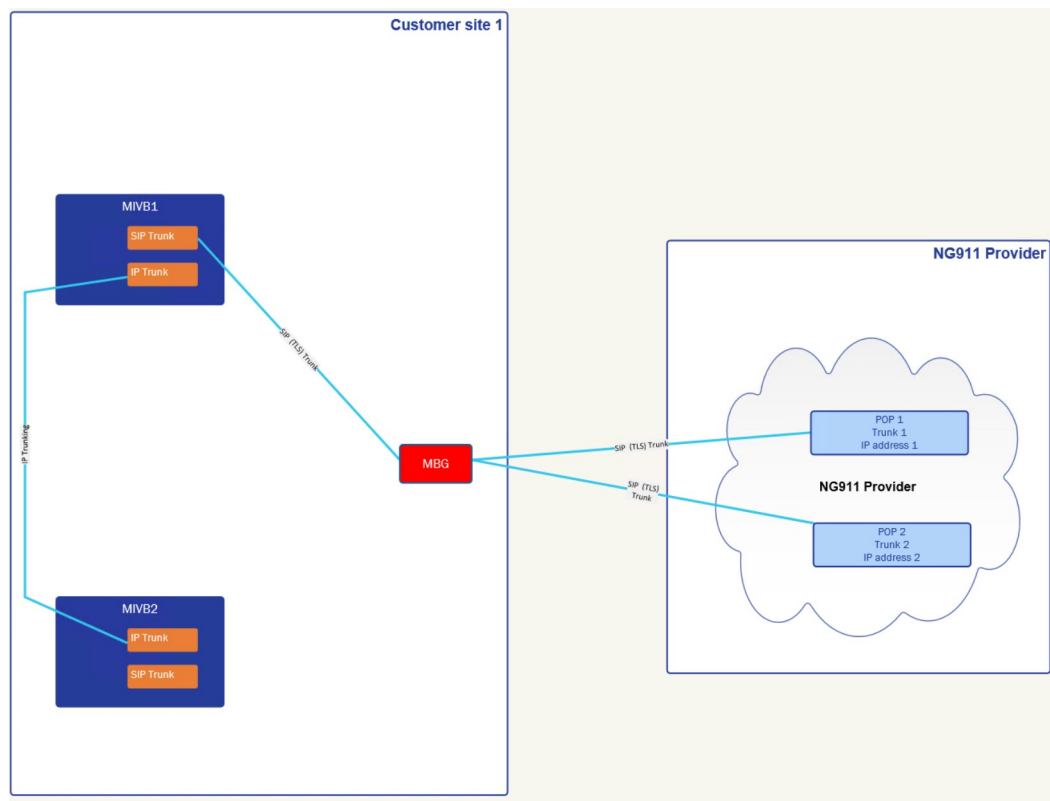
The following architecture view shows a more complicated setup between multiple MiVoice Business instances and a single MBG and Intrado. In this case, each MiVoice Business is set up with an emergency route over between MiVoice Business and Intrado's SIP gateways using the single MBG as an outbound proxy. A double SIP Trunks between the customer site and Intrado is highly recommended.



NOTE: In this case, a single IP Trunk between MiVoice Business instances is all that is necessary, because every MiVoice Business has its own emergency route to the MBG. This method might cost more because you need SIP Trunk licenses for each MiVoice Business.

Multiple MiVoice Business Instances using a single MiVoice Business as a Trunking Gateway to a single MBG in a customer site

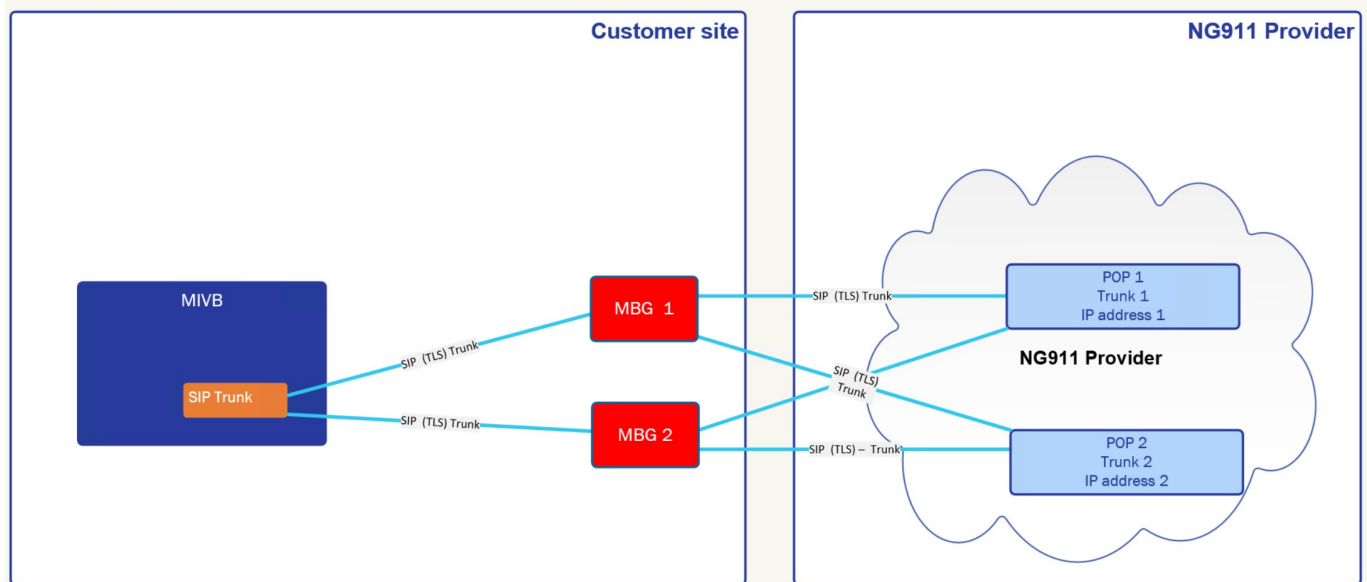
The following architecture view shows a more complicated setup between multiple MiVoice Business instances and a single MBG and Intrado, which reduces the number of SIP Trunks (and therefore licenses) required. In this case, multiple MiVoice Business instances are set up with an emergency IP Trunking route to a designated MiVoice Business set up with an emergency route between the gateway MiVoice Business and Intrado's SIP gateways using a single MBG as an outbound proxy. Double SIP Trunks between the customer site and Intrado are highly recommended.



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

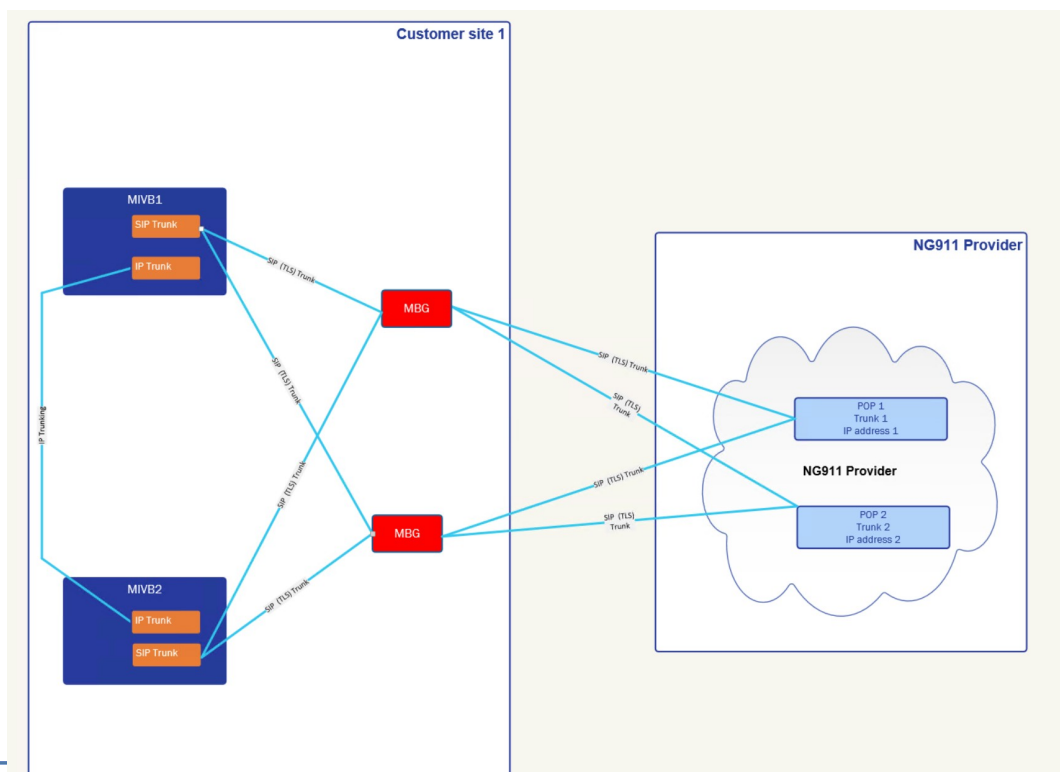
MiVoice Business and two MBGs in a customer site

The following architecture view below shows a redundant setup between MiVoice Business and Intrado. SIP trunks are set up between MiVoice Business and Intrado's SIP gateways using the MBGs as outbound proxies. Double SIP trunks between the customer site and Intrado are highly recommended.



Multiple MiVoice Business Instances using multiple MiVoice Business as a Trunking Gateway to a single MBG in a customer site

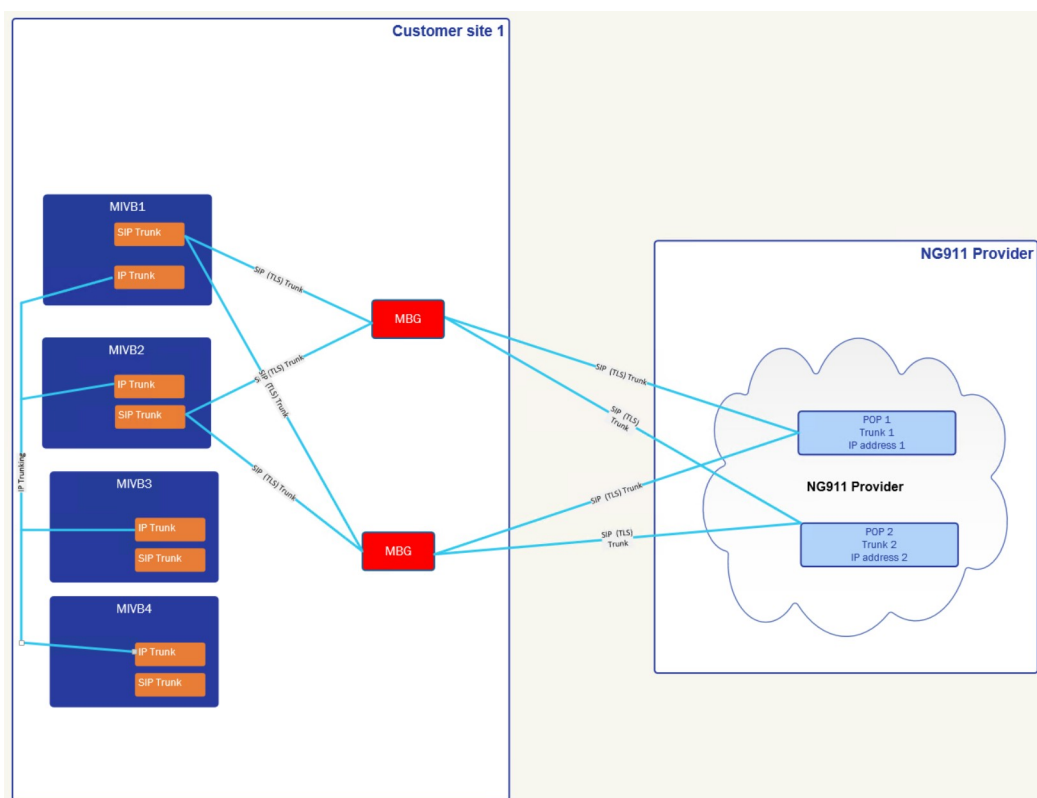
The following architecture view shows a redundant setup between multiple MiVoice Business and multiple MBGs and Intrado. SIP trunks between MiVoice Business and Intrado's SIP gateways are set up using the MBGs as outbound proxies. Double SIP trunks between the customer site and Intrado are highly recommended.



NOTE: In this case, a single IP Trunk between the MiVoice Business instances is all that is necessary, because every MiVoice Business has its own emergency route to the MBG. This method might cost more as you need SIP Trunk licenses for each MiVoice Business.

Multiple MiVoice Business Instances using a dedicated MiVoice Business as gateway to two MBGs in a customer site

The following architecture view shows a more complicated setup between multiple MiVoice Business instances and a multiple MBGs and Intrado, which reduces the number of SIP Trunks (and therefore licenses) required. In this case, multiple MiVoice Business instances are set up with an emergency IP Trunking route to designated MiVoice Business instances set up with an emergency route between MiVoice Business and Intrado's SIP gateways using the MBGs as outbound proxies.



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 Intrado using MBG as an Outbound- Proxy.

