

8x8 Nomadic 911

Administration Guide



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Preface

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About This Guide

This guide describes the features and administration of the Nomadic 911 feature. It is written for administrators tasked with configuring and maintaining dynamically updating emergency service locations with 8x8 X Series services in the USA and Canada.

Document Conventions

Table 1: Document Conventions

Convention	Description
System-generated messages	System-generated messages, terms, and field names display in the Courier Std font.
User Entry	Information that must be typed exactly as it appears displays in the Courier Std bold font.
Buttons, screen tabs, and screen panels	Buttons, tabs across the top of the screen that are used to access additional screens, and names of screen panels are identified by bold text.
<i>Windows and Screen Names</i>	Windows and screen names are identified by italics.
<u>Web Links</u>	All web-based hyperlinks are identified by bold blue underlined text.
Internal cross references	Cross references made to other sections in the same guide are identified by blue font. Note that these cross references are also links to the section.

Glossary

Table 2: Glossary

Term	Usage Notes
911	The three-digit telephone number reserved for use for reporting an emergency throughout North America. The call is answered at a common answering location (typically referred to as a PSAP), which will determine the nature of the emergency and dispatch the proper Public Safety response teams.
Address Validation	When an emergency address is added to the ERS portal, the system validates the accuracy of the civic address data that was entered against an MSAG list of all known valid address locations within a specific 911 service area. If the address information that was entered matches an MSAG record, then the address of the record is “valid.” If the system can not find a matching MSAG address, or if there is a problem with a specific part of the validation, such as geo-coding of the location, then the record may be automatically corrected.
CDR	Call Detail Records. As the name implies, these records include information related to all emergency calls made from your account. In addition to account, location, and subscriber information, CDRs also provide call times, duration, call type, call status, routing information, and call status information. ERS also provides Call Detail Record Reports.

Table 2: Glossary (Continued)

Term	Usage Notes
CSV	Comma Separated Values. This is a text file type that is commonly used to import and export data from one system to another. ERS can import and export Account, Subscriber, and Location information using text files with this file type. Text files using this format are designated with a CSV file name extension.
ECRC	Emergency Call Relay Center. The ECRC is staffed by APCO-certified dispatchers. The dispatchers confirm the caller's location and transfer the call to the appropriate first responders. It is staffed 24 hours a day, seven days a week, 365 days a year for emergency and non-emergency customer call handling.
ERS	Emergency Routing Service
ERL	Emergency Response Location. An ERL is a virtual representation of a physical address that includes civic address information, GPS coordinates, and additional location data that are used to determine the call flow and destination of a 911 call.
HELD	HELD refers to HTTPS Enabled Location Delivery. This is the protocol used by devices for retrieving location information from the ERS system.
IVR	Interactive Voice Recording that is used during a test call that informs you of the status of your account, the status of your address, and the location coverage. It is also used for testing two-way audio quality.
MSAG	Master Street Address Guide. A listing of all streets in a 911 service area and the house number ranges for each ESN. The primary functions of the MSAG database are to validate subscriber addresses and assign an ESN (for selective routing) to each customer telephone number record.

Table 2: Glossary (Continued)

Term	Usage Notes
Network Element	Network Element such as Subnet, Wireless Access Point, Switch or Port that is provisioned in the ERS account.
PSAP	Public Safety Answering Point. A facility equipped and staffed to receive 911 calls. A Primary PSAP receives the calls directly. If the call is relayed or transferred, the next receiving PSAP is designated a Secondary, or backup, PSAP.
PSAP Direct Call	PSAP Direct is an emergency call delivery method in ERS. When a caller dials 911, the call is routed directly to a PSAP operator. The PSAP Direct call delivery method is one of three call delivery methods used in the ERS service. The other call delivery methods are Three-way and Security Desk.
PSTN	Public Switched Telephone Network. The network of equipment, lines, and controls assembled to establish communication paths between calling and called parties. It is also used generically to refer to the phone system, including the whole network.
Security Desk Call	Security Desk is an emergency call delivery method in ERS. Specifically, Security Desk delivers emergency calls to an organization's internal Security Desk personnel, rather than to a local PSAP. A short code—such as 5-1-1, for example—is assigned as the Security Desk emergency dialing code to reach the internal Security Desk for an enterprise or organization.

Table 2: Glossary (Continued)

Term	Usage Notes
Subscriber	In the ERS portal, a subscriber refers to the primary phone number of an X Series User.
Test Call	A type of call that is routed to the IVR to test emergency call routing by dialing 933 instead of 911.
Three-Way Call	Three-Way is an emergency call delivery method in ERS. When a Three-Way emergency call is placed, ERS establishes a three-way connection between the emergency caller, the PSAP, and an organization's Security Desk. Depending on selected settings, Security Desk personnel can either monitor or participate in the emergency call.
User Permission Roles	Refers to the following four types of users that are created in the ERS to manage user access to specific functions: Super Admin, Admin, Provisioning, and Read-Only. Each user permission role has varying restrictions with regards to the functionalities they can perform through the ERS portal.

Chapter 1

Getting Started

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What is Nomadic 911?

Nomadic 911 is a feature within the X Series Unified Communications product suite which ensures that your organization's 911 emergency calls are routed to the appropriate Public Safety Answering Point based on the caller's location. The 911 call taker is automatically presented with a caller's address and enhanced location details such as what floor they are on.

How Does It Work?

Nomadic 911 works slightly differently depending on whether the endpoint in use is a physical desk phone or the 8x8 Work Desktop application.

In all cases, the location of an endpoint is determined by detecting changes to local network connection and looking up the details of that connection against a preconfigured map of your corporate network infrastructure.

Physical desk phones that support the Nomadic 911 feature learn their location by making a lookup request (known as a HELD request) each time they are rebooted or change their LAN connection. When an emergency call is made, they include their location in the emergency call and this overrides any statically assigned location for that user.

8x8 Work Desktop is used in conjunction with the Location Manager companion application. Location Manager uses a similar mechanism for looking up location based on changes of local network connection. In this case however, the user's statically assigned emergency location is updated such that when an emergency call is made, the address sent to the PSAP is up-to-date.

The feature has three principal interfaces:

- 8x8 Admin Console from where X Series users are enabled for Nomadic 911 by toggling on the "Emergency Routing Service" option in the user details page. Enabling ERS for a user does two things:
 - Adds their primary phone number to the ERS portal where it is known as a "subscriber"
 - Configures the user's physical desk phone to look up its location against the pre-configured network map in ERS
- The Emergency Routing Services (ERS) portal is used by an administrator to:
 - Manage emergency location details for your organization
 - Manage network infrastructure details for your organization and relate them to emergency locations. This is referred to as the network map throughout this document.
 - View desk phone lookup history
 - View the locations set by Location Manager
 - View emergency call logs
- The Location Manager companion application, which must be installed alongside Work Desktop. It is used by end-users to see the location that has been automatically detected and to manually enter their location if they are in a new

location outside the corporate network infrastructure

Planning Your Deployment

The Nomadic 911 feature entails significant administrative investment to set up and maintain the necessary configuration. Careful consideration should be given to the deployment approach to ensure it is appropriate for your organization. Each deployment is different and while 8x8 Professional Services and/or Support are on-hand to offer guidance, you are responsible for ensuring that your networking environment is appropriately configured and for entering the correct information about your network infrastructure into the ERS portal.

A planning guide is available [here](#) to assist with preparation and gathering the information you will need to get Nomadic 911 up and running.

Signing In to the ERS Portal

The primary admin user for the ERS portal is created by 8x8 as part of setting up your account for Nomadic 911. After this you can create and maintain your own admin users within the portal.

- 1 Open your browser and enter <https://admin.e911.8x8.com> in the browser's web address field or access it from the Admin Console home page.
- 2 A *Sign In popup* screen appears, as shown in Figure 1 below, prompting you for your sign in name or email address and your password. Enter your sign in name or email address and password and click **Sign In**.

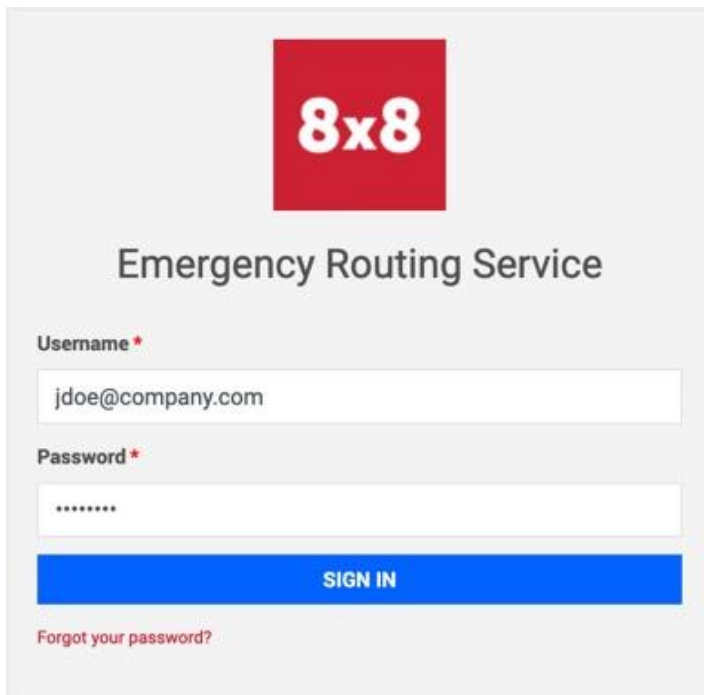


Figure 1: Enter Your User Name or Email and Your Password and Click Log In.

NOTE | If you do not remember your password, click the **Forgot your password?** link. You will be prompted for your email address. Enter your email address and click the **Send Email** button. You will receive an email with a link to reset your password. Once you reset your password, retry logging in.

- 3 On successful sign in, your *ERS Account Dashboard* screen displays, as shown in Figure 2 below.

The screenshot shows the 'Emergency Routing Service' dashboard for a Level 1 account. The user is logged in as 'John Doe (Super Admin)'. The dashboard is titled 'Account Dashboard' and is divided into three main sections:

- GENERAL INFORMATION:** Displays account details for 'coursedev02 Demo', including Account ID (7E933EB7-6948-4D26-B6C6-4F4323611AD5) and NOC Contact ((408) 329-4911). It also includes an 'EMAIL NOTIFICATIONS' section with a table showing no addresses.
- PROVISIONING STATISTICS:** Shows '3 Locations' and '0 Subscribers', with a 'VIEW PROVISIONING DETAILS' button.
- 911 CALL STATISTICS:** A table comparing 'Current Month' and 'Previous Month' for 'Provisioned' and 'Unprovisioned' calls.

	Current Month	Previous Month
Provisioned	0	0
Unprovisioned	0	0

Type	Email Addresses
	None

Figure 2: ERS Account Dashboard Screen—Level 1 Account—Super Admin User Example Shown

NOTE ERS is permissions-based. Therefore, your *Account Dashboard* screen may look different depending on a variety of factors including the permissions granted by your system administrator.

Sign In Problems?

If a user name or password is not recognized by the system due to user or system error, an Authentication Failed message displays. If this occurs, re-check that cookies are enabled in your browser and try logging in again. If you continue having trouble logging on to the ERS Portal, please contact 8x8 support:

<https://support.8x8.com/support-services/support/contact-8x8-technical-support>

Chapter 2

ERS User Interface and Components

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Screen Components

When you successfully log on to the ERS Portal, the *Account Dashboard* home screen displays. The ERS screen components are:

- Header
- Main menu
- Work panel
- Footer

The screenshot displays the 8x8 Emergency Routing Service interface. At the top, the header includes the 8x8 logo, the text "Emergency Routing Service", a "File Manager" dropdown, and the user "John Doe (Super Admin)" with a dropdown arrow and a help icon. Below the header is a main menu with "Dashboard", "Provisioning", "Monitoring", and "Administration" items. The main content area is titled "Account Dashboard" and contains three panels: "GENERAL INFORMATION" for "coursedev02 Demo" with account ID and NOC contact; "PROVISIONING STATISTICS" showing 3 locations and 0 subscribers with a "VIEW PROVISIONING DETAILS" button; and "911 CALL STATISTICS" table.

	Current Month	Previous Month
Provisioned	0	0
Unprovisioned	0	0

The footer at the bottom left shows "© 2021 | www.8x8.com".

Figure 3: Common Screen Components

Header

As shown in Figure 4, below, the header identifies the application and displays your user name and permissions role. The ERS header also includes:

[Logo](#) and the [Product Name](#)—Click on either of these hyperlinks to go to the ERS *Account Dashboard* home screen.



Figure 4: ERS Header—Logo, Product Name, User Name, and User Permissions

Clicking the **drop-down icon** to the right of your user role provides [My Profile](#) and [Sign Out](#) options, as shown in [Figure 5](#).

[My Profile](#)—Click on the **drop down icon** and select [My Profile](#) to display and edit your user profile.

[Sign Out](#)—Click on the **drop down icon** and choose [Sign Out](#) to sign out of the ERS Portal.

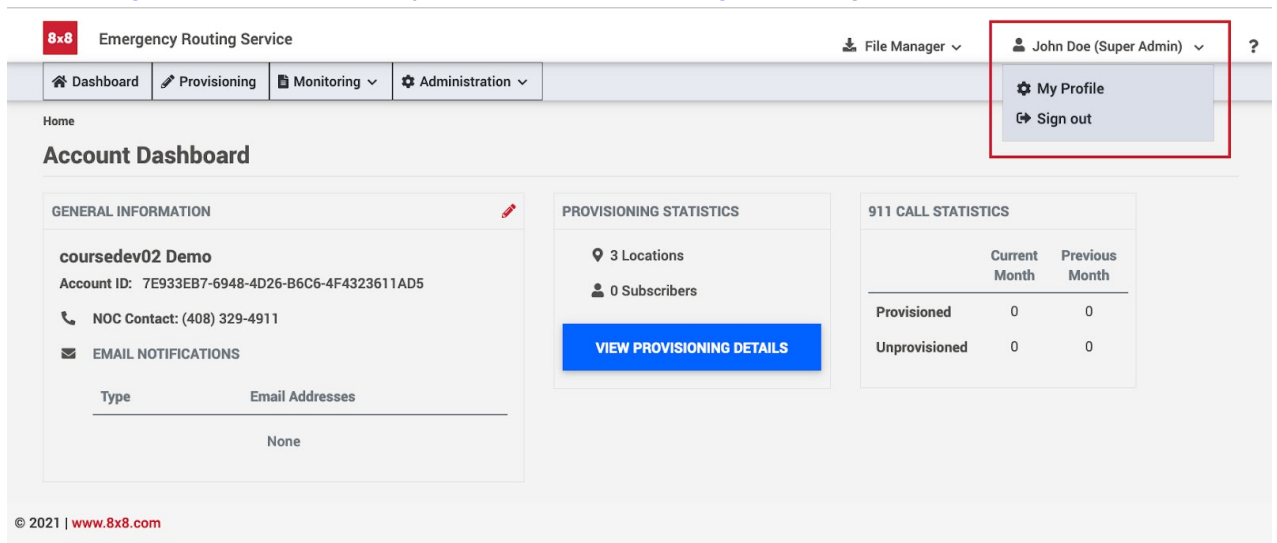


Figure 5: ERS Header—My Profile and Sign Out Drop -Down Menu

Help —As shown in [Figure 6](#), clicking the **? icon** displays a window of help options:

[Admin Guide](#)—Click this hyperlink to access the latest version of this guide.

Email Support—Click the email hyperlink to auto-open your email client and send an email to 8x8 Support.

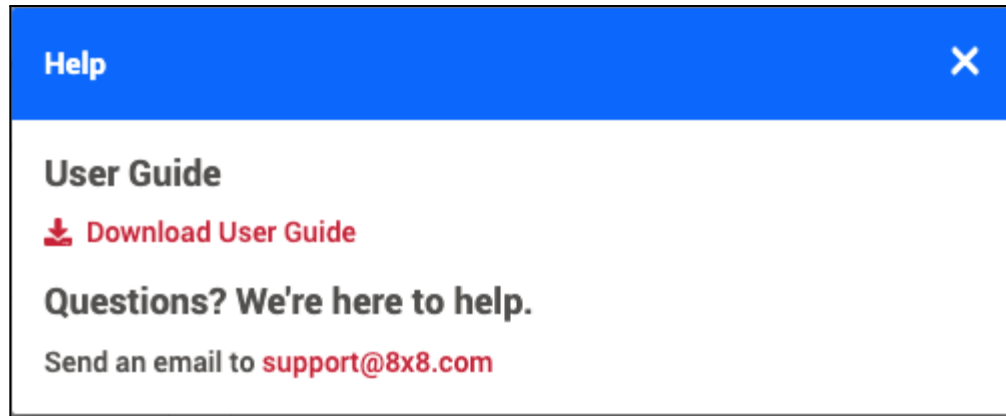


Figure 6: ERS Header—Click the Help Icon to Download the User Guide and Release Notes

File Manager—As shown in Figure 7, reports and files that are available for download are displayed here. Click on **File manager** and select the name of a report or file from the list to download it to your computer.

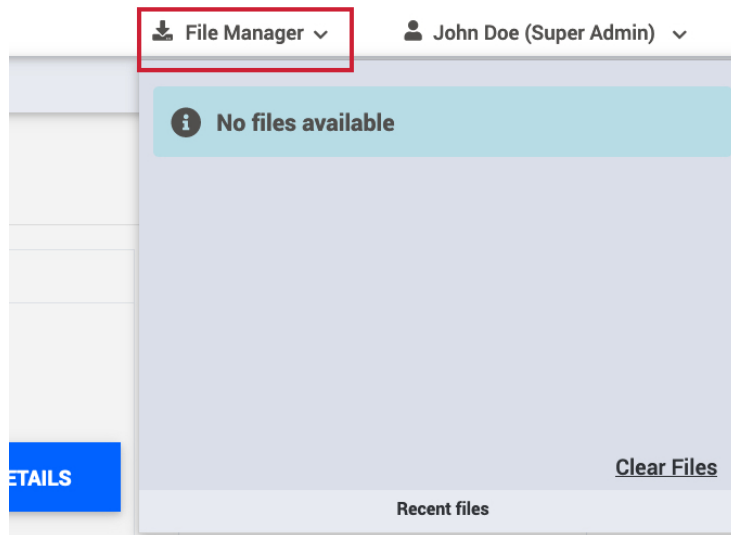


Figure 7: ERS Header—Click the File Manager Icon to Download Reports and Files

Menu

The Main menu appears on every page so that you can conveniently access the most important ERS tasks.

Dashboard—Access the *Account Dashboard* home screen for at-a-glance notification of provisioning, 911 call statistics, and deployment account information.

Provisioning—Provision Emergency Routing Locations (ERLs), subscriber information, subnets and Wireless Access Points for your account.

Monitoring—Monitor call detail records, provisioning logs, and user sign in history.

Administration—Manage ERS Portal authorized users and Location Manager options.

Work Panel

The look and feel of the ERS work panel changes depending on the work task you are performing, and also on your user role.

Through the work panel you can view, add, edit, or delete ERS information. For instance, if you are monitoring call detail records, then the *Call Detail* screen is displayed. Similarly, if you are adding a new ERS user, then the work panel changes to display the *User List* screen with the fields and selections necessary for adding a new user.

Account Dashboard Home Screen

Account At-a-Glance Information

An ERS *Account Dashboard* home screen has three at-a-glance sections—General Information, Provisioning Statistics, and 911 Call Statistics.

General Information—displays your ERS account details including your account name, account ID, account level, as well as contact and notification information for your account. Click the pencil icon to edit the general information for your account. For additional details, see Chapter 3: “Manage Accounts”.

Provisioning Statistics—shows the total provisioned data in your accounts. Depending on your account level and type, the statistics includes locations and subscribers. Click the **View Provisioning Details** button to view and manage your account’s provisioning data.

911 Calls Statistics—displays the total number of 911 calls made from this account for the current and previous month.

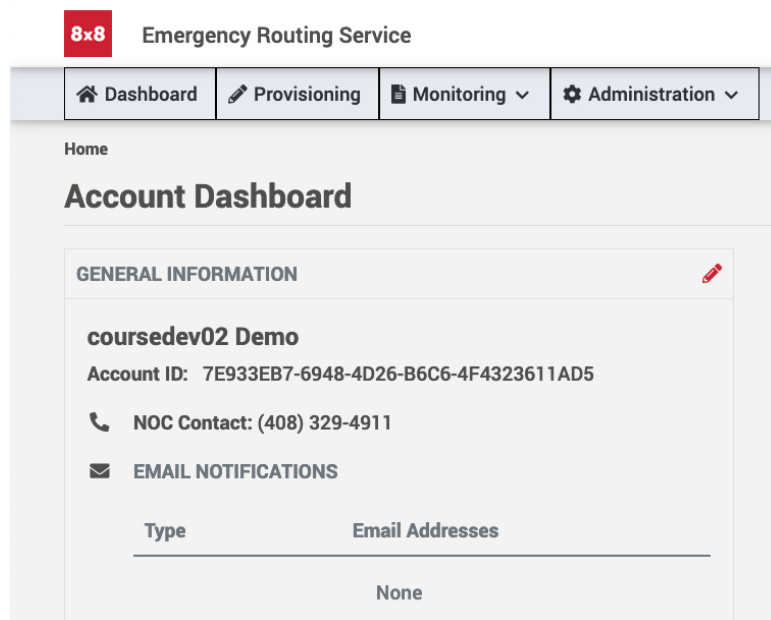


Figure 8: Account Dashboard

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Manage Accounts

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Manage Account Notification Contacts

ERS sends notifications to inform system administrators of specific events.

Emergency Calls: This notification is sent whenever an emergency call is placed.

You can configure recipients for this notification in the following ways:

You can add recipients per ERL when adding an ERL. In this case, when a subscriber associated to this ERL places a 9-1-1 call, these recipients will receive an email. [See “Adding ERLs”](#).

If recipients are added into the account as well as the ERL, notifications will be sent to both recipients listed.

Test Calls: This notification is sent whenever a test call is placed. Test calls are typically made to ensure connectivity to ERS and to verify audio quality.

Edit Notification Contact Info

To edit an existing contact email:

- 1 Navigate to the *Edit General Information* screen as described earlier.
- 2 In the notifications email list, click the contact’s email address that you want to edit.
- 3 Either click inside the email text box and edit the existing email address, or click the **Delete** button inside the email box to delete the existing email address and then enter the new email address.
- 4 When finished editing, click the **Checkmark** button to accept the edits, or the **X** button to cancel the edit, as shown in Figure 16.

The screenshot shows the 'Edit General Information' screen. At the top, there is a breadcrumb 'Home / Edit General Information'. Below that is the 'General Information' section with a white background, containing fields for 'Account Name' (8x8 UK Editions), 'Account ID' (68EE7299-89E1-4AA2-855E-A659043DF7), and 'NOC Contact' ((998) 477-). Below this is the 'Notifications' section with a red question mark icon. It features an 'Email Address' input field containing 'john.smith@example.com' and a blue plus icon. Underneath is a table with three columns: 'EMAILS', 'EMERGENCY CALLS', and 'TEST CALLS'. The table has two rows: one for 'admin@8x8.com' and one for 'Test@8x8.com'. Each row has checkboxes in the 'EMERGENCY CALLS' and 'TEST CALLS' columns, and a red trash icon in the final column. At the bottom of the form are two buttons: a red 'CANCEL' button and a blue 'SAVE' button.

EMAILS	EMERGENCY CALLS	TEST CALLS	
admin@8x8.com	<input type="checkbox"/>	<input type="checkbox"/>	
Test@8x8.com	<input type="checkbox"/>	<input type="checkbox"/>	

Figure 16: Level 1 Edit General Information Screen—Click the Email Address You Want to Change and Make Edits

- 5 To edit the notification types for the contact, select or de-select the desired notification types.
- 6 Click the **Save** button to save the edits for this contact.

Delete a Notification Contact

To delete an individual so that they no longer receive any ERS notifications:

- 1 Navigate to the *Edit General Information* screen as described above.
- 2 In the notifications email list, click the **Trashcan** button next to the person that you want to delete from the notifications list, as shown in Figure 16. They are deleted from the notifications list.

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Manage ERS Admin Users

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Overview

When Nomadic 911 is first activated for your account, one Super Admin user is created for you by 8x8. Going forward, you can create additional admin users so that your ERS configuration can be administered by someone in your organization. There are four available user permissions roles. Table 5 lists the tasks that can be performed by each ERS user.

Table 5: Available Tasks Per User Role

User Role	Description
Super Admin	User role with most permissions <ul style="list-style-type: none"> ■ Manage users and passwords ■ Edit account general information ■ Configure 911 Location Manager ■ Provision locations ■ Provision network elements ■ View provisioned data and logs ■ View call detail records
Admin	<ul style="list-style-type: none"> ■ Manage passwords ■ Edit account general information ■ Configure 911 Location Manager ■ Provision locations ■ Provision network elements ■ View provisioned data and logs ■ View call detail records
Provisioning	<ul style="list-style-type: none"> ■ Provision network elements ■ View provisioned data and logs ■ View call detail records
Read-Only	<ul style="list-style-type: none"> ■ View provisioned data and logs ■ View call detail records

ERS Portal User Profile Management

Depending on your user permissions role, you can view and edit your own user profile or another ERS user's profile

View or Edit Your Own User Name, Email, or Password

To view or edit your profile:

- 1 From any screen, click on the **drop-down icon** next to your name and user permissions role in the ERS Portal header, and select **My Profile**, as shown in Figure 20, below. The *My Profile* screen displays.

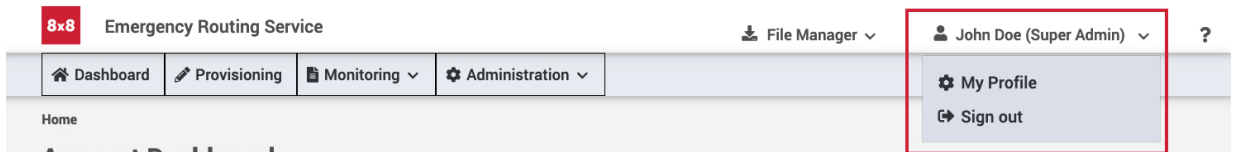
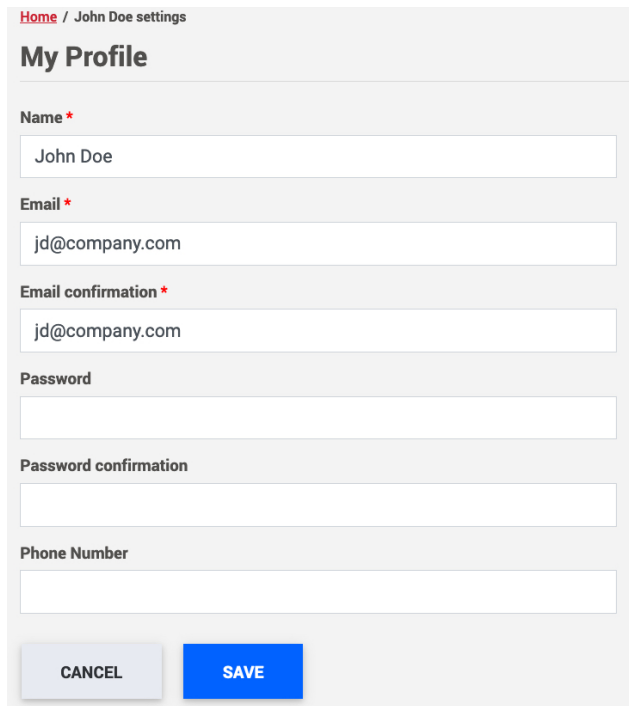


Figure 20: Select My Profile

- 2 On the *My Profile* screen, click in the appropriate field to edit your display name, email, or password, as shown in Figure 21. Click **Save** to save your changes.



The screenshot shows the 'My Profile' settings page for a user named John Doe. The page has a breadcrumb trail 'Home / John Doe settings' at the top. Below the title 'My Profile', there are several input fields: 'Name *' with 'John Doe', 'Email *' with 'jd@company.com', 'Email confirmation *' with 'jd@company.com', 'Password', 'Password confirmation', and 'Phone Number'. At the bottom, there are two buttons: a grey 'CANCEL' button and a blue 'SAVE' button.

Figure 21: My Profile Screen—Edit Your Display Name, Email, Phone, or Password

NOTE | If you have changed your password, you will be logged out of the application, and prompted to log back in using the new password.

Add a New ERS Portal User

NOTE Only Super Admins and Admins can add a new ERS Portal user.

Adding a new ERS Portal user involves three primary steps:

- 1 **Step One**—Determine the specific work you want the new user to perform on the portal. Based on those work requirements, choose the User Permissions Role that best meets the work criteria. Table 5 provides a detailed list of available work tasks by user permission role to help you determine which permissions role is best suited to the new user.
- 2 **Step Two**—Add the new user to the ERS Portal, as described in the instructions that follow.

To add a new ERS Portal user:

- 1 Navigate to the account dashboard of the account to which you want to add a new user.
- 2 In the menu bar, click the **Administration drop-down** icon and select **Users**. The *User List* screen displays as shown in Figure 22.

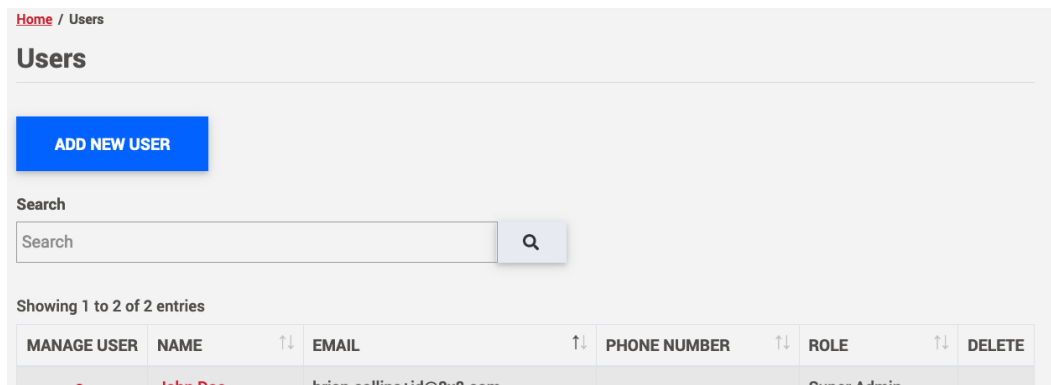
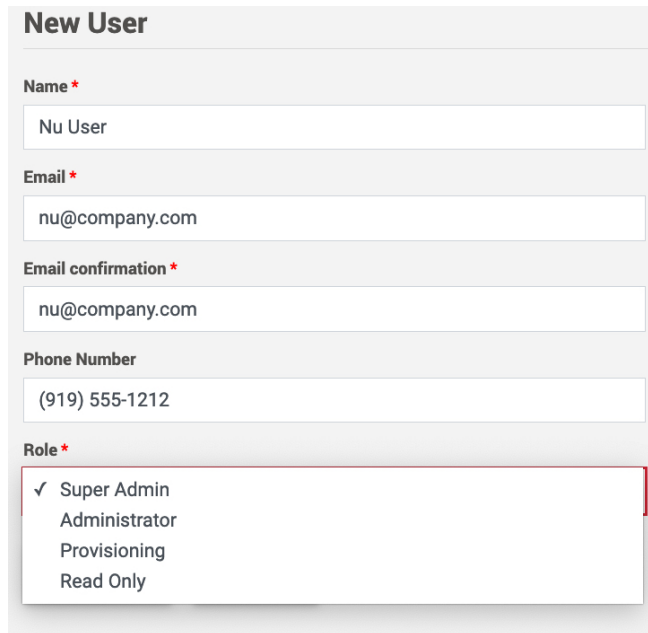


Figure 22: Click Administration and Select Users—The *User List* Screen Displays

- 3 Click the **Add New User** button, as shown in the figure above. The *Add New User* screen displays, as shown in Figure 23.
- 4 Enter a display name, email address, and phone number for the new user.
- 5 Click the **Role drop-down** icon and Assign a user permissions role for the new user.

NOTE Display name, email, and a user permissions role are required properties.



New User

Name *
Nu User

Email *
nu@company.com

Email confirmation *
nu@company.com

Phone Number
(919) 555-1212

Role *

- ✓ Super Admin
- Administrator
- Provisioning
- Read Only

Figure 23: Enter New User Details and Assign a User Permissions Role—Add New User Screen

- 6 Click the **Save** button. The user is added to ERS, their name now appears in the user list. An email is sent to the new user with a link to set their password and access the portal.

NOTE For additional user permissions role information, refer to [“Add a New ERS Portal User”](#), and review Table 5 for a list of work tasks and user permissions roles.

Copy and Provide Portal Access Link

Alternatively, if the user was unable to receive the reset password link by email, you can share it manually by copying and providing it to them. This link is available until the user has reset their password. The instructions below describe how you can copy this link.

- 1 From the *Users* screen, click the **Manage User icon**, as shown in Figure 24. The *Manage User* screen displays.



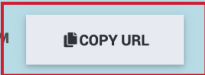
	Nu User	nu@company.com	(919) 555-1212	Super Admin	
Records per page	10				Previous 1 Next

Figure 24: Click Manage User Icon in the Users Screen

- From the *Manage User* screen, click the Reset **Copy URL** button, as shown in Figure 25. This way you can paste this URL into an email or another similar means to provide it to your new user.

Password reset link sent at: 2021-12-15 @ 19:02:33

https://admin.e911.8x8.com/users/password/edit?reset_password_token=nXJTC19Td2HqYDtw2JQM 

Name *

Email *

Email confirmation *

Phone Number

Role *

Figure 25: Click Copy URL button to Copy the Reset Password URL

Change Another ERS Portal User's Password

NOTE | Only Super Admins and Admins can change another ERS Portal user's password.

To change another ERS Portal user's password:

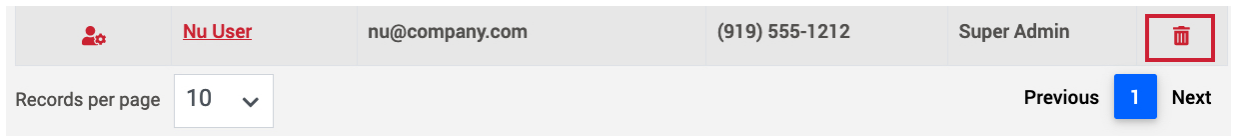
- 1 Navigate to the account dashboard of the user.
- 2 In the menu bar, click the **Administration drop-down** icon and select **Users**. The *Users* screen displays as shown in Figure 22.
- 3 In the user list, click the **Manage User** icon for the user, as shown in Figure 24.
- 4 In the *Manage User* screen, click the **Reset Password** button. The user is sent an email with a link to reset their password. Alternatively, you can also copy and provide the reset password link to your user, as outlined in ["Copy and Provide Portal Access Link"](#).

Delete an ERS Portal User



NOTE Only Super Admins can delete an ERS Portal user.

To delete a user:

- 1 Navigate to the account dashboard from which you want to delete the user.
- 2 In the menu bar, click the **Administration drop-down** icon and select **Users**. The **Users** screen displays as shown in [Figure 26](#), below.
- 3 In the user list, click the **Trash** icon for the user you want to delete.



The screenshot shows a table with user information. The first row contains a trash icon, the name 'Nu User', the email 'nu@company.com', the phone number '(919) 555-1212', and the role 'Super Admin'. The trash icon is highlighted with a red box. Below the table is a 'Records per page' dropdown menu set to '10', and navigation buttons for 'Previous', '1', and 'Next'.