Configure MBG SIP Options

SIP options

SIP support

Protocols

UDP ☒

TCP ☒

TCP/TLS ☒

Access profile

Public

Public

Public

Certificate [Export root cert](#)

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

Mitel | MiCollab

admin@ottawa.design.mitel.com Status: **Minor**

Applications

Users and Services
Audio, Web and Video Conferencing
MiVoice Border Gateway
Nupoint Web Console
MiCollab Client Service
MiCollab Client Deployment
Licensing Information

ServiceLink

Install Applications
Status

Administration

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

Configuration

Integrated Directory Service
MiCollab Client Integration
Wizard
Reconcile Wizard
MiCollab Settings
MiCollab Language
Video Settings
Networks
E-mail settings
Google Apps
Cloud Service Provider
DHCP
Date and Time
Hostnames and addresses
Domains
IPv6-in-IPv4 Tunnel
SIP
Ethernet Cards
Review configuration

Security

Remote access
Port forwarding
SIP
Web Server
MBG client certificates

Miscellaneous

Support and licensing
Help

ICP Information

Default for MNet	Default for SIP	Name	Hostname or IP address	Type	Installer password	SIP capabilities	Indirect call recording capable	Associated connectors	Associated sets (MNet/SIP)	Associated trunk rules (pri/sec)			
<input checked="" type="radio"/>	<input checked="" type="radio"/>	iptbx405	10.34.20.105	MiVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	5/0	Edit	Delete	Refresh
<input type="radio"/>	<input type="radio"/>	iptbx406	10.46.28.73	MiVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	1/2	Edit	Delete	Refresh
<input type="radio"/>	<input type="radio"/>	iptbx408	10.38.146.20	MiVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	1/1	Edit	Delete	Refresh
<input type="radio"/>	<input type="radio"/>	iptbx418	10.35.124.97	MiVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	1/0	Edit	Delete	Refresh
<input type="radio"/>	<input type="radio"/>	iptbx441	10.40.90.41	MiVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	0/0	Edit	Delete	Refresh
<input type="radio"/>	<input type="radio"/>	iptbx465	10.38.159.200	MiVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	1/0	Edit	Delete	Refresh
<input type="radio"/>	<input type="radio"/>	iptbx470	10.38.101.70	MiVoice Business		UDP TCP TLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0/0	1/0	Edit	Delete	Refresh

[Update default ICPs](#)

MiVoice Border Gateway 11.3.0.20
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NOTE: All of these need not be MiVoice Business — 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: MBG must set the MiVoice Business SIP capabilities as UDP, TCP, and TLS.

Configure MBG SIP Trunking to Intrado

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: ☒
 RIR timeout (s):

Connection:

Transport protocol:
 Remote trunk endpoint address:
 Remote trunk endpoint port:
 Accept traffic from all UDP ports: ☐

SIP adaptation:

Receive pipeline:
 Send pipeline:

Media:

Local streaming between trunk calls: ☐
 RTP address override:

Trunk-side RTP security:

Inbound:
 Outbound:
 Preferred cipher:

Sip-side RTP security:

Inbound:
 Outbound:
 Preferred cipher:

Routing 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 Jump to page:

Rules per page:

First	Prev	Match	Rule	Primary	Secondary	Description	Next	Last
1		Request URI	*	gbu405				

Save

MiVoice Business Gateway 11.3.0.20
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NOTE: Transport protocol

MBG does not support translating transport protocols to a given SIP Service provider. Therefore, the MiVoice Business (Network Elements for both the MBG Outbound Proxy and Intrado), MBG (MiVoice Business + SIP Trunk), and Intrado must use the same protocol for the given communication path.

If there is a need to support SIP Service Provider with different protocols, you can do the following:


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

NOTE: TLS Support (Port 5061) - Intrado does not support TLS.

Configure MiVoice Business Trunking Gateways to use MBG as an outbound proxy to Intrado

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

Change

 Network Elements

Name	vMBG_UDP
Type	Outbound Proxy
FQDN or IP Address	10.46.28.70
Local	False
Version	
Zone	1
ARID	

Outbound Proxy Specific

Outbound Proxy Transport Type	UDP
Outbound Proxy Port	5060

Save


Cancel

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

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

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

Change

 **Network Elements**

Name	Intrado1
Type	Other ▼
FQDN or IP Address	208.71.179.181
Local	False
Version	
Zone	1
ARID	
SIP Peer	<input checked="" type="checkbox"/>

SIP Peer Specific

SIP Peer Transport	UDP ▼
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 Intrado SIP Trunk. Create a SIP Peer Profile for Intrado 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 Intrado SIP Gateways.

The screenshot displays the Mitel MiVoice Business configuration interface. The left sidebar shows a navigation menu with categories like Licenses, LAN/WAN Configuration, Voice Network, System Properties, Hardware, and Trunks. The main area is titled 'SIP Peer Profile on lpbx405' and includes a search bar and buttons for Add, Change, Delete, Print, Import, Export, and Data Refresh. A table lists the SIP Peer Profile configuration for 'Intrado1'.

Network Element	SIP Peer Profile Label	Outbound Proxy Server	CPN Restriction	Trunk Service	Session Timer	Zone
Intrado1	Intrado1M1	vMBG_UDP	No	6	90	1

Below the table, the 'Basic' tab is selected, showing the following configuration details:

- SIP Peer Profile Label:** Intrado1M1
- Network Element:** Intrado1
- Local Account Information:**
 - Registration User Name:**
 - Address Type:** FQDN: swe-wuk02.mitel.com
- Administration Options:**
 - Interconnect Restriction:** 1
 - Maximum Simultaneous Calls:** 2000
 - Minimum Reserved Call Licenses:** 0
 - Outbound Proxy Server:** vMBG_UDP
 - SMDR Tag:** 911
 - Trunk Service:** 6
 - Zone:** 1
- Authentication Options:**
 - User Name:**
 - Password:** *****
 - Confirm Password:** *****
 - Authentication Option for Incoming Calls:** No Authentication
 - Subscription User Name:**
 - Subscription Password:** *****
 - Subscription Confirm Password:** *****
- Gateway Options:**
 - Digital Trunk Licenses:** 0
 - Maximum Digital/Analog Channels:** 0

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.
Disable Reliable Provisional Responses	Signaling and Header Manipulation	This option needs to be set to YES if the Extension Bind(XBind) feature is enabled.
Emergency Call Headers	Signaling and Header Manipulation	CESID in From, Callback in PAI
Multilingual Name Display	Signaling and Header Manipulation	Should be left to No, not supported by Intrado.
User-Defined Header Name	Signaling and Header Manipulation	E911-Organization-ID
User-Defined Header Value	Signaling and Header Manipulation	Organization ID provided by Intrado and available on the Intrado Portal Account Dashboard in the <i>General Information pane</i> - > <i>Account ID</i> .

MiVoice Business Field	Settings
Maximum Simultaneous Calls and Minimum Reserved Call Licenses	<p>Depending how a customer has configured these values on their SIP trunks today, these might need to be modified on existing SIP Peer Profiles, not just the new ones for the vendors.</p> <p>If a customer Reserved all their SIP trunks, they either need to get more licenses, use the “free” ones, or unreserve some amount for emergency calls.</p> <p>A customer who already has amount Unreserved, might want to unreserve some more.</p>
Disable Reliable Provisional Responses	<p>This option needs to be set to YES.</p>

If the Intrado Extension BIND feature is enabled, enable inward dialing on the Trunk Attributes for the Intrado SIP Peer.

Mitel | MiVoice Business

SDS Distribution Error Status: Unknown

Search DN Show form on (Login Node)

Trunk Attributes on

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

Page 1 of 15 Go to Value

Trunk Attributes

Trunk Service Number	Call Recognition Service	Direct Inward Dialing Service	Caller Based Routing Service	Class of Service	Class of Restriction	Intercept Number	Trunk Label
1	Off	Off	Off	1	1	1	DONOTUSE
2	Off	Off	Off	10	10	1	IPXNET
3	Trusted	On	Off	11	11	2	PRI
4	Off	Off	Off	11	11	1	T1D4
5	Off	On	On	11	11	2	SIP
6	Trusted	On	Off	11	11	1	VMBG
7	Off	Off	Off	11	11	11	LS CLASS
8	Off	Off	Off	1	1	1	
9	Off	Off	Off	1	1	1	
10	Off	Off	Off	1	1	1	

Call Recognition Service Off

Direct Inward Dialing Service On

Caller Based Routing Service On

Class of Service 11

Class of Restriction 11

Baud Rate 300

Intercept Number 2

Non-dial in Trunks Answer Point - Day

Non-dial in Trunks Answer Point - Night 1

Non-dial in Trunks Answer Point - Night 2

Dial in Trunks Incoming Digit Modification - Absorb 0

Dial in Trunks Incoming Digit Modification - Insert

Dial in Trunks Answer Point

Dial in Trunks Insert Forwarding Information No

Trunk Label

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

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

ARS Routes on MN81

Search DN

Show form on NOT ACCESSIBLE

Change Change Page Change All Clear

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

Page 1 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
1					1	1		Off	
2	TDM Trunk Group	3			1	3		Off	
3	TDM Trunk Group	4			1	3		Off	
4					1	1		Off	
5	IPXNET Trunk Group	5			1	5		On	
6	IPXNET Trunk Group	5			1	1		Off	
7					1	1		Off	
8	TDM Trunk Group	6			1	6		Off	
9	TDM Trunk Group	8			1	6		Off	
10	SIP Trunk		SIPTrunk		1	10		Off	
11	TDM Trunk Group	8			1	6		Off	
12	TDM Trunk Group	8			1	6		Off	
13	TDM Trunk Group	8			1	6		Off	
14	TDM Trunk Group	8			1	6		Off	
15	TDM Trunk Group	8			1	8		Off	

NOTE: For full resiliency coverage, it is recommended to have at least two MiVoice Business Trunking Gateways, and that each has four SIP Peer Profiles:

- Intrado1 using MBG1 as the outbound proxy
- Intrdao1 using MBG2 as the outbound proxy
- Intrado2 using MBG1 as the outbound proxy
- Intrado2 using MBG2 as the outbound proxy

The SIP peers must 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. Adding each of these ARS Routes to the Route List is required.

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

Mitel | MiVoice Business

SOS Distribution Error Status: Warning

ipbx405

ARS Route Lists on ipbx405

Search DN

Show form on ipbx405 (Login Node) Go

ARS Route Lists Search:

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

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

ARS Route Lists

List Number	1st Choice route	2nd Choice route	2nd Choice Warning Tone	3rd Choice route	3rd Choice Warning Tone	4th Choice route	4th Choice Warning Tone	5th Choice route	5th Choice Warning Tone	6th Choice route	6th Choice Warning Tone	7th Choice route	7th Choice Warning Tone	8th Choice route	8th Choice Warning Tone	9th Choice route	9th Choice Warning Tone	10th Choice route	10th Choice Warning Tone	11th Choice route
1	96	99	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
3			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
5			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
7			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
9			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
11			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
13			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
15			No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

NOTE: As a “last resort”, non-emergency ARS routes can be added AFTER all Intrado Routes to handle a case where Intrado is completely down. These final ARS Routes in the list must 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 and.

NOTE: IFT/EFT sites might 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', 'Automatic Route Selection (ARS)' 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, ARS Node Identities, Call Handling, Music On Hold, Emergency Services Management, Property Management, and Maintenance and Diagnostics.

The main content area is titled 'ARS Digits Dialed on Ipbx405'. It includes a search bar, buttons for 'Add', 'Change', 'Delete', 'Print...', 'Import...', 'Export...', and 'Data Refresh'. Below this is a table titled 'ARS Digits Dialed' with the following data:

Digits Dialed	Number of Digits to Follow	Termination Type	Termination Number
70405	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 Intrado

Create Emergency IP Trunking ARS Route to 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.

Mitel | MiVoice Business

Admin Group Alarm Status: **Critical**

ipbx405

ARS Routes on ipbx405

Search DN

Show form on ipbx405 (Login Node) Go

Change Change Page Change All Clear

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

Page 7 of 14 Go to Value Go

ARS 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 complicated to program).

(Optional) Define ARS Route List. Provide resilient routing to MiVoice Business Trunking Gateway(s) is recommended.

Mitel | MiVoice Business

Admin Group Alarm Status: **Critical**

ipbx405

ARS Route Lists on ipbx405

Search DN

Show form on ipbx405 (Login Node) Go

ARS Route Lists Search:

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

Change Clear

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

ARS Route Lists

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

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

Mitel | MiVoice Business

Admin Group Alarm Status: Critical

ipbx405

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
96470	Unknown	Route	70
99	Unknown	Route	20

Deployment Guide: Emergency Callbacks

For Emergency Callbacks, using the Intrado Extension Bind feature with a private SIP Trunk to Intrado is suggested, because this eliminates the need of having to provide CPN/DID programming on each user/device that can make an emergency call.

Otherwise, CPN Substitution and DID Services to complete the emergency callback can be programmed as described in this section.

- CPN Substitution is used for identifying the Calling Party Number and is used as the Emergency Callback number.