	Nu User	nu@company.com	(919) 555-1212	Super Admin	
---	----------------	----------------	----------------	-------------	---

Records per page: 10 ▾

Previous 1 Next

Figure 26: Click the Trash Icon for the User You Want to Delete—User List Screen Shown

- 4 A confirmation window is displayed, asking if you want to delete the user. Click **Delete** to delete the user.

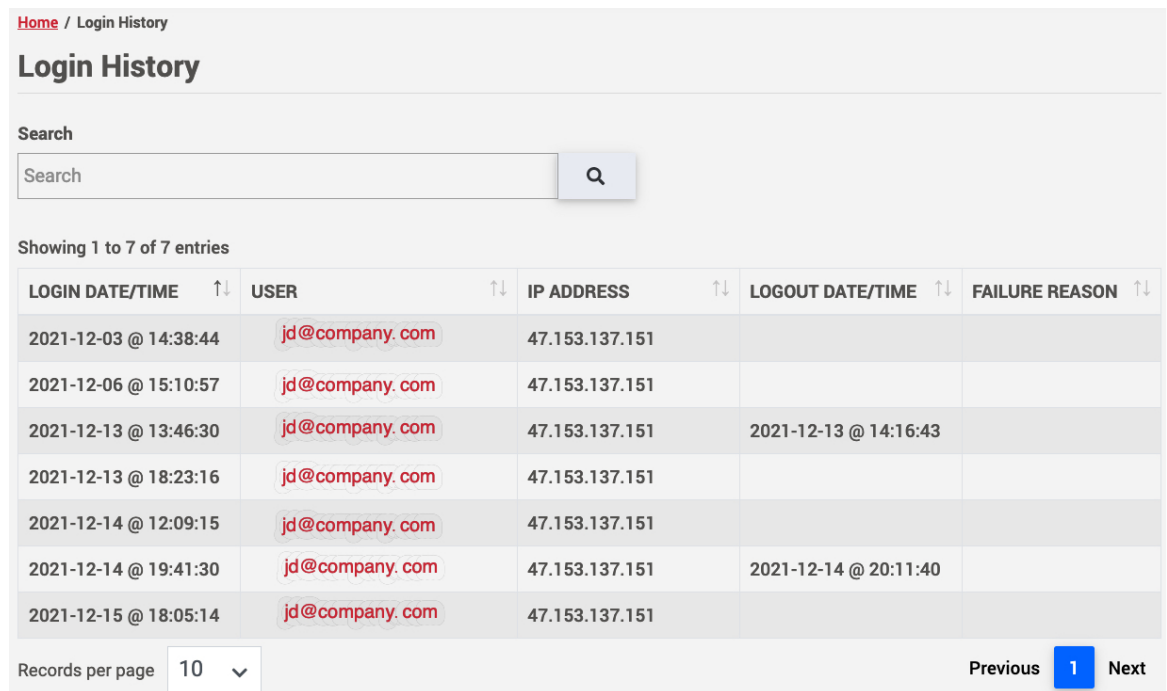
User Login History

NOTE Only Super Admins and Admins can view login history.

To view the login history:

- 1 Navigate to the account dashboard for which you want to view the login history.
- 2 Go to Monitoring --> Login History. The *Login History* screen displays as shown in Figure 27.

The login history shows the user's email address, their IP address, the login and logout date and time—and if they were not able to log in, the reason why their login attempt failed



The screenshot shows the 'Login History' page with a search bar and a table of login events. The table has columns for LOGIN DATE/TIME, USER, IP ADDRESS, LOGOUT DATE/TIME, and FAILURE REASON. The data shows seven login attempts for the user 'jd@company.com' from IP address '47.153.137.151'. Two of these attempts have associated logout times: '2021-12-13 @ 14:16:43' and '2021-12-14 @ 20:11:40'. The page also includes a 'Records per page' dropdown set to 10 and navigation buttons for 'Previous', '1', and 'Next'.

LOGIN DATE/TIME	USER	IP ADDRESS	LOGOUT DATE/TIME	FAILURE REASON
2021-12-03 @ 14:38:44	jd@company.com	47.153.137.151		
2021-12-06 @ 15:10:57	jd@company.com	47.153.137.151		
2021-12-13 @ 13:46:30	jd@company.com	47.153.137.151	2021-12-13 @ 14:16:43	
2021-12-13 @ 18:23:16	jd@company.com	47.153.137.151		
2021-12-14 @ 12:09:15	jd@company.com	47.153.137.151		
2021-12-14 @ 19:41:30	jd@company.com	47.153.137.151	2021-12-14 @ 20:11:40	
2021-12-15 @ 18:05:14	jd@company.com	47.153.137.151		

Figure 27: Login History Screen

Chapter 5

Manage Locations for Your Subscribers

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Overview

The ERS portal serves as a provisioning and validation hub to store emergency locations, network infrastructure details and how they map to one another. Each user that has been enabled with ERS in Admin Console appears as a subscriber in the ERS portal. Those subscribers have an initial emergency location which is then continuously updated by the Location Manager app.

You can provision emergency locations and network infrastructure elements individually or via batch provisioning from the CSV file.

Provisioning Considerations

Table 6, below, lists the caller-related data that can be provisioned in the ERS.

Table 6: Caller Related Data

Provisioning Data	Data fields in the ERS	Description
Subscribers	Subscribers represent users from Admin Console in the form of their 10 digit primary phone number	Users from Admin Console using a physical desk phone, 8x8 Work Desktop or both
Locations	ERLs (Emergency Routing Locations) Represented by their ERL ID (custom identifier or auto-generated GUID)	Location of the caller that is dispatched to the emergency responder.
Subnets	Subnets Represented by their Subnet ID (IP address and subnet mask)	Subnets within which the organization's users are connected.
Access Points	Wireless Access Point Represented by their BSSID.	Access Points that enable wireless devices such as laptops to connect to an enterprise WiFi network.
Switches	Switch and related port information. Represented by the switch's identifier and the port's MAC address.	Switch and port information that identify HELD-compliant hard phones on the enterprise network.
Network Map	Network map is a combination of the following: <ul style="list-style-type: none"> ■ Subnet- ERL association ■ Wireless Access Point- ERL association ■ Switch-ERL association ■ Port-ERL association 	Depending on the Provisioning scenario, subnets, wireless access points, switches and ports are associated to ERLs in ERS.

Unprovisioned Emergency Calls

If someone in your organization dials 911 but they have not yet been provisioned in the ERS, these calls are considered “unprovisioned” and are routed to the ECRC. The caller provides their location to the ECRC operator.

IMPORTANT | For proper PSAP routing, it is very important that each individual in your organization is provisioned in the ERS.

Provisioning Scenarios

This section describes the different provisioning scenarios supported in the ERS as well as the type of data and overview of the workflow required for each. The level of mobility of your callers combined with the nature of your network infrastructure and communication technology determine your provisioning scenarios.

The following sections describe each provisioning scenario currently supported by the ERS and provide clear examples for each to help you identify them better.

Identifying your provisioning scenario(s) is a pre-requisite to provisioning the ERS. Once you have selected the provisioning scenario(s) that fit your needs, you will be ready to provision the necessary data in the ERS, by following their respective workflow.

Scenario A: Fixed Subscribers

This scenario is beneficial for organizations that meet one of the following criteria:

- Individuals do not move frequently and remain within the organization's network boundaries.
- Network infrastructure is defined with multiple subnets for one single location.

In ERS terms, the users are considered **fixed subscribers** with **static ERLs**. When these fixed subscribers place a 911 call, ERS routes the call using the caller ID and the associated ERL information that you provision into the account.

Example: A two-story office building where each employee has a physical desk phone. Employees are assigned a cubicle from where they rarely move.

In this scenario the standard (i.e non-Nomadic) E911 feature should be used. Users should not be enabled for ERS in Admin Console. No configuration in the ERS portal is required.

Scenario B: Subscribers Mobile Within an Organization

This scenario benefits organizations that meet the following criteria:

- You have employees that move frequently within the enterprise's network boundaries.
- Your on-site employees use 8x8 Work Desktop.

For an enterprise's with 8x8 Work Desktop users, **911 Location Manager** is required. 911 Location Manager is an add-on application of the ERS. It detects the subscriber's IP address (for a wired connection) or BSSID (for a wireless connection) and searches for a location using the provisioned network map. If the subscriber does not work remotely, they will not be prompted by 911 Location Manager to enter their address; it automatically assigns a location for the subscriber and cannot be modified.

For example: You have one subnet per floor of the office building and access points for each of the four conference rooms. Employees use 911 Location Manager and connect to the Wireless Access Point when they are in one of the conference rooms. 911 Location Manager detects the IP address or the BSSID of the subscriber's device and finds the location based on the network map.

In this case, provisioning is done in the following steps:

- 1 **Add ERLs** (refer to [“Adding ERLs”](#))
For example: Five ‘floor’ ERLs (one per story) and one additional ‘main’ ERL (no floor associated).
- 2 **Add Network Maps**
 - A **Add Subnets.** See [“Adding Subnets”](#)
Associate subnets to ERLs. For example: Each subnet is associated to the ERL representing one of the floors of a three-story building.
 - B **Add Wireless Access Points.** See [“Adding Wireless Access Points”](#) Associate Wireless Access Points to ERLs. For example, each access point providing a WiFi connection is associated to an ERL.
- 1 **Install the 911 Location manager on user’s device.** (refer to [“911 Location Manager”](#))
- 3 **Enable Users**
Enable ERS for those users in Admin Console

Scenario C: Remote Nomadic Subscribers

This scenario benefits organizations that have a combination of on-site and off-site employees.

These employees are supported using ERS’ s add-on application, **911 Location Manager**. ERS and 911 Location Manager work together to gather the subscriber’s address and route the call.

For off-site subscribers, 911 Location Manager prompts the user to self-provision their address. ERS captures this data and routes the call to the PSAP based on the subscriber-provided address.

For on-site subscribers, the enterprise’s ERS administrator must provision the enterprise’s network map containing subnets and/or Wireless access points. 911 Location Manager does **not** prompt the subscriber for the address. It gathers their IP address (wired connection) or BSSID (for users connecting to WiFi), and matches this information with the pre-provisioned network map. ERS then routes the call to the appropriate PSAP.

Example 1: Sales personnel that travel frequently for trade shows or to customer sites. These employees switch back and forth between traveling and staying on-site, as required. When off-site, 911 Location Manager will prompt them for an address. When on-site, it will stay silent since their address is determined using network maps.

Example 2: A three-story building housing both on-site and off-site employees. These on-site employees use a wired as well as a WiFi network connection. 911 Location Manager stays silent for on-site employees even when they disconnect from their wired connection and connect to a WiFi connection, for example, from a conference room.

In this scenario, provisioning is done by following the steps below:

- 2 **Add ERLs:** refer to [“Adding ERLs”](#))
For example: One ERL for each floor of the building.
- 3 **Configure the network map.** This is optional and is only required if you will have a combination of on-site and off-site users. If you will have only off-site or remote users, you can skip this step and go to Step 3.
 - B **Add Subnets.** See [“Adding Subnets”](#)
Associate subnets to ERLs. For example: each subnet is associated to the ERL representing one of the floors of a three-story building.
 - C **Add Wireless Access Points.** See [“Adding Wireless Access Points”](#) Associate Wireless Access Points to ERLs. For example, each Access Point providing a WiFi connection is associated to an ERL.
- 4 **Configure the 911 Location Manager** (refer to [“911 Location Manager”](#))
This involves setting the number of licenses for 911 Location Manager. Several configurable options are also available.
- 5 **Install the 911 Location manager on user’s device.** (refer to [“911 Location Manager”](#))
- 6 **Enable Users**
Enable ERS for those users in Admin Console

Immediately following installation, subscribers are prompted to provide their phone number and should enter their primary phone number . This step is mandatory in order to use 911 Location Manager.

Scenario D: Organizations with HELD-Compliant Desk Phones

Only specific models of physical desk phone are supported for Nomadic 911.

Supported desk phones send their network information such as BSSID, IP address, Switch ID and Port ID to the ERS in a HELD request. The ERS processes this information to determine the location based on the pre-provisioned network map. The location information is returned to the hardphone, which is saved and sent at call time. ERS routes the call according to the information it receives at call time.

Provisioning for this scenario has the following steps:

- 1 **Add ERLs:** refer to [“Adding ERLs”](#))
For example: One ERL for each floor of the building.
- 2 **Configure the network map**
 - A **Add Subnets:** See [“Adding Subnets”](#)
Gather the Subnet information of your network and associate these Subnets to ERLs in the ERS account.
Example: Associate a Subnet called **Floor 1** with Subnet and mask **192.168.55.0/24** to **ERL A**. ERS receives a HELD request with the phone’s IP

address provided as **192.168.55.50**. This IP address falls within the Subnet and mask that is associated to **ERL A**. Hence, the location information associated to **ERL A** is sent in the HELD response to the phone.

- B Add Wireless Access Points:** See [“Adding Wireless Access Points”](#) Gather the Access Point information of your network and associate it to ERLs in the ERS account.

Example: Associate Access Point called **Floor 1 — Conference Room** with BSSID **94:b4:0f:38:1f:80** to **ERL B**. ERS receives a HELD request with the phone’s BSSID provided as **94:b4:0f:38:1f:80**. Since this BSSID matches the one associated with **ERL B**, this is determined as the phone’s location and returned to the phone in the HELD response.

- C Add Switches and Ports:** See [“Adding Switches and Ports”](#)

Note that in order for location detection on the basis of switch and port to work, the switch must have Link Local Discovery Protocol (LLDP) enabled. Gather the switch information of your network. Add this information and associate it to proper ERLs in the ERS.

The HELD request from a desk phone typically includes the Chassis ID and the Port ID. ERS matches the incoming switch and/or port information to the pre-provisioned information in the network map and determines the ERL.

NOTE

ERS prioritizes the Port ID over the Switch ID. That is, when the HELD request contains the Chassis ID (Switch ID) and the Port ID, the Port ID is first considered by the ERS to obtain a match with the pre-provisioned network map and determine the ERL. When a match is not determined for the Port ID, the Chassis ID is considered.

Example: Consider the following network setup for a three-story office building:

- **Switch A** is added for the whole building and associated to **ERL A**
- **Port 1** is added for Floor No. 1 and is associated to **ERL B**
- **Port 2** is added for Floor No. 2 and is associated to **ERL C**

The phone sends a HELD request to ERS with Floor No.1’s Port ID and the building’s switch Chassis ID. Since Port ID overrides the switch’s Chassis ID, ERS determines **ERL B** as the phone’s location and sends this location in the HELD response.

D Enable Users

Enable ERS for those users in Admin Console. As well as creating a subscriber entry for the user in the ERS portal, this will also configure the user’s physical desk phone to make HELD requests to the ERS each time it reboots or detects a change of connectivity.

Provisioning Screen Components

The *Provisioning* screen is accessed by clicking the **Provisioning** button in the main menu or by clicking the **View Provisioning Details** button, as shown in Figure 28, below. The *Provisioning* screen displays, as shown in Figure 29.

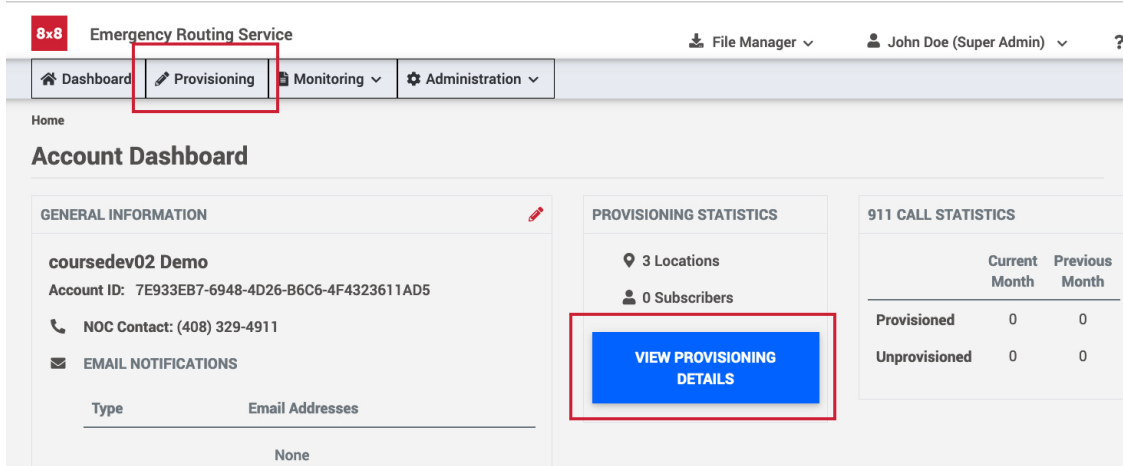


Figure 28: Click Either Button to Access the Provisioning Screen from ERS Home screen

The *Provisioning* screen displays the ERLs present in your account, with the most recently added ERL on top.

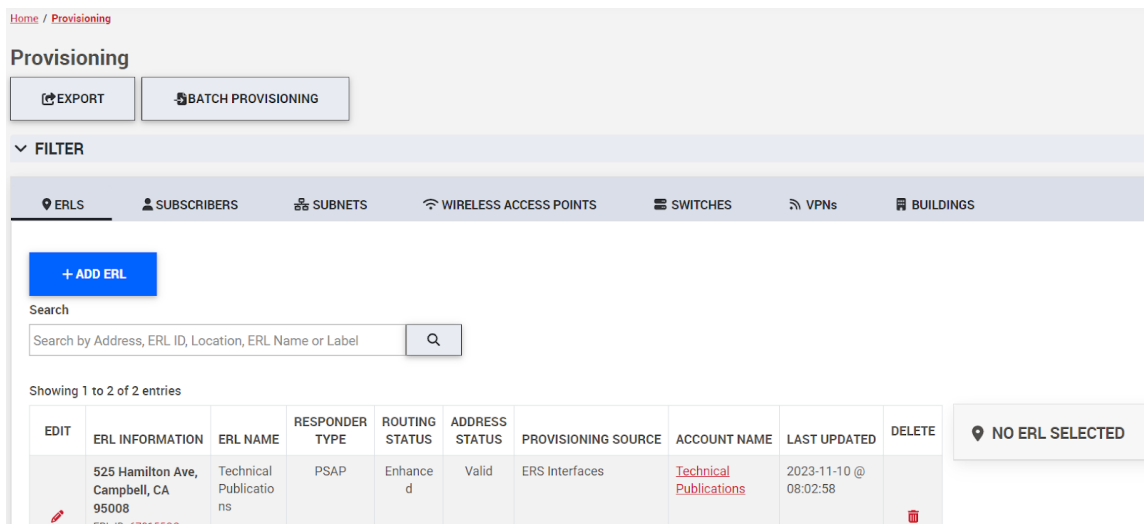


Figure 29: Provisioning Screen —Deployment Account Showing ERLs, Subscribers, Subnets and Wireless Access Points Shown

IMPORTANT

Please note that starting with this release **VPN** tab is not used and should **NOT** be configured with anything. It is there in preparation for a future release.

In the *Provisioning* screen, the following items are of special interest, as shown in Figure 30

- 1 **+ADD ERL:** Click this button to add ERLs.
- 2 **ERL Row:** Click on each ERL row to view the associations that were provisioned for it. The associations are displayed on the right hand side of the screen.
- 3 **ERL ID:** The ERL ID displayed in the *ERL Information* column is a hyperlink. Clicking the ERL ID hyperlink will take you to the *Edit ERL* screen where you can make any necessary changes.
- 4 **Edit:** Click **Edit** (pencil icon) to edit the ERL.
- 5 **Account Name:** Click the *Account Name* hyperlink to view details about the current account.
- 6 **ERL Associations:** View and learn more about the various elements that are associated to the chosen ERL. See [“ERL Associations”](#) for detailed information on how the elements are displayed here.
- 7 **Relocate:** In the *ERL Associations* window, you can relocate a Subscriber to a different ERL by clicking the **Relocate** icon.
- 8 **Delete:** In the *ERL Associations* window, you can delete associations by clicking the **Delete** icon

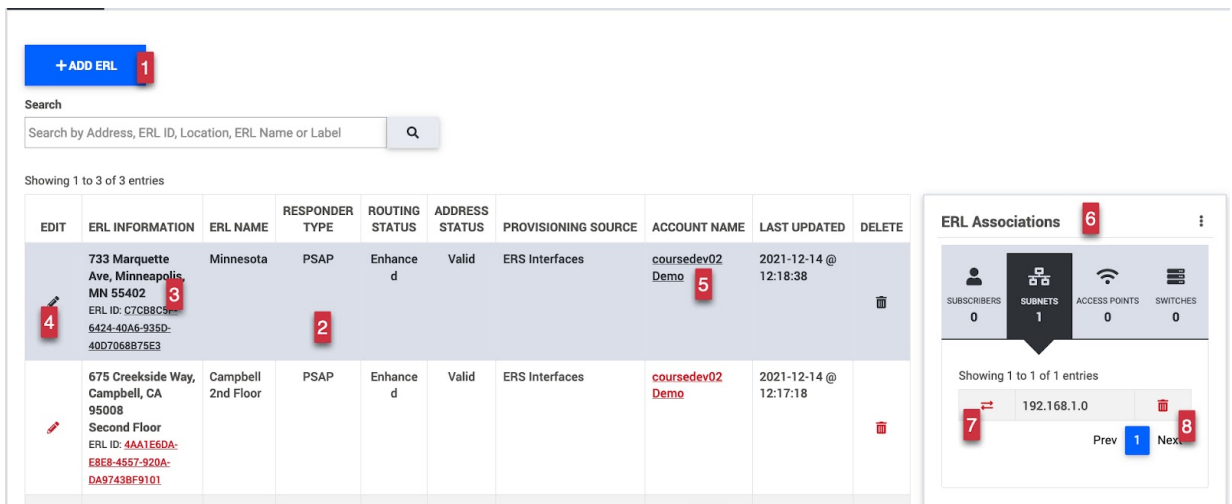


Figure 30: Provisioning Screen

The **Subscribers, Subnets, Wireless Access Points** and **Switches** tab display the Subscribers, Subnets, Wireless Access Points and Switches associated with the ERLs in the selected account. If **Include Sub Accounts** is checked in the Filter section, the list reflects this change. Filters are described in [“Filter and Search”](#).

ERL Associations

Using **ERL Associations**, you can view, relocate and delete the associations that belong to a specific ERL. It displays to the right of the ERL row that is selected, as shown in Figure 30.

ERL Associations enables you to perform the following:

- View a list of all associations that are attached to the selected ERL by clicking on each element's name: **SUBSCRIBERS**, **SUBNETS**, **ACCESS POINTS**, **SWITCHES**. The number of associations is also displayed under the element. See Figure 31.

The screenshot shows the 'ERL Associations' interface. At the top, there are four tabs: 'SUBSCRIBERS' (13), 'SUBNETS' (2), 'ACCESS POINTS' (1), and 'SWITCHES' (0). Below the tabs, it says 'Showing 1 to 10 of 13 entries'. A table lists 10 subscriber numbers, each with a red double-headed arrow icon to its left. At the bottom, there are navigation buttons: 'Prev', '1' (highlighted), '2', and 'Next'.

Icon	Subscriber Number
↔	(209) 442-9229
↔	(209) 442-9320
↔	(209) 442-9235
↔	(209) 442-9208
↔	(209) 442-9486
↔	(209) 442-9343
↔	(209) 442-9682
↔	(209) 442-9165
↔	(209) 442-9737
↔	(209) 442-9362

Figure 31: ERL Associations

- Relocate the association to a different ERL by clicking the **Relocate** icon and choosing another ERL.
In the example shown in Figure 32, Subscriber (514) 333-3345 has been relocated from ERL 101, Main Street to ERL 100, Main Street. The same procedure can be used to relocate Subnets, Access Points and Switches.

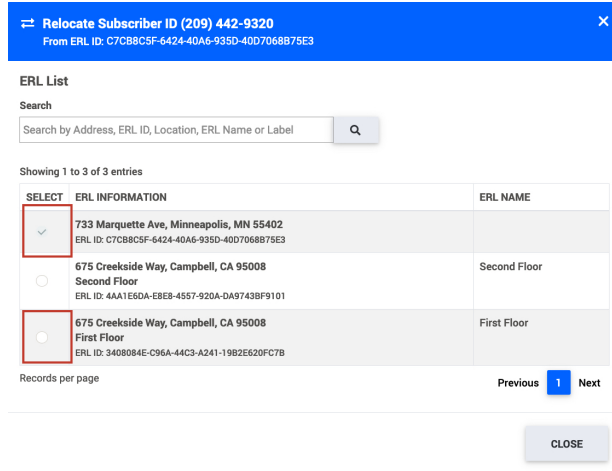


Figure 32: Relocate Subscriber

- Delete the association by clicking the **Delete** icon.

Switches and Ports

When `Switches` are selected under `ERL Associations`, only the switches and ports that are associated to the selected ERL are displayed.

In some cases, a switch's port may be associated to another ERL. This port is **not** displayed when the switch's ERL is chosen. This port is displayed only when the ERL to which it belongs is selected. `ERL Associations` does not display the ports that are added to the switch. In the example shown in Figure 33, switch `Floor 2` is displayed with a red exclamation mark next to it. This is due to the fact that the chosen ERL has one port attached to it. The `ERL Associations` displays the switch `Floor 2` to signify the fact that this port belongs to it.

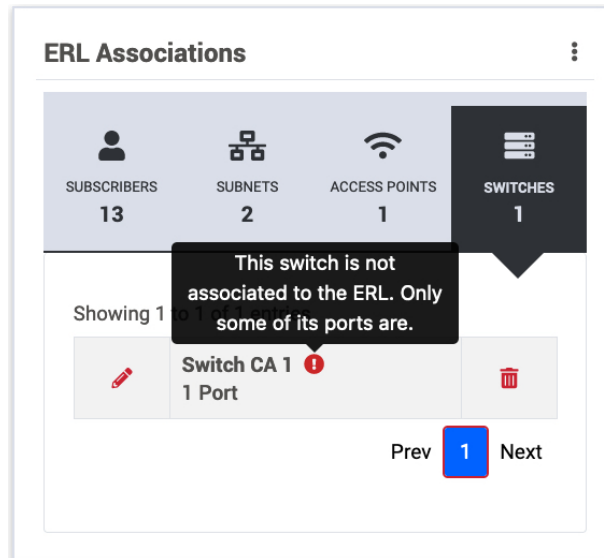


Figure 33: Switch Not Associated to Same Port as ERL

Filter and Search

You can delimit the list of records through filter and search options. Filter the list by clicking the **Filter Arrow** to expand the filter selections, as shown in Figure 34. Select from the available drop-down selections. Only the ERLs matching the filter criteria are displayed. Click the **Filter** button to filter the list. To save your filter selections, click the **Save As...** button. To cancel the selected filters, click **Reset Filter**.

Detailed filter and search instructions are provided in [“Searching and Filtering ERLs and Associated Records.”](#)

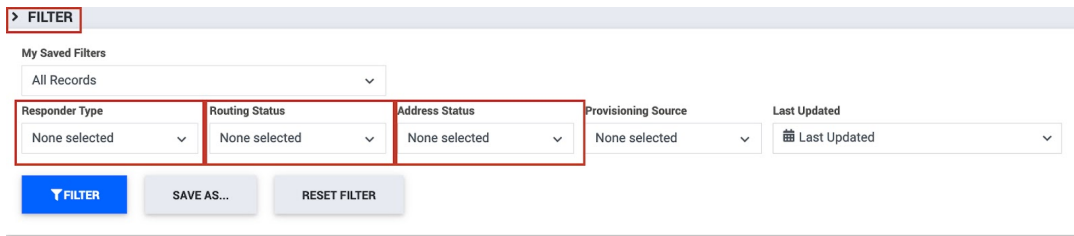


Figure 34: Provisioning Screen—Filter Section Expanded and Include Sub Accounts Checked

Search for specific **ERLs**, **Subscribers**, **Subnets**, **Access Points** and **Switches** by selecting the appropriate tab and then entering text in the `Search` field.

Step-by-Step Provisioning Instructions

All the scenarios described earlier require you to provision data into your account. Irrespective of the scenario that you want to provision for, the following prerequisites apply:

- Ensure your user role permissions allow you to provision data. If you feel you are missing permissions, contact your ERS system administrator.
- Gather a list of all civic addresses or geo-coordinate location information (latitude and longitude) that you want to provision as ERLs.
- Gather the Subnet and Access Point information you want to associate with the ERLs.
- Ensure your network setup has been modified if required to allow devices to uniquely identify their location on the basis of their network infrastructure details.

Adding ERLs

Adding an ERL is required for all provisioning scenarios except when adding a Dynamic Subscriber. In ERS, there are two ways to define an ERL:

- By using a standard civic address —such as, 123 Main St., Longmont, CO 80503—for the location. This is the standard method of provisioning a 911 location.
- By using geo-coordinates—that is, by assigning a latitude and longitude to specify a geographic location. This method is most appropriate for locations that do not have standardized civic street addresses—for instance, a remote work location in a national forest or on an oil rig.

A civic address entered in ERS will be validated against an Master Street Address Guide (MSAG) list of all known valid address location within a specific 911 service region. If the civic address entered matches an MSAG record, then ERS “validates” the address. Validation also provides the level of service and responder type for the location. If the address entered does not match a known MSAG record, then ERS flags the address as unvalidated. For

additional information on address validation, refer to [Appendix C: “ERS Civic Address Validation”](#).

In contrast, ERLs that are entered using latitude and longitude geo-coordinates are not “validated” by the ERS system against a list of known locations. Instead, ERS performs a check to ensure that the geo-coordinates are properly formatted and in the ERS service area. The responder type is also returned. Since the coordinates are not validated, it is recommended that when you provision using latitude and longitude that you also provide additional location details such as mile marker information or a descriptive identifier such as: Gulf Coast Oil Rig #1 or Green Mountain Fire Lookout Ranger Station 5.

For instructions on adding an ERL using a civic address, please refer to the ["Adding an ERL Using a Civic Address"](#) section that follows. For instructions for adding an ERL using geo-coordinates, please see [“Adding an ERL Using Geo-Coordinates”](#). For descriptions of the various ERL fields, see [Appendix A: “Field Descriptions”](#).

Adding an ERL Using a Civic Address

To add an ERL using an address:

- 1 Click the **Add ERLs** button from the *Provisioning* screen. The *Add ERL* screen appears, guiding you through the steps to add an ERL.

ERS Guides You Through Three Potential Steps to Add an ERL

The screenshot shows the 'Add ERL' screen with a progress bar at the top indicating three steps: 1. VALIDATE ADDRESS, 2. CONFIGURE ROUTING, and 3. ADD ASSOCIATIONS. The first step is currently active. Below the progress bar is a form titled 'Emergency Response Location'. The form includes a 'Provisioning Mode' section with two radio buttons: 'Civic Address' (selected) and 'Find or enter Lat/Long'. Below this are several required fields: 'ERL Name *', 'House # *', 'Street/Road *', 'City *', 'Country *' (with a dropdown menu set to 'US'), 'State *' (with a dropdown menu set to 'Alabama'), and 'ZIP Code *'. There is also a 'Location' field with a placeholder 'e.g. Floor, Suite ...'. At the bottom of the form are two buttons: 'CANCEL' and 'VALIDATE ADDRESS'.

Figure 35: Add ERL Screen—Showing the Three Steps to Add an ERL Using a Civic Address

- 2 In the **STEP 1 — VALIDATE ADDRESS** section, check the **Civic Address** radio button.
- 3 Enter a name in the `ERL Name` field.
- 4 Enter the civic address information for your ERL in the required address fields.

NOTE | **ERL Name** and the civic address fields are required fields. Required fields are marked with an asterisk.

- 5 In the **Location** field, add any optional location information that would be helpful for emergency call takers.
- 6 Click the **Add Label** icon to add an optional descriptive label for the location.
- 7 Click the **Validate Address** button, as shown in Figure 36, below. The ERS performs address validation to verify the accuracy of your address and provides feedback as shown in Figure 37.

NOTE | When you click on **Validate Address**, ERS processes this address to ensure its accuracy. If any of the fields entered for your address is invalid, ERS fails the validation process and you cannot proceed to the next step. For more information on the criteria that ERS uses to validate addresses and how to correct any errors see [Appendix C: “ERS Civic Address Validation”](#). ERS also provides the reason for failing the validation.

Emergency Response Location

Provisioning Mode
 Civic Address Find or enter Lat/Long

ERL Name * * Required

House # * **Street/Road ***

City * **Country ***

State * **ZIP Code ***

Location

Add Label

Figure 36: Add ERL Screen—Enter the ERL Name, the Civic Address, and Click Validate Address

 **Acme**

 **Location successfully validated**

675 Creekside Way, Campbell, CA 95008
4th Floor


 **Valid address**

 **Routes to PSAP with enhanced 911 capabilities**

Figure 37: Address Validation Message

In the example below, District of Columbia was mistakenly selected as “State.” ERS returns a geocode error, as shown in Figure 38.

 **Acme**

 **Could not geocode this civic address. Please check the validity of your address.**

Provisioning Mode

Civic Address Find or enter Lat/Long

ERL Name * * Required

Acme

House # * **Street/Road ***

675 Creekside Way

City *

Campbell

Country *

US ▾

State *

District of Columbia ▾

ZIP Code *

95008

Location

4th Floor

 **Add Label**

CANCEL

VALIDATE ADDRESS

Figure 38: Invalid Address Entered with Wrong State—Geocode Error Returned

Adding an ERL Using Geo-Coordinates

Adding an ERL using geo-coordinates is particularly useful if you know that a location is not MSAG-Valid. For example, the address may not be yet available in the MSAG authority because the location is a new development or it is an area that does not have an address, such as a coastal oil rig.

As mentioned earlier, geo-coordinates are not MSAG-validated against a master database of known locations. Given this, when geo-coordinates are used to provision a location, it is optional to provide an associated full or partial civic address. If you do provide a civic address using the geo-coordinates option, the civic address is not validated by ERS as it is would be if civic address provisioning were selected. However, if you do provide a complete or partial civic address, that information will be displayed at the PSAP, along with any information entered into the location details field.

To add an ERL using geo-coordinates:

- 1 In the *Add ERL* screen, **STEP 1 — VALIDATE ADDRESS** section, select **Find or enter Lat/Long**. The *Add ERL* screen changes to display Google Maps, as shown in Figure 39.

NOTE	ERS leverages the web mapping and geo-positioning capabilities of the Google Maps API to enable you to choose latitude and longitude values for an ERL.
-------------	---

- 2 From the Validate Address step, you can provide geo-coordinates for the location in three ways. You can:
 - A Move the Google Map marker to the ERL location. The latitude and longitude coordinates are displayed for the location, as in Figure 39:

Find on map *
Enter latitude, longitude in decimal degrees or the street address.

Search by address or geocode

MAP SATELLITE

Zzyzx CA US
35.11757965804699, -116.0618641557518

United States

Warning: Emergency response will be based on your exact Lat/Long coordinates.

Civic Address (optional)

House Number	Street/Road
<input type="text"/>	<input type="text"/>
City	Country
<input type="text" value="Zzyzx"/>	<input type="text" value="US"/>
State	ZIP Code
<input type="text" value="California"/>	<input type="text"/>
Location <input type="text" value="e.g. Floor, Suite ..."/>	

[Add Label](#)

CANCEL NEXT

Figure 39: Move the Google Map Marker to the ERL Location

- B Alternatively, begin entering an ERL civic address in the search bar and choose from the address suggestions that are provided, as shown in Figure 40.