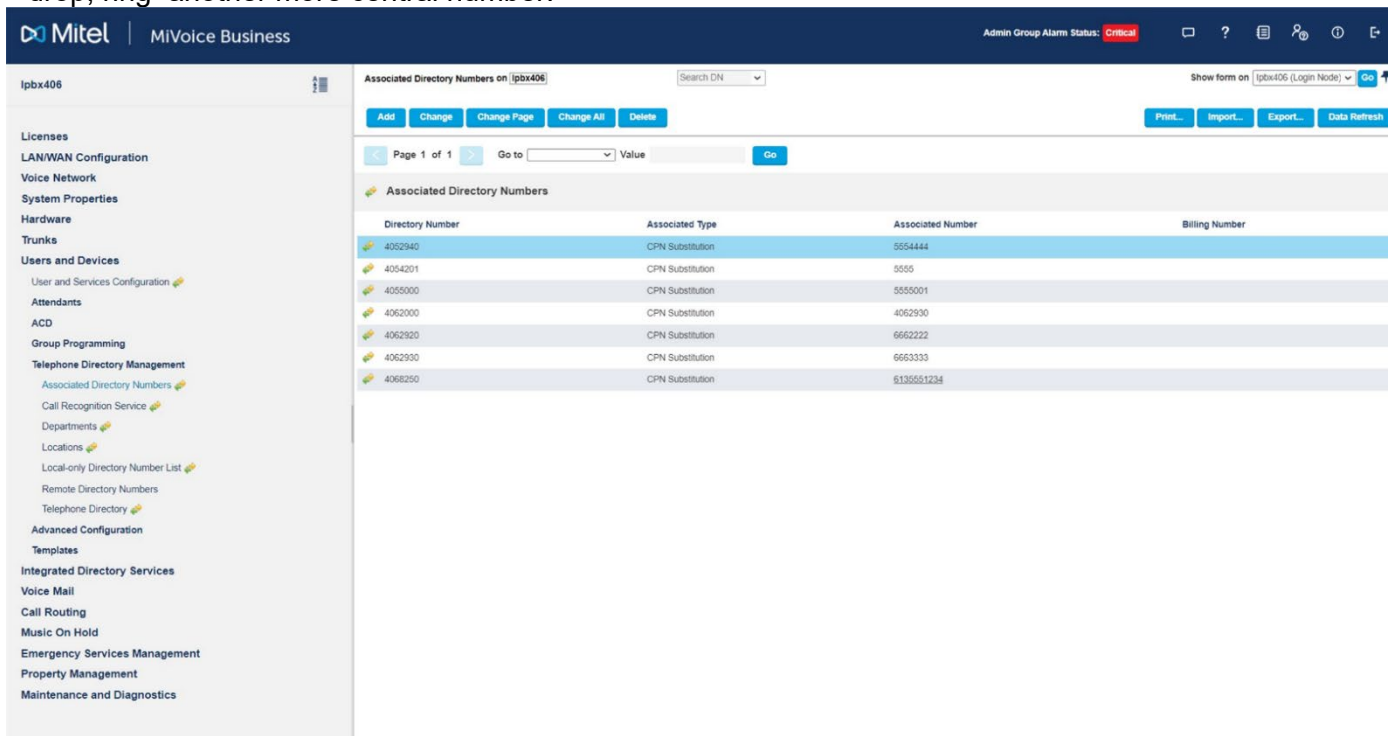
NOTE: The same CPN is used for non-emergency and emergency calls.

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

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

For a proper callback to occur, the CPN sent to Intrado must be routable back to the MiVoice Business where the called digits are matched to the DID number and route the call to the programmed destination. It is recommended to have a unique CPN/DID for each User/Device 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, Attendants, ACD, Group Programming, Telephone Directory Management, Advanced Configuration, Templates, Integrated Directory Services, Voice Mail, Call Routing, Music On Hold, Emergency Services Management, Property Management, and Maintenance and Diagnostics. The main content area is titled 'Associated Directory Numbers on ipbx406'. It includes a search bar, a 'Go' button, and a table of 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	
4068290	CPN Substitution	6135551234	

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)

Mitel | MiVoice Business

License Violation Status: **Critical**

MN81

Direct Inward Dialing Service on MN81

Search DN

Show form on Not Accessible

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
5656	555	6910	Emergency DID
6969696969	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
1212121212	555	81222	Emergency DID
0000081660	555	81660	Emergency DID
381817700	555	8177	Standard DID

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: Because the MiVoice Business/Intrado solution will not use the CESID as the callback destination, the MiVoice Business Emergency DID Routing feature must be disabled in the Shared System Options form.

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 Intrado solution requires that the administrator define locations (ERLS) as required in the Intrado Portal. These ERL are typically linked to an MiVoice Business CESID based on the ERL ID.

NOTE: The administrator is responsible for ensuring that the MiVoice Business CESID, ERL ID programming, and the Intrado programming are aligned.

Deployment Guide: Defining On-Premises Wire Maps

The MiVoice Business Intrado solution for On-Premise HELD clients (such as MiCollab SIP Softphone) and 911 Location Manager clients (such as MiVoice Business Console, MiCollab MINET Softphones) use Intrado's ERS configuration to identify their location.

- Switches - Used for associating a location to a device based on wired connectivity to a L2 network switch.
- Wireless Access Points - Used for associating a location to a device based on the MAC address of a Wireless Access Point.
- Subnets - Used for associating a location to a device based on IP address configuration.

Deployment Guide: Device Overview

There are three different configuration models, depending on the device and its location. The information on devices and their specific configuration model is detailed later in the document.

Devices that use CESID (such as 69xx, Single Cell DECT, and 5634 Wireless)

Step 1: Add a location to the Intrado Portal.

Through the Provisioning portal, select add ERL, and define the location.

The screenshot shows a web form for adding a location. At the top, there is a location pin icon and the text "Kanata - 2H01-H12". Below this is a green banner with a checkmark and the text "Location successfully validated". The form contains several fields: "ERL Name" with a red asterisk and "Required" label, containing the text "Kanata - 2H01-H12"; "House #" containing "4000"; "Street/Road" containing "Innovation"; "City" containing "Kanata"; "Country" with a dropdown menu showing "CA"; "Province" with a dropdown menu showing "Ontario"; "Postal Code" containing "K2K 3K1"; and "Location" containing "Second Floor - South West Corner". Below the "Location" field is a red warning message: "You have entered over 20 characters for the Location. Be aware that some PSAPs can only receive 20 characters." At the bottom of the form are two buttons: "CANCEL" and "VALIDATE ADDRESS".

- ERL Name - Customer defined label to identify the location
- House # - Civic Address provided to PSAP
- Street/Road - Civic Address provided to PSAP
- City - Civic Address provided to PSAP
- Country - Civic Address provided to PSAP
- State/Province - Civic Address provided to PSAP
- Postal Code - Civic Address provided to PSAP
- Location - The dispatchable location within the given civic address, provided to PSAP.

After the address is validated, define the routing options.

↕ Routing Options

Language

☒ English ☐ French

Delivery Method

☒ PSAP ☐ Security Desk ☐ Three way

Custom Callback

Email Notifications

john.smith@example.com

ERL ID

123456789012

CANCEL

ADD ERL

- Delivery Method - The MiVoice Business solution supports only the PSAP delivery method.
- Custom Callback - If configured, the ERS Custom Callback number will override the callback number sent by the MiVoice Business. It should be noted this callback is based on the location of the caller as it is tied to the CESID/ERL ID, rather than the caller's callback number.
- Email Notifications - Recommended to use the Intrado Account-based email notifications instead of ERL specific email notifications (see below).
- ERL ID - CESID from the device or MiVoice Business must match the FROM in the SIP Invite.

Step 2: Program the CESID information in the MiVoice Business.

CESID Alternatives	Configuration Steps																						
CESID sent by the device (limited to SIP devices)	<div><div>Program the CESID on the SIP device.</div><div>NOTE: Configuration depends on the device type.</div><div>On MiVoice Business, enable Emergency Info Provided by Device in the SIP Device Capabilities.</div></div> <div><div><div><div>Mitel MiVoice Business</div><div>SIP Distribution Error Status</div><div>Search On</div><div>Show form on</div><div>Log In</div></div><div><div>ipbx405</div><div><div>Licenses</div><div>LAUWAM Configuration</div><div>Voice Network</div><div>System Properties</div><div>System Settings</div><div>System Feature Settings</div><div>System Options</div><div>Shared System Options</div><div>Class of Service Options</div><div>SIP Device Capabilities</div><div>Class of Restriction Groups</div><div>System Access Points</div><div>Feature Access Codes</div><div>Independent Account Codes</div><div>Default Account Codes</div><div>System Account Codes</div><div>System Speed Calls</div><div>Tenants</div><div>SMDR Options</div><div>Traffic Report Options</div><div>Inward Calling Modification</div><div>Outward Calling Modification</div><div>System IP Ports</div><div>Location Based Numbers</div><div>System Administration</div><div>Hardware</div></div></div><div><div>SIP Device Capabilities on ipbx405</div><div><div>Change</div><div>Copy</div><div>Print</div><div>Export</div><div>Export</div><div>Clear Refresh</div></div><div><div>SIP Device Capabilities</div><div><table><tr><td>1</td><td>PSAP</td></tr><tr><td>2</td><td>Admin Desk</td></tr><tr><td>3</td><td>Account Desk</td></tr><tr><td>4</td><td>Admin Desk</td></tr><tr><td>5</td><td>Police</td></tr><tr><td>6</td><td>Mail Desk</td></tr><tr><td>7</td><td>Fire</td></tr><tr><td>8</td><td>PSAP No Back</td></tr><tr><td>9</td><td></td></tr><tr><td>10</td><td></td></tr><tr><td>11</td><td></td></tr></table></div><div><div>SIP Options</div><div>Signaling and Header Manipulation</div><div>Distinctive Ring Tones</div><div>Timers</div><div>Key Press Event</div><div>Called Party Inward Calling Modification</div><div>Record Information</div><div>Advanced</div></div><div><div>SIP Device Capabilities Number</div><div>1</div><div>default</div><div>Comment</div><div>Call Routing and Administration Options</div><div><div>Outbound Proxy Server</div><div>Emergency Info Provided by Device</div><div>Require System Caller with Device Based In-Call Features</div><div>Allow MWI Notifications without Subscription</div><div>Enable Digit Collection in Busy Or Alerting State</div><div>TL3 Only</div></div></div></div></div><div>NOTE: Valid CESIDs are digit strings of 1-12 digits and length and 0-9 are the</div></div></div>	1	PSAP	2	Admin Desk	3	Account Desk	4	Admin Desk	5	Police	6	Mail Desk	7	Fire	8	PSAP No Back	9		10		11	
1	PSAP																						
2	Admin Desk																						
3	Account Desk																						
4	Admin Desk																						
5	Police																						
6	Mail Desk																						
7	Fire																						
8	PSAP No Back																						
9																							
10																							
11																							

	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.
--	--

CESID Alternatives

BSSID to CESID Mapping
(limited to 5634)

Configuration Steps

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

NOTE: Configuration depends on the device type.

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

The screenshot shows the Mitel MiVoice Business configuration interface for device ipbx406. The left sidebar lists various configuration categories, including System Settings, SIP Device Capabilities, and System Administration. The main panel displays the 'SIP Device Capabilities' configuration for device ipbx406. A table lists 11 capabilities, with the 11th capability, 'Emergency Info Provided by Device', highlighted in red. The value for this capability is set to 'No'.

SIP Device Capabilities	Value
1	Default
2	AdminOnly
3	AdminOnly
4	AdminOnly
5	AdminOnly
6	AdminOnly
7	AdminOnly
8	AdminOnly
9	AdminOnly
10	AdminOnly
11	Emergency Info Provided by Device

Below the table, the 'Emergency Info Provided by Device' option is highlighted in red, with a value of 'No'.

On MiVoice Business, program the BSSID to CESID Mapping.

The screenshot shows the Mitel MiVoice Business configuration interface for device ipbx406. The left sidebar lists various configuration categories, including System Settings, SIP Device Capabilities, and System Administration. The main panel displays the 'BSSID to CESID Mapping' configuration for device ipbx406. A table lists the mapping between BSSID and CESID, with columns for BSSID, CESID, and BSSID LSN. The table is currently empty.

BSSID	CESID	BSSID LSN
-------	-------	-----------

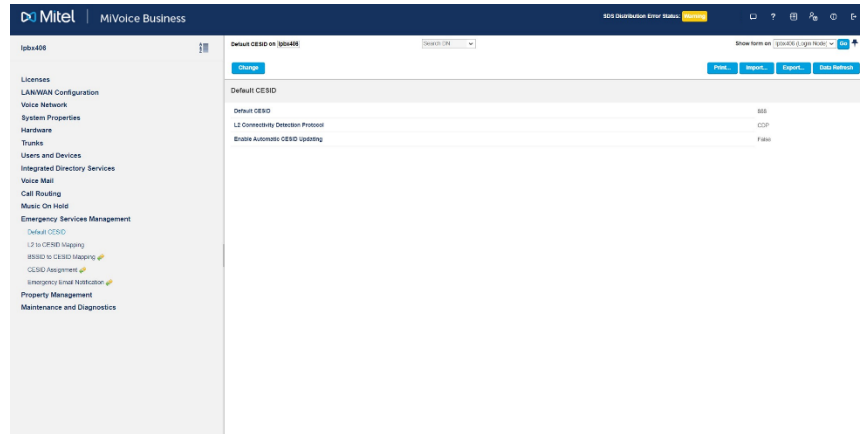
CESID Alternatives

L2 to CESID Mapping (limited to MINET sets)

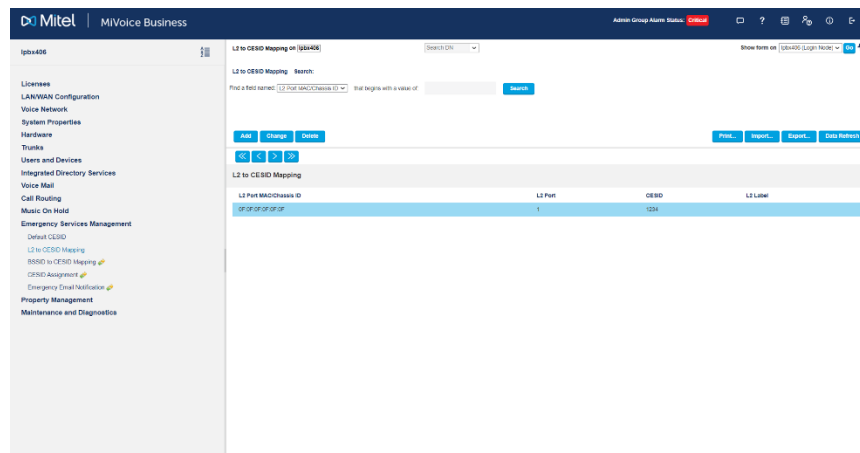
Configuration Steps

On MiVoice Business, configure the L2 Connectivity Detection Protocol in the Default CESID form. The available options are STP, CDP, or LLDP.