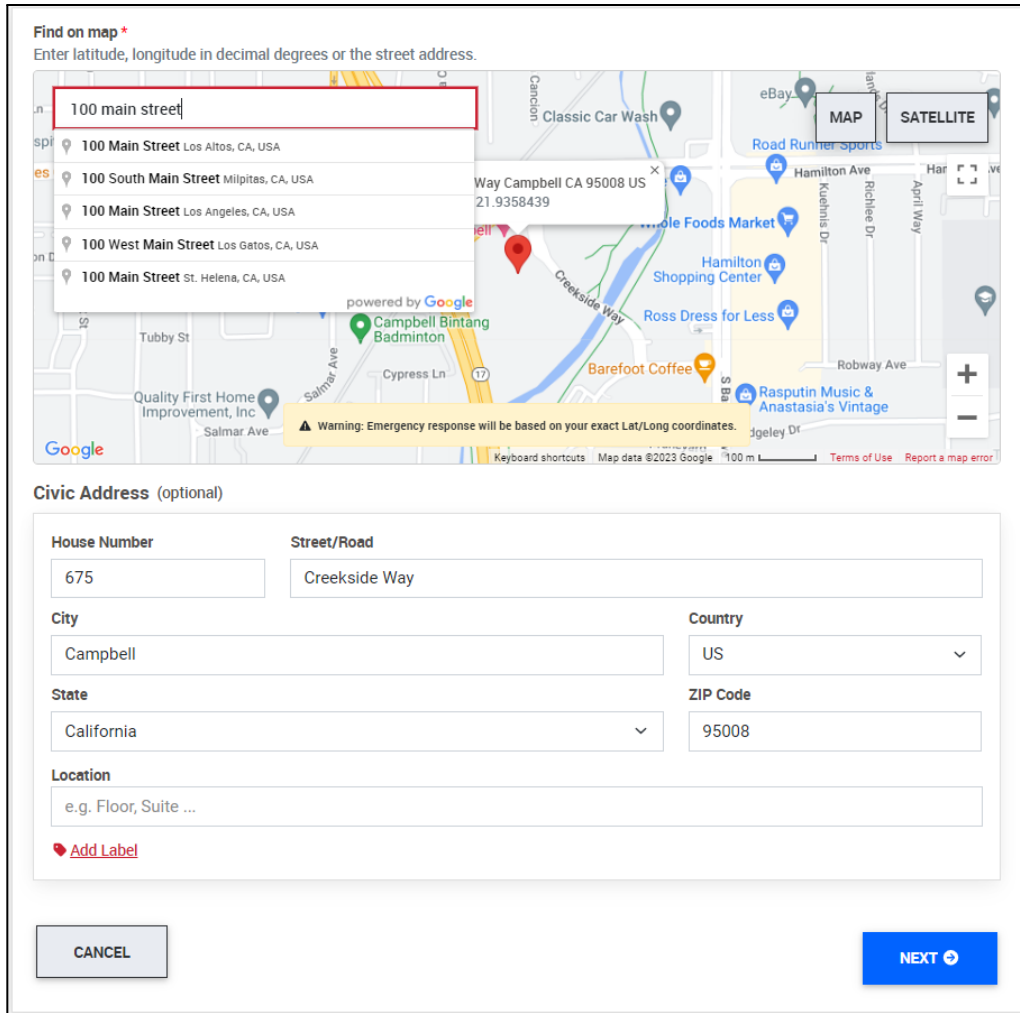


Figure 40: Start Entering a Civic Address and Choose a Suggested Address

- C Alternatively, enter the exact latitude and longitude values of the location in the Google Maps Search bar and click **Enter**. Google Maps displays the location represented by the geo-coordinates that you entered, as shown in Figure 41.

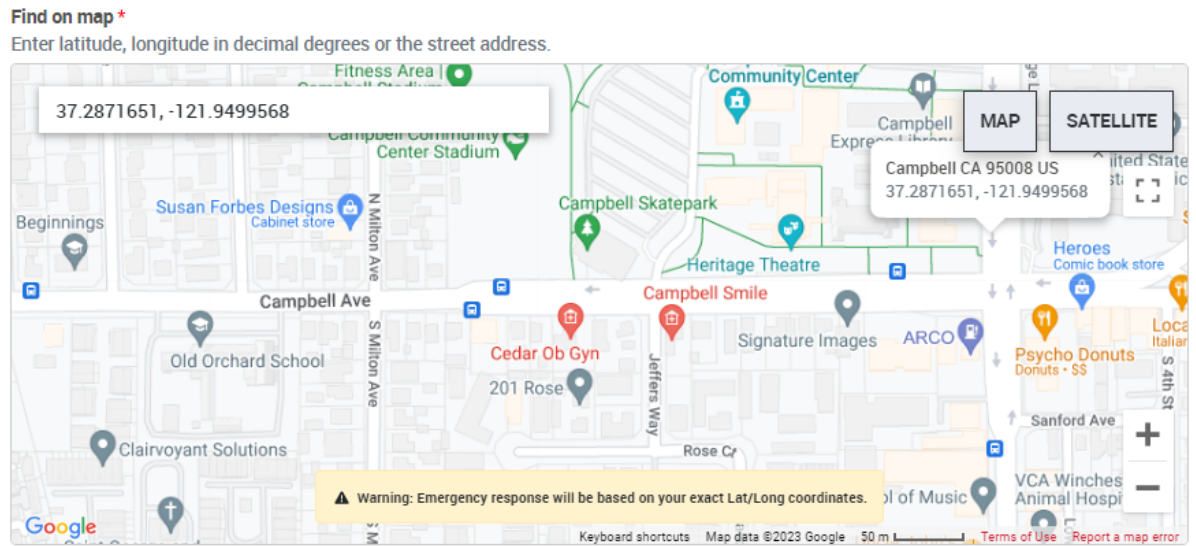


Figure 41: Enter Latitude and Longitude Values in the Google Maps Search Bar and Click Enter

- 3 In the **Name** field, enter a unique name for the ERL.

NOTE | **ERL Name** is a mandatory field.

- 4 In the **Civic Address** section, provide a partial or complete civic address.

NOTE | Providing a partial or complete civic address is optional. If you choose to provide a civic address in addition to latitude and longitude coordinates, ERS will not validate the address. ERS routes the call based solely on the provided lat/long, not the civic address.

- 5 In the **Location** field, enter any information that would be helpful to identify the location for Emergency Responders, such as Gulf BP Oil Rig No 2. Click the **Next** button. See Figure 42. You can also click the **Add Label** icon and add any other information to identify the location.

Civic Address (optional)

House Number	Street/Road
<input type="text"/>	<input type="text"/>
City	Country
<input type="text" value="Campbell"/>	<input type="text" value="US"/>
State	ZIP Code
<input type="text" value="California"/>	<input type="text" value="95008"/>
Location	
<input type="text" value="e.g. Floor, Suite ..."/>	
Add Label	

CANCEL

NEXT

Figure 42: Providing the Civic Address - Optional

NOTE The Location and Label fields are optional.

Although ERS does not validate the location, ERS does check the lat/long coordinates to ensure that the location is within the ERS coverage area, as shown in Figure 43. If a 911 call is made from a subscriber associated with this ERL, the call is routed to the PSAP and includes the geo-coordinates, and any user-provided location details and civic address information.

Add ERL

1 VALIDATE ADDRESS 2 CONFIGURE ROUTING

TECHNICAL PUBLICATIONS

675 Creekside Way , Campbell, 95008 US
37.28676399671324,-121.95262491703033 user-provided

37°17'12.4"N 121°57'09.5"W
166 W Campbell Ave, Campbell, CA 95008, USA

ROUTING OPTIONS

Delivery Method
 PSAP Security Desk Three way

Custom Callback

Email Notifications

ERL ID

CANCEL ADD ERL

Figure 43: The Add ERL Screen Displays the User-Provided Geo-Coordinates for the Newly-Added ERL

Configure Routing

- 1 Following a successful validation, proceed to the **STEP 2 — CONFIGURE ROUTING** section as shown in Figure 44, below. Please note that Canadian Location provisioning has been activated in this account.

↕ Routing Options

Delivery Method

PSAP Security Desk Three way

Custom Callback

Email Notifications

ERL ID

CANCEL

ADD ERL

Figure 44: Step 2 Configure Routing Screen—PSAP Routing Selected

NOTE Some accounts are configured in a manner where you cannot configure routing options. For example, Residential SIP Accounts. In these cases, the screen prompts you to finish adding the ERL.

- 2 In the **Select Routing Options** section, configure the following:
 - A Choose the language, **English** or **French**. The option to choose the language only appears when the ERL Country was chosen as Canada.
 - B Choose the destination for the call originating from this ERL. Select either PSAP, Security Desk, or Three Way. See [“Call Delivery Options Per ERL”](#) for more information on how calls are routed based on the choices you make here.
 - C Enter the custom callback number.
- 3 Enter a valid email address in the `Email Notifications` field and click the **+** icon. The recipient will be notified when an emergency call is made from this ERL.

NOTE A notification is sent to the email recipient only when an emergency call is made from a subscriber associated to this ERL. When a test call originates from this ERL, the email recipient is **NOT** notified.

4 Click the **Add ERLs** button. The ERL is created as shown in Figure 45, below.

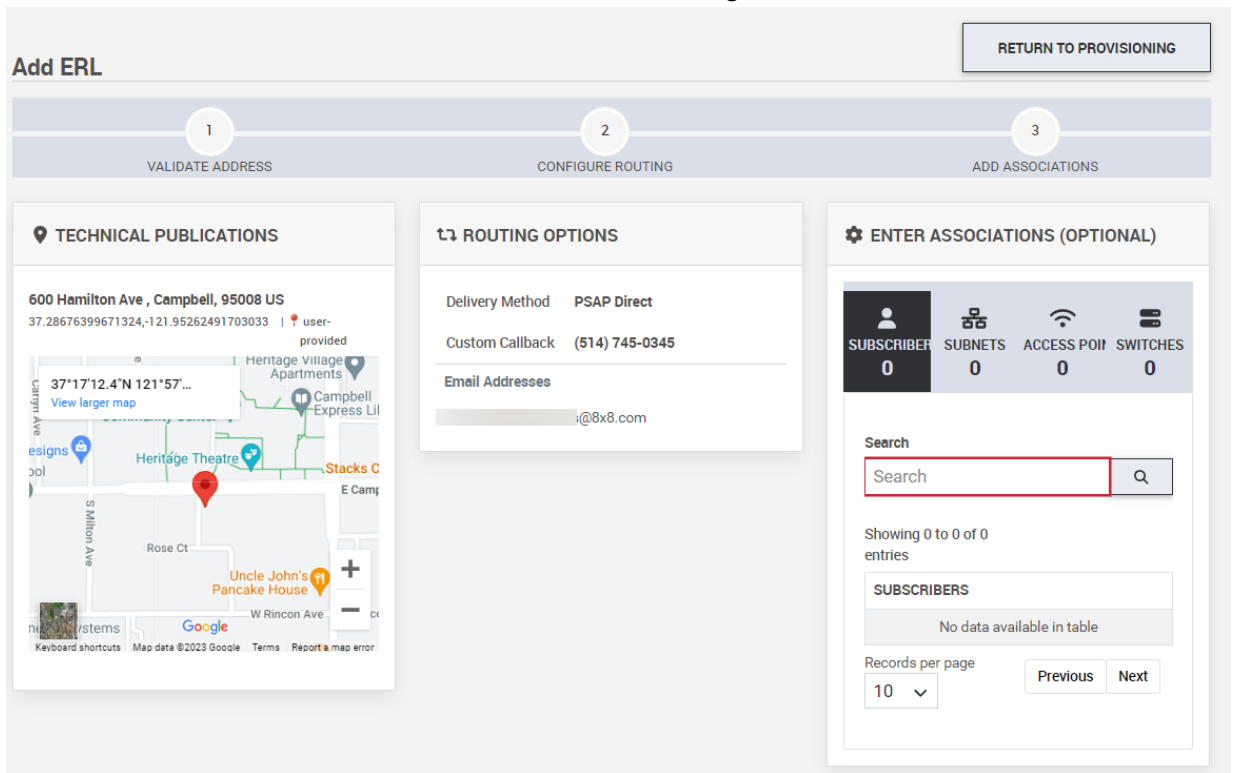


Figure 45: ERL Added —PSAP Direct Routing Option Shown

NOTE After adding the ERL, some scenarios require you to add subscribers whereas some require you to add Subnets, Access Points or Switches, based on your account configuration.

Adding Subscribers: Enabling ERS for Users in Admin Console

Subscribers are not added directly in the ERS portal. They are automatically added and removed when a user is enabled or disabled for ERS in the Admin Console portal.

From the Admin Portal Users page you can see which users are already enabled in ERS by the icon next to their name

Home / Users Search by name, extension, username or email

Filters

Site ▲

- All
- NoGas Central
- NoGas HQ




Status ▲

- All
- Active
- Deactivated

Profile policy ▲

- All
- 8x8 Master User Te...
- Reception - no meeti...

Showing: 60 results for Users

<input type="checkbox"/>	Name ↑	Phone number	Extension number	Email
<input type="checkbox"/>	AS Adolfo Schneider	+1 209-442-9618	10036	Adolfo.Sc
<input type="checkbox"/>	AB Alden Bell 	+1 209-442-9362	50096	Alden.Bel
<input type="checkbox"/>	AD Alisha Delgado 	+1 209-442-9208	50098	Alisha.De
<input type="checkbox"/>	AP Alta Page 	+1 209-442-9486	50069, 60028	Alta.Page

To Enable ERS for a user

1. Edit the user by clicking on the edit end-of-row icon
2. In the services section, toggle on the Enable Emergency Routing Service switch
3. Save

Services and permissions

Configure and modify license assignments.

Assign a profile policy

8x8 Master User Template

Assign one or more services to user

X Series - X4-VOSVC0216-04-US

× +

↳ Enable Emergency Routing Service



↳ Enable Frontdesk



Note that when a user is Enabled for ERS in Admin Console, their emergency address can no longer be modified from within Admin Console and the user can no longer modify their own emergency address is the user profile page accessed from the Work Desktop settings.

Service location



Emergency services are configured through the [8x8 Emergency Routing Service](#)

Address

This address will be used to determine taxes and fees on your bill

If the user has an activated desk phone but that model does not support Nomadic 911, a warning icon will be shown.

IMPORTANT

It is not recommended to use 8x8 Work Desktop with Location Manager alongside a desk phone that is not supported for Nomadic 911. In this situation any emergency call made from the desk phone will have whatever location information was last provided by Location Manager, which may be somewhere different to the desk phone.

Adding Subnets

Associating Subnets to an ERL is required for the following cases:

- 1 You have users that are nomadic within the enterprise network.
- 2 Your deployment includes HELD-compliant desk phones that will send their IP address to the ERS service.

There are two ways to associate a Subnet to an ERL.

Method 1 – Add ERL Screen

- 1 In the *Add ERL* screen, under **STEP 3 – ADD ASSOCIATIONS**, enter the *Subnet Name* and the *Subnet Mask* and click on the **+** icon, as shown in Figure 54 below:

3
ADD ASSOCIATIONS

⚙️ Enter Associations (optional)

SUBSCRIBERS 0 SUBNETS 0 ACCESS POINTS 0 SWITCHES 0

Subnet Name * Subnet Mask *

3rd Floor NW 255.255.0.0/16 +

Search

Search

Showing 0 to 0 of 0 entries

SUBNETS
No data available in table

Records per page: 10 Previous Next

Figure 54: Enter Subnets and Click the + Icon

Method 2 – Add Subnet(s) Screen

- 1 In the *Provisioning* screen, click on the **SUBNETS** tab and then click the **+ ADD SUBNET** button. See Figure 55.

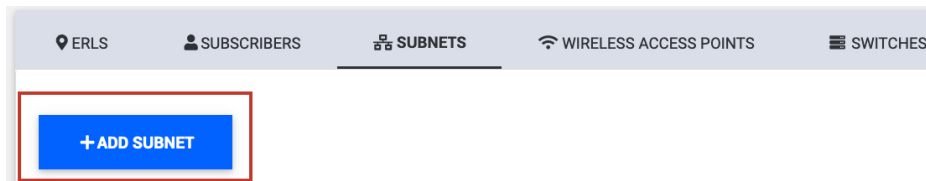


Figure 55: Click +ADD SUBNET Button

- 2 The *Add Subnet* screen displays. Here, you can add a new subnet using a three-step process, as shown in Figure 56.

Three-Step Process to Add a New Subnet

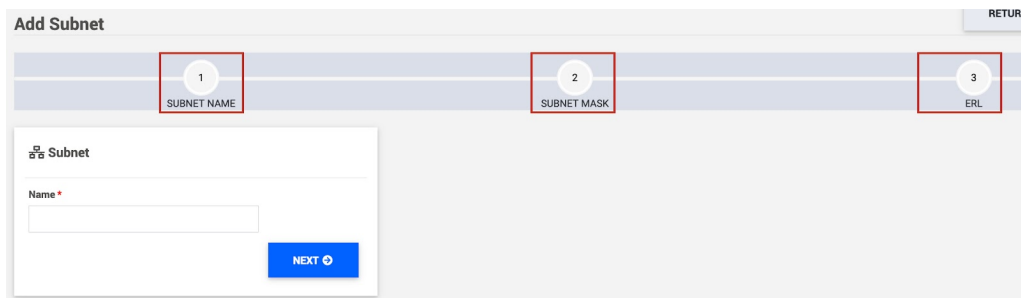


Figure 56: Three-Step Process for Adding a New Subnet

- 3 To add a new subnet:
 - A Under *Name*, provide a name for the new subnet in the *Name* text box and click **NEXT**.
 - B Under *Subnet Mask*, provide a subnet mask value in the *Subnet Mask* text box and click **NEXT**.
 - C Under *ERL*, you can associate this subnet to an ERL either by searching for ERL in the *Search* text box or by choosing the appropriate ERL from the list of ERLs provided. Then, click **ADD SUBNET** to finish adding the new subnet.

See Figure 57 for an example.

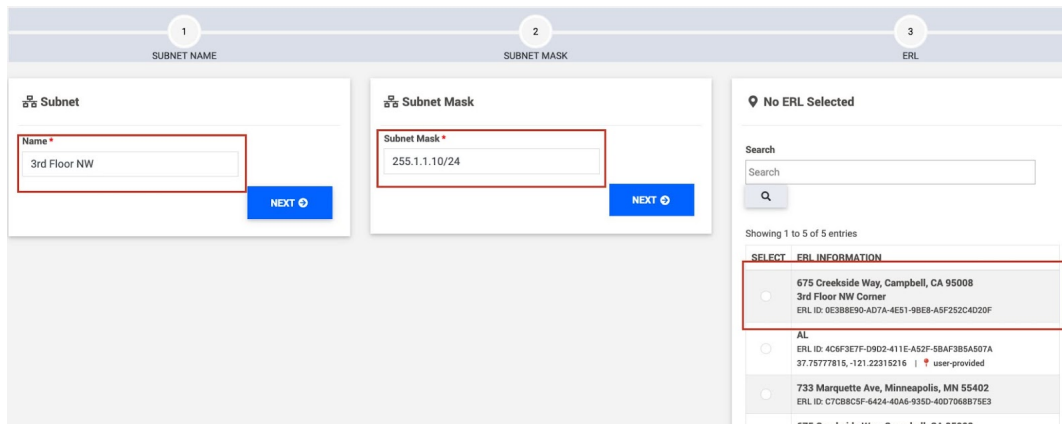


Figure 57: Adding a New Subnet and Associating to an ERL

Adding Wireless Access Points

Associating a Wireless Access Point to an ERL is required in the following cases:

- 1 You have subscribers that are nomadic within the enterprise network.
In this case, 911 Location Manager users connect to the enterprise’s Access Point when they are on-site.
- 2 Your deployment includes HELD-compliant desk phones that will send the BSSID of their Access Point to the ERS service.

NOTE For Access Points, you can have multiple access points with the same name but they must have different BSSIDs.

For example, adding the following 2 access points is supported:

Access Point Name = Floor 1
BSSID = 11:22:33:44:55:66

Access Point Name = Floor 1
BSSID = 11:33:44:55:66:77

To add Access Points:

- 1 From the *Provisioning* screen, click the **WIRELESS ACCESS POINTS** tab.
- 2 Click the **+ADD WIRELESS ACCESS POINT** button. See Figure 58.

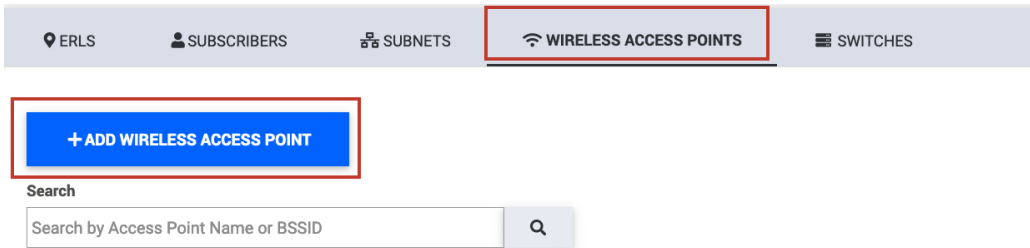


Figure 58: Adding a Wireless Access Point

- 3 In the *Add Wireless Access Point* screen, provide a name for the new Wireless Access Point and click **Next**. See Figure 59.

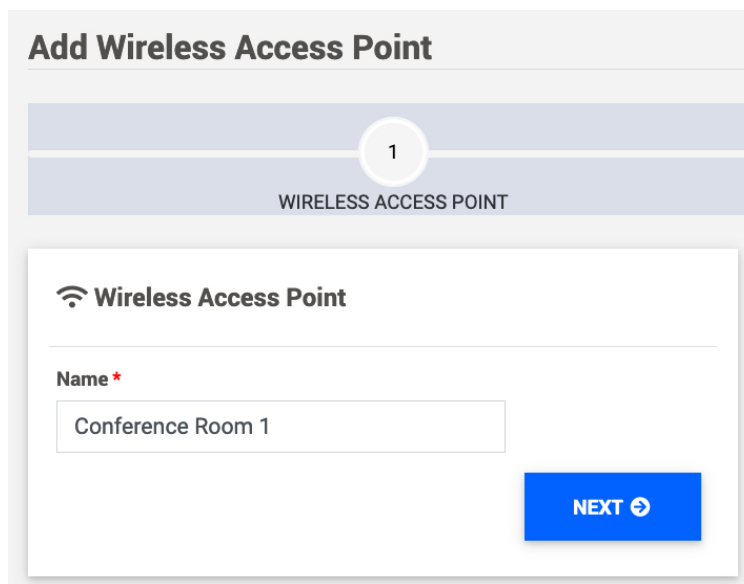
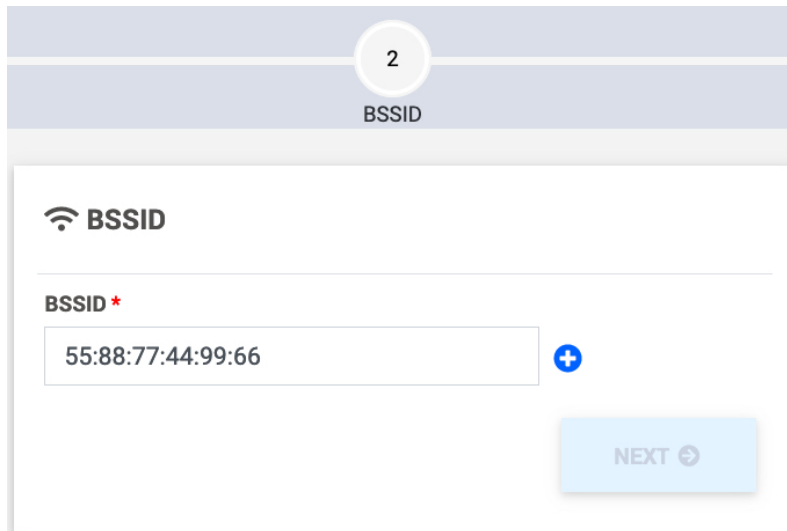


Figure 59: Adding Wireless Access Points — Providing a Name

- 4 Provide one or more BSSID(s) for the Wireless Access Point. Click the + icon and then **Next**. You can also add multiple BSSIDs to the same Access Point by providing the BSSID, clicking the + icon and repeating the process. See Figure 60.

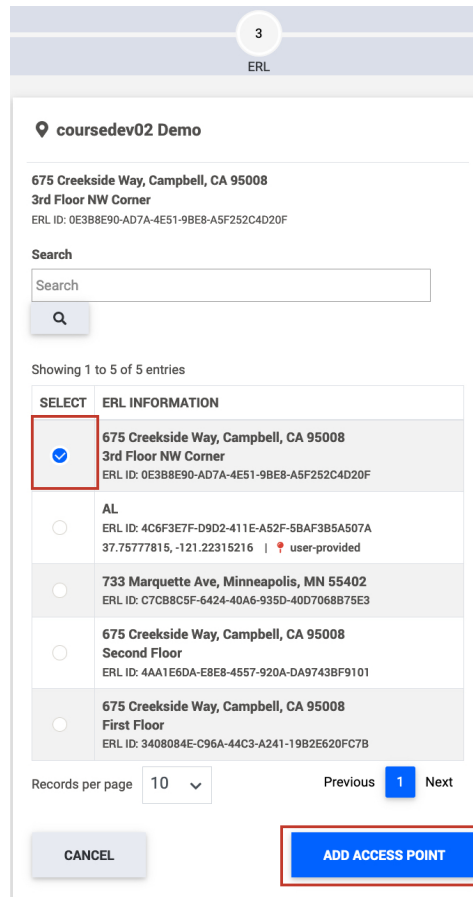


The screenshot shows a configuration interface for wireless access points. At the top, a grey header bar contains a white circle with the number '2' and the text 'BSSID' below it. The main content area has a white background with a grey border. It features a Wi-Fi icon followed by the text 'BSSID'. Below this is a horizontal line. Underneath the line, the text 'BSSID *' is displayed in bold. A text input field contains the MAC address '55:88:77:44:99:66'. To the right of the input field is a blue plus sign icon. At the bottom right of the form is a light blue button with the text 'NEXT' and a right-pointing arrow icon.

Figure 60: Adding Wireless Access Points — Providing BSSID(s)

- 5 Associate the Wireless Access Point to an ERL by choosing the ERL and clicking the **ADD WIRELESS POINT** button. See Figure 61.

Choose the relevant ERL



Click ADD ACCESS POINT

Figure 61: Adding a Wireless Access Point- Choosing an ERL

You can also add Access Points as the third step while adding an ERL. This procedure is similar to adding Subnets through the *Add ERL* screen, as described in [“Adding Subnets”](#).

Adding Switches and Ports

ERS determines the hardphone’s location based on the Switch-ERL or Port-ERL association in the pre-provisioned network map and sends the location to the phone in response to a HELD request.

Through the *Add Switch* screen, you can add:

- Switches and/or
- Switches and related Port Information

For example, you can provision one switch per floor of your multi-story office building and associate it to an ERL. For additional granularity, you can provision each port on the switch for a conference room or a specific office area. See Figure 62 for an example.

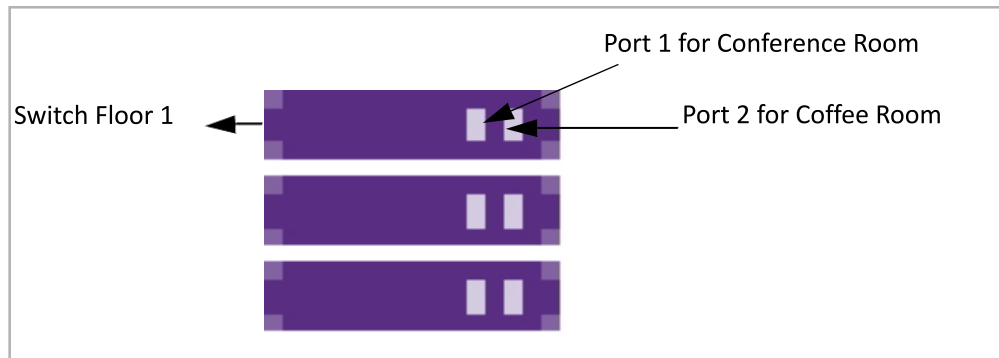


Figure 62: Network Setup of Switches and Ports

Adding Switches and Ports is a two-step process. It involves:

- Step 1— Adding a new switch and selecting an ERL for the switch
- Step 2— Adding one or more ports to this switch and select ERLs for the ports.

Step 1 — Add a New Switch and Associate to an ERL

To add a new switch:

- 1 From the *Provisioning* screen, click the **SWITCHES** tab and click the **+ADD SWITCH** button. See Figure 63. The *Add Switch* screen appears.

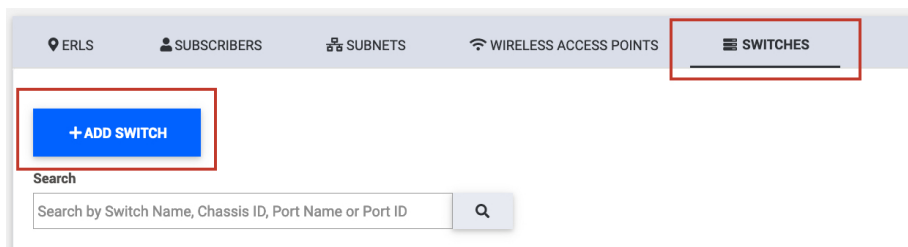


Figure 63: Adding a New Switch

- 2 Under **SWITCH**, provide the following information:
 - A **Name**: Enter an easily identifiable name for your switch.
Example: Floor 1
 - B **Chassis ID**: Enter the identifying information for the switch; it can be a Host Name, MAC Address or IP Address. See [“Wireless Access Points, Subnets and Switches”](#) for accepted formats.
Example: 11:22:33:44:55:66.
 - C Click the **SELECT ERL ADDRESS** button to proceed to the next step. See Figure 64 for an example.

Add Switch

1
SWITCH

Switch

Name *
Floor 1

Chassis ID * ?
sw-floor1.internal.company.com

SELECT ERL

Figure 64: Adding a New Switch

- 3 In the **Select an ERL Address** pop-up screen, choose the appropriate ERL row and click **Save**. See Figure 65.

Select ERL [X]

Search [Search] [Q] Showing 1 to 5 of 5 entries

ERL INFORMATION
675 Creekside Way, Campbell, CA 95008 3rd Floor NW Corner ERL ID: 0E3B8E90-AD7A-4E51-9BE8-A5F252C4D20F
AL ERL ID: 4C6F3E7F-D9D2-411E-A52F-5BAF3B5A507A 37.75777815, -121.22315216 user-provided
733 Marquette Ave, Minneapolis, MN 55402 ERL ID: C7CB8C5F-6424-40A6-935D-40D7068B75E3
675 Creekside Way, Campbell, CA 95008 Second Floor ERL ID: 4AA1E6DA-E8E8-4557-920A-DA9743BF9101
675 Creekside Way, Campbell, CA 95008 First Floor ERL ID: 3408084E-C96A-44C3-A241-19B2E620FC7B

Previous **1** Next

CANCEL SAVE

Figure 65: Attaching Switch to an ERL

The switch is added and ERS displays a confirmation message, as shown in Figure 66.

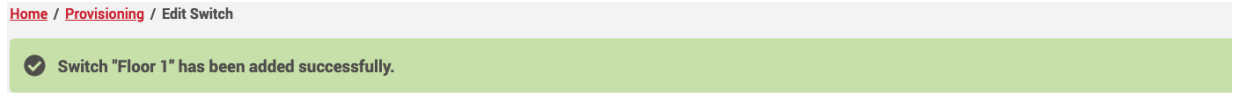


Figure 66: ERS Displays Confirmation Message- Switch Added Successfully

The switch and the ERL selected are displayed, as shown in Figure 67.

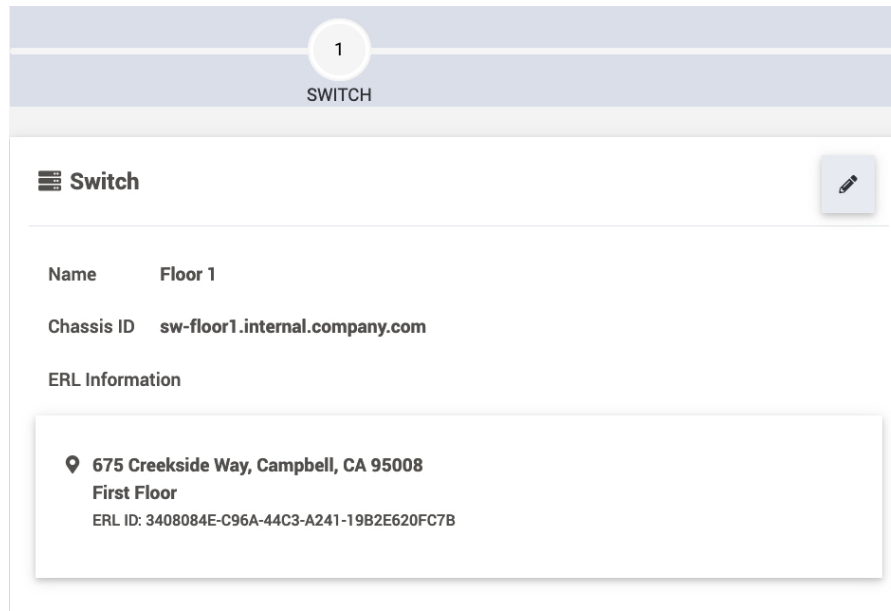


Figure 67: Switch and ERL

Step 2 — Adding Ports to Switch

Adding ports are optional and it depends on your enterprise's network infrastructure.

You can add one or more ports to a switch.

- To add a port, under **Step 2—PORTS**, provide:
 - Name:** An easily-identifiable name for the port. Example: Conference Room 1
 - Port ID:** Information that identifies the port. This can be the IP address, Port Name or MAC address associated to the port.

Example: 11:22:33:44:55:65, Gi01/9/8

See Figure 68 as example.

2
PORTS

Ports (optional)

Name *

Port ID *

Showing 0 to 0 of 0 entries

PORT NAME	PORT ID	ERL INFORMATION	DELETE
No data available in table			

[Previous](#) [Next](#)

Figure 68: Adding a Port

- 2 Click **Select ERL Address** button. The `Select ERL` pop-up screen displays, enabling you to select an ERL for the port. Click **Save** to finish adding the port. See Figure 69.

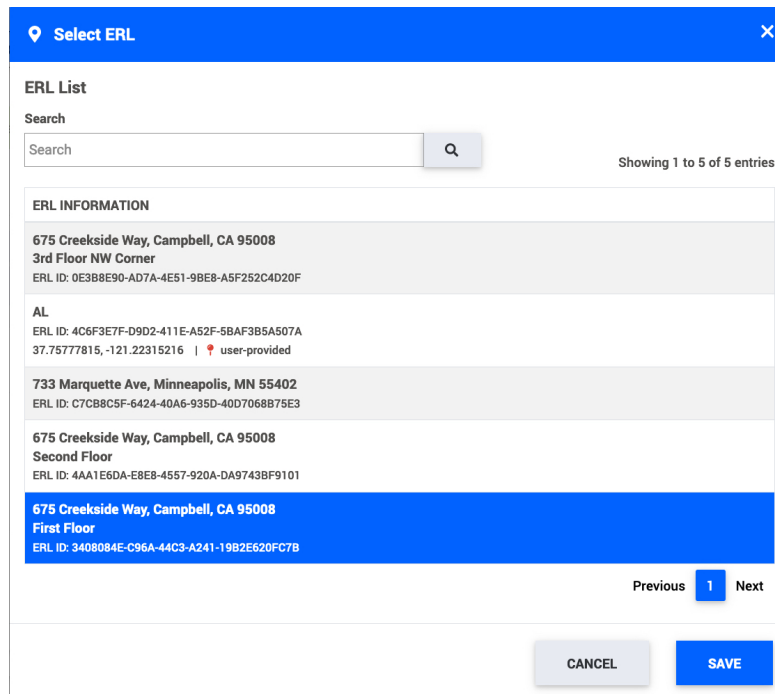


Figure 69: Selecting ERL for Port

The port that was just added displays, as shown in Figure 70.

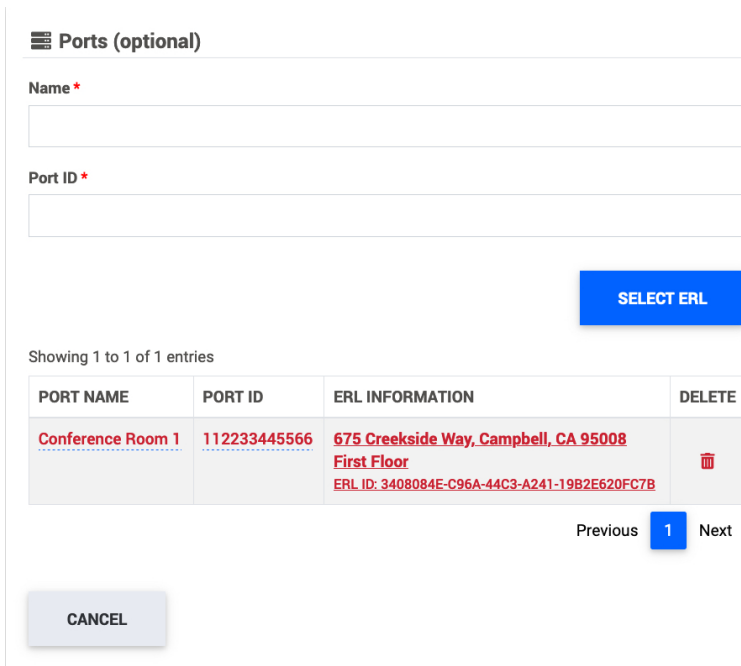


Figure 70: Port Saved

Searching and Filtering ERLs and Associated Records

Given the possibility of a large number of ERL and associated records, you can apply filters and perform searches to shorten the list of records displayed.

To shorten the list of records ERS displays:

- 1 Apply filters to narrow down the list of ERL by criteria.
- 2 Perform a search by providing specific text in the Search bar.
- 3 Export (optional) to download the results as a CSV file. This enables you to view, analyze, and search through your records in Microsoft excel.

After retrieving a specific ERL, you can:

- Add associations to it such as subscribers and other network elements.
- Edit the address fields or routing options.
- Delete it from the ERS records. Steps on how to delete and specific repercussions are described in [“Modifying the ERL Address”](#).
- Download it into a CSV file using **Export**. See [“Downloading a Sample Batch File”](#) for more information.

All of the above are optional and can be used independently of each other. The filtering options are available in all the *Provisioning* screen tabs. A list of account ERLs is displayed under the **ERLs** tab in the *Provisioning* screen. By default, filters are not chosen and the `Include Sub Accounts` box is unchecked.

The most-recently added ERLs are at the top of the list.

- 1 To refine the ERL records, click the **Filter arrow** at the top of the *Provisioning* screen, as shown in Figure 71 to display the filter options.

> FILTER

My Saved Filters
All Records

Responder Type	Routing Status	Address Status	Provisioning Source	Last Updated
None selected	None selected	None selected	None selected	Last Updated

FILTER SAVE AS... RESET FILTER

Figure 71: Click the Filter Arrow to Display the Filter Options

2 Next, apply a filter by selecting from the drop-down menu.

Example 1—For example, if you want to retrieve ERLs with an Enhanced routing status, choose *Enhanced* from the **Routing Status** filter, and then click the **Filter** button, as shown in Figure 72. The ERLs list is updated to display only ERLs with a routing status of “Enhanced”.

The screenshot shows a 'FILTER' section with several dropdown menus. The 'Routing Status' dropdown is open, showing options: 'Enhanced' (checked), 'Basic', and 'None'. A blue 'FILTER' button is highlighted with a red box. Other filters include 'My Saved Filters' (set to 'All Records'), 'Responder Type' (set to 'None selected'), 'Address Status' (set to 'None selected'), 'Provisioning Source' (set to 'None selected'), and 'Last Updated' (set to 'Last Updated').

Figure 72: Select Enhanced Routing to Display Only ERLs with a Routing Status of Enhanced

Example 2: To retrieve ERLs whose calls will be routed to the ECRC, choose *Response Center* from the **Responder Type** filter, and then click the **Filter** button.

The ERLs list is updated to display only ERLs routed to the ECRC.

NOTE | The filter options you choose are retained until you log out of the portal.

3 **Searching**—To further delimit records, you can enter a text in the Search bar and press **Enter**, as shown in Figure 73. In the example, we entered *141* and pressed **Enter**. All records matching this term are retrieved and displayed.

NOTE | A minimum of three characters must be entered in the Search bar.

NOTE | The search and filter functionality is available in all the *Provisioning* screen tabs: **ERLs, Subscribers, Subnets, Wireless Access Points and Switches.**

NOTE | You can search by civic address, but **not** by geo-coordinates.

Provisioning

EXPORT BATCH PROVISIONING

> FILTER

ERLS SUBSCRIBERS SUBNETS WIRELESS ACCESS POINTS SWITCHES

+ ADD ERL

Search
Creekside

Showing 1 to 3 of 3 entries

EDIT	ERL INFORMATION	ERL NAME	RESPONDER TYPE	ROUTING STATUS	ADDRESS STATUS	PROVISIONING SOURCE	ACCOUNT NAME	LAST UPDATED	DELETE
	675 Creekside Way, Campbell, CA 95008 3rd Floor NW Corner ERL ID: 0E3B8E90-AD7A-4E51-9BE8-A5F252C4D20F	coursedev02 Demo	PSAP	Enhanced	Valid	ERS Interfaces	coursedev02 Demo	2021-12-17 @ 11:50:12	
	675 Creekside Way, Campbell, CA 95008 Second Floor ERL ID: 4AA1E6DA-E8E8-4557-920A-DA9743BF9101	Campbell 2nd Floor	PSAP	Enhanced	Valid	ERS Interfaces	coursedev02 Demo	2021-12-14 @ 12:17:18	

Figure 73: ERLs with the Term “Creekside” in the Address are Retrieved and Displayed

- After retrieving an ERL, you can select an ERL row and then add the appropriate association by expanding and clicking the + icon.

Editing and Deleting ERLs

From the **ERLs** tab, you can edit ERL information to:

- Resolve any address discrepancies
- Make changes to the emergency destination routing options and notifications
- Add, delete, or relocate associations

Editing ERLs

To edit an ERL:

- 1 Select the **ERL** tab.
- 2 Find the ERL you want to edit and click the **pencil** icon, as shown in Figure 74 below. The *Edit ERL* screen is displayed as shown in Figure 75.

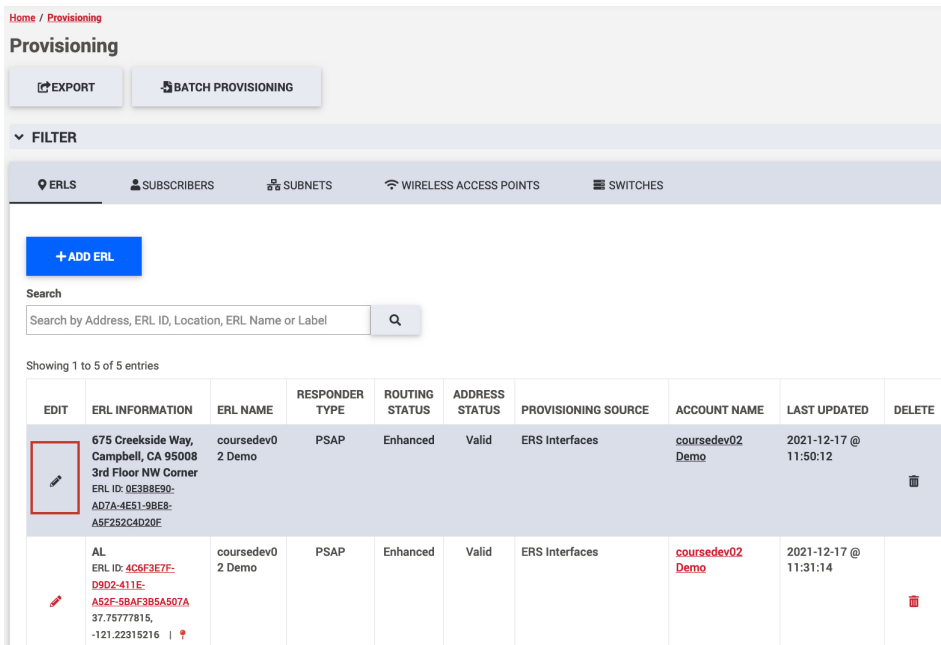


Figure 74: Provisioning Screen—Click the Pencil Icon to Edit an ERL

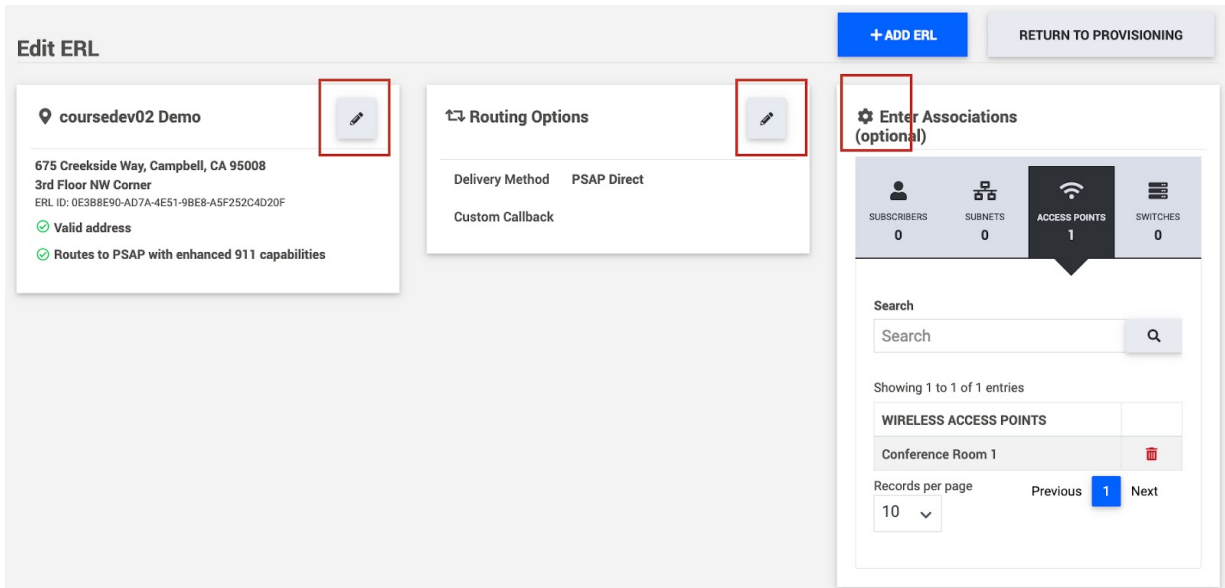


Figure 75: Editing an ERL Through the Edit ERL Screen

From the *Edit ERL* screen, you can:

- **Edit an ERL’s address information:**
 - A Click on the **pencil** icon in the address box.
 - B Edit address fields as required and click the **Validate Address** button.

NOTE When you edit an ERL and click on the **Validate Address** button, ERS performs the same civic address or geo-coordinate validation checks that it initially performs when an ERL is first added. In addition, any relevant error messages are displayed for correction until the record passes the appropriate data and validation requirements. Changes to the ERL are not saved until they are validated or checked by the ERS, depending on the type of location information provided.

- **Edit an ERL’s routing options:**
 - A Click the **pencil** icon in the routing options box.
 - B Edit the routing options as desired and click the **Save Changes** button.
- **Provision additional associations:**
 - A Enter any additional associations by clicking the **+** icon in the Enter Associations section.

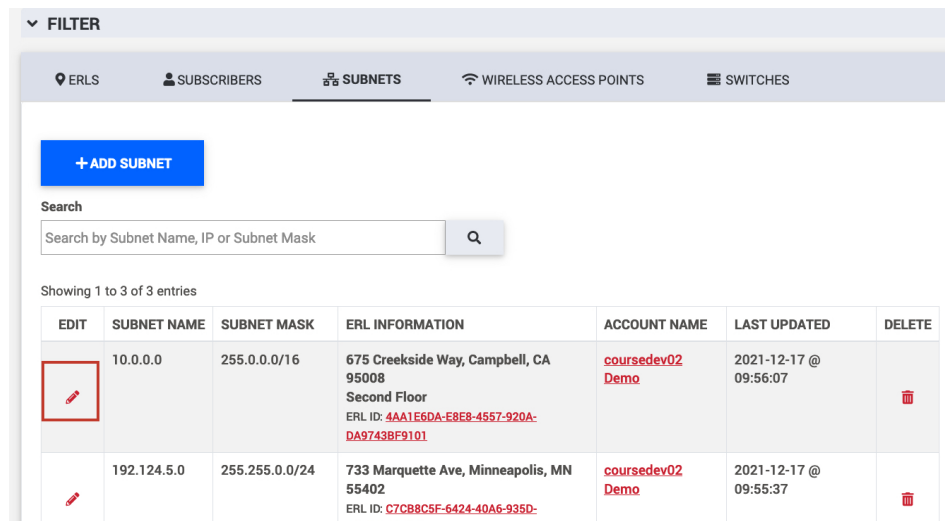
Editing Network Elements

You can edit an ERL's network elements by accessing the tab and editing its information, as required.

Editing Subnets

To edit a Subnet:

- 1 Choose the **Subnets** tab and click the pencil icon on the subnet row you want to edit. See Figure 76. The *Edit Subnet* screen displays.



The screenshot shows a web interface for managing subnets. At the top, there is a navigation bar with tabs for ERLS, SUBSCRIBERS, SUBNETS (selected), WIRELESS ACCESS POINTS, and SWITCHES. Below the navigation bar is a blue button labeled '+ ADD SUBNET'. A search bar is present with the placeholder text 'Search by Subnet Name, IP or Subnet Mask'. Below the search bar, it says 'Showing 1 to 3 of 3 entries'. A table displays the following data:





EDIT	SUBNET NAME	SUBNET MASK	ERL INFORMATION	ACCOUNT NAME	LAST UPDATED	DELETE
	10.0.0.0	255.0.0.0/16	675 Creekside Way, Campbell, CA 95008 Second Floor ERL ID: 4AA1E6DA-E8E8-4557-920A-DA9743BF9101	coursedev02 Demo	2021-12-17 @ 09:56:07	
	192.124.5.0	255.255.0.0/24	733 Marquette Ave, Minneapolis, MN 55402 ERL ID: C7CB8C8F-6424-40A6-935D-.....	coursedev02 Demo	2021-12-17 @ 09:55:37	

Figure 76: Editing the Subnet

- 2 The *Edit Subnet* screen displays where you can make the necessary edit to the subnet information. You can edit the following information for a subnet:
 - A Subnet Name
 - B Subnet Mask
 - C Change the ERL that the Subnet is attached to. See Figure 77 for an example.

Editing Subnet Name, Subnet Mask and ERL

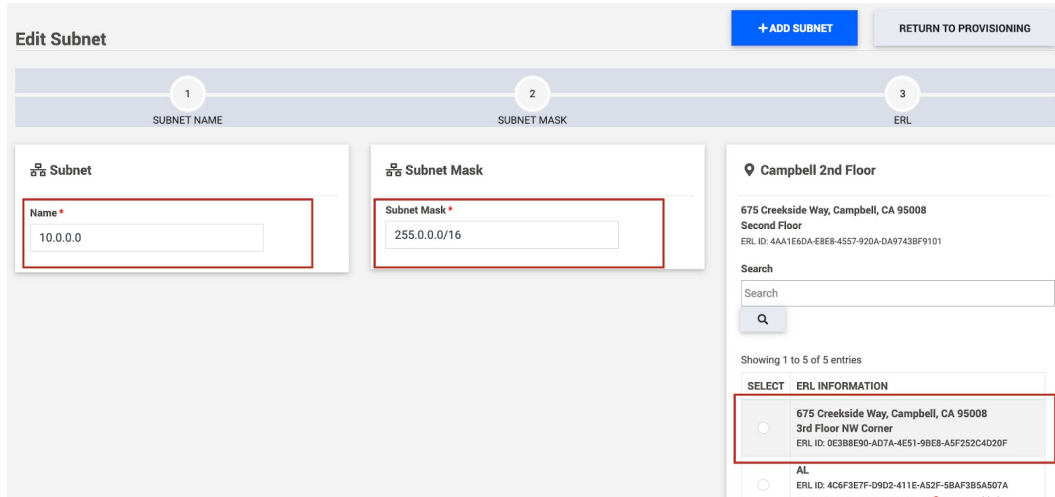


Figure 77: Editing Subnet Information

- 3 Click **Save** button to save the changes.

Editing Wireless Access Points

To edit a Wireless Access Point:

- 1 Choose the **Wireless Access Points** tab and click the pencil icon on the Access Point row you want to edit. The *Edit Wireless Access Point* screen displays.
- 2 In the *Edit Wireless Access Point* screen, you can edit the following information for an access point, as shown in Figure 79:
 - A Wireless Access Point Name
 - B BSSID
 - C Change the ERL information of the Wireless Access Point

Edit Wireless Access Point

[+ ADD WIRELESS ACCESS POINT](#) [RETURN TO PROVISIONING](#)

1 WIRELESS ACCESS POINT 2 BSSID 3 ERL

Wireless Access Point

Access Point ID: 51041B3C-EB9C-4781-AC53-D101EFA3867C

Name *

BSSID

BSSID *

Example: 00:00:00:00:00:00 +

 ✖

coursedev02 Demo

675 Creekside Way, Campbell, CA 95008
3rd Floor NW Corner
ERL ID: 0E3B8E90-AD7A-4E51-9BE8-A5F252C4D20F

Search

Showing 1 to 5 of 5 entries

SELECT	ERL INFORMATION
<input checked="" type="checkbox"/>	675 Creekside Way, Campbell, CA 95008 3rd Floor NW Corner ERL ID: 0E3B8E90-AD7A-4E51-9BE8-A5F252C4D20F
<input type="checkbox"/>	AL ERL ID: 4C6F3E7F-D9D2-411E-A52F-5BAF3B5A507A

Figure 78: Editing Wireless Access Point

3 Click **Save**.

Editing Switches and Ports

- 1 Choose the **Switches** tab and click the pencil icon on the Switch row you want to edit. The *Edit Switch* screen displays.
- 2 To edit only the switch:
 - A Click the pencil icon, as shown in Figure 79.

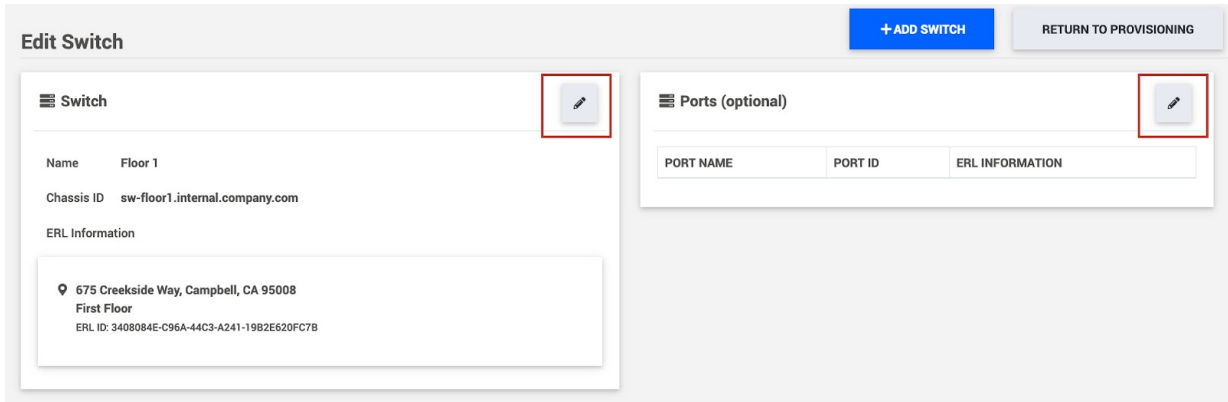


Figure 79: Editing a Switch or Port

- B Click in the relevant text box to edit the Name and Chassis ID.
- C Click the pencil icon under *ERL Information* to edit the ERL information of the switch.
- D Click **Save** to save the edits made to the switch. See Figure 80.

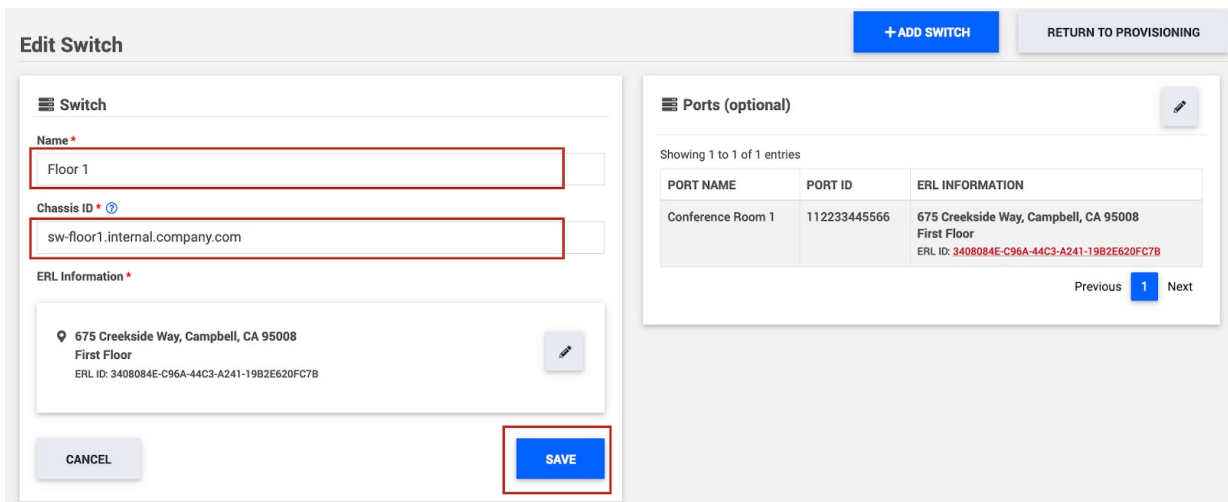


Figure 80: Editing Switch Information

- 3 To edit the port:
 - A Edit the port name by clicking under **Port Name**, make the edits and click the tick mark icon, as shown in Figure 81.
 - B Edit the Port ID in the same manner as above.
 - C Edit the ERL by clicking the ERL hyperlink under **ERL Information** and attach the port to another ERL.

Ports (optional)

Name *

Port ID *

Showing 1 to 1 of 1 entries

PORT NAME	PORT ID	ERL INFORMATION	DELETE
Conference Room 1	112233445566	675 Creekside Way, Campbell, CA 95008 First Floor ERL ID: 3408084E-C96A-44C3-A241-19B2E620FC7B	<input type="button" value="🗑️"/>

Previous 1 Next

Figure 81: Editing Port Information

Relocating Associations - Subscribers and Network Elements

You can move an ERL's association(s) such as subscribers and other network elements from one ERL to another by using the **Relocate** feature.

You can either relocate an element from the `ERL Associations` window as described in ["ERL Associations"](#) or by accessing the element's tab from the *Provisioning* screen.

The following procedure describes relocating a subscriber from the **Subscribers** tab:

To relocate a subscriber:

- 1 Select the **Subscribers** tab and choose the subscriber you want to move.
- 2 Click the **Relocate** icon, as shown in Figure 82 below. The *Relocate Subscriber* screen appears listing all the ERLs that are available to move this subscriber to, as shown in Figure 83.






RELOCATE	SUBSCRIBER ID	ERL INFORMATION	ERL NAME	RESPONDER TYPE	ROUTING STATUS	ADDRESS STATUS	ACCOUNT NAME	LAST UPDATED
	(209) 442-9229	733 Marquette Ave, Minneapolis, MN 55402 ERL ID: C7CB8C5F-6424-40A6-935D-40D7068B75E3	Minnesota	PSAP	Enhanced	Valid	coursedev02 Demo	2021-12-17 @ 09:46:34
	(209) 442-9320	733 Marquette Ave, Minneapolis, MN 55402 ERL ID: C7CB8C5F-6424-40A6-935D-40D7068B75E3	Minnesota	PSAP	Enhanced	Valid	coursedev02 Demo	2021-12-17 @ 09:46:27
	(209) 442-9235	733 Marquette Ave, Minneapolis, MN 55402 ERL ID: C7CB8C5F-6424-40A6-935D-40D7068B75E3	Minnesota	PSAP	Enhanced	Valid	coursedev02 Demo	2021-12-17 @ 09:46:22
	(209) 442-9208	733 Marquette Ave, Minneapolis, MN 55402 ERL ID: C7CB8C5F-6424-40A6-935D-40D7068B75E3	Minnesota	PSAP	Enhanced	Valid	coursedev02 Demo	2021-12-17 @ 09:43:00
	(209) 442-9486	733 Marquette Ave, Minneapolis, MN 55402 ERL ID: C7CB8C5F-6424-40A6-935D-40D7068B75E3	Minnesota	PSAP	Enhanced	Valid	coursedev02 Demo	2021-12-17 @ 09:42:53

Figure 82: Click the Relocate Icon to Relocate the Subscriber to Another ERL

➤ Relocate Subscriber ID (209) 442-9229
✕

From ERL ID: C7CB8C5F-6424-40A6-935D-40D7068B75E3

ERL List

Search

Search by Address, ERL ID, Location, ERL Name or Label Q

Showing 1 to 5 of 5 entries

SELECT	ERL INFORMATION	ERL NAME
<input type="radio"/>	675 Creekside Way, Campbell, CA 95008 3rd Floor NW Corner <small>ERL ID: 0E3B8E90-AD7A-4E51-9BE8-A5F252C4D20F</small>	3rd Floor NW Corner
<input type="radio"/>	AL <small>ERL ID: 4C6F3E7F-D9D2-411E-A52F-5BAF3B5A507A 37.75777815, -121.22315216 user-provided</small>	
<input checked="" type="radio"/>	733 Marquette Ave, Minneapolis, MN 55402 <small>ERL ID: C7CB8C5F-6424-40A6-935D-40D7068B75E3</small>	
<input type="radio"/>	675 Creekside Way, Campbell, CA 95008 Second Floor <small>ERL ID: 4AA1E6DA-E8E8-4557-920A-DA9743BF9101</small>	Second Floor
<input type="radio"/>	675 Creekside Way, Campbell, CA 95008 First Floor <small>ERL ID: 3408084E-C96A-44C3-A241-19B2E620FC7B</small>	First Floor

Records per page Previous 1 Next

CLOSE

Figure 83: Relocate Subscriber Screen—List of Available ERLs for Relocation of the Subscriber

- Find the ERL you want to associate the subscriber to and click **Select**. The *Provisioning* screen displays a message confirming that the subscriber has been successfully relocated to the new ERL.

NOTE | To relocate a network element, you must go to the element’s *Edit* screen and change the ERL. See [“Editing Network Elements”](#) for more information.

Deleting ERLs

IMPORTANT

ERLs that have network elements such as Subnets, Wireless Access Points, Switches or Ports associated to them cannot be deleted. You must delete or relocate the associations and then delete the ERL.

However, an ERL that has subscribers associated to it can be deleted. The ERS Portal displays a warning to the user.

NOTE

The Delete ERL procedure described here is essentially the same procedure used to delete Subscribers or network element associations. To delete a Subscriber, Subnet, Wireless Access Point, Switch or Port, first click the appropriate tab to find the specific element from the list and then follow the deletion instructions outlined below.

- 1 From the *Provisioning* screen **ERLs** tab, click the **Delete** icon for the ERL that you want to delete, as shown in Figure 84, below. A *Delete ERL* screen appears asking you to confirm the deletion of the ERL.






EDIT	ERL INFORMATION	ERL NAME	RESPONDER TYPE	ROUTING STATUS	ADDRESS STATUS	PROVISIONING SOURCE	ACCOUNT NAME	LAST UPDATED	DELETE
	675 Creekside Way, Campbell, CA 95008 3rd Floor NW Corner ERL ID: 0E388E90-AD7A-4E51-9BE8-A5F252C4D20F	coursedev02 Demo	PSAP	Enhanced	Valid	ERS Interfaces	coursedev02 Demo	2021-12-17 @ 11:50:12	
	AL ERL ID: 4C6F3E7F-D9D2-411E-A52F-5BAF3B5A507A 37.75777815, -121.22315216 	coursedev02 Demo	PSAP	Enhanced	Valid	ERS Interfaces	coursedev02 Demo	2021-12-17 @ 11:31:14	

Figure 84: Provisioning Screen—Click the Delete Icon to Remove Data from an Account (ERL Example Shown)

- 2 To delete the ERL, click **Delete**.

Batch Provisioning

Batch Provisioning enables you to manage multiple ERLs, network elements and associations using a single batch file. ERS performs system checks to ensure the validity of information in the file. The system checks vary, based on the type of location data provided, as described in these instructions. ERS records are then updated.

The following operations can be performed through batch:

- Adding and deleting ERLs
- Adding and deleting network infrastructure elements (Subnets, Wireless Access Points, Switches and Ports)
- Moving Subscribers and other associations from one ERL to another.

Overview

Step One—Download a sample batch file from the appropriate account.

Step Two—Populate the batch file with ERLs, Subscribers, Subnet, Wireless Access Point and Switch information, as desired.

Step Three—Upload the batch file to the ERS portal.

Downloading a Sample Batch File

A sample batch file is downloaded from the *Provisioning* screen. If your account already contains data, the information displayed is also downloaded into the batch file. This batch file is in CSV format.

To download a sample batch file:

- 1 From ERS *Provisioning* screen, click on **Export** button as shown in Figure 85. The *Export Results* screen displays, as shown in Figure 85.

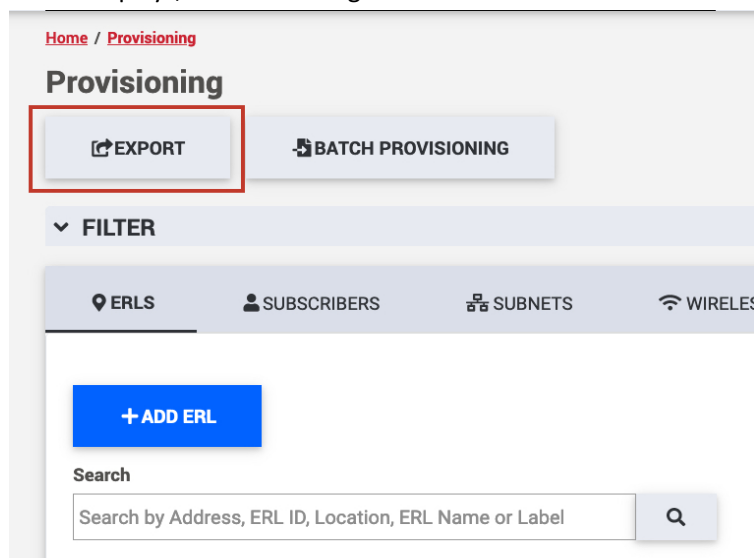


Figure 85: Click Export to Choose Batch File Fields

2 On the *Export Results* screen:

- A Enter a file name.
- B Choose the selection of record items to export (for example, ERL, Subscribers, Subnets, Wireless Access Points, Switches). By default, all items are selected. At least one item is required.
- C (Optional) Select any additional record fields to export. By default, the fields required for batch provisioning are automatically selected.

WARNING Do not uncheck fields marked with an asterisk. Un-checking required fields can result in an error when you upload this file into the ERS.

IMPORTANT Please note that ERS limits the number of records that can be exported to 500,000.

Figure 86: Enter a File Name and Choose the Desired Batch File Fields

3 Click **Export**. The file is ready for download in the file manager, as shown in Figure 87.

- 4 Click the file to download it to your system.

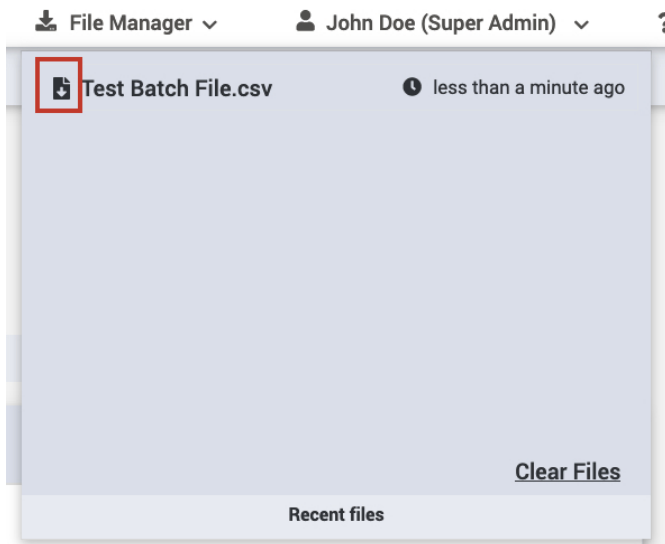


Figure 87: File Ready for Download in File Manager

Batch File Structure

If your account does not contain any provisioned data, the sample batch file you download is empty. It contains some preliminary information such as the column names. However, if you download this file from an account already containing provisioned data, then this data is also ported over into the file.

The first row of the batch file always contains the Account Name, Account ID and the date and time that it was generated. The second row of the batch file contains the following column titles:

- Operation (OP)
- Result (RES)
- Message (MSG)
- Item Type
- Account ID
- Account Name
- Sub Account ID
- Sub Account Name
- Subscriber ID
- Subnet ID
- Subnet Name
- BSSID
- Access Point Name

- Access Point ID
- Switch Name
- Chassis ID
- Port Name
- Port ID
- ERL ID
- Civic Address or Geo-coordinate Information

Batch File Structure Considerations

- **Account ID, Account Name** are always populated
- **OP, RES,** and **MSG** columns are empty when you download the sample batch file.
- **Item Type** column helps discern if the row belongs to an ERL, Subscriber, Subnet, Access Point, Switch or Account.

For batch operations, all other information is provided by the user. This includes the **OP** (operation)—as well as provisioning data.

Populating the Batch File

To populate the batch file:

- 1 Open the CSV batch file.
- 2 Enter the operator values in the **OP** column and provide all necessary information. The operator and the information you provide varies based on the batch action you want to perform. See [“Batch Operator Values”](#) for more information. For instance, “A” operator is used for adding, whereas the “D” operator is used for deleting.
- 3 Provide all necessary information based on the batch operation you want to perform. All the batch operations supported by ERS, along with examples are provided in [“Batch Actions”](#).

Batch Operator Values

These operations are entered in the **OP** column of the CSV file, based on the action you want to perform.

Table 7: Batch Operator Values Table

Operator	Description
A	Add or Update
D	Delete
M	Move a subscriber, Subnet, Wireless Access Point or Switch from one ERL to another
X	Delete an ERL and its subscribers

Batch Actions

Batch file operations supported by the ERS are described in this section.

WARNING Do not modify the first two rows of the batch file. These are mandatory rows that the ERS auto-generates and are required for proper provisioning.

ERLs

For ERLs, you can perform the following operations via batch:

- Add an ERL by providing the Civic Address. See [“Adding an ERL Using a Civic Address”](#)
- Add an ERL by providing the Geo-Coordinates. See [“Adding an ERL Using Geo-Coordinates”](#)
- Delete ERLs and its Subscribers. See [“Deleting ERLs and Subscribers”](#)

Adding an ERL Using a Civic Address

- 1 In the **OP** column, enter A.