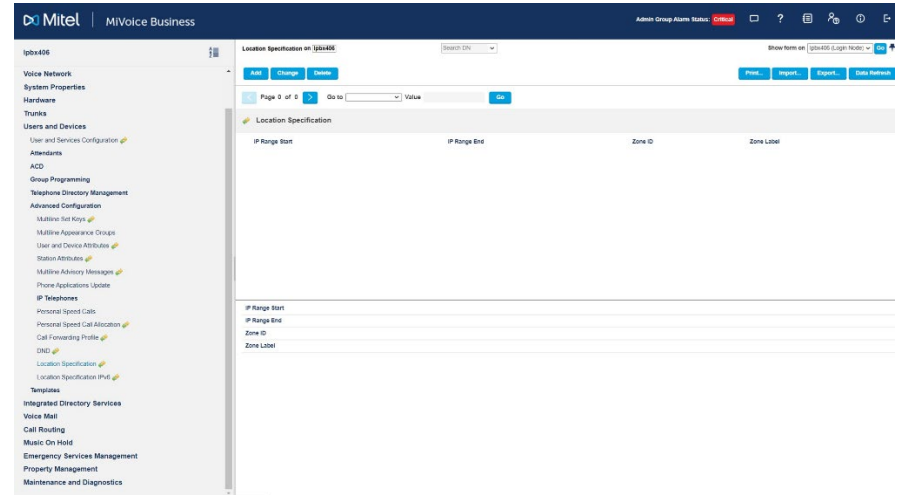
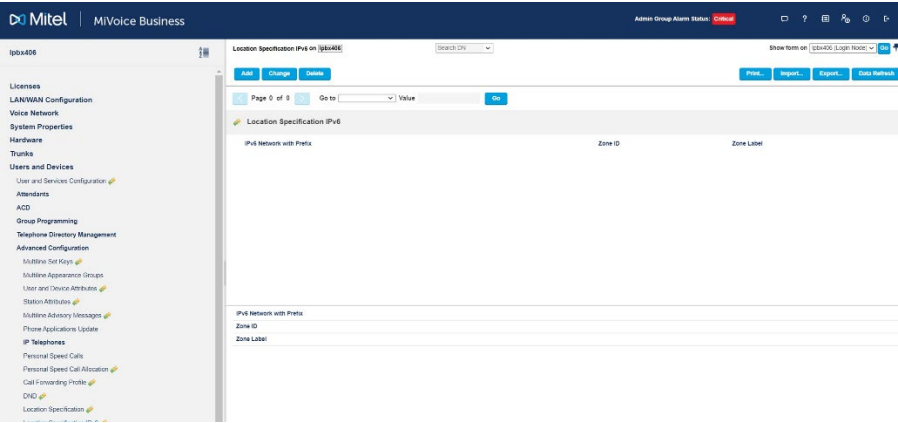
NOTE: Not all MINET devices support LLDP



On MiVoice Business, configure the L2 to CESID Mapping.



NOTE: MiVoice Business supports only one device per L2 Port.

CESID Alternatives	Configuration Steps
IP to Zone to CESID Mapping	<div>On the MiVoice Business, define the IP Address range to Zone ID in either the Location Specification or Location Specific IPv6 form.</div> <div></div> <div></div>

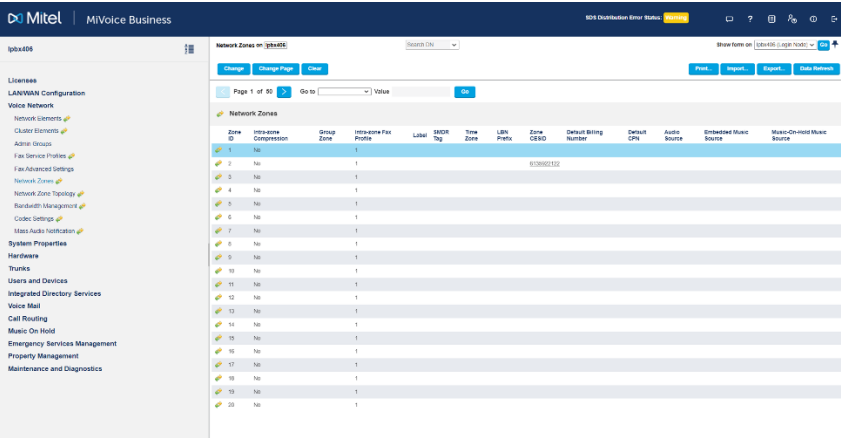
Configuration Steps

[illegible]

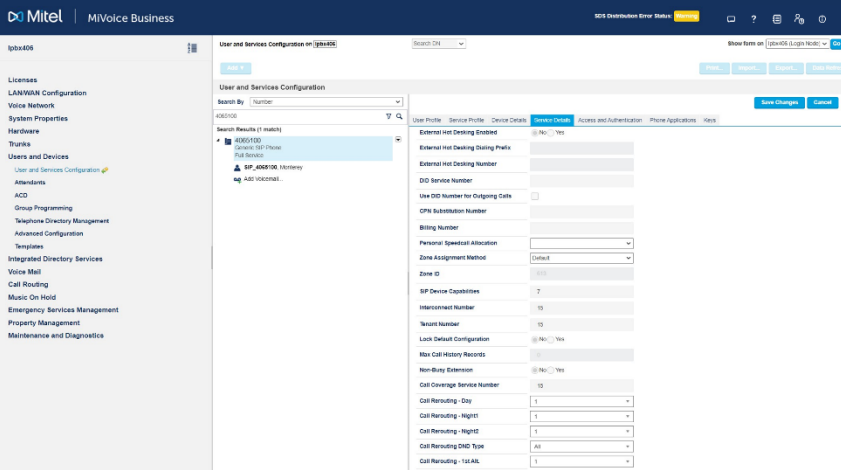
The screenshot displays the Cisco MIBusiness web interface for configuring a user and their services. The top navigation bar includes the Cisco logo, the 'MIBusiness' title, and a 'SIS Distribution Error Status' button. The main header shows the user 'User and Services Configuration on 4505130' and a 'Show More on 4505130 Login State' link. The left sidebar contains a tree view of configuration categories: Lineones, LANMON Configuration, Voice Network, System Properties, Hardware, Trunks, Users and Devices (selected), and a sub-menu for 'User and Services Configuration' which includes Attendants, ACD, Group Programming, Telephony Directory Management, Advanced Configuration, Templates, Integrated Directory Services, Voice Mail, Call Routing, Music On Hold, Emergency Services Management, Property Management, and Maintenance and Diagnostics. The main content area is titled 'User and Services Configuration' and features a 'Search By' dropdown and a search icon. Below this is a 'Search Results (3 results)' section listing '4505130' (Device: SIP Phone, Full Name) and 'SP_4505130' (User: 4505130). The 'Device Details' tab is active, showing various configuration fields: External Hot Desking Enabled (No), External Hot Desking Dialing Profile (None), External Hot Desking Number (None), DID Service Number (None), Use DID Number for Outgoing Calls (checkbox), CPN Substitution Number (None), Billing Number (None), Personal Speedcall Allocation (None), Zone Assignment Method (Default), Zone ID (001), SP Device Capabilities (7), Interconnect Number (15), Tenant Number (15), Lock Default Configuration (No), Max Call History Records (10), Non-Busy Extension (No), Call Coverage Service Number (15), Call Remotely - Day (1), Call Remotely - Night1 (1), Call Remotely - Night2 (1), Call Remotely DND Type (All), and Call Remotely - Int AS (1).

Zone to CESID Mapping

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



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

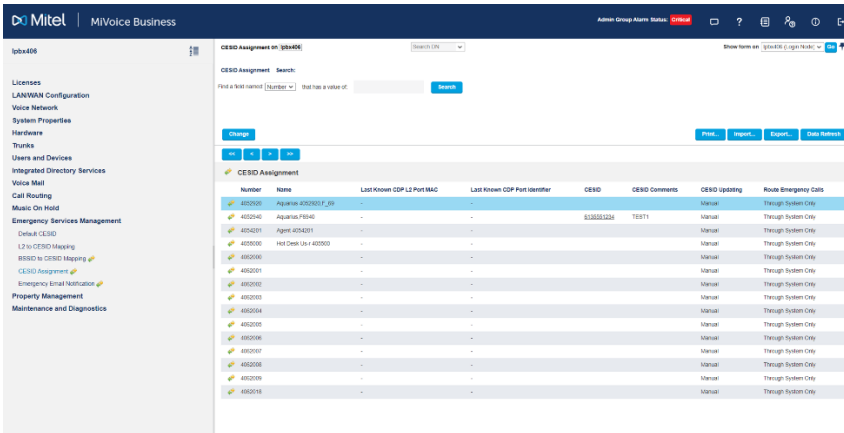


CESID Alternatives

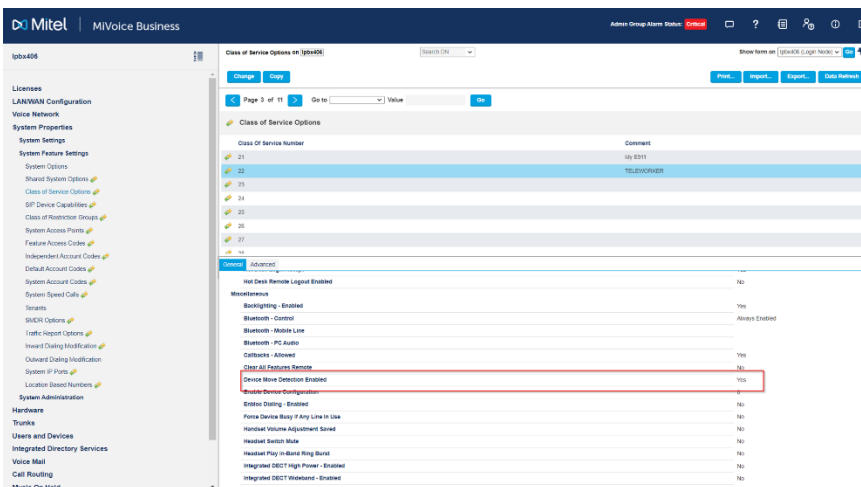
Configuration Steps

CESID Assignment

On MiVoice Business, program the CESID against the device in the CESID Assignment form.



Some Off-Premise MiNET devices (For example, select 53xx, 69xx) 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.



Devices that use Intrado's 911 Location Manager (such as MiVoice Business Console)

Step 1: Add the enterprise FQDN

- Fully Qualified Domain Name (FQDN) - Used by the 911 Location Manager application to determine if the client is on- site or off-site.

The screenshot shows the Intrado Emergency Routing Service interface. The top navigation bar includes Dashboard, Provisioning, Monitoring, and Administration. The main content area is titled 'Location Manager' and has tabs for REGISTRATION, CONFIGURATION, NETWORK, TERMS OF USE, and MESSAGES. The 'CONFIGURATION' tab is active, showing the 'ON-SITE/OFF-SITE CONFIGURATION' section. It has three radio buttons: 'On-site only', 'On-site/Off-site' (selected), and 'Off-site only'. To the right, there are two bullet points: 'On-Site - Location automatically assigned by Network Maps' and 'Off-Site - User is prompted for remote location'. Below this is the 'FULLY QUALIFIED DOMAIN NAME (FQDN)' section with a text input field containing 'Example: locationmanager.corp.pri' and a 'DELETE' button.

Step 2: Configure the Location Manager Subnets (optional) for off-site clients connecting through a VPN.


- Subnet Name - Customer-defined label to identify the subnet.
- Subnet Mask - IP address + Subnet Mask (CIDR format)
- LM Behavior - Determines whether an off-site client on this subnet must ask for the Location, or use the location as programmed in step 4 below.


The screenshot shows the Intrado Emergency Routing Service interface, specifically the 'SUBNETS' section under the 'CONFIGURATION' tab. It has a 'Subnet name' field with 'Example: First floor' and a 'Subnet Mask' field with 'Example: 192.168.0.0/24'. Below these is a 'Search' field. A table shows 'Showing 0 to 0 of 0 entries' with columns for 'SUBNET NAME', 'SUBNET MASK', 'LM BEHAVIOR', and 'DELETE'. The table is currently empty, with a message 'No data available in table'. At the bottom, there are 'Records per page' (set to 10) and 'Previous/Next' navigation links.

Step 3: Add a location to the Intrado Portal for On-Premise 911 Location Manager Clients.

Through the Provisioning portal, select add ERL, and define the location.

- ERL Name - Customer defined label to identify the location
- House # - Civic Address provided to PSAP
- Street/Road - Civic Address provided to PSAP
- City - Civic Address provided to PSAP
- Country - Civic Address provided to PSAP
- State/Province - Civic Address provided to PSAP
- Postal Code - Civic Address provided to PSAP
- Location - The dispatchable location within the given civic address, provided to PSAP.

 Kanata - 2H01-H12

 Location successfully validated


ERL Name * * Required


House # * Street/Road *

City * Country *

Province * Postal Code *

Location

 You have entered over 20 characters for the Location. Be aware that some PSAPs can only receive 20 characters.