- 2 In the **Item Type** column, enter ERL.
- 3 In the **ERL ID** column, enter a value for the ERL ID as detailed in [Appendix A: “Field Descriptions”](#). If this field is left empty, the ERS will auto-generate an ERL ID.
- 4 Ensure the **Account ID, Account Name, Sub Account ID** or **Sub Account Name** columns are populated as per the exported template
- 5 Enter the civic address information.

NOTE | All other batch file fields are optional.

A sample file with a row added for a new ERL is shown below:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
1	Account Name	coursedev02	ID:	7E933EB7-6F	Generated at:	12/17/21 16:24															
2	OP	RES	MSG	Item Type	Account ID	Account Name	Sub Account	Sub Account	Subscriber ID	Subnet ID	Subnet Name	BSSID	Access Point	Access Point	Switch Name	Chassis ID	Port Name	Port ID	ERL ID	House Num	
3				ERL	F215418B-6F	8x8 Enterprise	7E933EB7-6F	coursedev02	Demo											0E3B8E90-A1	675
4				ERL	F215418B-6F	8x8 Enterprise	7E933EB7-6F	coursedev02	Demo											4CBF3E7F-D9D2-411E-A52	
5				ERL	F215418B-6F	8x8 Enterprise	7E933EB7-6F	coursedev02	Demo											C7CB8CSF-6F	733
6				ERL	F215418B-6F	8x8 Enterprise	7E933EB7-6F	coursedev02	Demo											4AA1E6DA-E	675

Figure 92: Sample Batch File Showing an ERL Added Using a Civic Address

Adding an ERL Using Geo-Coordinates

- 1 In the **OP** column, enter A .
- 2 In the **Item Type** column, enter ERL.
- 3 In the **ERL ID** column, enter a value for the ERL ID as detailed in [Appendix A: “Field Descriptions”](#). If this field is left empty, the ERS will auto-generate an ERL ID.
- 4 In the **ERL Name** column, enter a name for the ERL.
- 5 Ensure the **Account ID, Account Name, Sub Account ID** or **Sub Account Name** columns are populated as per the exported template
- 6 Enter **Yes** in the **User-Provided Lat/Long** column.
- 7 In the **Latitude** column, provide the latitude coordinate value for the specific location.

8 In the **Longitude** column, provide the longitude value for the specific location.

NOTE All other batch file fields are optional.

A sample file for adding an ERL using geo-coordinates is shown below.

	A	B	C	D	E	AA	AB	AC	AD	AE
1	Account Name	coursedev02	ID:	7E933EB7-69	Generated at:					
2	OP	RES	MSG	Item Type	Account ID	ERL Name	Latitude	Longitude	User-Provided Lat/Long	
3	Account Name:				F21541BB-64FF-4514-B21		44.97605	-93.270885	Yes	
4				ERL	F21541BB-64FF-4514-B21	coursedev02	37.29265	-121.936	No	
5				ERL	F21541BB-64FF-4514-B21	coursedev02	37.7577782	-121.22315	Yes	
6				ERL	F21541BB-64FF-4514-B21	Minnesota	44.97605	-93.270885	No	

Figure 93: Sample Batch File Showing an ERL Added Using Geo-Coordinate

Modifying the ERL Address

- 1 In the column **OP**, enter the letter A.
- 2 In the column **Item**, enter ERL.
- 3 Enter a valid ERL ID in the column **ERL ID**.
- 4 Enter a valid Subscriber ID in the column **Subscriber ID** (this is optional).
- 5 Ensure the **Account ID**, **Account Name**, **Sub Account ID** or **Sub Account Name** columns are populated as per the exported template
- 6 From the following fields, provide the fields that you want to modify: House Number, Street Name, City, State, ZIP, Country, Location, ERL Label, Language, Crisis Email, Call Delivery, Security Desk DID, SD Mute, Notification Display, Customer Callback DID

If the ERL is located under a sub account (Level 3), the sub account name must be provided in the column Sub Account Name.

Deleting ERLs and Subscribers

This example shows how to delete ERLs and Subscribers with D or X batch operator values.

	A	B	C	D	E	F	G	H	I
1	Account Name	coursedev02	ID:	7E933EB7-69	Generated at:	12/17/21 16:24			
2	OP	RES	MSG	Item Type	Account ID	Account Name	Sub Account	Sub Account	Subscriber ID
3	Account Name:				F21541BB-64FF-4514-B21	8x8 Enterprise	7E933EB7-6948-4D26-B6C6-4F4323611		
4	X			ERL	F21541BB-64FF-4514-B21	8x8 Enterprise	7E933EB7-6948-4D26-B6C6-4F4323611	coursedev02	Demo
5	D			ERL	F21541BB-64FF-4514-B21	8x8 Enterprise	7E933EB7-6948-4D26-B6C6-4F4323611	coursedev02	Demo
6				ERL	F21541BB-64FF-4514-B21	8x8 Enterprise	7E933EB7-6948-4D26-B6C6-4F4323611	coursedev02	Demo

Figure 94: Sample Batch File—Deleting ERLs and Associations

The D batch operation value deletes the ERL, provided that no subscribers are attached to it.

The **x** batch operation value must be used to delete an ERL that has subscribers attached to it. The X operation cannot be used for deleting network elements.

IMPORTANT Take extra precaution when using the X operation. When using X for deleting ERLs and subscribers, please ensure that you have saved a backup copy of the ERL and Subscriber records in your account.

Subscribers

IMPORTANT Subscribers are added and deleted automatically when users are enabled/disabled for ERS in 8x8 Admin Console

Subnets

For subnets, the following batch operations are available:

- Add a subnet and a new ERL in a single step. See [“Adding a Subnet to a New ERL”](#).
- Add a subnet to an existing ERL. See [“Adding a Subnet to an Existing ERL”](#).
- Move a Subnet from one ERL to another. See [“Moving a Subnet from One ERL to Another”](#).
- Delete a Subnet. See [“Deleting a Subnet”](#).

Adding a Subnet to a New ERL

To add a Subnet and an ERL in one step:

- 1 In the **OP** column, enter `A`.
- 2 In the **Item Type** column, enter `SUBNET`.
- 3 In the **Subnet ID** column, enter a valid Subnet ID.
- 4 Ensure the **Account ID**, **Account Name**, **Sub Account ID** or **Sub Account Name** columns are populated as per the exported template.
- 5 Enter the following civic address information: ERL Name, House Number, Street Name, City, State, ZIP, Country.

NOTE The following columns are stored if provided: Location, ERL Label, Language, Crisis Email, Call Delivery, Security Desk DID, SD Mute, Notification Display, Customer Callback DID.

	A	B	C	D	E	F	G	H	I	J	K
1	Account Name	coursedev02	ID:	7E933EB7-6	Generated a	#####					
2	OP	RES	MSG	Item Type	Account ID	Account Name	Sub Account	Sub Account	Subscriber IC	Subnet ID	Subnet Name
3	A			SUBNET	F21541BB-6	8x8 Enterpris	7E933EB7-6	coursedev02	Demo	255.255.255.	192.168.1.0

Figure 101: Sample Batch File Showing the Addition of an ERL and an Associated Subnet

Adding a Subnet to an Existing ERL

This batch procedure shows how to add a new Subnet to an existing ERL.

- 1 In the **OP** column, enter **A**.
- 2 In the **Item Type** column, enter **SUBNET**.
- 3 In the **Subnet ID** column, enter the Subnet ID.
- 4 In the **ERL ID** column, enter a valid and existing ERL ID.
- 6 Ensure the **Account ID, Account Name, Sub Account ID or Sub Account Name** columns are populated as per the exported template

	A	B	C	D	E	F	G	H	I	J	K	L
1	Account Name	coursedev02	ID:	7E933EB7-6	Generated a	#####						
2	OP	RES	MSG	Item Type	Account ID	Account Name	Sub Account	Sub Account	Subscriber IC	Subnet ID	Subnet Name	BSSID
3	A			SUBNET	F21541BB-6	8x8 Enterpris	7E933EB7-6	coursedev02	Demo	255.0.0.0/16	10.0.0.0	

Figure 102: Sample Batch File—Adding a Subnet to an Existing ERL

Deleting a Subnet

- 1 In the **OP** column, enter **D**.
- 2 In the **Item Type** column, enter **SUBNET**.
- 3 In the **Subnet ID** column, enter the Subnet ID.
- 4 Ensure the **Account ID, Account Name, Sub Account ID or Sub Account Name** columns are populated as per the exported template.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Account Name	coursedev02	ID:	7E933EB7-6	Generated a	#####						
2	OP	RES	MSG	Item Type	Account ID	Account Name	Sub Account	Sub Account	Subscriber IC	Subnet ID	Subnet Name	BSSID
3	D				F21541BB-6	8x8 Enterpris	7E933EB7-6	coursedev02	Demo	255.0.0.0/16	10.0.0.0	

Figure 103: Sample Batch File—Deleting a Subnet

Moving a Subnet from One ERL to Another

- 1 In the **OP** column, enter **M**.
- 2 In the **Item Type** column, enter **SUBNET**.
- 3 In the **Subnet ID** column, enter the subnet ID of the subnet you want to move.
- 4 In the **ERL ID** column, enter the ERL ID of the destination ERL where you want to move the subnet.
- 5 Ensure the **Account ID, Account Name, Sub Account ID or Sub Account Name** columns

are populated as per the exported template.
 An example is shown in Figure 104.

	A	B	C	D	E	F	G	H	S
1	Account Name	coursedev02	ID:	7E933EB7-65	Generated a	#####			
2	OP	RES	MSG	Item Type	Account ID	Account Name	Sub Account	Sub Account	ERL ID
3	M			SUBNET	F21541BB-65	8x8 Enterprise	7E933EB7-65	coursedev02	Room 5

Figure 104: Sample Batch File- Moving a Subnet to ERL with ERL ID Room # 5

NOTE | Moving a subnet between ERLs is possible only if the ERLs belong to the same account.

Wireless Access Points

You can perform the following batch operations for Wireless Access Points:

- Add an Access Point to a new ERL. See [“Adding Wireless Access Point to a New ERL”](#)
- Add an Access Point to an existing ERL. See [“Adding a Access Point to an Existing ERL”](#)
- Add a BSSID to an existing Access Point. See [“Adding a BSSID to an Existing Access Point”](#)
- Delete a BSSID from an Access Point. See [“Deleting a BSSID from an Access Point”](#)
- Delete an Access Point and its associated BSSID(s). See [“Deleting an Access Point and BSSIDs”](#)
- Move Access Point from one ERL to another. See [“Moving an Access Point Between ERLs”](#)

Adding Wireless Access Point to a New ERL

To add an access point and an ERL in a single step:

- 1 In the **OP** column, enter `A`.
- 2 In the **Item Type** column, enter `ACCESS_POINT`.
- 3 In the **BSSID ID** column, enter a valid BSSID value for the access point.
- 4 In the **Access Point Name** column, enter a valid name for the new access point.
- 5 In the **Access Point ID** column, provide a valid Access Point ID. This is optional.
- 6 Ensure the **Account ID**, **Account Name**, **Sub Account ID** or **Sub Account Name** columns are populated as per the exported template

NOTE Providing the Access Point ID is optional. If you do provide a value in this field, you can create a new Access Point and then add multiple new BSSIDs to that same Access Point within a single batch file.

- 7 Enter the civic address information for the new ERL. Include valid information in the following fields: House Number, Street Name, City, State, ZIP, Country, ERL Name. Do not provide the ERL ID value in the column **ERL ID**.

See Figure 105 for an example.

	A	B	C	I	J	K	Q	R	S	T	U	V	W
1	Account Name	Generated at:	12/17/21 16:24										
2	OP	Account ID	Account Name	BSSID	Access Point Name	Access Point ID	House Number	Street Name	City	State	ZIP	Country	Location
3	A	F21541BB-64FF-4518x8	Enterprise	55:88:77:44:99:66	Conference Room 1	51041B3C-EB9	675	Creekside W	Campbell	CA	95008	US	3rd Floor NA

Figure 105: Adding an ERL and Wireless Access Point

Adding a Access Point to an Existing ERL

- 1 In the **OP** column, enter **A**.
- 2 In the **Item Type** column, enter **ACCESS_POINT**.
- 3 In the **BSSID ID** column, enter a valid BSSID value for the access point.
- 4 In the **Access Point Name** column, enter a valid name for the new access point.
- 5 In the **Access Point ID** column, provide a valid Access Point ID. This is optional.
- 6 Ensure the **Account ID**, **Account Name**, **Sub Account ID** or **Sub Account Name** columns are populated as per the exported template.

NOTE Providing the Access Point ID is optional. By providing the Access Point ID, you can create a new Access Point and then add multiple new BSSIDs to that same Access Point within a single batch file.

- 7 In the **ERL ID** column, enter a valid and existing ERL ID.

	A	B	I	J	P	
1	Account Name	Generated at:				
2	OP	Account ID	BSSID	Access Point Name	ERL ID	
3	A	F21541BB-64FF-45155:88:77:44:99:66	55:88:77:44:99:66	Conference Room 1	0E3B8E90-AD7A-4E51-9BE8-A5F252C4D20F	

Figure 106: Adding a New Wireless Access Point to an Existing ERL

Adding a BSSID to an Existing Access Point

- 1 In the **OP** column, enter A.
- 2 In the **Item Type** column, enter ACCESS_POINT.
- 3 In the **BSSID** column, enter a valid BSSID value for the access point.
- 4 In the **Access Point ID** column, enter a valid access point ID.
- 5 Ensure the **Account ID, Account Name, Sub Account ID** or **Sub Account Name** columns are populated as per the exported template
- 6 In the **ERL ID** column, provide ERL ID of the Access Point. An example is shown in Figure 107.

	A	B	C	D	E	L	N
1	Account Name	coursedev02	ID:	7E933EB7-6948-4D2	Generated at:		
2	OP	RES	MSG	Item Type	Account ID	BSSID	Access Point ID
3				ACCESS_POINT	F21541BB-64FF-4514-B2DA-E807B9266	5 5888E+11	51041B3C-EB9C-4781-AC53-D101EFA3867C
4	A			ACCESS_POINT	F21541BB-64FF-4514-B2DA-E807B9266	233AC12345	51041B3C-EB9C-4781-AC53-D101EFA3867C

Figure 107: Adding BSSID to an Existing Access Point

Moving an Access Point Between ERLs

- 1 In the **OP** column, enter M.
- 2 In the column **Item Type**, enter ACCESS_POINT.
- 3 In the **Access Point Name** column, provide a valid access point name.
- 4 In the **Access Point ID** column, enter the access point ID.
- 5 Ensure the **Account ID, Account Name, Sub Account ID** or **Sub Account Name** columns are populated as per the exported template
- 6 In the **ERL ID** column, enter the ERL ID of the destination ERL.

In the example shown in Figure 108, the access point is moved to another ERL.

	A	D	E	M	N	S
	Account Name	7E933EB7-6948-4D2	Generated at:			
	OP	Item Type	Account ID	Access Point	Access Point ID	ERL ID
	M	ACCESS_POINT	F21541BB-64FF-4514-B2DA-E807B9260677	Conference F	51041B3C-EB9C-4781-AC53-D101EFA3867C	0E3B8E90-AD7A-4E51-9BE8-A5F2

Figure 108: Moving Access Point to Another ERL

Deleting a BSSID from an Access Point

- 1 In the **OP** column, enter D.
- 2 In the **Item Type** column, enter ACCESS_POINT.
- 3 Ensure the **Account ID**, **Account Name**, **Sub Account ID** or **Sub Account Name** columns are populated as per the exported template
- 4 In the **Access Point ID** column, enter the access point ID.
- 5 In the **BSSID** column, enter the BSSID that you want to remove from the Access Point.

In the example shown in Figure 109, the highlighted BSSID is removed from the Access Point whose ID is 51041B3C-EB9C-4781-AC53-D101EFA3867C.

	A	D	E	F	L	N	S
1	Account Name 7E933EB7-6948-4D2 Generated at:			12/17/21 16:24			
2	OP	Item Type	Account ID	Account Name	BSSID	Access Point ID	ERL ID
3	D	ACCESS_POINT	F21541BB-64FF-4514-B2DA-E807B9260677	8x8 Enterprise	55:88:77:44:99:66	51041B3C-EB9C-4781-AC53-D101EFA3867C	0E3B8E90-AD7A-4E51-9BE8-A5F252

Figure 109: Deleting a BSSID From an Access Point

Deleting an Access Point and BSSIDs

- 1 In the column **OP**, enter the letter D.
- 2 In the column **Item Type**, enter ACCESS_POINT.
- 3 Include a valid Access Point ID in the column **Access Point ID**.

IMPORTANT To delete an Access Point and all its related BSSID(s), do not provide the BSSIDs in the batch file.

- 4 Ensure the **Account ID**, **Account Name**, **Sub Account ID** or **Sub Account Name** columns are populated as per the exported template.

In the example shown in Figure 110, the Access Point is deleted.

	A	D	E	L	N	S
1	Account Name	7E933EB7-6948-4D2	Generated at:			
2	OP	Item Type	Account ID	BSSID	Access Point ID	ERL ID
3	D	ACCESS_POINT	F21541BB-64FF-4514-B2DA-E807B9260677	55:88:77:44:99:66	51041B3C-EB9C-4781-AC53-D101EFA3867C	0E3B8E90-AD7A-4E51-9BE8-A5F25

Figure 110: Deleting an Access Point and BSSID

Switches and Ports

The following batch operations are supported for switches and ports:

- Adding a switch to an existing ERL. See [“Adding a New Switch to an Existing ERL”](#).
- Adding a port to an existing ERL. See [“Adding a Port to an ERL”](#).
- Adding a switch and an ERL in a single step. See [“Adding an ERL and Switch in a Single Step”](#).
- Adding a port and an ERL in single step. See [“Adding an ERL and Port in a Single Step”](#).
- Updating the name of an existing switch. See [“Updating a Switch’s Name”](#).
- Update the name of an existing port. See [“Updating a Port’s Name”](#).
- Move the switch from one ERL to another. See [“Move a Switch From One ERL to Another”](#).
- Moving the port from one ERL to another ERL. See [“Move a Port From One ERL to Another”](#).
- **Delete switches.** See [“Delete Switches”](#).
- Deleting ports. See [“Delete Ports”](#).

Adding a New Switch to an Existing ERL

- 1 Enter the letter **A** in the column **OP**.
- 2 Enter **SWITCH** in the **Item Type** column.
- 3 Ensure the **Account ID**, **Account Name**, **Sub Account ID** or **Sub Account Name** columns are populated as per the exported template
- 4 In the **Switch Name** column, enter an appropriate name for the new switch.
- 5 In the **Chassis ID** column, enter an appropriate Chassis ID to identify the new switch. See [“Switches and Ports”](#) for valid formats and examples.
- 6 In the **ERL ID** column, provide a valid and existing ERL ID. Please note that since you are associating a new switch to an existing ERL, this ERL must already have been added in the account.

All other fields are ignored (including the civic address and location fields).

See Figure 111 for an example batch file. In this example, two new switches are added to an already-existing ERL with ERL ID 48C04037-6606-4F07-BDC4-4C009159BFF0.

OP	Item Type	Account ID	Sub Account	Switch Name	Chassis ID	ERL ID
A	SWITCH	F21541BB-64FF-4514-	7E933EB7-6948-4D26	Floor 1	sw-floor1.internal.company.com	48C04037-6606-4F07-BDC4-4C009159BFF0
A	SWITCH	F21541BB-64FF-4514-	7E933EB7-6948-4D26	Switch CA 1	AB13452627AA	48C04037-6606-4F07-BDC4-4C009159BFF0

Figure 111: Adding Two New Switches to an ERL

Adding an ERL and Switch in a Single Step

- 1 Enter the letter **A** in the column **OP**.
- 2 Enter **SWITCH** in the **Item Type** column.
- 3 Ensure the **Account ID**, **Account Name**, **Sub Account ID** and **Sub Account Name** columns are populated as per the exported template.
- 4 In the **Switch Name** column, enter an appropriate name for the new switch.
- 5 In the **Chassis ID** column, enter an appropriate Chassis ID to identify the new switch. See [“Switches and Ports”](#) for valid formats and examples.
- 6 Include valid information in the following fields: *House Number, Street Name, City, State, ZIP, Country, ERL Name*. Do not provide the ERL ID value in the column **ERL ID**.

NOTE

Please note that the *Location, ERL Label, Language, Crisis Email, Call Delivery, Security Desk DID, SD Mute, Notification Display, Customer Callback and DID* columns are stored if provided.

See [Figure 112](#) for an example. In this batch example, two ERLs and switches are added in a single step.

OP	Item Type	Account ID	Sub Account ID	Chassis ID	House Number	Street Name	City	State	ZIP	Country	Location	ERL Name
A	SWITCH	F21541BB-64FF-4514-	7E933EB7-6948-4D26	sw-floor1.internal.company.com	675	Creekside W/	Campbell	CA	95008	US	First Floor	Campbell 1s
A	SWITCH	F21541BB-64FF-4514-	7E933EB7-6948-4D26	AB13452627AA	675	Creekside W/	Campbell	CA	95008	US	Second Floor	Campbell 2n

Figure 112: Adding ERLs and Switches in a Single Step

Adding a Port to an ERL

NOTE To be able to associate a new port to an ERL, a switch must already have been added into the appropriate account.

To add a new port to an existing ERL:

- 1 Enter the letter **A** in the column **OP**.
- 2 Enter **Port** in the **Item Type** column.
- 3 Ensure the **Account ID**, **Account Name**, **Sub Account ID** and **Sub Account Name** columns are populated as per the exported template
- 4 In the **Chassis ID** column, provide the Chassis ID of the switch you want to add this new port to.
- 5 In the column **Port Name**, include the name of the port
- 6 In the **Port ID** column, provide an ID for the port. For accepted formats and examples, see [“Switches and Ports”](#).
- 7 In the **ERL ID** column, provide a valid and existing ERL ID.

NOTE Please note that since you are associating a new switch to an existing ERL, this ERL must already have been added in the account. All other fields are ignored (including the civic address and location fields)

NOTE Even though the user may provide the ERL address fields (Civic address and the location field) in addition to the ERL ID, ERS does not perform any address validation when processing the batch file. Only the ERL ID is used; all other location-related fields are ignored.

In the example batch file shown in [Figure 113](#), two ports are added to switch with Chassis ID floor1.enterprise.org and with ERL ID 5D763AFF-87F9-4E44-96DA-C93D63E25D2B.

OP	Item Type	Account ID	Chassis ID	Port Name	Port ID	ERL ID
A	PORT	F21541BB-64FF-4514-	floor1.enterprise.org		1	5D763AFF-87F9-4E44-96DA-C93D63E25D2B
A	PORT	F21541BB-64FF-4514-	floor1.enterprise.org		2	5D763AFF-87F9-4E44-96DA-C93D63E25D2B

Figure 113: Adding Ports to a Switch

Adding an ERL and Port in a Single Step

NOTE To be able to associate a new port to an ERL, a switch must already have been added into the appropriate account.

- 1 Enter the letter **A** in the column **OP**.
- 2 Enter **PORT** in the **Item Type** column.
- 3 Ensure the **Account ID**, **Account Name**, **Sub Account ID** and **Sub Account Name** columns are populated as per the exported template.
- 4 In the **Chassis ID** column, provide the Chassis ID of the switch you want to add this new port to.
- 5 In the column **Port Name**, include the name of the port
- 6 In the **Port ID** column, provide an ID for the port. For accepted formats and examples, see [“Switches and Ports”](#).
- 7 Include valid information in the following fields: **House Number**, **Street Name**, **City**, **State**, **ZIP**, **Country**. Do not provide the ERL ID value in the column **ERL ID**.

NOTE Please note that the **Location**, **ERL Label**, **Language**, **Crisis Email**, **Call Delivery**, **Security Desk DID**, **SD Mute**, **Notification Display**, **Customer Callback** and **DID** columns are stored if provided.

In the example shown in Figure 114, a new port with Port ID 11:33:55:66:88:77 is added along with a new ERL.

OP	Item Type	Account ID	Chassis ID	Port Name	Port ID	House Number	Street Name	City	State
A	PORT	F21541BB-64FF-4514-	floor1.enterprise.org		1 11:33:55:66:88:77	675	Creekside W.	Campbell	CA

Figure 114: Adding an ERL and Port in a Single Step

Updating a Switch’s Name

- 1 Enter the letter **A** in the column **OP**.
- 2 Enter **SWITCH** in the **Item Type** column.
- 3 Ensure the **Account ID**, **Account Name**, **Sub Account ID** and **Sub Account Name** columns are populated as per the exported template.
- 4 Enter a name for the switch in the **Switch Name** column.
- 5 In the **Chassis ID** column, provide the Chassis ID of the switch. This should be the Chassis ID of the switch whose name you want to update.
- 6 In the **ERL ID** column, provide a valid and existing ERL ID. This should be the ERL ID of

the Switch whose name you want to update.

In the batch file example shown in Figure 115, the switch name is updated.

OP	Item Type	Account ID	Switch Name	Chassis ID	ERL ID
A	SWITCH	F21541BB-64FF-4514-	Floor 2	sw-floor1.internal.company.com	48C04037-6606-4F07-BDC4-4C009159BFF0

Figure 115: Updating a Switch's Name

Updating a Port's Name

- 1 Enter the letter **A** in the column **OP**.
- 2 Enter **PORT** in the **Item Type** column.
- 3 Ensure the **Account ID**, **Account Name**, **Sub Account ID** and **Sub Account Name** columns are populated as per the exported template.
- 4 Enter a name for the port in the **Port Name** column.
- 5 In the **Port ID** column, provide the Port ID of the port.
- 6 In the **Chassis ID** column, provide the Chassis ID of the switch.
- 7 In the **ERL ID** column, provide a valid and existing ERL ID. This should be the ERL ID of the port whose name you want to update.

In the example shown in Figure 116, the port's name has been updated.

OP	Item Type	Account ID	Chassis ID	Port Name	Port ID	ERL ID
A	PORT	F21541BB-64FF-4514-	sw-floor1.internal.company.com	Conference Room 1	11:22:33:44:55:66	3408084E-C96A-44C3-A241-19B2E620FC7B

Figure 116: Updating Port's Name

Move a Switch From One ERL to Another

This operation enables the user to move a switch between ERLs in the same sub account.

NOTE | This operation does not relocate ports. See [“Move a Port From One ERL to Another”](#) on how to relocate a port from one ERL to another.

To relocate a switch from one ERL to another:

- 1 Enter the letter **M** in the column **OP**.
- 2 Enter **SWITCH** in the **Item Type** column.
- 3 Ensure the **Account ID**, **Account Name**, **Sub Account ID** and **Sub Account Name** columns are populated as per the exported template.
- 4 In the **Chassis ID** column, provide the Chassis ID of the switch. This should be the Chassis ID of the switch that you want to move.
- 5 In the **ERL ID** column, provide a valid and existing ERL ID that exists within the same sub account. This should be the ERL ID of the switch to where you want to relocate the switch.

In the example shown in Figure 117, the switch is moved to a new ERL.

OP	Item Type	Account ID	Chassis ID	ERL ID
M	SWITCH	F21541BB-64FF-4514-	AB:13:45:26:27:AA	48C04037-6606-4F07-BDC4-4C009159BFF0

Figure 117: Relocating a Switch

Move a Port From One ERL to Another

This operation enables the user to relocate a port from one ERL to another. The ERLs must belong to the same account.

To relocate ports:

- 1 Enter the letter **M** in the column **OP**.
- 2 Enter **PORT** in the **Item Type** column.
- 3 Ensure the **Account ID**, **Account Name**, **Sub Account ID** and **Sub Account Name** columns are populated as per the exported template
- 4 In the **Chassis ID** column, provide the Chassis ID of the switch that the port is attached to.
- 5 In the **Port ID** column, enter the port’s ID.
- 6 In the **ERL ID** column, provide a valid and existing ERL ID that exists within the same sub account. This should be the ERL ID of the port where you want to relocate the port to.

In the example shown in Figure 118, the port is moved to another ERL.

OP	Item Type	Account ID	Port ID	ERL ID
M	PORT	F21541BB-64FF-4514-	22:34:55:66:77	5D763AFF-87F9-4E44-96DA-C93D63E25D2B

Figure 118: Moving Ports Between ERLs

Delete Switches

When a switch is deleted through batch, all the ports attached to it are also deleted.

To delete a switch:

- 1 Enter the letter **D** in the column **OP**.
- 2 Enter **SWITCH** in the **Item Type** column.
- 3 Ensure the **Account ID**, **Account Name**, **Sub Account ID** and **Sub Account Name** columns are populated as per the exported template
- 4 In the **Chassis ID** column, provide the Chassis ID of the switch. This should be the Chassis ID of the switch whose name you want to update.

See Figure 119 for example.

	A	D	E	O	P	S
1	Account N	400D1783	Generated at:			
2	OP	Item Type	Account ID	Switch Name	Chassis ID	ERL ID
4	D	SWITCH	589E92FE-	Floor 1	1.12E+11	6F73F52F-68A5-444B-AD11-72686040CA47

Figure 119: Deleting a Switch via Batch

Delete Ports

To delete ports:

- 1 Enter the letter **D** in the column **OP**.
- 2 Enter **PORT** in the **Item Type** column.
- 3 Ensure the **Account ID**, **Account Name**, **Sub Account ID** and **Sub Account Name** columns are populated as per the exported template
- 4 In the **Chassis ID** column, provide the Chassis ID of the switch that the port belongs to.
- 5 In the **Port ID** column, enter the port’s ID. See Figure 120 for an example.

OP	Item Type	Account ID	Account Name	Sub Account ID	Sub Account Name	Chassis ID	Port ID
D	PORT	F21541BB-64FF-4514-	8x8 Enterprise	7E933EB7-6948-4D2E-	coursedev02	floor1.enterprise.org	22:34:55:66:77

Figure 120: Deleting a Port via Batch

Uploading a Batch File

After making the desired changes and additions to the batch CSV file:

- 1 Save the changes you made.

NOTE Please ensure that you have saved the batch file in CSV format. Microsoft Excel asks to save the file twice.

- 2 Go to the ERS *Provisioning* screen and click the **Batch Provisioning** button. The *Batch Provisioning* screen displays, as shown in Figure 121.

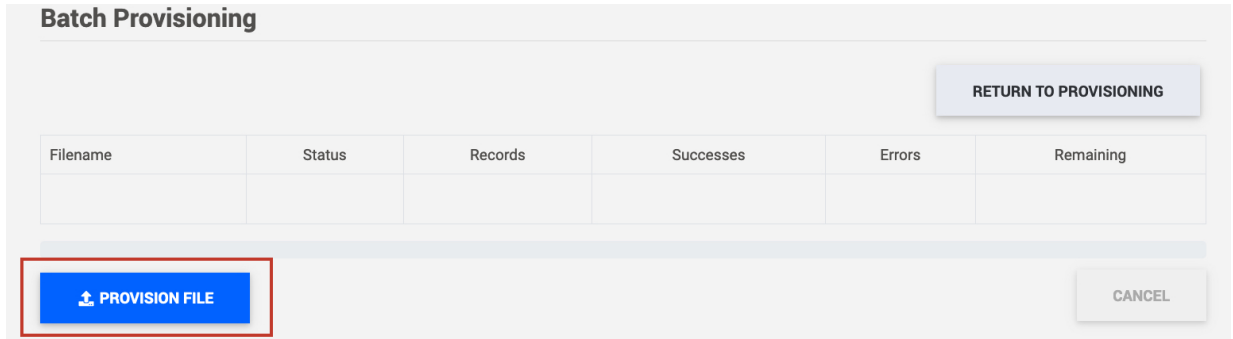


Figure 121: Batch Provisioning Screen—Click the Provision File Button to Upload the Batch File

- 3 Click the **Provision File** button.
- 4 Navigate to the desired batch file and click it to upload it.
- 5 Click **Confirm**.

If the batch file includes civic addresses, then ERS validates them. The system also performs other system checks to ensure that the information in the batch file is valid. The results are displayed in real-time under the **Status** column. An example is shown in Figure 122. When the **Remaining** column displays 0, the ERS has finished processing the file.

NOTE Address validation is only performed on Civic Address records. For batch files that include geo-coordinate locations, ERS does *not* validate the geo-coordinate location, but does perform system checks to ensure that the batch file is properly formatted. The system status message is displayed for both location types.

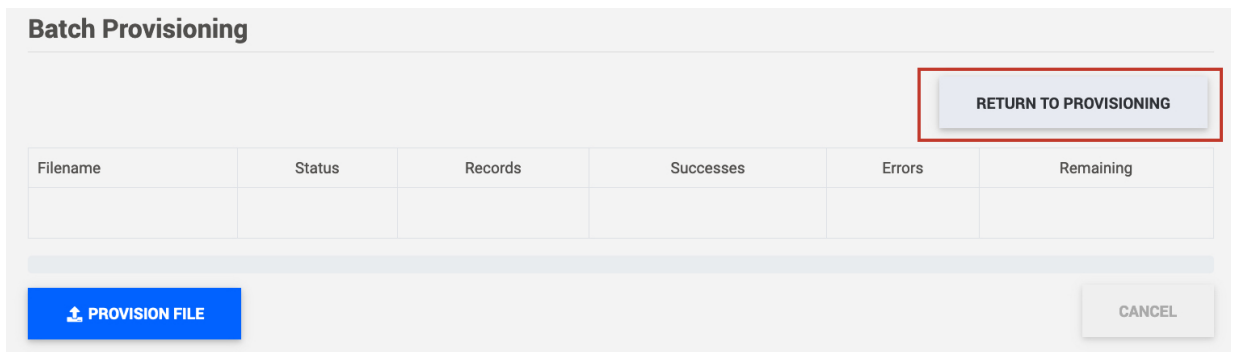


Figure 122: Batch Provisioning Status Message

- 6 Click the **Return to Provisioning** button to return to the *Provisioning* screen, to view your newly provisioned data.

Reviewing Batch Provisioning Results

When you upload a batch file and click the **Provision File** button, ERS processes the CSV file row-by-row. Information in the rows that are valid are added to ERS records. Records in rows that failed Civic Address validation or system checks are rejected. The batch file operational successes and errors are recorded by the ERS. These can be viewed in the Batch Provisioning History section of the *Batch Provisioning* screen.

The screenshot shows the 'Batch Provisioning History' section of a web interface. At the top, there is a blue button labeled 'PROVISION FILE' and a grey button labeled 'CANCEL'. Below this, a red banner indicates 'Provisioning Errors (1)' with a sub-message: 'Line 3: Switch Service failure.' The main section is titled 'Batch Provisioning History' and shows 'Showing 1 to 4 of 4 entries'. A table with 8 columns is displayed: 'BATCH FILES', 'BATCH LOG', 'DATE LOADED', 'STATUS', 'RECORDS', 'SUCCESSES', 'ERRORS', and 'DELETE'. The first row is highlighted with a red border and shows a file named 'Err Batch File-1.csv' with a status of 'Completed - Errors', 1 record, 0 successes, and 1 error. The second and third rows show the same file name with a status of 'Completed - Success', 1 record, 1 success, and 0 errors.

BATCH FILES	BATCH LOG	DATE LOADED	STATUS	RECORDS	SUCCESSES	ERRORS	DELETE
Err Batch File-1.csv	Log File Error File	Mon Dec 20 16:56:11 EST 2021	Completed - Errors	1	0	1	
Err Batch File-1.csv	Log File	Mon Dec 20 16:55:24 EST 2021	Completed - Success	1	1	0	
Err Batch File-1.csv	Log File	Mon Dec 20 16:54:42 EST 2021	Completed - Success	1	1	0	

Figure 123: Batch Provisioning Screen—Batch File Provisioning History Details

IMPORTANT After completing batch provisioning it can take a few minutes before the updated details are visible in the provisioning page.

Batch Log Files

ERS generates a log file in CSV format of the batch operation. The uploaded batch file is returned with the **RES** (result) and **MSG** (message) column populated. For instance, in the example log file shown in Figure 124 below, the **RES** column in the log file displays `OK` and the **MSG** column displays `Location successfully added` to advise the user that the ERL row was valid and added to ERS records.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Account Nam	coursedev02	ID:	7E933EB7-6	Generated a	#####						
2	OP	RES	MSG	Item Type	Account ID	Account Nam	Sub Account	Sub Account	Subscriber IC	Subnet ID	Subnet Nam	BSSID
3				ERL	F21541BB-6	8x8 Enterpris	7E933EB7-6	coursedev02	Demo			
4				ERL	F21541BB-6	8x8 Enterpris	7E933EB7-6	coursedev02	Demo			
5				ERL	F21541BB-6	8x8 Enterpris	7E933EB7-6	coursedev02	Demo			
6				ERL	F21541BB-6	8x8 Enterpris	7E933EB7-6	coursedev02	Demo			
7	A	OK		ERL	F21541BB-6	8x8 Enterpris	7E933EB7-6	coursedev02	Demo			
8				SUBSCRIBER	F21541BB-6	8x8 Enterpris	7E933EB7-6	coursedev02	(209) 442-9229			
9				SUBSCRIBER	F21541BB-6	8x8 Enterpris	7E933EB7-6	coursedev02	(209) 442-9320			
10				SUBSCRIBER	F21541BB-6	8x8 Enterpris	7E933EB7-6	coursedev02	(209) 442-9235			

Figure 124: Sample Batch Log File

NOTE | The log file is generated even if there were no errors in the batch file. If the uploaded batch file did contain errors, then you can correct those errors and re-upload.

Error Log File

If any rows in the batch file failed Civic Address validation or other system checks, ERS generates an Error File. This file displays only the rows that generated an error. The **RES** (result) and **MSG** (message) columns display the result of the Civic Address validation or system check and the reason for the error. An example error log file is shown in Figure 125, below.

Account Nam	coursedev02	ID:	7E933EB7-6	Generated a	#####	
OP	RES	MSG	Item Type	Account ID	Account Nam	Sub Acc
A	ERROR	Switch Service failure.	SWITCH	F21541BB-6	8x8 Enterpris	7E933EB

Figure 125: Sample Error Log File

Chapter 6

Call Routing

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Call Delivery Options Per ERL

The option to choose the delivery method for an ERL provides you with the flexibility to route calls to more than one destination based on its ERL information. For instance, in a large organization with multiple campuses, you can configure the ERS to route emergency calls originating from a specific location (ERL ID: X) to a Security Desk, while routing emergency calls originating from a different location (ERL ID: Y) directly to a PSAP.

ERS can be configured for ERL-based call routing so that calls end up at one of the following destinations:

- **PSAP:** Choosing this option routes the call to the PSAP. A two-way communication is established between the caller and the PSAP operator. (Refer to “[PSAP](#)”)
- **Security Desk:** Choosing this option routes the call to the Security Desk. A two-way communication is established between the caller and the internal Security Desk personnel. (Refer to “[Security Desk](#)”)
- **Three-Way:** Choosing this option routes the call to the Security Desk as well as the PSAP. A three-way communication is established between the caller, PSAP operator, and the Security Desk personnel. (Refer to “[Three-Way](#)”)

You can setup ERL-based call routing destinations when you are adding an ERL or by editing an ERL. Both workflows require you to enter the same information in routing options. The procedure to setup routing options by editing an ERL is provided below:

- 1 Go to the Deployment account *Provisioning* screen.
- 2 Retrieve the ERL you want to setup routing options for.
- 3 Click on the pencil icon on the associated ERL row. The *Edit ERL* screen displays, as shown in Figure 126.

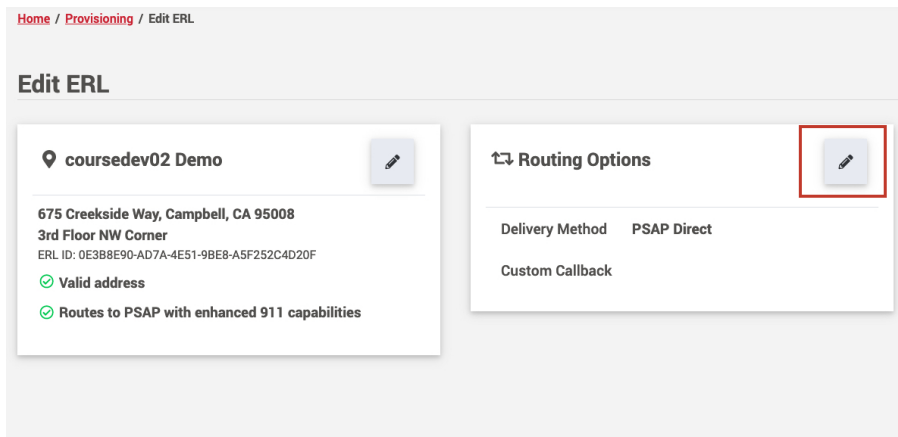


Figure 126: Edit ERL Screen Displaying Routing Options

- 4 Click on the **pencil icon** in *Routing Options*. The *Select Routing Options* panel expands showing the various options available, as shown in Figure 127.

Routing Options

Delivery Method

PSAP Security Desk Three way

Custom Callback

(408) 555-1212

Email Notifications

john.doe@company.com

CANCEL SAVE

Figure 127: Selecting Routing Options

- 5 Choose from the following delivery methods, as required, and enter all relevant information:
 - PSAP
 - Security Desk
 - Three Way
- 6 Click **Save** to finish the selecting routing options.

Selecting Call Delivery Methods in ERL

PSAP

When **PSAP** is chosen as the delivery method, an emergency call made from this ERL reaches the PSAP directly.

In the example below, **PSAP** is chosen as the delivery method and all relevant information such as the custom callback number and the email address for notifications are provided.

Security Desk

Certain organizations that have internal Security Desk personnel can perform additional configuration to route calls to the Security Desk instead of the PSAP. This is a two-way call that takes place between the caller and the Security Desk personnel; no PSAP is involved.

To support this requirement, Security Desk DIDs are added at the ERL level through the ERS portal.

To setup call routing to an internal Security Desk DID:

- Configure a Security Desk through ERL Properties through the *Add ERL* or *Edit ERL* screens. See [“Configuring a Security Desk through ERL Properties”](#) for more information.

Configuring a Security Desk through ERL Properties

When an ERL’s delivery method under `Routing Options` is set to `Security Desk`, emergency calls originating from this ERL are directed to the associated Security Desk DID, rather than the one configured at the account level, provided that `Override ERL Security Desk DID` option has been disabled on your account dial plan. This allows you to pick and choose the destination of the calls based on the location (ERL) of the subscriber. The following conditions apply:

- All accounts using methodologies other than SIP to connect to the ERS must configure a Security Desk per ERL, if you want to direct calls to your internal Security Desk.

In the example below, `Security Desk` is chosen as the delivery method and all relevant information such as the Security Desk DID, notification display setting, label, and email address for notification are provided.

Three-Way

When `Three-Way` is chosen as the delivery method, calls originating from this ERL are directed to the PSAP as well as the Security Desk. There is an optional setting to mute the Security Desk personnel so that they can listen in on the call but cannot speak to the PSAP operator or the caller.

When choosing `Three Way`, you have to enter the Security Desk DID and choose between `Unmute/Mute` for the Security Desk Mute setting:

- **Security Desk Unmute:** When a Security Desk is unmuted (default setting) and a Security Desk answers the emergency call before the PSAP, then a message is played warning the Security Desk personnel that they are joining the call, followed by beep tones until a PSAP answers the call. The Security Desk is only able to interact with the caller when a PSAP answers the call.
The exact message played to the Security Desk is: `Joining the emergency call in progress.`
- **Security Desk Mute:** When a Security Desk is muted and a Security Desk answers the emergency call before the PSAP, then a message is played warning the Security Desk personnel that they are monitoring the call, followed by beep tones until a PSAP answers the call. The Security Desk and the caller cannot interact in this call and the Security Desk personnel cannot unmute themselves while the call is in progress.
The exact message played to the Security Desk is: `Monitoring an emergency call in progress.`

In the example below, `Three-Way` is chosen as the delivery method and all relevant information such as the Security Desk DID, notification display, Security Desk mute settings, label, and email address for notification are provided

Chapter 7

911 Location Manager 2.x

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Overview

Location Manager allows organizations to track a user's location regardless of whether they are on-site or off-site. This application is installed on the user's device and detects changes in network conditions.

Locations for on-site users are automatically assigned based on the information that the enterprise's administrator has provided. It does not matter whether the user connects to the enterprise network via a wired or wireless connection; Location Manager uses network maps and auto-assigns a location without any input from the user. In cases where the on-site location cannot be assigned, additional configuration can be performed to display a list of buildings the user may be located in.

On the other hand, off-site users are asked to provide their location, ensuring that any emergency call placed is routed with the most current user location.

Location Manager is designed to:

- Determine whether the user is on-site or off-site and whether or not to prompt the user
- Automatically assign the enterprise's address for an on-site user
- Prompt the off-site user at an unknown location.
- Remember familiar locations so that users are not repeatedly asked to provide addresses when they revisit these locations.
- Starting with this release of Location Manager 2.x, it is now possible to run Location Manager on a VMWare Horizon Virtual Desktop (RDP) via a thin client.
- Prompt the on-site user to choose the building they are located in.

This chapter describes Location Manager 2.x and guides you through the requirements, installation and configuration.

The current recommended major release of Location Manager is 2.0 or later which has some important differences from the earlier 1.x versions

IMPORTANT

For details about earlier 1.x versions of Location Manager, please see [Appendix G](#).

If you have an existing deployment of Location Manager 1.x please read though section [Migration From Location Manager 1.x to 2.x](#) to help plan your migration to Location Manager 2.x

How is location tracked in 911 Location Manager 2.x?

To determine the user's location, Location Manager 2.x associates an Emergency Response Location (ERL) to a user, and stores it in ERS.

NOTE	Emergency Response Location (ERL) refers to the current physical location where the user can be found by first responders in case of an emergency.
-------------	--

Location Manager automatically detects whether the user is on-site or off-site and applies different mechanisms to determine the ERL. The supported mechanisms are:

- **Off-site Manual Mode:** Location Manager prompts the user to enter their location.
- **Network Maps:** Location Manager does not prompt the user for their location. The user's location is automatically detected based on network maps in the ERS Portal.
- **On-Site Manual Mode:** Location Manager prompts the user to save their current on-site location, by selecting from a list of on-site buildings, provisioned by the administrator in the ERS Portal.

The Location Manager's prompting behavior will vary based on the used mechanism(s). The mechanism to determine the location and the prompting behavior can be configured by the ERS administrator in the ERS Portal. However, if nothing is configured, the following default behavior is applied:

Off-Site or On-Site?	Mechanism	Prompting Behavior
Off-Site	Off-site manual mode	Prompt user to enter their remote location
On-Site	Network Maps	No prompting
On-Site	On-site manual mode	Prompt end-user to select from a list of on-site buildings

Migration From Location Manager 1.x to 2.x

The configuration pages for Location Manager in the ERS portal differ between Location Manager 1.x and Location Manager 2.x. To facilitate gradual migration of users to Location Manager 2.x, both settings can be accessed from the Administration menu as shown below:

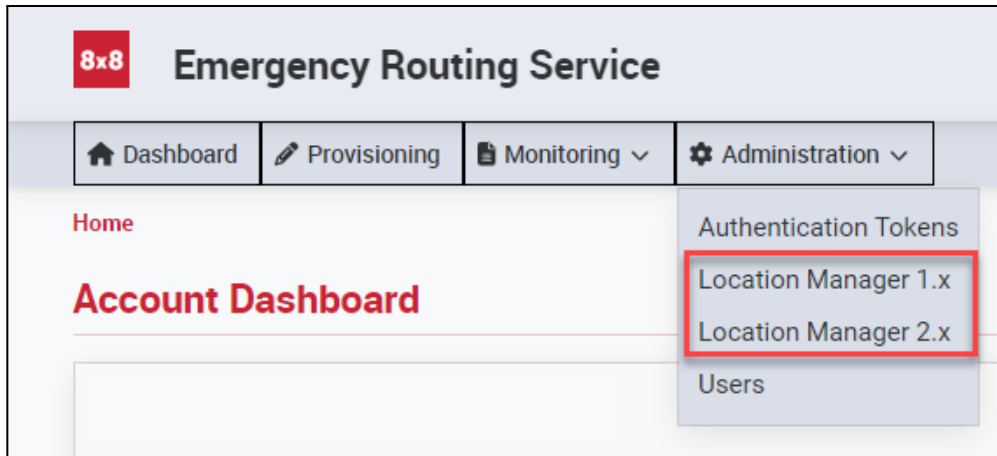


Figure 128: Location Manager 1.x and 2.x Active on Same Account

Please note that any changes made in either of the Location Manager menus will NOT be copied across to the other and will need to be made in both places manually. The Location Manager 1.x menu item will be removed in a future release once all migrations are complete. Please see the upgrade section [Upgrade Location Manager](#) for details on upgrading the installed application.

Migration mode is now available in the ERS Portal. The following settings were copied as a one-time event from the Location Manager 1.x configuration page to the 2.x:

- Softphone behavior and related configuration that was added in **CONFIGURATION** tab
- Softphone executables that were added in the **CONFIGURATION** tab
- FQDN that was provided in the **NETWORK** tab
- Network and prompting settings configured in the **CONFIGURATION** tab
- Custom messages that were configured in the **MESSAGES** tab

IMPORTANT While migration mode is active, the settings have to be managed separately for both versions. This means that when any changes are made for Location Manager 1.x, they do not get automatically updated for Location Manager 2.x.

Applying Configuration Changes

The configuration of the Location Manager can be changed at any time by accessing the ERS portal. Every time a Location Manager change is applied and saved, the resulting configuration is stored in the ERS database. However, the changes are not applied to the application instantaneously.

Modifications propagated to Location Manager vary depending on the version of the application installed on the user's workstation.

Registration

Through the Registration screen, you can:

- **View User Statistics:** the percentage of users on each version of Location Manager
- **View Registered Users:** Information on the user that is using Location Manager; their Subscriber ID, their Location Manager version, date they upgraded the application, Location Manager ID
- **Export Registered Users List:** Generate a CSV file with the list of registered subscribers, the Location Manager version they are registered to and last updated date.
- **Unlink Subscriber:** A particular subscriber can be unlinked from their Location Manager license. See [Location Manager ERLs](#) for more information on this topic.

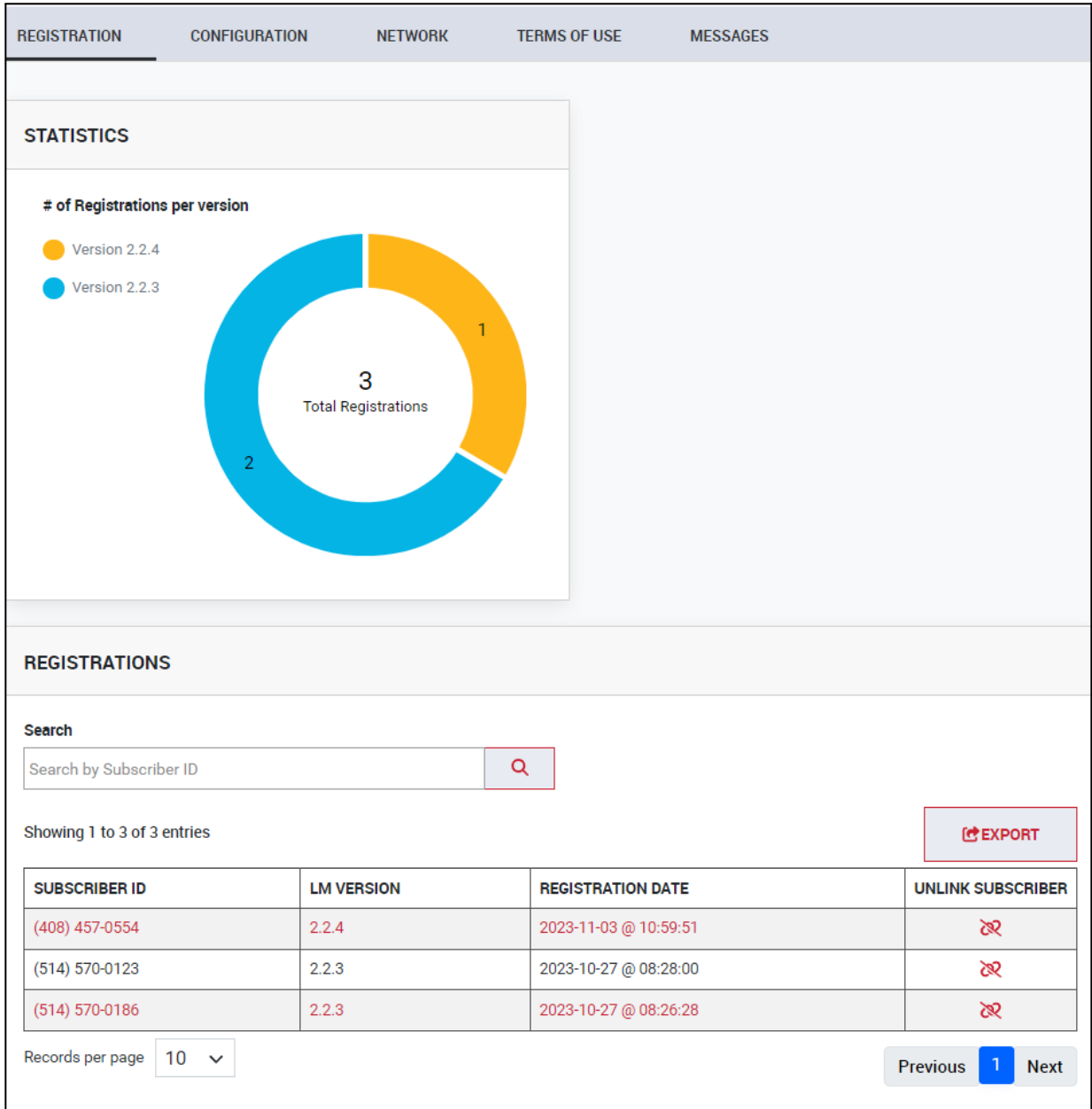


Figure 129: Registration Screen

Exporting Registered Users List

To export a list of registered subscribers:

- 1 Under **REGISTRATIONS**, click the Export button, as shown in Figure Click Export Button - Registered Users.

REGISTRATIONS

Search

Search by Subscriber ID

Showing 1 to 3 of 3 entries

SUBSCRIBER ID	LM VERSION	REGISTRATION DATE	UNLINK SUBSCRIBER
(408) 457-0554	2.2.4	2023-11-03 @ 10:59:51	
(514) 570-0123	2.2.3	2023-10-27 @ 08:28:00	
(514) 570-0186	2.2.3	2023-10-27 @ 08:26:28	

Records per page

Figure 130: Click Export Button - Registered Users

In Location Manager 2.X, the **REGISTRATIONS** section has the following columns, instead of the columns displayed in Figure 130:

- SUBSCRIBER ID
- LM VERSION
- REGISTRATION DATE
- UNLINK SUBSCRIBER

See Figure 131 for an example.

REGISTRATIONS

Search

Search by Subscriber ID

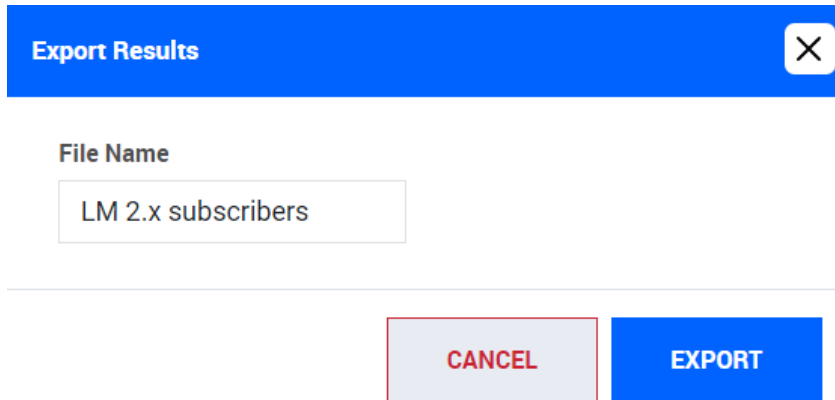
Showing 1 to 3 of 3 entries

SUBSCRIBER ID	LM VERSION	REGISTRATION DATE	UNLINK SUBSCRIBER
(408) 457-0554	2.2.4	2023-11-03 @ 10:59:51	
(514) 570-0123	2.2.3	2023-10-27 @ 08:28:00	
(514) 570-0186	2.2.3	2023-10-27 @ 08:26:28	

Records per page

Figure 131

- The **Export Results** pop-up window appears, as shown in Figure 170. Provide a name for the file under **File Name** and click the **EXPORT** button.



The image shows a blue dialog box titled "Export Results" with a close button (X) in the top right corner. Below the title bar, there is a label "File Name" followed by a text input field containing the text "LM 2.x subscribers". At the bottom of the dialog, there are two buttons: a grey "CANCEL" button and a blue "EXPORT" button.

Figure 132: Exporting Results

- The CSV file is generated and appears under File Manager as shown in Figure 133. Click on the file name under File Manager and download it.

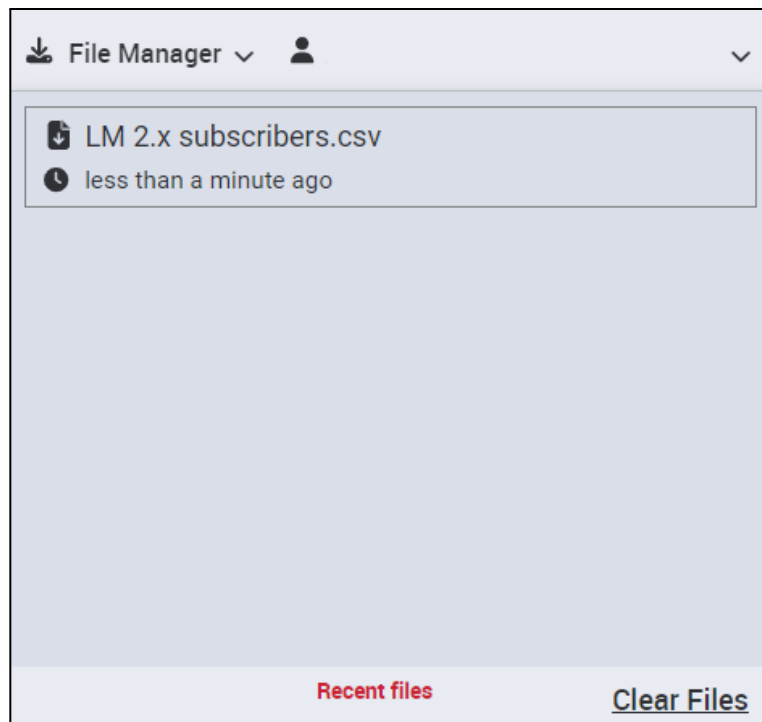


Figure 133: Exported CSV File

Install 911 Location Manager 2.x

Requirements

Prior to installing 911 Location Manager 2.x, ensure that workstations meet the following operating system requirements:

- Windows 8, 10 and 11
- macOS Catalina, Big Sur, Monterey and Ventura and higher (64-bit systems only)

IMPORTANT 911 Location Manager application is not compatible with Windows systems where “Use random hardware addresses” feature has been turned on.

To disable random hardware addresses:

- 1 In your Windows system, go to **Start > Network and Internet > WiFi**.
- 2 Under **Random Hardware Addresses**, ensure the setting is turned off.

Installation Steps

To install 911 Location Manager:

- 1 Download the installation file from the following 8x8 Support article:
https://support.8x8.com/cloud-phone-service/voice/admin-console/setup/Nomadic_911/Download_Location_Manager
- 2 Double click on the file and accept the End User License agreement to complete the installation.

After the 911 Location Manager is installed, it appears in the system tray menu of the user’s workstation. The 911 Location Manager icon is shown below, as it appears to the user (Windows):

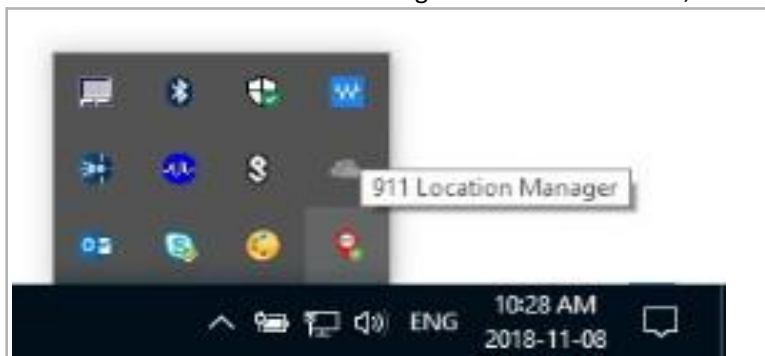


Figure 134

911 Location Manager needs to have access to the Account ID and Token from the ERS portal in order to connect. In Manual installation you have to enter these as part of the installation. However if you want to perform a remote deployment of the application to your user base using an enterprise management tool, then you can pre-configure the package to include the account ID and token so that the user does not have to enter these during first use. See the [silent installation](#) section for more information.

Retrieving Account ID and Token

Pre-requisite: You must have access to the ERS Portal and possess relevant user account privileges. If your Sub Account administrator will be installing the application for their users, then they must be provided with the relevant privileges.

To retrieve the Account ID and Token:

- 1 Login to the ERS portal using your administrator user access.

IMPORTANT If you are the admin, you can login to your account and access your customer's sub account to retrieve the Sub account's ID and token.

- 2 Click the **Administration** drop down menu and choose **Authentication Tokens**. See Figure 135 for more information the *Location Manager* screen displays.

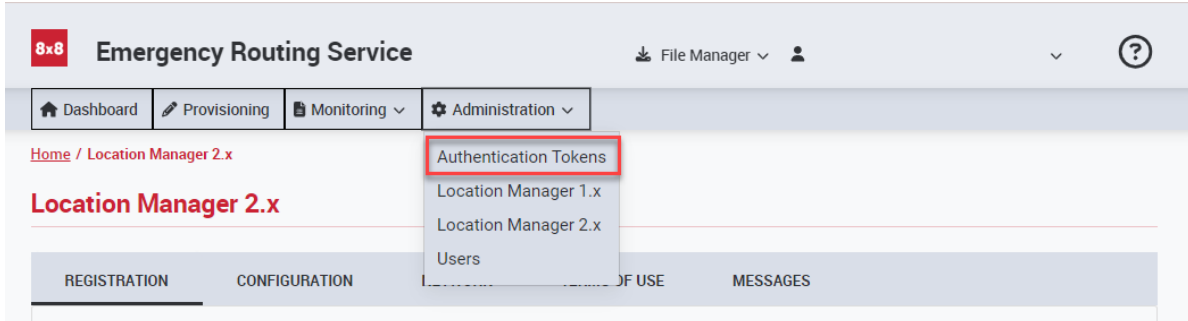


Figure 135: Choose Authentication Tokens From Administration Drop Down Menu- ERS Portal

- 3 In the *Authentication Tokens* screen, copy the Account ID and token as shown in Figure 136. Paste this information into a notepad or any other easily accessible location. You will need this information when installing Location Manager.

The screenshot shows the 8x8 Emergency Routing Service portal. At the top, there is a header with the 8x8 logo, the text "Emergency Routing Service", and a "File Manager" dropdown menu. Below the header, there is a breadcrumb trail: "Home / Authentication Tokens". The main content area is titled "General Information" and contains a table with the following data:

Account Name:	8x8 UK
Account ID:	68EE7299-89E1-4AA2-855E-A659043DF792

Below this, there is a section titled "Authentication Tokens" which contains a "LOCATION MANAGER" link with a question mark icon. Underneath, there is a table with the following data:

Token:	60B3812A-1FAF-4FED-A873-6F73D406C923
--------	--------------------------------------

Figure 136: Retrieving Account ID and Token from ERS Portal

Manual Installation

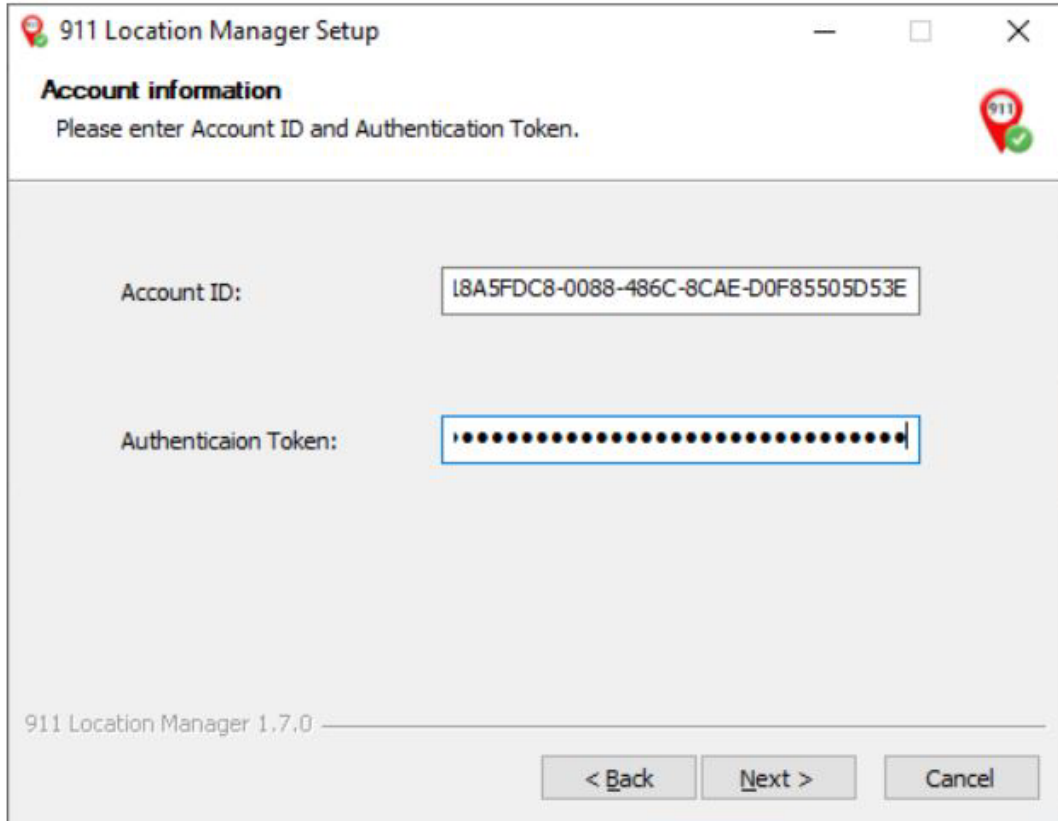
To install Location Manager:

- 1 Download the installation zip file for Windows or Mac as appropriate, then unzip it. Inside you will find an installer executable and another zip file which should be left zipped. See Figure 137 for an example.

Name	Type	Date modified	Size
911LocationManager	Compressed (zipped) Folder	2021-06-03 11:52 AM	6 KB
911LocationManagerSetup	Application	2021-06-03 11:52 AM	46,551 KB

Figure 137: Location Manager Installation Files

- 2 Double click on the executable file called "911LocationManagerSetup". Accept the End User License agreement to proceed with the installation. The Location Manager installation wizard will prompt for the **Account ID** and **Authentication Token** as shown below. The information retrieved as described in "Retrieving Account ID and Token" must be entered in this screen.



The screenshot shows a window titled "911 Location Manager Setup" with a red location pin icon in the top-left corner. The window has standard Windows window controls (minimize, maximize, close) in the top-right corner. Below the title bar, the text "Account information" is displayed in bold, followed by the instruction "Please enter Account ID and Authentication Token." in the top-right area. There is a small red location pin icon with a green checkmark in the top-right corner of the main content area. The "Account ID:" label is followed by a text input field containing the alphanumeric string "l8A5FDC8-0088-486C-8CAE-D0F85505D53E". The "Authenticaiton Token:" label (note the typo) is followed by a text input field filled with black dots, indicating a masked password. At the bottom left of the window, the version number "911 Location Manager 1.7.0" is displayed. At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel".

Figure 138: Providing Account ID and Authentication Token

- 3 Click **Next** and complete the installation process.

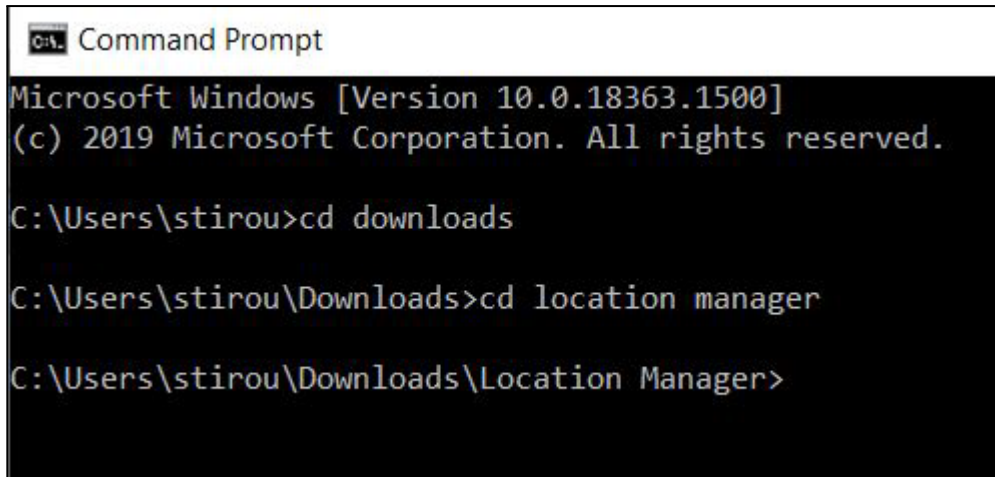
Once the installation process is complete, Location Manager automatically starts and the user is prompted to register their phone number.