 Add Label

CANCEL

VALIDATE ADDRESS

After the address is validated, define the routing options

- Delivery Method - The MiVoice Business solution supports only the PSAP delivery method.
- Custom Callback - If configured, the ERS Custom Callback number will override the callback number sent by the MiVoice Business. It should be noted this callback is based on the location of the caller as it is tied to the CESID/ERL ID, rather than the caller's callback number.
- Email Notifications - Recommend that you use the Intrado Account-based email notifications instead of ERL-specific email notifications (see below).
- ERL ID - CESID from the device or MiVoice Business, must match the FROM in the SIP Invite.

Routing Options

Language
☒ English ☐ French

Delivery Method
☒ PSAP ☐ Security Desk ☐ Three way

Custom Callback

Email Notifications
 +

ERL ID

CANCEL ADD ERL

Step 4: Program the On-Premise wire map in the Intrado Portal for on-premise 911 Location Manager clients.

Use SUBNETS to define an association between a Location and an IP address.

- Subnet NAME - Customer-defined name to help identify the subnet/location.
- Subnet MASK - IP address/Subnet Mask (CIDR format).
- ERL - Location of that subnet (defined in Step 1)

Intrado Emergency Routing Service

Dashboard Provisioning Monitoring Administration

Provisioning

EXPORT BATCH PROVISIONING

FILTER

ERLS DISCORDERS SUBNETS WIRELESS ACCESS POINTS SWITCHES

+ ADD SUBNET

Search
 Search by Subnet Name, IP or Subnet Mask

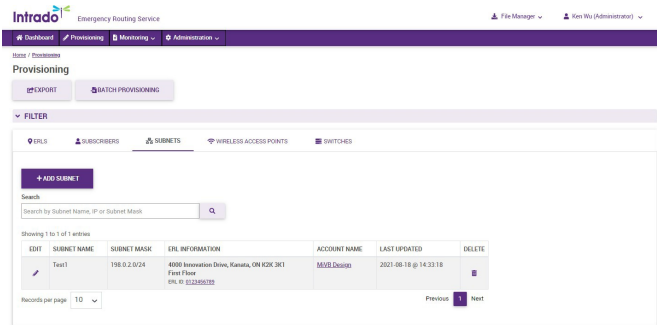
Showing 1 to 1 of 1 entries

EDIT	SUBNET NAME	SUBNET MASK	ERL INFORMATION	ACCOUNT NAME	LAST UPDATED	DELETE
	Test1	192.0.2.0/24	4000 Innovation Drive, Kansas, OH 4201-361 First Floor ERL ID: 123456789	MYLDDDD	2021-08-18 @ 14:33:18	

Records per page: 10 Previous Next

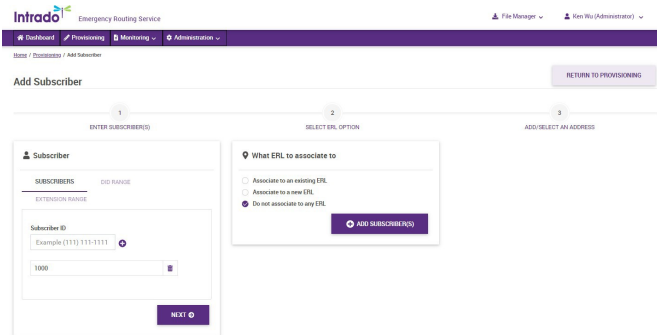
Use Wireless Access Points to define an association between a Location and the MAC address Wireless of a Access Point.

- Wireless Access Point Name - Customer-defined name to help identify the Wireless Access Point/Location
- BSSID - MAC Address of the Wireless Access Point. (Can be a list of BSSIDs).
- ERL - Location of that Wireless Access Point.

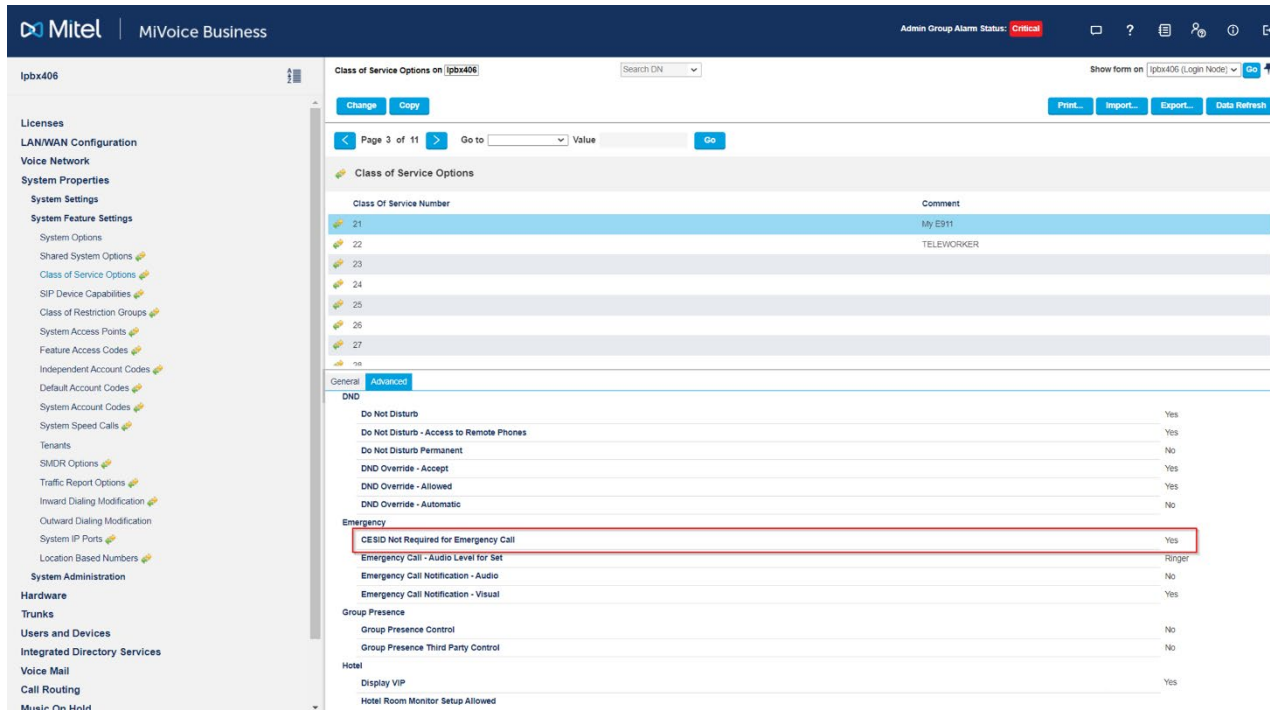


Step 5: Define the Subscriber in the Intrado Portal for all 911 Location Manager clients.

- Subscriber ID - If you are private SIP Trunks between the MiVoice Business and Intrado, this will be the DN of the device, unless the device is in an MDUG, if in an MDUG, it is the prime DN of the MDUG. If using a public SIP Trunk, this will be the CPN/DID for the user.
NOTE: If the customer has a network of multiple MiVoice Business clusters, care needs to be taken on how to handle the Primary Node ID (PNI). The DN must be PNI prefixed unless you are using the Strip PNI option in the SIP Peer Profile on MiVoice Business.
- What ERL to associate to - Select do not associate to any ERL. The 911 Location Manager application adds the association when it detects a change.



Step 6: On MiVoice Business, enable CESID not required for Emergency Calls on the device's COS option, for all 911 Location Manager clients.



Step 7: Install the 911 Location Manager application on the same PC as the device (MiVoice Business Console, MiCollab MiNET Softphone).

Devices that use Geolocation (such as MiCollab SIP Softphone Client)

NOTE: How a HELD client determines if they are on-site vs off-site depends on the client.

NOTE: Whether a HELD client supports Subnets, Wireless Access Points, or Switches depends on the individual clients.

Step 1: Add a location to the Intrado Portal for On-Premise HELD clients through the Provisioning portal, select add ERL, and define the location.

Via the Provisioning portal, select add ERL, and define the location.

- ERL Name - Customer defined label to identify the location
- House # - Civic Address provided to PSAP
- Street/Road - Civic Address provided to PSAP
- City - Civic Address provided to PSAP
- Country - Civic Address provided to PSAP
- State/Province - Civic Address provided to PSAP
- Postal Code - Civic Address provided to PSAP
- Location - The dispatchable location within the given civic address, provided to PSAP.

Kanata - 2H01-H12

☒ Location successfully validated

ERL Name * * Required

Kanata - 2H01-H12

House # * Street/Road *

4000 Innovation

City * Country *

Kanata CA

Province * Postal Code *

Ontario K2K 3K1

Location

Second Floor - South West Corner

You have entered over 20 characters for the Location. Be aware that some PSAPs can only receive 20 characters.

Add Label

CANCEL VALIDATE ADDRESS

After the address is validated, define the routing options.

- Delivery Method - The MiVoice Business solution supports only the PSAP delivery method.
- Custom Callback - If configured, the ERS Custom Callback number will override the callback number sent by the MiVoice Business. It should be noted this callback is based on the location of the caller as it is tied to the CESID/ERL ID, rather than the caller's callback number.
- Email Notifications - recommended to use the Intrado Account-based email notifications instead of ERL-specific email notifications (see below).
- ERL ID - CESID from the device or MiVoice Business must match the FROM in the SIP Invite.

Routing Options

Language

☒ English ☐ French

Delivery Method

☒ PSAP ☐ Security Desk ☐ Three way

Custom Callback

Email Notifications

john.smith@example.com

ERL ID

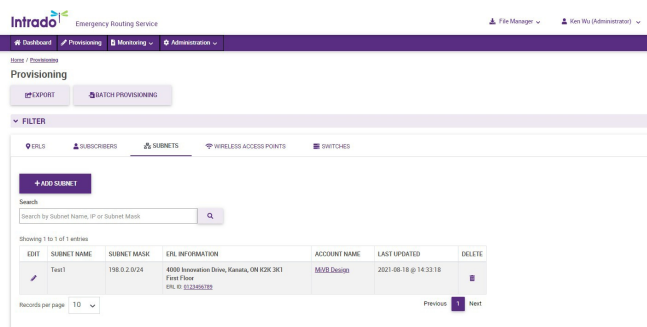
123456789012

CANCEL ADD ERL

Step 2: Program the On-Premise wire map in the Intrado Portal for on-premise HELD clients

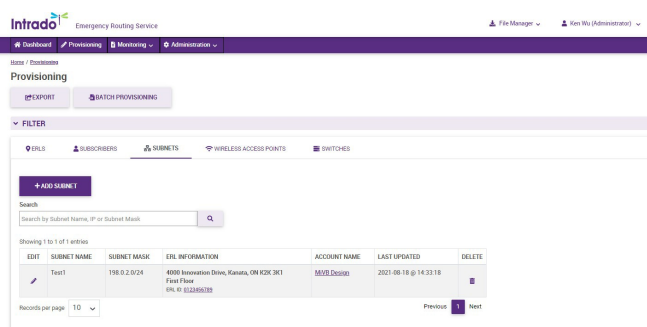
Use SUBNETS to define an association between a Location and an IP address.

- Subnet NAME - customer defined name to help identify the subnet/location.
- Subnet MASK - IP address/Subnet Mask (CIDR format).
- ERL - Location of that subnet (defined in Step 1)



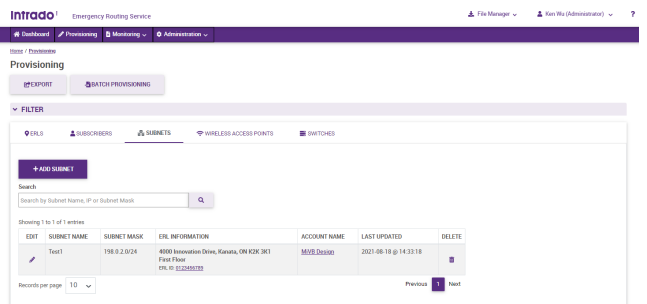
Use Wireless Access Points to define an association between a Location and the MAC address of the Wireless Access Point.

- Wireless Access Point Name - customer defined name to help identify the Wireless Access Point/Location
- BSSID - MAC address of the Wireless Access Point. (Can be a list of BSSIDs).
- ERL - Location of that Wireless Access Point.



Use Switches to define an association between a location and a L2 Network Switch
Switches

- Switch name- customer defined name to help identify the switch/location.
- Chassis ID - ID of the Chassis (must match the information from the network switch)
- ERL - The location of the switch (used when there are no ports, or the ports have no ERL)



CHAPTER 15

Ports

- Port name - customer defined name to help identify the port/location.
- Port ID - ID of the Port (must match the information from the network switch).
- ERL - The location of the port.

Step 3: Define the Subscriber in the Intrado Portal for all HELD clients

- Subscriber ID - If you are private SIP Trunks between the MiVoice Business and Intrado, this will be the DN of the device. If using a public SIP Trunk, this will be the CPN if programmed, otherwise the DN.
NOTE: The DN must be PNI prefixed, unless you are using the Strip PNI option in the SIP Peer Profile (on the MiVoice Business).
- What ERL to associate to - Select do not associate to any ERL. The HELD client will update the association when it detects a change.

Step 4: On the MiVoice Business, enable Emergency Info Provided by Device in the SIP Device Capabilities

ID	Name	Value
1	default	
2	AastraDect	
3	AscomDectOld	
4	Aastra f6box	
5	Polycorn	
6	Mitel S3xx	
7	Bria	
8	PSP no PBack	
9		
10		
11		

Option	Value
SIP Device Capabilities Number	1
Comment	default
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
TLS Only	No

Deployment Guide: 69xx MiNet

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

On Premises

Options Available	Programming Steps
L2 to CESID Mapping (RECOMMENDED)	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the L2 Port. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk) <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Define the L2 to CESID Mapping <p>Device:</p> <ul style="list-style-type: none"> • None
IP to Zone to CESID Mapping	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of Zone. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk) <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. <p>Device:</p> <ul style="list-style-type: none"> • None

Off Premises

Options Available	Programming Steps
CESID Assignment	<p>Intrado:</p> <ul style="list-style-type: none">• Program an ERL with ERL ID matching the CESID of CESID Assignment• Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk) <p>MiVoice Business:</p> <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 Intrado. The MiVoice Business will generate an Audit Trail when the notification has been acknowledged by the user <p>Device:</p> <ul style="list-style-type: none">• None.