Silent Installation

Windows

To setup silent install:

- 1 Open command prompt by typing cmd in the search box. Access the folder where you have stored the two Location Manager installation files (.zip and .exe files). See Figure 139 for an example. In the example below, the installation files were kept in a folder titled "Location Manager" in the Downloads folder.



```
Command Prompt
Microsoft Windows [Version 10.0.18363.1500]
(c) 2019 Microsoft Corporation. All rights reserved.

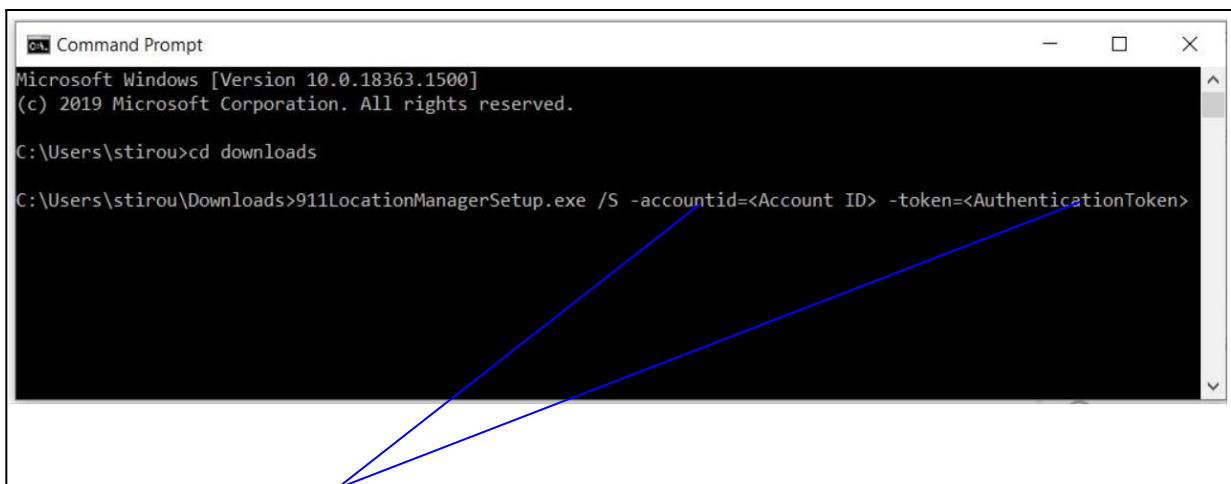
C:\Users\stirou>cd downloads

C:\Users\stirou\Downloads>cd location manager

C:\Users\stirou\Downloads\Location Manager>
```

Figure 139: Accessing Location Manager Install Files

- 2 Type `911LocationManagerSetup.exe /S` and provide the Account ID and the token, as shown in Figure 140 and click **Enter** to begin the install.



```
Command Prompt
Microsoft Windows [Version 10.0.18363.1500]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\stirou>cd downloads

C:\Users\stirou\Downloads>911LocationManagerSetup.exe /S -accountid=<Account ID> -token=<AuthenticationToken>
```

Enter the Account ID and Authentication Token here

Figure 140: Command for Silent Install

IMPORTANT The command mentioned in Step 3 is case-sensitive. The `/S` parameter must be capitalized.

- 3 Windows prompts the user asking for permission to install, as shown in Figure 141. Click **Yes** to agree and install Location Manager.

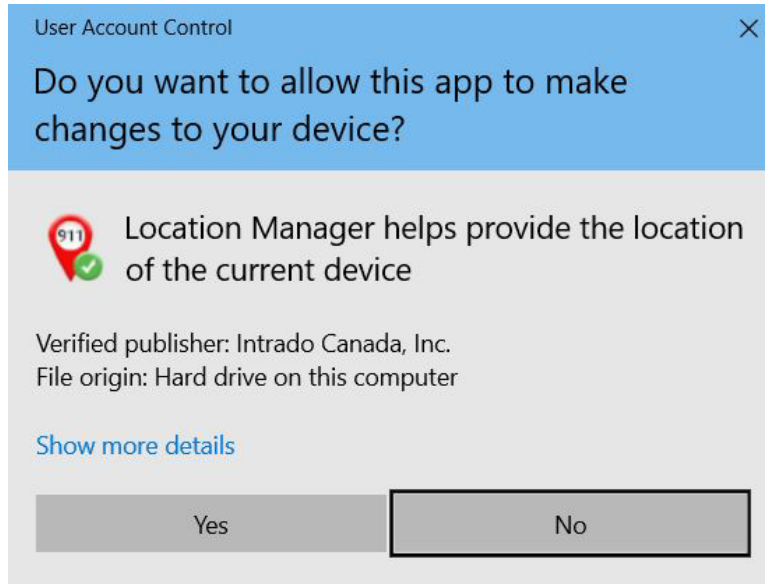


Figure 141: User Account Control

NOTE | The system must be rebooted to automatically start Location Manager after installing through this procedure.

macOS

Prerequisite: Before mass installing Location Manager on macOS, the .env file in the 911LocationManager.zip package must be modified, as follows:

- 1 Locate the .env file, as shown in Figure 142.

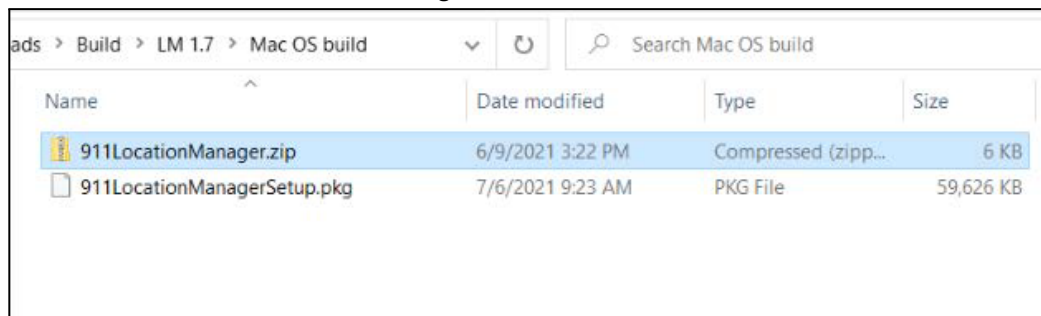


Figure 142: Locating .env file

- 2 Extract the .env file and open it in a text editor. See Figure 143.

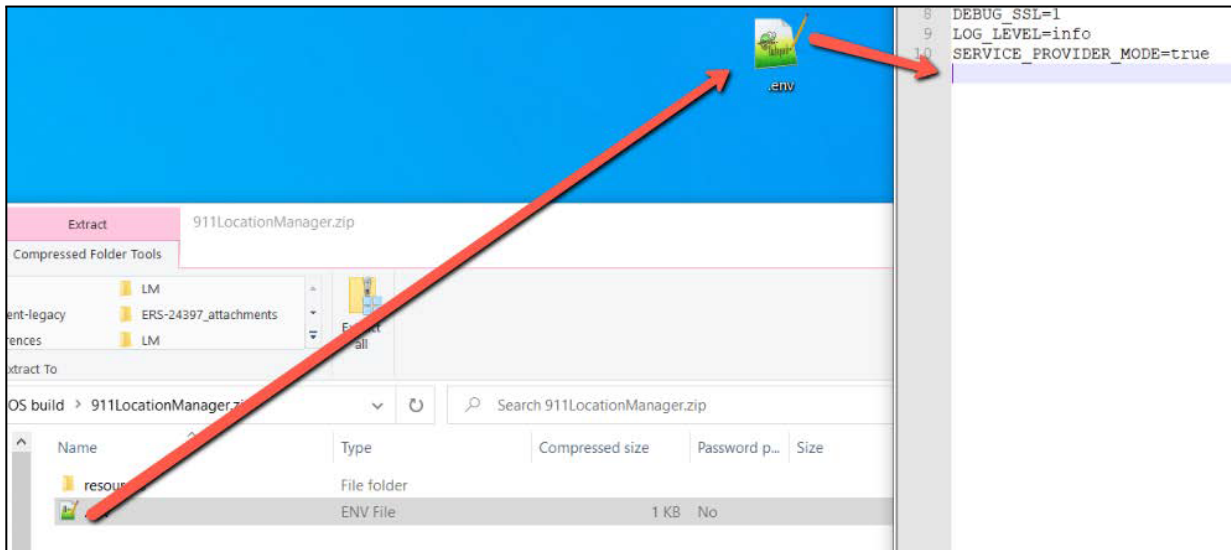


Figure 143: Editing the .env file

- 3 Enter the following two lines after `SERVICE_PROVIDER_MODE=true`.

```
L3_ACCOUNT=<your-account-id>
L3_TOKEN=<your-token>
```

```
10 SERVICE_PROVIDER_MODE=true
11 L3_ACCOUNT=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
12 L3_TOKEN=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
13
```

Figure 144: Editing the .env file

- 4 Save the .env file. Copy and paste the .env file back into the 911LocationManager.zip package (thereby replacing the old .env. file). See Figure 145.

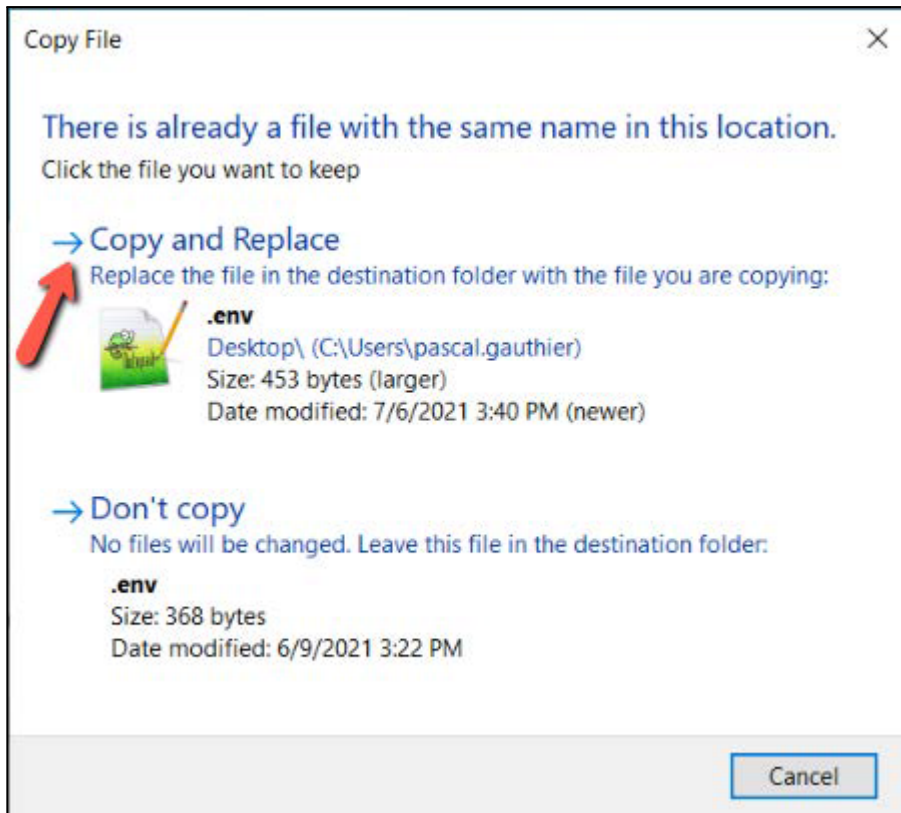


Figure 145: Click Copy and Replace to replace the .env file

For macOS, silent installation is performed by accessing the installer `-pkg` command from a terminal, as follows:

- 1 Open the terminal from the Mac system by accessing **Utilities** and then choosing **Terminal**.
- 2 Enter the commands, as shown in Figure 146. When prompted for the password as shown in line 5, provide the administrator password.

```
1 % ls -lart
2 911LocationManagerSetup.pkg 911LocationManager.zip
3
4 % sudo installer -pkg ./911LocationManagerSetup.pkg -target /
5 Password:
```

Figure 146: Entering Commands into Mac Terminal

NOTE Starting with Location Manager 2.x release, you can use the following command and provide the Account ID and token:

```
./installer 911LocationManagerSetup.pkg --account-id  
<value> --token <value>
```

When the installation completes, the terminal displays a confirmation as shown in Figure 147.

```
6 installer: Package name is 911 Location Manager  
7 installer: Installing at base path /  
8 installer: The install was successful.
```

Figure 147: Confirmation that Location Manager Successfully Installed

Upgrade Location Manager

The procedure for upgrading Location Manager is identical in all accounts. It does not matter whether your account uses certificate-based or token-based authentication.

IMPORTANT You do not need to uninstall Location Manager prior to an upgrade. However, if you do uninstall and perform a fresh install of Location Manager, the user is prompted to register their phone number again.

To upgrade, click the executable from the package. See Figure 148.

Name	Type	Date modified	Size
911LocationManager	Compressed (zipped) Folder	2021-06-03 11:52 AM	6 KB
911LocationManagerSetup	Application	2021-06-03 11:52 AM	46,551 KB

Figure 148: Upgrading Location Manager

Uninstall Location Manager

Windows

To manually uninstall Location Manager, go to Control Panel > Uninstall a program. To uninstall Location Manager silently, open command prompt and enter the following:

```
C:\Program Files\Intrado\911 Location Manager>"Uninstall 911
Location Manager.exe" /S
```

IMPORTANT After silent un-install, you must manually remove the Location Manager settings file.

- Go to: C:\Users\username\AppData\Roaming\
- Locate the file called `911-location-manager` and delete it.

macOS

To uninstall Location Manager, open the terminal and perform the following steps:

- 1 Enter `% ls /Applications | grep 911`. This lists the application as `911 Location Manager.app`
- 2 Enter `% sudo rm -rf /Applications/'911 Location Manager.app'` and provide the password.
- 3 Enter `% sudo rm -rf '/Users/username/Library/Application`

Support/911-location-manager' and provide the password.

```
4      Enter % sudo pkgutil --forget com.connexon.locationManager
and provide the password. System responds with Forgot package
'com.connexon.locationManager' on '/'.
```

Install the Location Manager 2.x. on a virtual machine

To install Location Manager on the virtual machine:

- 1 Install and Launch the Location Manager application by clicking 911LocationManagerSetup.exe
- 2 For silent installation for accounts with Location Manager, using VDI, run the following command from the folder where 911LocationManager.zip and 911LocationManagerSetup.exe is located: `911LocationManagerSetup.exe / S -accountid=<Account ID> -token=<AuthenticationToken>`

Log Files

Client logs

On the VDI Virtual Machine, client logs are located at

```
C:\Users\<Username>\AppData\Roaming\911-location-manager and contains
911LocationManager.log
```

LM-Bridge logs

On the VDI Virtual Machine, the Location Manager bridge logs are located at:

```
C:\Users\<Username>\AppData\Roaming\911-location-manager and contains
lm-bridge.log
```


Configure and Manage Location Manager 2.x

Location Manager is configured and managed through the ERS Portal. Administrators can perform the following functions:

- View information required for authenticating Location Manager
- Add, manage and unlink licenses
- Configure enterprise FQDNs and subnets
- Configure required add-on options
- Configure Location Manager pop-up behavior

Registration

Through the Registration screen, you can:

- **View User Statistics:** the percentage of users on each version of Location Manager
- **View Registered Users:** Information on the user that is using Location Manager; their Subscriber ID, their Location Manager version, date they upgraded the application, Location Manager ID
- **Export Registered Users List:** Generate a CSV file with the list of registered subscribers, the Location Manager version they are registered to and last updated date.
 - **Unlink Subscriber:** A particular subscriber can be unlinked from their Location Manager license. See [Location Manager ERLs](#) for more information on this topic.

The screenshot displays the 'REGISTRATION' screen with the following components:

- Navigation Bar:** REGISTRATION (active), CONFIGURATION, NETWORK, TERMS OF USE, MESSAGES.
- STATISTICS:**
 - Chart title: # of Registrations per version
 - Legend:
 - Version 2.2.4 (Orange)
 - Version 2.2.3 (Blue)
 - Donut Chart Data:

Version	Count
Version 2.2.4	1
Version 2.2.3	2
Total Registrations	3
- REGISTRATIONS:**
 - Search: Search by Subscriber ID [input field] [search icon]
 - Showing 1 to 3 of 3 entries
 - EXPORT button
 - Table:

SUBSCRIBER ID	LM VERSION	REGISTRATION DATE	UNLINK SUBSCRIBER
(408) 457-0554	2.2.4	2023-11-03 @ 10:59:51	[Unlink icon]
(514) 570-0123	2.2.3	2023-10-27 @ 08:28:00	[Unlink icon]

Figure 149: Registration Screen

Network Configuration

When migration mode was activated, the FQDN, network and prompting settings were propagated from the Location Manager 1.x to the 2.x page. The table below shows how the Network and prompting behavior were mapped at that time.

Location Manager 1.x	Location Manager 2.x
On-site/Off-site	Off-site: Prompt user to enter a location On-site: Do not prompt. User location determined by matching ERS Network maps.
On-site/Off-site	Off-site: Prompt user to enter a location On-site: User location determined by matching ERS Network Maps. On failure, prompt user with a list of building locations.
On-site/Off-site	Off-site: Prompt user to enter a location On-site: Prompt user with list of building locations.
On-site/Off-site	Off-site: Prompt user to enter a location On-site: Prompt user to enter a location
Off-site Only	Off-site: Prompt user to enter a location. On-site: Do not prompt. User location determined by a third-party system.

To edit or setup network or prompting behavior:

1. In the *Location Manager 2.x* screen, go to the **Network** tab. See Figure Location Manager 2.2 Network Configuration Screen.

Emergency Routing Service File Manager

Dashboard Provisioning Monitoring Administration

Home / Location Manager 2.x

Location Manager 2.x

REGISTRATION CONFIGURATION **NETWORK** TERMS OF USE MESSAGES

Select the proper prompting behavior and configure the FQDN(s). Once saved, return to the provisioning page to provision network maps and/or buildings as needed.

PROMPTING BEHAVIOR

Off-site:

- Prompt user to enter a location

On-site:

- Do not prompt. User location determined by matching ERS Network Maps
- User location determined by matching ERS Network Maps. On failure, prompt user with a list of building locations
- Do not prompt. User location determined by a 3rd party system
- Prompt user with a list of building locations
- Prompt user to enter a location

FULLY QUALIFIED DOMAIN NAME (FQDN)

When the FQDN can be resolved, the ERS determines that the user can be connected to the corporate network.

Example: locationmanager.corp.pri

DOMAIN NAME	DELETE

CANCEL SAVE

Figure 150: Configure Subnets Figure Location Manager 2.2 Network Configuration Screen.

2. Under **Prompting Behavior**, choose from one of the following on-site and off-site combinations and provide the required information:
 - **Combo 1—Off-site: Prompt user to enter a location and On-site: Do not prompt. User location determined by matching ERS network maps.**
 - Under **FULLY QUALIFIED DOMAIN NAME (FQDN)**, enter your organization's FQDN information. Click **Save**.
 - Once the FQDN is saved, go to the Provisioning screen where you can add network elements and associate them to locations. To associate network elements such as subnets or access points to ERLs, see the ERS User Guide.
 - See Figure Location Manager Combo 1 Network and Prompting Settings for an example on how to configure Location Manager for this configuration.

REGISTRATION CONFIGURATION **NETWORK** TERMS OF USE MESSAGES

Select the proper prompting behavior and configure the FQDN(s). Once saved, return to the provisioning page to provision network maps and/or buildings as needed.

PROMPTING BEHAVIOR

Off-site:

- Prompt user to enter a location

On-site:

- Do not prompt. User location determined by matching ERS Network Maps
- User location determined by matching ERS Network Maps. On failure, prompt user with a list of building locations
- Do not prompt. User location determined by a 3rd party system
- Prompt user with a list of building locations
- Prompt user to enter a location

FULLY QUALIFIED DOMAIN NAME (FQDN)

When the FQDN can be resolved, the ERS determines that the user can be connected to the corporate network.

Example: locationmanager.corp.pri

DOMAIN NAME	DELETE

Figure 151: Location Manager Combo 1 Network and Prompting Settings

- **Combo 2—Off-site: Prompt user to enter a location and On-site: User location determined by matching ERS Network Maps. On failure, prompt the user with a list of building locations.**
 - Under **FULLY QUALIFIED DOMAIN NAME (FQDN)**, enter your organization's FQDN information. Click **Save**.
 - Once the FQDN is saved, go to the Provisioning screen where you can add network elements and associate them to locations.
 - If 911 Location Manager cannot determine the location using Network Maps, the user will be prompted with the list of buildings that are provisioned into the account. See "[Provisioning Buildings](#)" for instructions.
 - See Figure Location Manager Combo 2 Network and Prompting Settings for an example on how to configure Location Manager for this configuration.

REGISTRATION CONFIGURATION **NETWORK** TERMS OF USE MESSAGES

Select the proper prompting behavior and configure the FQDN(s). Once saved, return to the provisioning page to provision network maps and/or buildings as needed.

PROMPTING BEHAVIOR

Off-site:

- Prompt user to enter a location

On-site:

- Do not prompt. User location determined by matching ERS Network Maps
- User location determined by matching ERS Network Maps. On failure, prompt user with a list of building locations
- Do not prompt. User location determined by a 3rd party system
- Prompt user with a list of building locations
- Prompt user to enter a location

FULLY QUALIFIED DOMAIN NAME (FQDN)

When the FQDN can be resolved, the ERS determines that the user can be connected to the corporate network.

Example: locationmanager.corp.pri

DOMAIN NAME	DELETE

CANCEL **SAVE**

Figure 152: Location Manager Combo 2 Network and Prompting Settings

- **Combo 3—Off-site: Prompt user to enter a location and On-site: Do not prompt. User location determined by a third party system.**

IMPORTANT

The option to determine the user location by a third party is shown on the menu but it is not supported and should not be used.

- Under **FULLY QUALIFIED DOMAIN NAME (FQDN)**, enter your organization's FQDN information. There is no requirement to provision network maps for this configuration since the location is determined by the organization's third party system.

REGISTRATION
CONFIGURATION
NETWORK
TERMS OF USE
MESSAGES

Select the proper prompting behavior and configure the FQDN(s). Once saved, return to the provisioning page to provision network maps and/or buildings as needed.

PROMPTING BEHAVIOR

Off-site:

Prompt user to enter a location

On-site:

Do not prompt. User location determined by matching ERS Network Maps

User location determined by matching ERS Network Maps. On failure, prompt user with a list of building locations

Do not prompt. User location determined by a 3rd party system

Prompt user with a list of building locations

Prompt user to enter a location

FULLY QUALIFIED DOMAIN NAME (FQDN)

When the FQDN can be resolved, the ERS determines that the user can be connected to the corporate network.

Example: locationmanager.corp.pri

DOMAIN NAME	DELETE
	🗑️

CANCEL
SAVE

Figure 153: Location Manager Combo 3 Prompting and Network Settings

- **Combo 4—Off-site: Prompt user to enter a location and On-site: Prompt user with a list of building locations**
 - Under **FULLY QUALIFIED DOMAIN NAME (FQDN)**, enter your organization’s FQDN information. Click **Save**.
 - Once the FQDN is saved, go to the Provisioning screen where you can add a list of buildings. This list will be presented on the Location Manager screen to the user. See “[Provisioning Buildings](#)” for instructions.
 - See Figure Location Manager Combo 4 Prompting and Network Settings for an example on how to configure Location Manager for this configuration.

REGISTRATION
CONFIGURATION
NETWORK
TERMS OF USE
MESSAGES

Select the proper prompting behavior and configure the FQDN(s). Once saved, return to the provisioning page to provision network maps and/or buildings as needed.

PROMPTING BEHAVIOR

Off-site:

Prompt user to enter a location

On-site:

Do not prompt. User location determined by matching ERS Network Maps

User location determined by matching ERS Network Maps. On failure, prompt user with a list of building locations

Do not prompt. User location determined by a 3rd party system

Prompt user with a list of building locations

Prompt user to enter a location

FULLY QUALIFIED DOMAIN NAME (FQDN)

When the FQDN can be resolved, the ERS determines that the user can be connected to the corporate network.

Example: locationmanager.corp.pri

DOMAIN NAME	DELETE
	🗑️

CANCEL

SAVE

Figure 154: Location Manager Combo 4 Prompting and Network Settings

- **Combo 5—Off-site: Prompt user to enter a location and On-site: Prompt user to enter a location**
 - There is no need to provision anything for this configuration. The user is promoted for their location when they are on-site and when they are off-site. See Figure Location Manager Combo 5 Prompting and Network Settings for setup.

REGISTRATION CONFIGURATION **NETWORK** TERMS OF USE MESSAGES

Select the proper prompting behavior and configure the FQDN(s). Once saved, return to the provisioning page to provision network maps and/or buildings as needed.

PROMPTING BEHAVIOR

Off-site:

- Prompt user to enter a location


On-site:

- Do not prompt. User location determined by matching ERS Network Maps
- User location determined by matching ERS Network Maps. On failure, prompt user with a list of building locations
- Do not prompt. User location determined by a 3rd party system
- Prompt user with a list of building locations
- Prompt user to enter a location

FULLY QUALIFIED DOMAIN NAME (FQDN)

When the FQDN can be resolved, the ERS determines that the user can be connected to the corporate network.

Example: locationmanager.corp.pri

DOMAIN NAME	DELETE
dummye911.dummyeght	

CANCEL **SAVE**

Figure 155: Figure Location Manager Combo 5 Prompting and Network Settings for setup

On-Site Manual Mode and Buildings

The administrator provides on-site ERLs and buildings in the ERS and then associates each building to a list of ERLs that share the same address. When the user is detected on-site, 911 Location Manager prompts to manually select a building from the ERS list. Once the building and location details are saved, the ERS updates the location associated with the user's subscriber ID with the created ERL ID.

This method is used for on-site users when 911 Location Manager cannot determine their location through Network Maps or simply when Network Maps are not configured and cannot be used to find an on-site user's location. The list of configurations are available in [Network Configuration](#). In the latter case, Location Manager directly prompts the end-user to select from a list of on-site buildings without attempting to determine their location using Network Maps.

IMPORTANT

On-site manual mode and the ability for the user to choose the building they are located in is supported with Location Manager 2.x versions and above.

In addition, the following pre-requisites apply:

- the configuration to enable buildings must be enabled for Location Manager
- buildings along with their location field (LOC) must be provisioned in the account.

IMPORTANT

To enable an administrator to provide buildings and associate a list of ERLs to each building, the following Location Manager configuration settings must be enabled by logging into the ERS Portal and performing the following steps:

1 Navigate to **Administration > Location Manager 2.x > Network**.

2 Select one of the following on-site options:

A Do not prompt. User location is determined by matching ERS Network Maps. On failure, it prompts the user with a list of building locations.

B Prompt user with a list of building locations.

Buildings

Buildings that are provisioned in ERS are displayed in 911 Location Manager. The user chooses the building and the location they are at currently. They are used with the on-site manual mode of Location Manager. Learn more about [Provisioning Buildings](#).

Building address

In ERS, a building is first added and then an ERL along with their location (LOC field) is associated with the building. Multiple ERLs can be associated with the same building.

The civic address of the building is the civic address of the first ERL that was associated with the building. Any subsequent ERLs associated with the building must have the exact same civic address. However, the location field (LOC) of the ERL can be different.

Editing Building Address

To edit a building's address, the ERLs that are associated with it must first be removed. Then a new ERL with a different address can be associated with it.

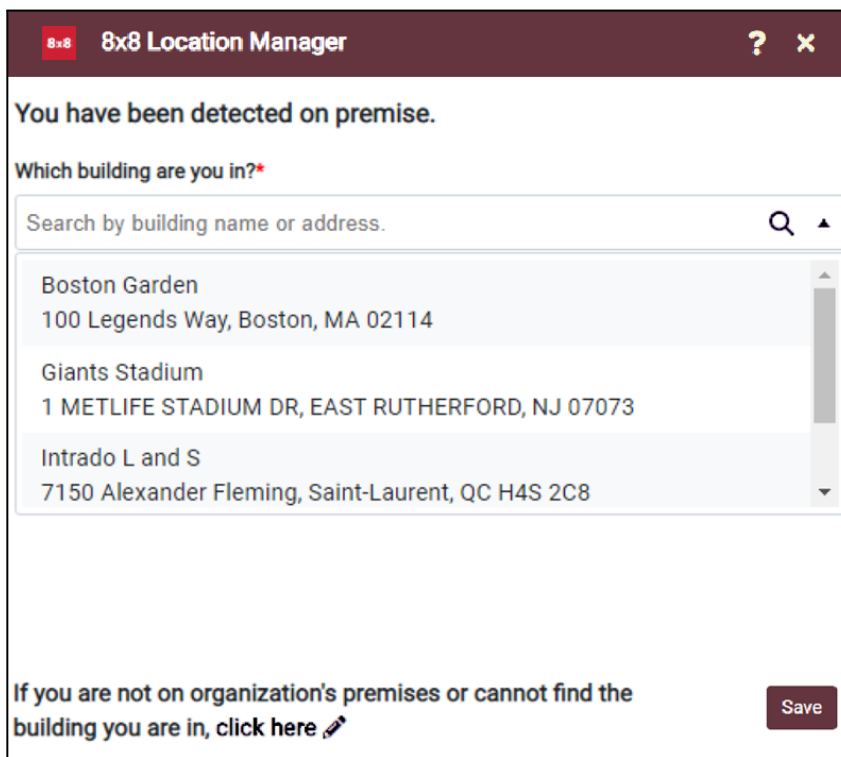
IMPORTANT

The following rules apply when provisioning buildings:

- The building's name must be unique within an account.
- Same building name can exist in two different Sub Accounts under the same deployment account.
- The building's name cannot be longer than 70 characters.
- Accepted characters include alphabets (a-z, A-Z), digits (0-9) and the following special characters: _ - # () ! @ \$ % ? ^ *.
- A building cannot contain more than 500 ERLs.

See "[Network Configuration](#)" for possible scenarios where 911 Location Manager will display the list of buildings.

When on-site, user is presented with the list of buildings that were provisioned in the account, as shown in Figure 156 On-site manual mode- list of buildings presented to the user.



The screenshot shows the 8x8 Location Manager interface. At the top, there is a header with the 8x8 logo and the text "8x8 Location Manager". Below the header, a message reads "You have been detected on premise." followed by the question "Which building are you in?*" and a search input field. The search field contains the text "Search by building name or address." and a search icon. Below the search field is a list of buildings with their addresses:

- Boston Garden
100 Legends Way, Boston, MA 02114
- Giants Stadium
1 METLIFE STADIUM DR, EAST RUTHERFORD, NJ 07073
- Intrado L and S
7150 Alexander Fleming, Saint-Laurent, QC H4S 2C8

At the bottom of the interface, there is a message: "If you are not on organization's premises or cannot find the building you are in, click here" with a pencil icon. To the right of this message is a "Save" button.

Figure 156: On-site manual mode- list of buildings presented to the user

After choosing the building from the drop-down list, the user chooses the Location field from the drop-down list, as shown in Figure 157.

Figure 157: On-site manual mode - choosing the building's location

User Visits a Known Off-Site Location

When the user visits a known location- that is, a location that the user has already visited and provided their address for, 911 Location Manager will not prompt the caller to re-enter this address.

911 Location Manager can remember and auto-detect up to 100 such locations.

It discreetly informs the detection of the address to the caller through a system tray notification.

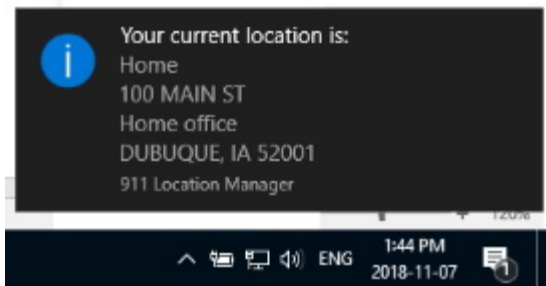


Figure 158: System Tray Notification That the Caller Location is Auto-Detected

User Visits a Known On-Site Location

When the user visits a known on-site building- that is, the building and a location that was previously chosen by the user, Location Manager will not prompt the user to re-enter this address.

It discreetly informs the detection of the address to the caller through a system tray notification, as seen in Figure 159.

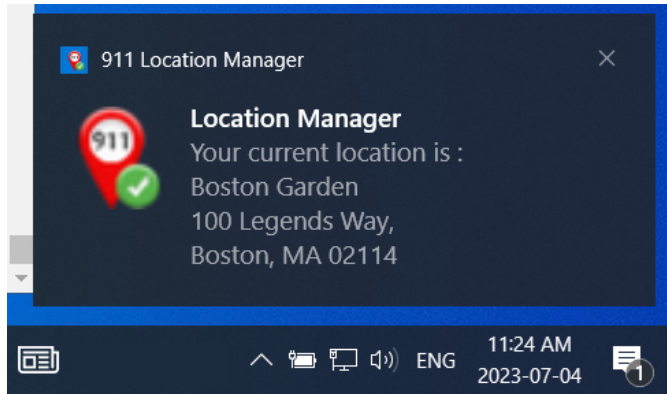


Figure 159: On-site building notification

Provisioning Buildings

Provisioning of buildings is done through the ERS Portal.

- 1 From the *Provisioning* screen, click the **BUILDINGS** tab and then click **+ADD BUILDING** button. See Figure 160.

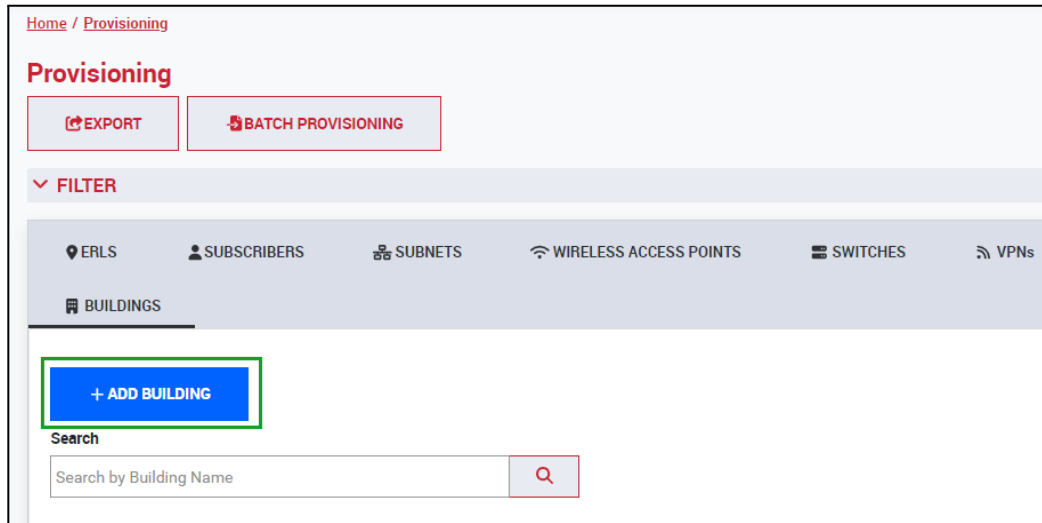


Figure 160: Click +ADD BUILDING to add a new building

- 2 The *Add Building* screen appears, as seen in Figure 161: Adding a new building. Enter a name for the building you want to add and click the **NEXT** button. See the example below.

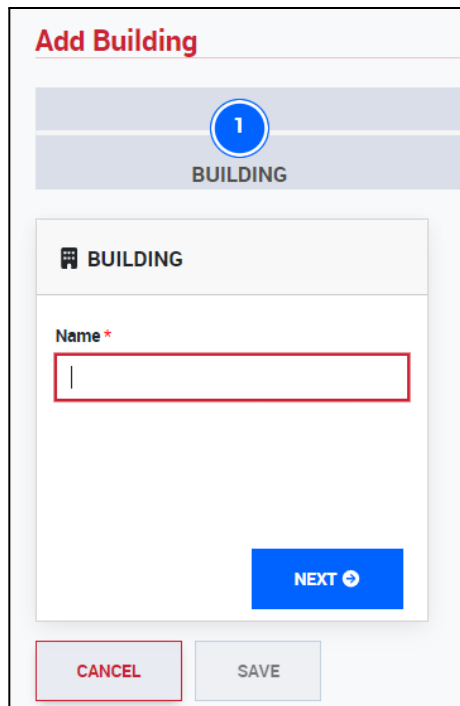


Figure 161: Adding a new building

- 3 Click **SELECT ERLs** button in the next step. See Figure 162: Selecting ERLs for reference.