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

On Premises

Options Available	Programming Steps
L2 to CESID Mapping (RECOMMENDED)	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the L2 Port. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Define the L2 to CESID Mapping <p>Device:</p> <ul style="list-style-type: none"> • None
IP to Zone to CESID Mapping	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the Zone. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk) <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. <p>Device:</p> <ul style="list-style-type: none"> • None

Off Premises

Options Available	Programming Steps
CESID Assignment	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the CESID Assignment • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk) <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 Intrado. The MiVoice Business will generate an Audit Trail when the notification has been acknowledged by the user <p>Device:</p> <ul style="list-style-type: none"> • None <p>NOTE: The device user will be notified of a possible device move and will instruct them to contact the Administrator to correct the location in Intrado. The MiVoice Business will generate an Audit Trail when the notification has been acknowledged by the user.</p>

Deployment Guide: Legacy MINET 53xx

On Premises

Options Available	Programming Steps
L2 to CESID Mapping (RECOMMENDED)	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the L2 Port. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Define the L2 to CESID Mapping <p>Device:</p> <ul style="list-style-type: none"> • None
IP to Zone to CESID Mapping	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the Zone. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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. <p>Device:</p> <ul style="list-style-type: none"> • None

Off Premises

Not recommended as these devices do not support Device Move Detection

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

On Premises

Options Available	Programming Steps
L2 to CESID Mapping (RECOMMENDED)	<p>Intrado:</p> <ul style="list-style-type: none"> Program an ERL with ERL ID matching the CESID of the L2 Port. Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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). <p>Device:</p> <ul style="list-style-type: none"> None
IP to Zone to CESID Mapping	<p>Intrado:</p> <ul style="list-style-type: none"> Program an ERL with ERL ID matching the CESID of the CESID Assignment. Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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. <p>Device:</p> <ul style="list-style-type: none"> None

Off Premises

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

Deployment Guide: 5540

On Premises

Options Available	Programming Steps
L2 to CESID Mapping (RECOMMENDED)	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the L2 Port. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Define the L2 to CESID Mapping <p>Device:</p> <ul style="list-style-type: none"> • None
IP to Zone to CESID Mapping	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the Zone. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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. <p>Device:</p> <ul style="list-style-type: none"> • None

Off Premises

Options Available	Programming Steps
CESID Assignment	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the CESID Assignment. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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 Intrado. The MiVoice Business will generate an Audit Trail when the notification has been acknowledged by the user <p>Device:</p> <ul style="list-style-type: none"> • None <p>NOTE: The device user will be notified of a possible device move and will instruct them to contact the Administrator to correct the location in Intrado. The MiVoice Business will generate an Audit Trail when the notification has been acknowledged by the user.</p>

Deployment Guide: MiVoice Business Console

On Premise

Options Available	Programming Steps
911 Location Manager Application (RECOMMENDED if device is wireless)	<p>Intrado:</p> <ul style="list-style-type: none"> • Program the enterprise FQDN • Program the Network wire map as required • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the CESID not required for Emergency Calls COS option. <p>Device:</p> <ul style="list-style-type: none"> • Install the Application given the Subscriber ID. • Manage the location via the 911 Location Manager application.
IP to Zone to CESID Mapping (RECOMMENDED if device is wired)	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of Zone. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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. <p>Device:</p> <p>None</p>

Off Premise

Options Available	Programming Steps
911 Location Manager Application	<p>Intrado:</p> <ul style="list-style-type: none"> • Program the enterprise FQDN • Program the Location Manager subnets • Program the Network wire map as required • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the CESID not required for Emergency Calls COS option. <p>Device:</p> <ul style="list-style-type: none"> • Install the 911 Location Manager Application given the Subscriber ID. • Manage the location via the 911 Location Manager application.

Deployment Guide: Generic SIP

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

On Premises

Options Available	Programming Steps
Geo-Location	<p>Intrado:</p> <ul style="list-style-type: none"> • Program the Network wire map as required • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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 Intrado HELD URL, account ID, and token. • Update the location
CESID provided by the device	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the device. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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"> • 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.

Options Available	Programming Steps
BSSID to CESID Mapping	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of BSSID to CESID Mapping. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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 the BSSID to CESID <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.
IP to Zone to CESID Mapping	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of Zone. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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. <p>Device:</p> <ul style="list-style-type: none"> • None

Options Available	Programming Steps
911 Location Manager Application	<p>Intrado:</p> <ul style="list-style-type: none"> • Program the enterprise FQDN • Program the Network wire map as required • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the CESID not required for Emergency Calls COS option. <p>Device:</p> <ul style="list-style-type: none"> • Install the 911 Location Manager Application given the Subscriber ID. • Manage the location via the 911 Location Manager application. <p>NOTE: This option must be used only where 911 Location Manager application can be installed alongside.</p>

Off Premises

Options Available	Programming Steps
Geolocation	<p>Intrado:</p> <ul style="list-style-type: none"> • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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 Intrado HELD URL, account ID, and token. • Update the location

Options Available	Programming Steps
CESID provided by the device	<p>Intrado:</p> <ul style="list-style-type: none"> • Program a Location to match the CESID of the device. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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"> • 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>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of BSSID to CESID mapping. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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 <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.

Options Available	Programming Steps
911 Location Manager Application	<p>Intrado:</p> <ul style="list-style-type: none">• Program the enterprise FQDN• Program the Location Manager subnets• Program the Network wire map as required• Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none">• Enable the CESID not required for Emergency Calls COS option. <p>Device:</p> <ul style="list-style-type: none">• Install the 911 Location Manager Application given the Subscriber ID.• Manage the location via the 911 Location Manager application. <p>NOTE: This option must be used only where 911 Location Manager application can be installed alongside.</p>

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

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

On Premises

Options Available	Programming Steps
CESID provided by the device	<p>Intrado:</p> <ul style="list-style-type: none"> Program an ERL with ERL ID matching the CESID of the device. Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> Enable the Emergency Info Provided by the Device 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.
IP to Zone to CESID Mapping	<p>Intrado:</p> <ul style="list-style-type: none"> Program an ERL with ERL ID matching the CESID of Zone. Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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. <p>Device: None</p>

Off Premises

Options Available	Programming Steps
CESID provided by the device	<p>Intrado:</p> <ul style="list-style-type: none">• Program an ERL with ERL ID matching the CESID of the device.• Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none">• Enable the Emergency Info Provided by the Device 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)

As of SIP-DECT Release 8.3SP1, 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 has made.

An ELIN can be set for:

- the system
- a site
- a specific base station

The more specific parameter value is used to help 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 OMM web service or via OMP. Only the general activation of this feature and the system-wide emergency location identification number can be set via the OMM configuration files.

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. 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	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
-------------------	---

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	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

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

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

Uptime

0 Day(s) 00 h 22 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

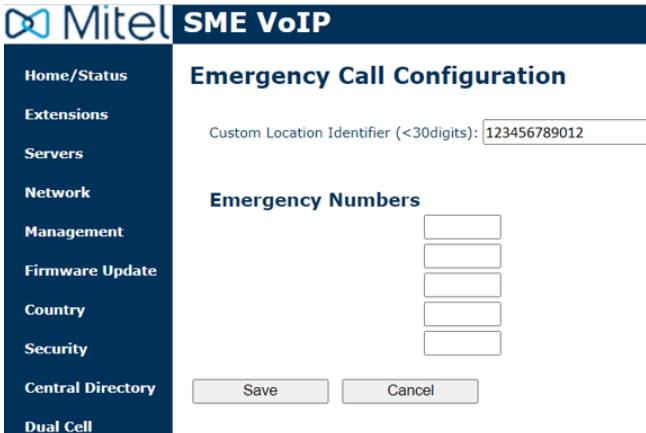
✓

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

Deployment Guide: RFP 12/14 Single Cell Solution

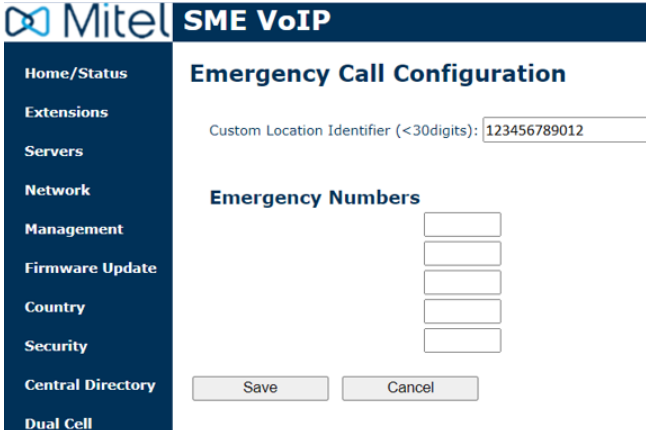
This is programmed as a Generic SIP Device on the MiVoice Business.

On Premises

Options Available	Programming Steps
CESID provided by the device	<p>Intrado:</p> <ul style="list-style-type: none"> Program an ERL with ERL ID matching the CESID of the device. Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> Enable the Emergency Info Provided by the Device 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.

IP to Zone to CESID Mapping	<p>Intrado:</p> <ul style="list-style-type: none">• Program an ERL with ERL ID matching the CESID of Zone.• Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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. <p>Device:</p> <ul style="list-style-type: none">• None
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Off Premises

Options Available	Programming Steps
<p>CESID provided by the device</p>	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the device. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device 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 Premises

Options Available	Programming Steps
CESID provided by the device	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the device. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device SIP Device Capability <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 Premises

Options Available	Programming Steps
CESID provided by the device	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the device. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device SIP Device Capability <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.

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

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

Visible ASCII characters and space

Apply Close

On Premises

Options Available	Programming Steps
CESID provided by the device	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the device. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device SIP Device Capability <p>Device:</p> <ul style="list-style-type: none"> • See configuration at start of chapter. • 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 Premises

Options Available	Programming Steps
CESID provided by the device	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the device. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device SIP Device Capability <p>Device:</p> <ul style="list-style-type: none"> • See configuration at start of chapter. • 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 Premises

Options Available	Programming Steps		
BSSID to CESID Mapping	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the BSSID to CESID mapping. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device SIP Device Capability • Define the BSSID to CESID Mapping <p>Device:</p> <p>In configuration manual there is a table under chapter "VoIP Protocol" with a table, this is our proposal for the entry for Ray Baum Solution:</p> <table border="1"> <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 Premises

Options Available	Programming Steps		
BSSID to CESID Mapping	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the BSSID to CESID mapping. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the Emergency Info Provided by the Device SIP Device Capability • Define the BSSID to CESID Mapping <p>Device:</p> <p>In configuration manual there is a table under chapter "VoIP Protocol" with a table, this is our proposal for the entry for Ray Baum Solution:</p> <table> <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>		

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

On Premise

Options Available	Programming Steps
IP to Zone to CESID Mapping	<p>Intrado:</p> <ul style="list-style-type: none">• Program an ERL with ERL ID matching the CESID of Zone.• Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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. <p>Device:</p> <ul style="list-style-type: none">• None

Off Premise

Not recommended.

Deployment Guide: MiCollab MINET Softphone

On Premise

Options Available	Steps
IP to Zone to CESID Mapping (RECOMMENDED if device is wired)	<p>Intrado:</p> <ul style="list-style-type: none"> • Program an ERL with ERL ID matching the CESID of the CESID Assignment. • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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. <p>Device:</p> <ul style="list-style-type: none"> • None
911 Location Manager Application (RECOMMENDED if device is wireless)	<p>Intrado:</p> <ul style="list-style-type: none"> • Program the enterprise FQDN • Program the Network wire map as required • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the CESID not required for Emergency Calls COS option. <p>Device:</p> <ul style="list-style-type: none"> • Install the 911 Location Manager Application given the Subscriber ID. • Manage the location via the 911 Location Manager application.

Off Premise

Options Available	Steps
911 Location Manager Application	<p>Intrado:</p> <ul style="list-style-type: none">• Program the enterprise FQDN• Program the Location Manager subnets• Program the Network wire map as required• Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none">• Enable the CESID not required for Emergency Calls COS option. <p>Device:</p> <ul style="list-style-type: none">• Install the 911 Location Manager Application given the Subscriber ID.• Manage the location via the 911 Location Manager application.

Deployment Guide: MiCollab SIP Softphone

NOTE: MiCollab Clients installed on a mobile device with a native Dialer (such as, Apple phones and Android phones; not tablets), the native dialer will intercept emergency calls, and will not go through the MiVoice Business.

Additional Configuration is required on MiCollab server 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

INTRADO

URL

https://intrado.com

Account Id

87F499C5-9CEA-4F49-B121-E603EE68C174

Token

.....

Confirm token

.....

Internal FQDN

https://abc.com

Virtual Environment

☐

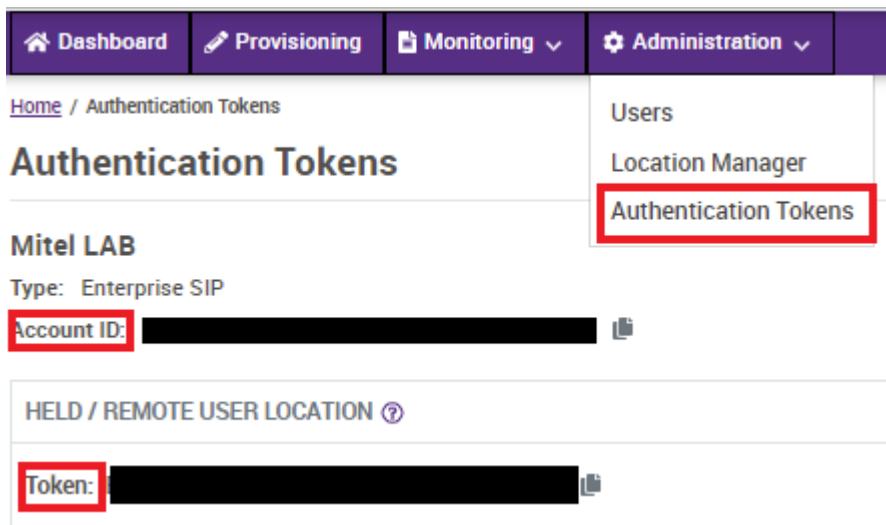
Test Connection

Test successful. Click Apply to save the location service settings.

Field	Notes
Location Service	Choose Intrado from the location service dropdown.
URL	The URL of Intrado location service.
Account Id	This can be obtained from the Intrado location service portal under the <i>Administration Tab-> Authentication Tokens</i> . This is the same Account ID also displayed on the Account Dashboard page in the <i>General Information</i> pane.
Token	This can also be obtained from the Intrado location service portal under the <i>Administration Tab-> Authentication Tokens</i> .
Internal FQDN	The Internal FQDN URL is required by Intrado. This URL is accessible only through the office network. Internal FQDN is used to determine whether you are in office network or not. Note: Internal FQDN will not be validated by the server.

Virtual Environment	The Virtual Environment checkbox must be selected if the clients are running in a virtual environment. This means that, the Virtual Environment checkbox enables the administrator to declare whether their clients are virtualized or not; VMWARE Horizon, Citrix, or RDS.
---------------------	---

The values for Account ID and Token can be found on the Intrado portal under Administration -> Authentication Tokens.

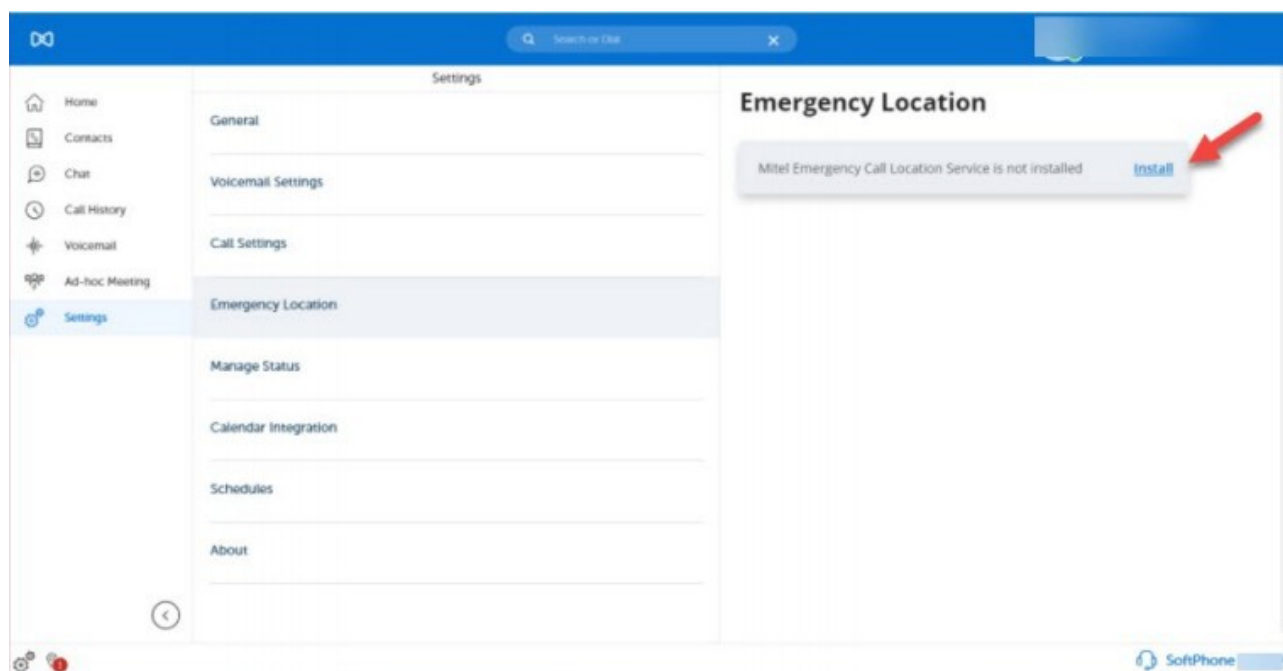


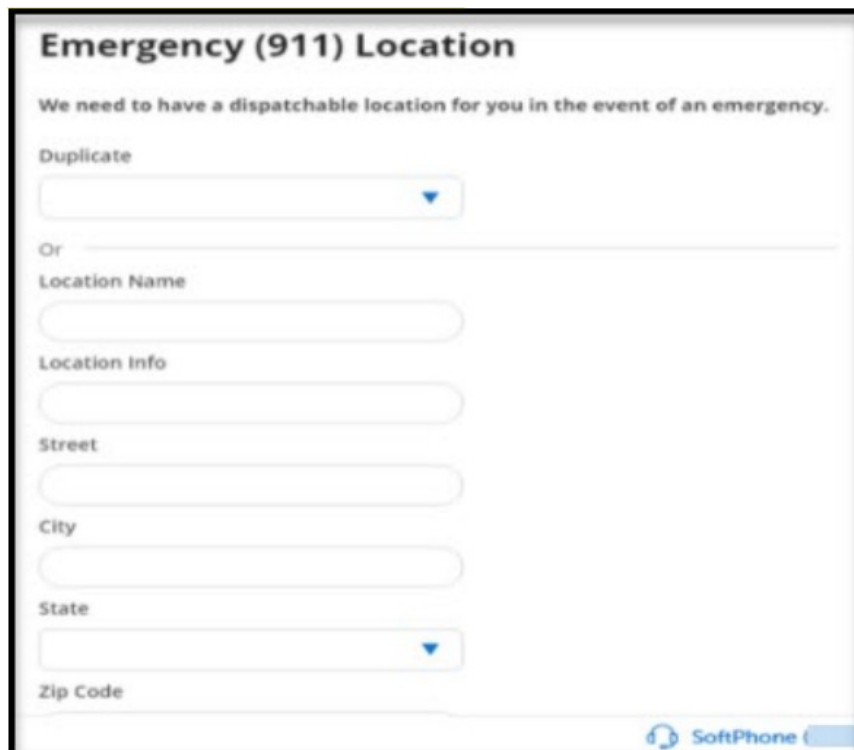
Via the MiCollab Server, configure the Emergency Dial Plan under MiCollab Client Deployment> Deployment Profiles > Emergency Numbers.

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

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

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





Emergency (911) Location

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

Duplicate

Or

Location Name


Location Info

Street

City

State

Zip Code

 SoftPhone

NOTE: This might appear slightly different based on the type of MiCollab Client.

On Premises

Options Available	Steps
Geolocation	<p>Intrado:</p> <ul style="list-style-type: none"> • Program the Network wire map as required • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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 Premises

Options Available	Steps
Geolocation	<p>Intrado:</p> <ul style="list-style-type: none"> • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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. <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 must enable 933 in the emergency number list for testing/integration.

Additional Configuration is required on MiCollab server 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

INTRADO

URL

https://www.intrado.com

Account Id

87F499C5-9CEA-4F49-B121-E603EE68C174

Token

.....

Confirm token

.....

Internal FQDN

https://abc.com

Virtual Environment

☐

Test Connection

Test successful. Click Apply to save the location service settings.

Field	Notes
Location Service	Choose Intrado from the location service dropdown.
URL	The URL of Intrado location service.
Account Id	This can be obtained from the Intrado location service portal.
Token	This can also be obtained from the Intrado location service portal.
Internal FQDN	<p>The Internal FQDN URL is required by Intrado. This URL is accessible only through the office network. Internal FQDN is used to determine whether you are in office network or not.</p> <p>Note: Internal FQDN will not be validated by the server.</p>
Virtual Environment	The Virtual Environment checkbox must be selected if the clients are running in a virtual environment. This means that, the Virtual Environment checkbox enables the administrator to declare whether their clients are virtualized or not; VMWARE Horizon, Citrix, or RDS.

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

Manage MiCollab Client Deployment

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

Profiles

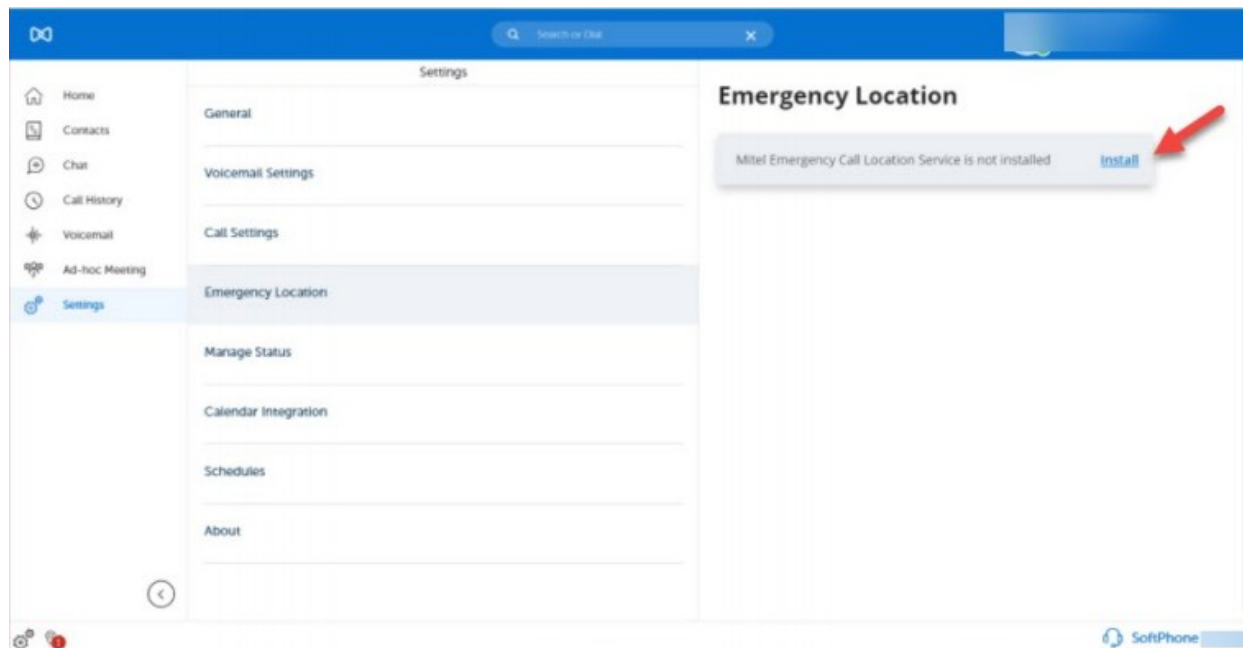
Location: Deployment Profiles / Modify

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.gtscs.ucs.mitel.io	Config download host *	MiCollab Server FQDN
		MBG SIP host *	Custom DNS SRV mbg.gtscs.ucs.mitel.io
		MBG-WebRTC SIP host *	MBG's FQDN
Override user email	<input type="checkbox"/>	PBX SIP host	Custom DNS SRV mivb.gtscs.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 with a blue triangle icon.
- 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 with a blue triangle icon.
- Zip Code: A text input field.

At the bottom right of the form, there is a 'SoftPhone' icon and label.

NOTE: This might differ based on the MiCollab Client.

On Premises

Options Available	Steps
Geolocation	<p>Intrado:</p> <ul style="list-style-type: none"> • Program the Network wire map as required • Program a Subscriber to match the DN of the user/device. (CPN if available and using a public SIP Trunk). <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 Premises

Options Available	Steps
Geolocation	<p>Intrado:</p> <ul style="list-style-type: none"> • Program a Subscriber to match the DN of the user/device. (CPN, if available, while using a public SIP Trunk). <p>MiVoice Business:</p> <ul style="list-style-type: none"> • Enable the Emergency information provided by Device SIP Device Capability for the device. <p>MiCollab Server:</p> <ul style="list-style-type: none"> • Define the Location Service Configuration. <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 Deskphone

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

Deployment Guide: MiCollab Mobile

MiCollab uses native dialer; Therefore, there is no interaction with the MiVoice Business solution for emergency calls.

Deployment Guide - Third-Party WebRTC Clients (via MBG)

NOTE: Because each third-party WebRTC Client might have different implementations, Mitel will need to certify the solution with each specific Third-party WebRTC Client.

WebRTC is an HTML wrapper around the SIP protocol; therefore, it behaves like a Generic SIP device. See above.

Deployment Guide - WebRTC Anonymous Calls (via MBG)

WebRTC can provide anonymous calls support via a web-link. These web-links are not expected to be routed from MiVoice Business to an emergency destination, and DO 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 different NG911 providers per tenant in the same system. For example, the same NG911 provider needs to be used by all tenants in a given system.

Testing the Intrado Integration and Reading Call Detail Records(CDR)

As part of on boarding with Intrado, customers will be required to go through a rigorous acceptance test plan on a Demo system before officially going to Production.
Intrado offers a couple of ways to test emergency calls in Demo mode.

933 Test Calls

Customers can use the 933 service to confirm both Subscriber and Location(ERL) configuration. To access this service, configure 933 calls to route the Intrado SIP trunks previously described in this guide, along with all the other required endpoint, MiVoice Business and Intrado programming.
When the 933 test calls is made and Intrado IVR will answer the calls and audible confirm the callers Subscriber ID and current Location(ERL). It will also allow the caller to make a recording to be played back to the caller in the same call to confirm a 2-way audio path.
When the call is complete, a Call Detail Record(CDR) will be generated providing details of the call, more details in the section below.
The Extension Bind(XBind) feature, if enabled, is not applied on these types of test calls.
933 test call support is also available on the Production system.

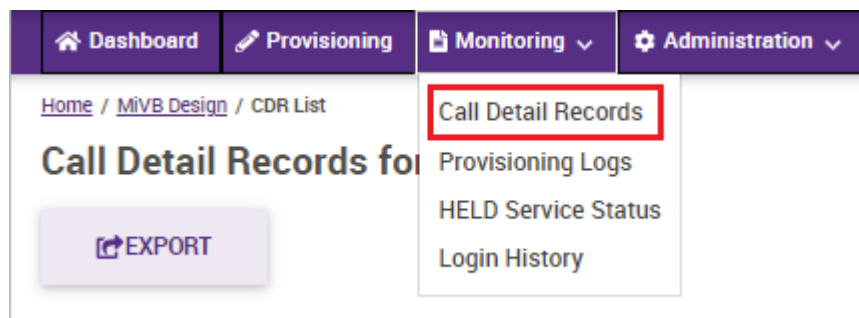
More information in Call Detail Record section below.

911 Test Calls

Customers can use the 911 service to confirm emergency callback configuration. These are NOT real 911 calls and will not go out to the PSAP, they are for testing only when in Demo mode. To access this service, configure 91 calls to route the Intrado SIP trunks previously described in this guide, along with all the other required endpoint, MiVoice Business and Intrado programming.
When the 911 test calls is made, Intrado will answer the call and the call should just be cancelled once the caller hears ringback.
When the call is complete, a Call Detail Record(CDR) will be generated providing details of the call, more details in the section below.
The Extension Bind(XBind) feature, if enabled, is not applied on these types of test calls.
More information in Call Detail Record section below.

Call Detail Records(CDR)

After the emergency test calls described above have been completed, what has been sent to Intrado by the MiVoice Business can be reviewed in Intrado's Call Detail Records(CDRs). These records can be found below.



Once on this page, you should entries like below

FILTER

Search

Search by all fields

Showing 1 to 10 of 333 entries

START TIME	ACCOUNT NAME	CALL TYPE	CALL STATUS	DURATION (S)	SUBSCRIBER ID	ERL ID	ADDRESS INFORMATION	CALLBACK NUMBER	CALL DESTINATION	PROVISIONED	ACTIONS
Wed Nov 24 09:42:33 EST 2021	MiVB Design	911	CANCELLED		(000) 991-4001	0000014001	4000 Innovation Drive Kanata ON K2C3K1 Third Floor	(514) 745-2143	VPSAP	Yes	<div></div>
Wed Nov 24 09:36:21 EST 2021	MiVB Design	911	CANCELLED		(000) 991-4001	0000014001	4000 Innovation Drive Kanata ON K2C3K1 Third Floor	(514) 745-2143	VPSAP	Yes	<div></div>
Wed Nov 24 09:27:11 EST 2021	MiVB Design	Test	COMPLETED	24		9902011	42.8936, -76.00224 2440 Lafayette Road, Jamestown NY 13078	(512) 887-3874	ECRC	No	<div></div>

It includes the following information:

- **Start Time** of the call
- **Account Name** the call is associated
- **Call Type**, where **911** is a 911 call and **Test** is a 933 call
- **Call Status** where Completed means the call was answered by Intrado or PSAP which applies to 933 calls only or real answered 911 calls, and Cancelled means the call was not answered, which applies to 911 test calls only or real 911 calls that the caller dropped.
- **Duration** of the call once answered by Intrado or PSAP. Applies to 933 test calls and real 911 calls. It will be blank for Cancelled calls.
- **Subscriber ID** of the caller. This information is sent to Intrado in the PAI header of the SIP Invite by the MiVoice Business and needs to match a Subscriber programmed on Intrado. If it does not match a Subscriber, it will still be marked as Completed, but will be highlighted as RED and for real 911 calls, will go to the ECRC.
- **ERL ID** of the caller. This will be CESID configured on the MiVoice Business for the location the caller is making the emergency call from and will be sent to Intrado in the FROM header of the SIP Invite. If this does not match a programmed ERL ID, it will be marked RED and for real 911 calls, will be sent to the ECRC. This will be populated by a GUID generated by Intrado for callers using the E911 Location Manager application or endpoints using the HELD protocol like the MiCollab SIP Client
- **Address Information**. This is the location Intrado has mapped their ERL ID from the CESID provided in the FROM header of the SIP Invite for the MiVoice Business.
- **Callback Number**. This is the number the caller would be called back on should the emergency call drop. For 933 test calls, this will always be Intrado's main number, 514-745-2143 and should not be used for callback testing purposes. For 911 test calls, this will be blank, however, if email notifications are enabled for the ERL ID, the email notification will contain the callback number. For real 911 calls it will be populated. The callback number presented in this field(and email notification) will be DID/CPN number provided as the **Subscriber ID** if using Public SIP trunks with Intrado. If using Private SIP Trunks with Intrado, where the Extension Bind feature is enabled, this is the DID number assigned to the **Subscriber ID** received in the emergency call by the Extension

Bind feature. For 911 test calls, this number can be called through the PSTN from any phone to confirm the calls reaches Intrado and they map to the correct Subscriber and caller receives a call through the Intrado SIP trunks. The call can be answered to confirm audio path.

- *Call Destination*: Indicates where the call was routed. For successful test calls, this will be VPSAP, Intrado's Virtual PSAP. For real 911 calls, this will be PSAP. For test or real calls marked RED due not finding a match for a Subscriber or location, this will be ECRC.
 - *Provisioned*: If Yes, both a Subscriber and Location were found. If No, no Subscriber or Location was found and the entry will be marked **RED**.
 - *Actions*. The folder icon can be selected to provide more details about the call, included details of the SIP Invite headers, as seen below. This information can be useful to further debug any issues.
-
- Much of this information was provided in the previous CDR table record and will just highlight some additional fields of note.
 - *Account ID* associated to this emergency call.
 - *ERL Determination Method*. Indicates the lookup algorithm being used by Intrado to match on Subscribers and ERLs. For the MiVoice Business solution, this should be *CUSTOMER_LOCATION_ID*. If this field shows any other value, contact Intrado to ensure the Location Determination Preference is set to ERL ID in SIP header for the account.
 - *Account Mode*. Indicates if you are using the account in Demo or Production mode.
 - *Incoming DNIS*. Provides details of the SIP Invite TO header indicating the emergency number called.
 - *Incoming FROM*. Provides details of the SIP Invite FROM header indicating the CESID sent from the MiVoice Business to Intrado to match an ERL ID. This will be set to ANONYMOUS for calls from devices using the E911 Location Manager, endpoints using the HELD protocol like the MiCollab SIP Client or calls in which the MiVoice Business cannot find a CESID for.
 - *Incoming CONTACT*. Provides details of the SIP Invite CONTACT header and it should match the PAI. This field is not used in this solution.
 - *Incoming PAI*. Provides details of the SIP Invite PAI header indicating the number that will be used to match to an Intrado Subscriber.
 - *Incoming E911-Organization-ID*. This should match the value configured in the *User-Defined Header Value* field in the Intrado SIP Peer Profile and is provided by the E911-Organization-ID header in the SIP Invite.

Troubleshooting

The intent of this section to help troubleshoot common issues in the solution and is not exhaustive.

Symptom	Troubleshooting Steps
Intrado is not receiving emergency calls	<p>Capture a wireshark trace to confirm if the SIP Invite is leaving the MiVoice Business and MBG</p> <p>If the SIP Invite is not leaving the MBG, review MBG configuration and logs.</p> <p>If the SIP Invite is not leaving the MiVoice Business, review MiVoice Business configuration and logs.</p> <p>If after reviewing the programming/logs and the calls are still not leaving the MiVoice Business/MBG, contact Mitel Product Support.</p> <p>If the SIP Invite is leaving the MiVoice Business and/or MBG, confirm with Intrado that the proper IP addresses are being used by Intrado and the MiVoice Business/MBG.</p>
Intrado's CDRs for emergency calls are marked RED.	<p>Review CDR details to see what is being received and confirm the Subscriber in the PAI is provisioned and/or the CESID provided in the FROM is provisioned.</p> <p>Confirm CDR <i>ERL Determination Method</i> is set to <i>ERL ID in SIP header</i>. If not, contact Intrado to ensure the Location Determination Preference for the account is set to <i>ERL ID in SIP header</i>.</p> <p>Confirm the <i>Route Assignment</i> is an Emergency route for emergency calls.</p> <p>If problems are still observed, contact Intrado Product Support</p>
The Subscriber provided in the emergency call is incorrect.	<p>Confirm CDR <i>ERL Determination Method</i> is set to <i>ERL ID in SIP header</i>. If not, contact Intrado to ensure the Location Determination Preference for the account is set to <i>ERL ID in SIP header</i>.</p> <p>If ERL Determination Method is correct confirm:</p> <p><i>Emergency Call Headers</i> field in the <i>SIP Peer Profile</i> is set to <i>CESID in From, Callback in PAI</i>.</p> <p>If Intrado Subscribers are configured as internal DNs, ensure the <i>SIP Peer Profile</i> field <i>Private Trunk</i> is set to Yes.</p> <p>If Intrado Subscribers are configured as DIDs, ensure the <i>SIP Peer Profile</i> field <i>Private Trunk</i> is set to No.</p> <p>If problems are still observed, contact Mitel Product Support</p>
The location provided in the emergency call is incorrect.	<p>Confirm CDR <i>ERL Determination Method</i> is set to <i>ERL ID in SIP header</i>. If not, contact Intrado to ensure the Location Determination Preference for the account is set to <i>ERL ID in SIP header</i>.</p> <p>If <i>ERL Determination Method</i> is correct confirm:</p> <p><i>Emergency Call Headers</i> field in the <i>SIP Peer Profile</i> is set to <i>CESID in From, Callback in PAI</i>.</p> <p>If the call is made from device for which the MiVoice Business provides the CESID, review the Deployment Guide chapter for that device in this document regarding configuration.</p> <p>If the call is made from device that provides the CESID during an emergency call, review the Deployment Guide chapter for that device in this document to ensure configured correctly.</p> <p>If problems are still observed, contact Mitel Product Support.</p>
Emergency Callbacks are not working	<p>Confirm CDR <i>ERL Determination Method</i> is set to <i>ERL ID in SIP header</i>. If not, contact Intrado to ensure the Location Determination Preference for the account is set to <i>ERL ID in SIP header</i>.</p> <p>If Intrado Subscribers are configured as internal DNs, contact Intrado to ensure the Location Determination Preference is set to Extension Bind.</p> <p>If Location Determination Method is correct confirm:</p> <p><i>Emergency Call Headers</i> field in the <i>SIP Peer Profile Configuration</i> is set to <i>CESID in From, Callback in PAI</i>.</p> <p>If Intrado Subscribers are configured as internal DNs, ensure the <i>SIP Peer Profile</i> field <i>Private Trunk</i> is set to Yes.</p>

	<p>If Intrado Subscribers are configured as DIDs, ensure the <i>SIP Peer Profile</i> field <i>Private Trunk</i> is set to No</p> <p>If the Location Determination Method is set to Extension Bind, callbacks will be coming to the MiVoice Business through the Intrado SIP trunk and care should be taken to ensure the routing of these inbound calls are handled as these calls will contain the internal DN in the FROM header of the SIP Invite.</p>
Emergency Calls are not routed to the correct Intrado account	Confirm CDR is displaying the value <i>Emergency Organization ID</i> in <i>SIP Peer Profile</i> . If they do not match, contact Intrado Product Support.

Contacting Mitel Product Support

If it is required to contact Mitel Product Support, please be ready to provide the following:

1. Intrado Account Number
2. CDR from Intrado for any failed calls.
3. SIP trunk wireshark traces between the MiVoice Business and Intrado, including MBG.
4. SIP endpoint wireshark traces between a SIP endpoint making an emergency calls and the MiVoice Business, including MBG if applicable.
5. Provide a CCS trace on the MiVoice Business for the failed call.
6. Software release versions for the MiVoice Business and MBG, along with system logs.
7. Firmware release versions of devices making the emergency calls, along with device logs

Contacting Intrado Product Support

If it is required to contact Intrado Product Support, please be ready to provide the following:

1. Intrado Account Number
2. Type of Mitel PBX being integrated as Intrado is supporting multiple Mitel PBXs, not just the MiVoice Business.

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 Intrado solution, the CESID is only used as a location identifier by Intrado 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.

ECRC - Emergency Call Relay Center(ECRC). This Intrado service will be called if the emergency call they have received from the PBX cannot find the Subscriber or Location of the caller. The ECRC will answer the emergency call and transfer it to the local emergency services

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.

GUID - Globally Unique Identifier. It is a 128-bit integer number used to identify resources. Intrado generates GUIDs for ERL ID locations for user's reporting their location through the 911 Location Manager or devices using the HELD protocol, like the MiCollab SIP Softphone.

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 MiVoice Business clusters in the same MiVoice Business network.

PSAP - 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