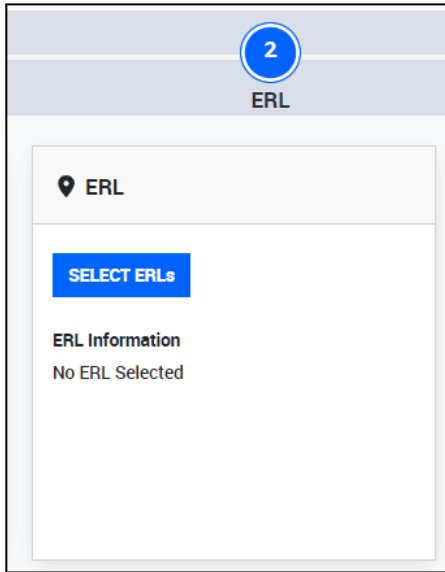


Figure 162: Selecting ERLs

- 4 In the *SELECT ERLs* pop-up screen, enter a search term. List of ERLs that match the search term are displayed. An example is shown in Figure 163: Selecting ERLs from displayed list.

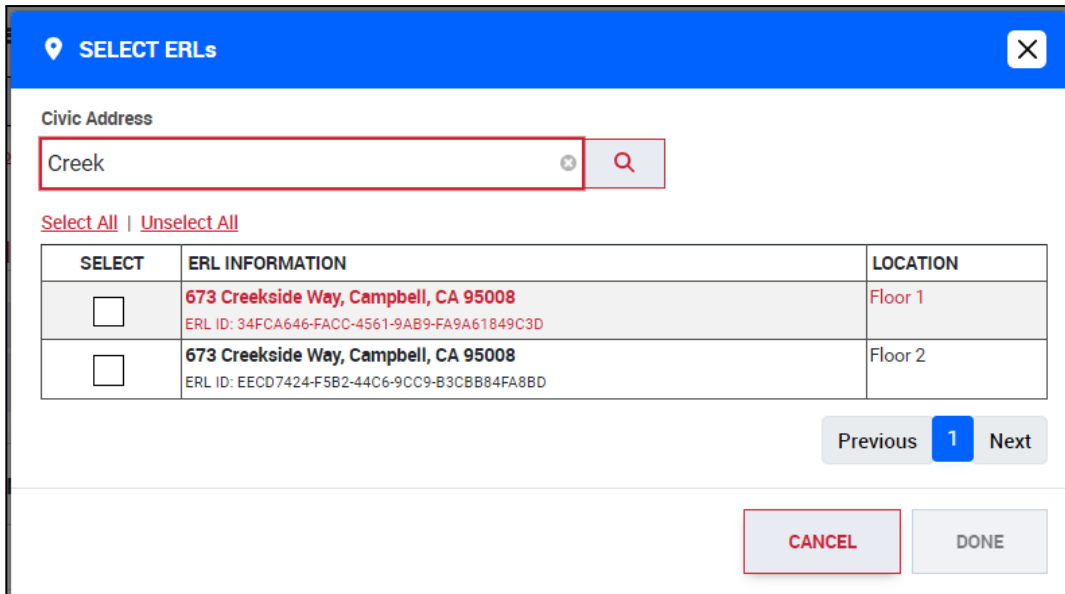


Figure 163: Selecting ERLs from displayed list

- 5 Select the desired ERL and click the **DONE** button. See Figure 164: Selecting ERLs from the list reference.

📍 SELECT ERLs
✕

Civic Address

✖
🔍

[Select All](#) | [Unselect All](#)

SELECT	ERL INFORMATION	LOCATION
<input type="checkbox"/>	673 Creekside Way, Campbell, CA 95008 <small>ERL ID: 34FCA646-FACC-4561-9AB9-FA9A61849C3D</small>	Floor 1
<input checked="" type="checkbox"/>	673 Creekside Way, Campbell, CA 95008 <small>ERL ID: EECD7424-F5B2-44C6-9CC9-B3CB84FA8BD</small>	Floor 2

Previous 1 Next

CANCEL

DONE

Figure 164: Selecting ERLs from the list

The ERL associated with the building is displayed as shown in Figure 165: ERL associated with building. Click **Save** to finish saving the building.

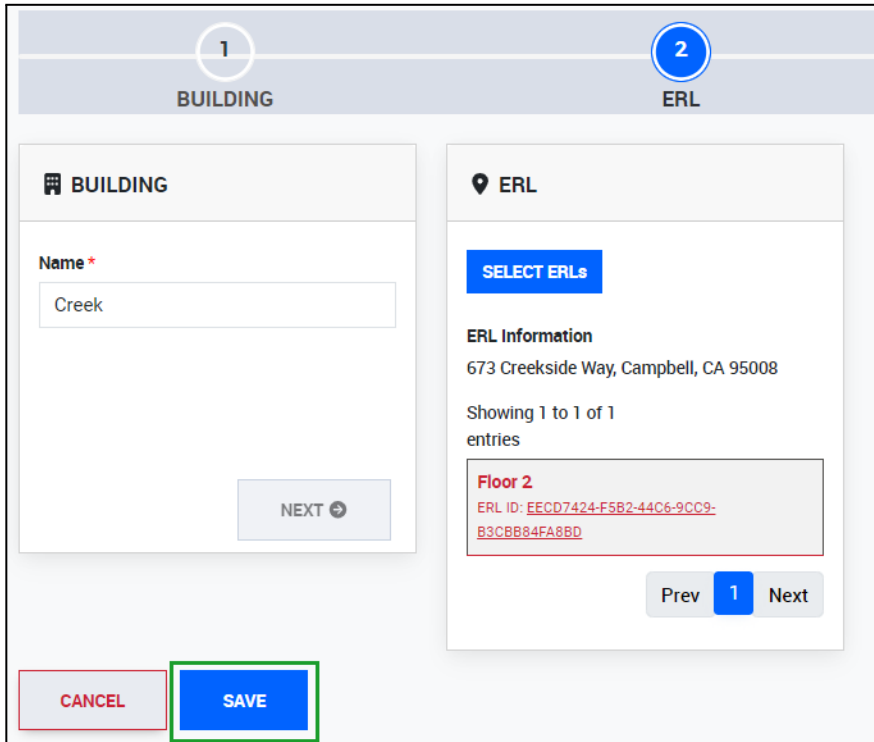


Figure 165: ERL associated with building

The building that was added is displayed in the Provisioning screen, as shown in Figure 166: Saved building saved in Provisioning screen. Clicking on the ERL ID hyper link provides detailed information on the ERL.

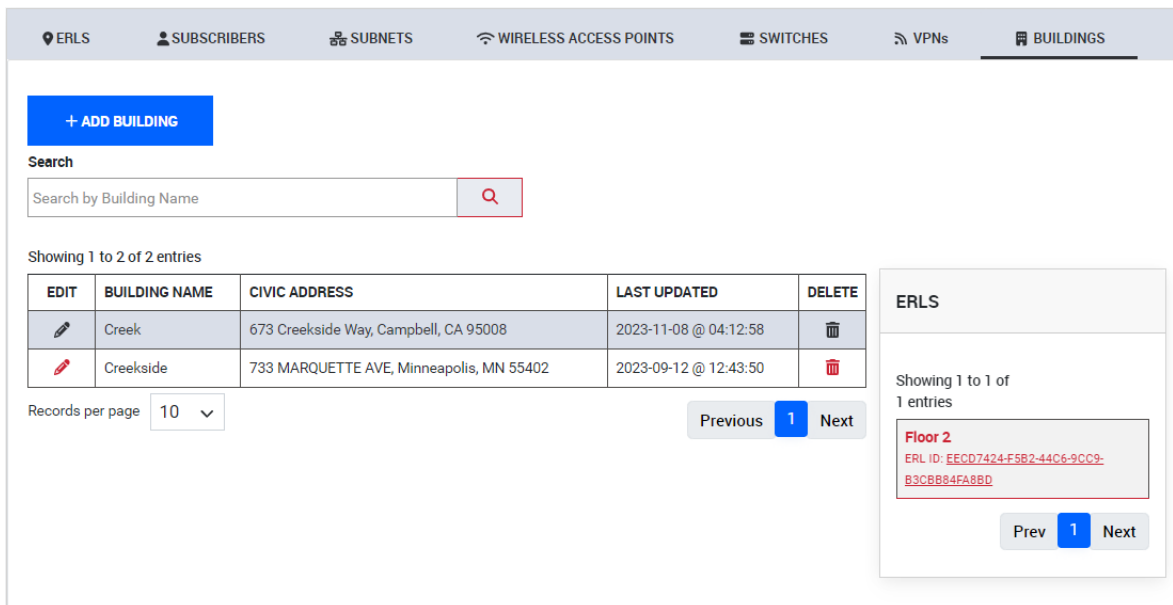


Figure 166: Saved building saved in Provisioning screen

Administer 911 Location Manager 2.x

Location Manager ERLs

Administrators can view ERLs provisioned by Location Manager from the ERS Portal Provisioning screen.

For example, in Figure 167, the Provisioning Source column displays Location Manager for every ERL that was provisioned via Location Manager. SUBSCRIBERS under ERL Associations displays the user that provided this location to the application.

NOTE Please note that administrators may notice ERLs (with Location Manager as Provisioning Source) that do not have any Subscriber association. These are ERLs that the user provisioned via Location Manager but are not currently located at. When the user revisits this location, ERS portal will display the user’s Subscriber ID under **ERL Associations**.

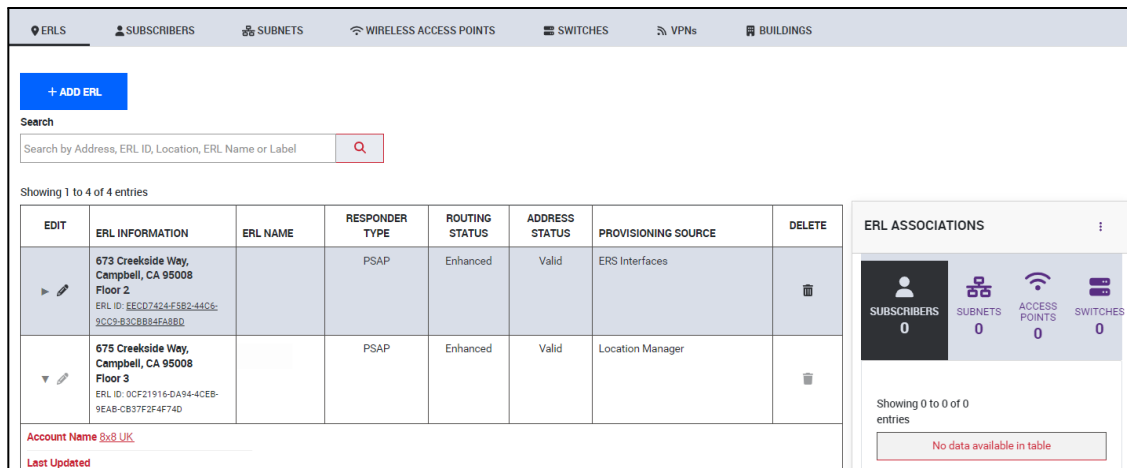


Figure 167: Location Manager ERLs

NOTE Subscribers provisioned via Location Manager cannot be deleted through the ERS portal. The delete icon is grayed out in the portal as seen in Figure Location Manager ERLs. The batch functionality can be used to delete Location Manager subscribers. See the ERS User Guide for steps on how to use batch for deleting subscribers.

Unlink Subscriber

If someone in your organization no longer requires the 911 Location Manager functionality, or if they need to install Location Manager on a different device, you can unlink the application from the subscriber in the ERS portal. When you unlink a subscriber from Location Manager in the ERS Portal, you are asked to provide a location for the associated subscriber. This ensures that the subscriber is still attached to a valid ERL in the ERS.

To unlink a 911 Location Manager license:

- 1 From the ERS main menu, click **Administration** → **Location Manager**.
- 2 From the *Location Manager* screen, choose the **Registration** tab. The *Registration* screen displays, as shown in Figure 181 below.

The screenshot shows the REGISTRATIONS screen with a search bar and a table of subscribers. The table has columns for SUBSCRIBER ID, LM VERSION, REGISTRATION DATE, and UNLINK SUBSCRIBER. There are three rows of data. Below the table is a 'Records per page' dropdown set to 10 and navigation buttons for 'Previous', '1', and 'Next'. An 'EXPORT' button is also visible in the top right corner.

SUBSCRIBER ID	LM VERSION	REGISTRATION DATE	UNLINK SUBSCRIBER
(408) 457-0554	2.2.4	2023-11-03 @ 10:59:51	🔗
(514) 570-0123	2.2.3	2023-10-27 @ 08:28:00	🔗
(514) 570-0186	2.2.3	2023-10-27 @ 08:26:28	🔗

Figure 168: Registration Screen Displaying Subscribers and their Associated Licenses Currently in Use

- 3 Locate the end user you wish to unlink either by scrolling through the list of subscriber IDs or by searching for it.
- 4 Click the **Unlink** icon under the Unlink Subscriber column. ERS displays a pop-up screen asking you to enter a new address for this subscriber, as shown in Figure 169 below.

Unlink Subscriber ID (408) 457-0554
✕

Associate to an existing ERL
 Do not associate to any ERL

Search

🔍

SELECT	ERL INFORMATION	ERL NAME
<input type="radio"/>	673 Creekside Way, Campbell, CA 95008 Floor 2 <small>ERL ID: EEC07424-F5B2-44C6-9CC9-B3CBB84FA8BD</small>	Test Floor 2
<input type="radio"/>	733 MARQUETTE AVE, Minneapolis, MN 55402 Suite 200 <small>ERL ID: D906852A-D4ED-4E38-8DC2-1FD90B4C8EBD</small>	8x8 UK Editions Product Demo 2
<input type="radio"/>	673 Creekside Way, Campbell, CA 95008 Floor 1 <small>ERL ID: 34FCA646-FACC-4561-9AB9-FA9A61849C3D</small>	Test Floor 1

Previous 1 Next

CANCEL
SAVE

Figure 169: Choose the ERL

- 5 Choose the appropriate ERL from the list and click CLOSE. The Subscriber is successfully associated to the ERL.

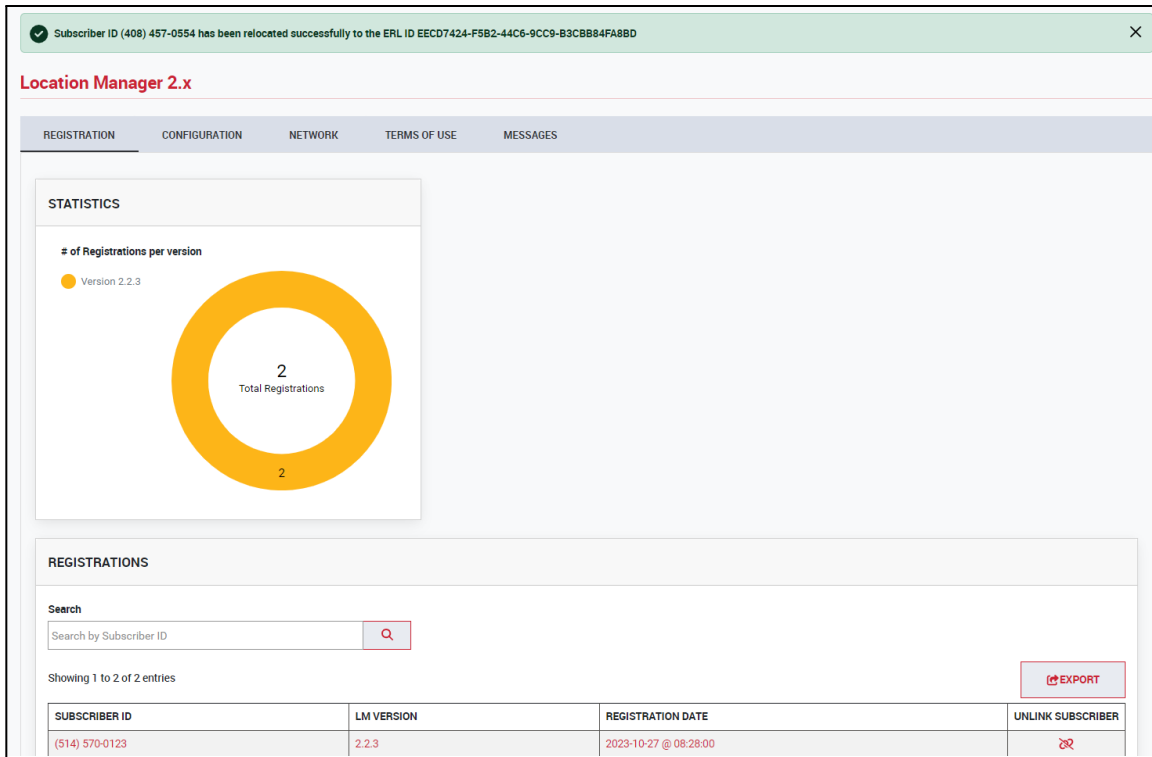


Figure 170

Unlink license ✕

The license is attached to a subscriber that has no current address. Please provision an address for the subscriber before unlinking the license.

ABC Inc

ERL Name * * Required

ABC Inc

House # * **Street/Road ***

City * **Country ***

US

State * **ZIP Code ***

Alabama

Location

e.g. Floor, Suite ...

CANCEL **SAVE**

Figure 171

Key configuration and log files

Settings, Logs and .env Files

While installing, un-installing or configuring Location Manager, you may need to access or modify the settings, .env or logs files pertinent to the application.

The following sections provide OS-specific steps on where these files are located on the user's workstation.

Windows

Settings File

The Settings file is located at: `C:\Users\\AppData\Roaming\911-location-manager`

Please note that `<username>` refers to the user for whom the application was installed.

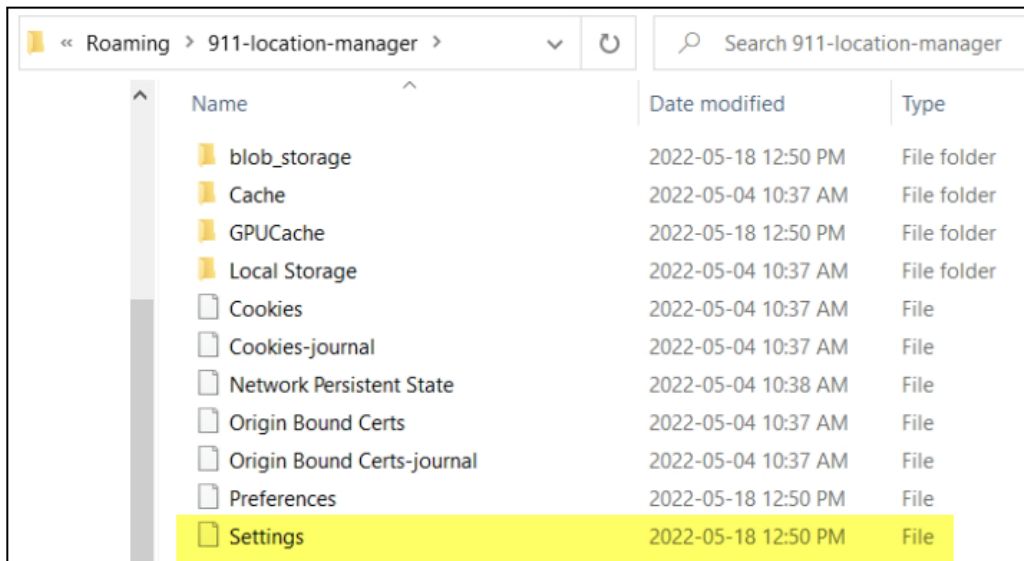


Figure 172: Locating Settings File - Windows

Log File

Log files are useful when troubleshooting.

The log files are located at: `C:\ProgramData\911 Location Manager`

See Figure 173 for reference.



Figure 173: Locating Log Files - Windows

Client Logs

Client logs can be found here: `C:\Users\<<Username>\AppData\Local\911-location-manager`

.env File

The .env file is located at: `C:\Program Files\Intrado\911 Location Manager`

See Figure 174 for reference

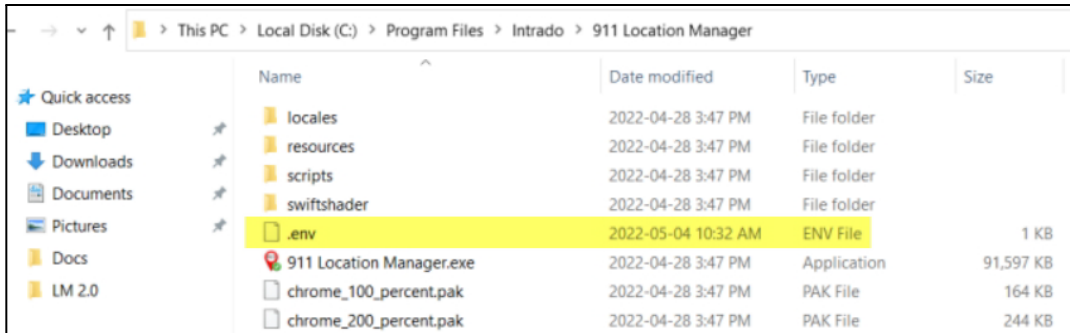


Figure 174: Locating .env File - Windows

LM-network-info Log File

The lm-network-info.log file is located at: `C:\AppData\Roaming\911-location-manager\`

macOS

Settings File

To locate the settings file:

- 1 Click **Go** -> **Go to Folder**.
- 2 In the **Finder**, enter `/Users/<username>/Library/Application Support/ 911-location-manager`. The settings file is displayed as shown in Figure 175.

Please note that `<username>` refers to the user for whom the application was installed.

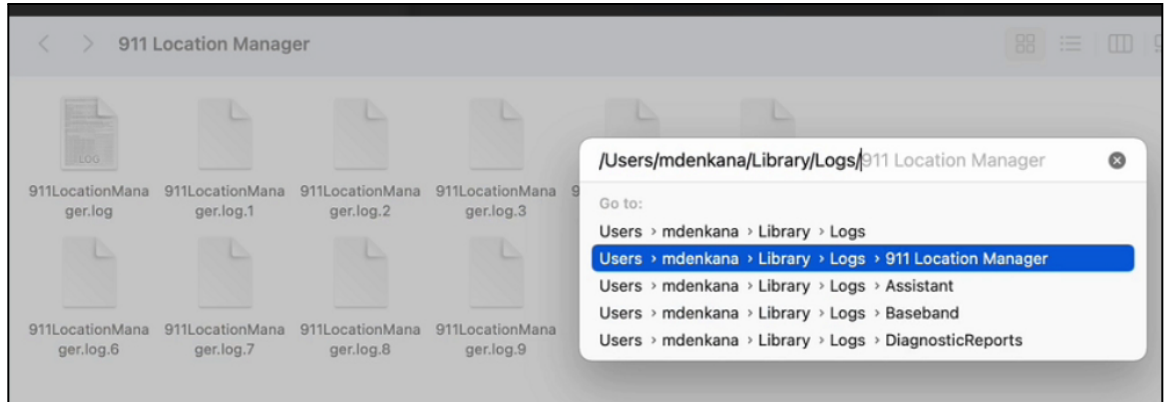


Figure 175: Locating Log Files - macOS

Client Logs

The client logs are located at: `/Users/<Username>/Library/Logs/911 Location Manager` or `(~/Library/Logs/911 Location Manager)\AppData\Roaming\911-location-manager\`

Network Info Logs

Location Manager network info logs are located at: `/Users/<Username>/Library/Logs/LM Network Info`

.env File

To locate the .env file:

- 1 Right-click on **Applications** --> **Location Manager**. Then choose **Show Package Contents**.
- 2 Open the **Contents** folder. The .env file displays as shown in Figure 176, below.

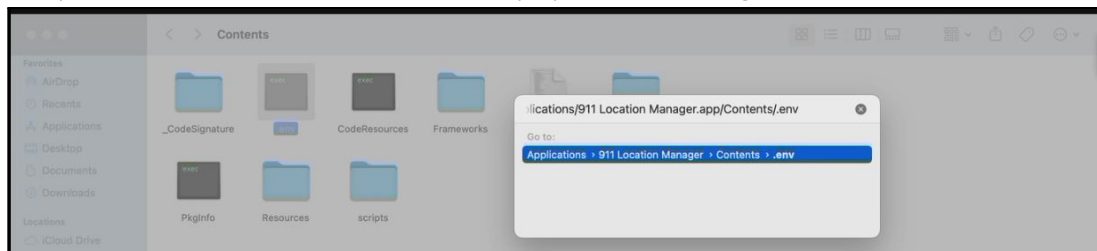


Figure 176: Locating .env File - macOS

Additional Notes

To add Location Manager as a start-up program in macOS:

- 1 Go to **System Preference** and click **Users and Groups**. See Figure 177.

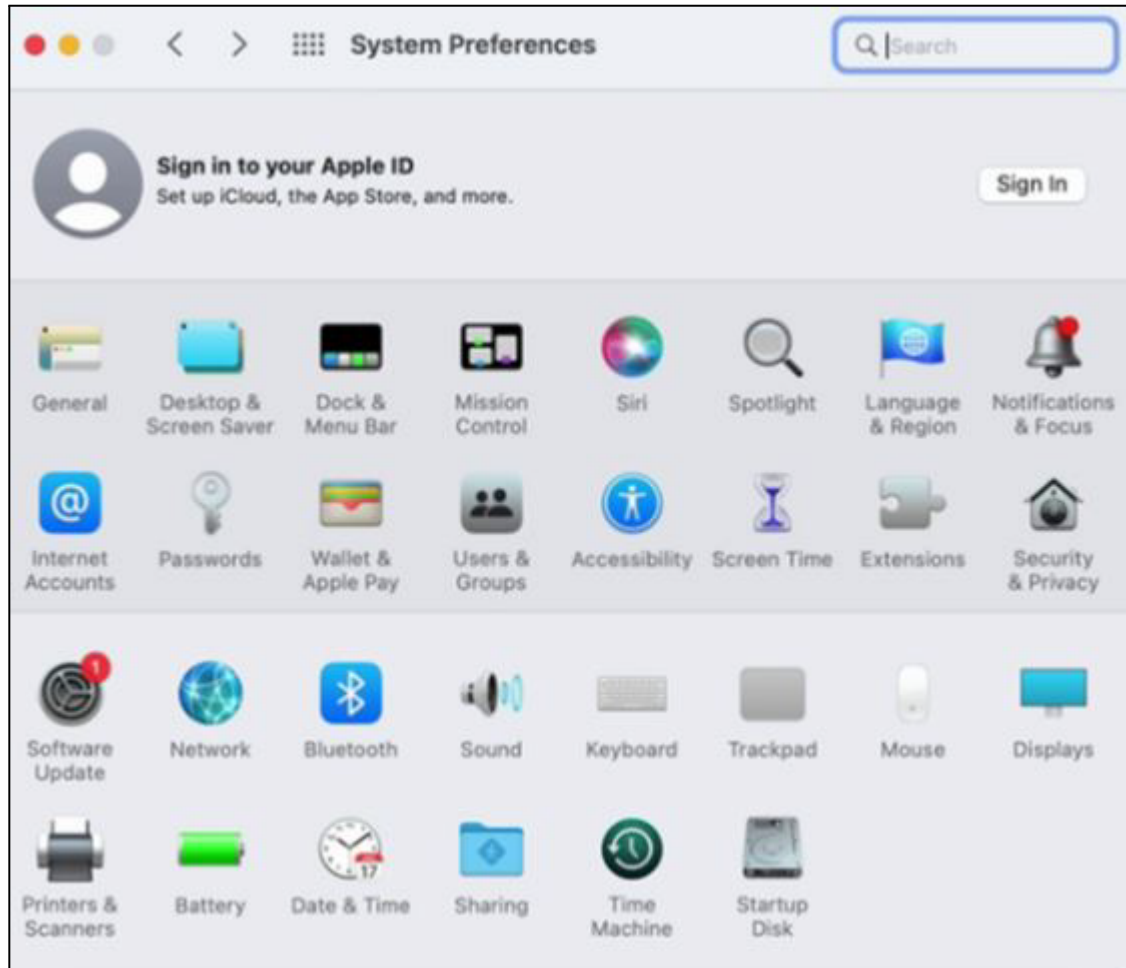


Figure 177: System Preferences - macOS

- 2 Choose **Login Items** and click the + button to add 911 Location Manager. See Figure 178 for an example.

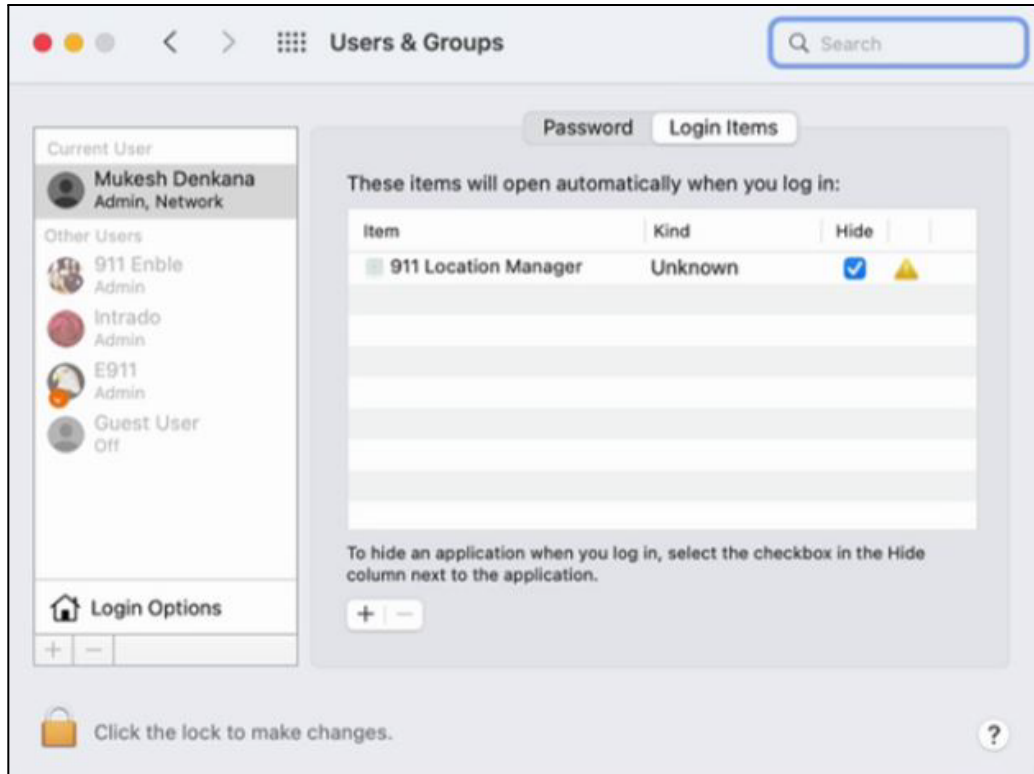


Figure 178: Adding Location Manager to Login Items

911 Location Manager 2.x for VDI

VMware Horizon's Virtual Desktop Infrastructure (VDI) refers to the use of virtual machines to provide and manage virtual desktops.

911 Location Manager can be deployed via VDI using 2 modes: persistent and non-persistent mode.

IMPORTANT For installing and operating Location Manager in VDI mode, the VMware Horizon client must be installed prior to proceeding.

NOTE Deployments with VMware Horizon VDI are supported starting with Location Manager release 2.0.

Hotspot

Refers to a physical location that provides Internet access to wireless devices using WiFi. When users are connected to a hotspot, 911 Location Manager prompts them to enter a location each time the connection to this hotspot is re-established.

Supported Operating Systems

Location Manager 2.0 is supported on Windows 10 & 11 virtual machines.

Important Terms

Location Manager Bridge Client: An intermediary application to be installed on the thin client. This bridge client sends network information from the thin client (end user's physical device) to the Location Manager application running on the VM (Virtual Machine). Two types of bridge client files are available and vary based on the operating system: **LM- Bridge-Client.msi** for Windows-based thin clients and **LM-Bridge-Client.pkg** for macOS-based thin clients.

Persistent VDI: In this mode, the user connects to the same desktop at every login, and they can personalize the desktop according to their requirements. Changes are saved every time the user logs out. That is, devices in a persistent VDI environment act exactly like personal physical desktops.

Non-persistent VDI: In this mode, users connect to generic desktops. Any personalized desktop changes are not saved and only last for the duration of the user's session. Location Manager is installed on the golden image and a clone of this image is issued to users. Each golden image is tied to an Account ID. This mode is used when there is no requirement to maintain customized desktops between user sessions.

Thin Clients: Refers to physical end user systems. Designed for remote desktop user tasks. This may be a macOS or Windows operating system. For running Location Manager in VDI mode, the Location Manager bridge client is required to be installed on each thin client that is present in your deployment.

Virtual Machine: Refers to a host workstation within the virtual infrastructure installed on a server. It enables multiple different operating systems to run on a single computer simultaneously.

References: <https://www.vmware.com/topics/glossary/content/virtual-desktop-infrastructure-vdi.html>

Important Notes

- Configure the “User Profile Management Solution” to preserve the following directory for all non-persistent VDI users: C:\Users\\AppData\Roaming\911-location-manager
- VMware Horizon Global Policy “Multiple sessions per user” (ability for a user to simultaneously use multiple desktops in a pool) is not supported.
- A user can use separate devices with the LM-Bridge client software but not simultaneously.
- Windows Remote Desktop Services (RDS) hosts are not supported.
- For Non-Persistent mode deployments, a desktop pool is needed for each unique Account ID.
- Horizon Client software is required. Connecting to VMware Horizon via browser is not supported.

Persistent Mode

In Persistent Mode, the Location Manager bridge client is installed on the end user’s thin client. The bridge client files can be downloaded from the Location Manager download page on the 8x8 support site. Depending on the operating systems present in your deployment, the following files will be provided:

- **LM-Bridge-Client.msi** for Windows-based thin clients
- **LM-Bridge-Client.pkg** for macOS-based thin clients

See “[Install the Location Manager Bridge Client](#)” for steps on installing the Location Manager bridge client.

On the virtual machine side, the Location Manager executable file will be available for download on:

https://support.8x8.com/cloud-phone-service/voice/admin-console/setup/Nomadic_911/Download_Location_Manager package which includes:

- 911LocationManager.zip (specifically designed for VDI users)
- 911LocationManagerSetup.exe (checks if VDI enabled or not; if VDI enabled, then grabs VDI files and installs it on VM)

See “[Install 911 Location Manager 2.x](#)” for steps on installing the Location Manager application.

Non-Persistent Mode

In Non-Persistent Mode, the end user that connects to the non-persistent VM on their desktop pool is provided with the snapshot image. Each user's settings file is saved under their roaming profile and when they log in, they will get their respective settings file.

IMPORTANT

Installing or upgrading of Location Manager in VDI Non-Persistent mode must be performed by the VMware administrator.

Similar to Persistent Mode, the Location Manager "bridge" client must be installed on the end user's thin client. The bridge client files can be downloaded from the Location Manager download page on the 8x8 support site.

Depending on the operating systems in your deployment, the following files will be provided:

- **LM-Bridge-Client.msi** for Windows-based thin clients
- **LM-Bridge-Client.pkg** for macOS-based thin clients

See [Install 911 Location Manager Bridge Client](#) for steps on installing the Location Manager bridge client.

On the virtual machine side, the following actions must be performed:

- The Desktop Pool should have been created.
- The Golden Image should have been created.
- The required version of Location Manager should have been installed on the Golden Image. The process to install Location Manager is provided in "[Install 911 Location Manager 2.x](#)"
- A snapshot or clone of the image (including Location Manager application) must be taken.
- This snapshot must be published in the Horizon Admin console. When the end user logs in, they are provided with this snapshot.

Install 911 Location Manager Bridge Client

This section provides detailed steps on installing the Location Manager bridge client on windows and macOS-based operating systems.

Windows

To install the bridge client on a Windows-based thin client:

- 1 Download **LM-Bridge-Client.msi** to the thin client (physical system of the end user) where VMware Horizon client application is installed and connected.
- 2 Double-click .msi file to proceed with the installation process.

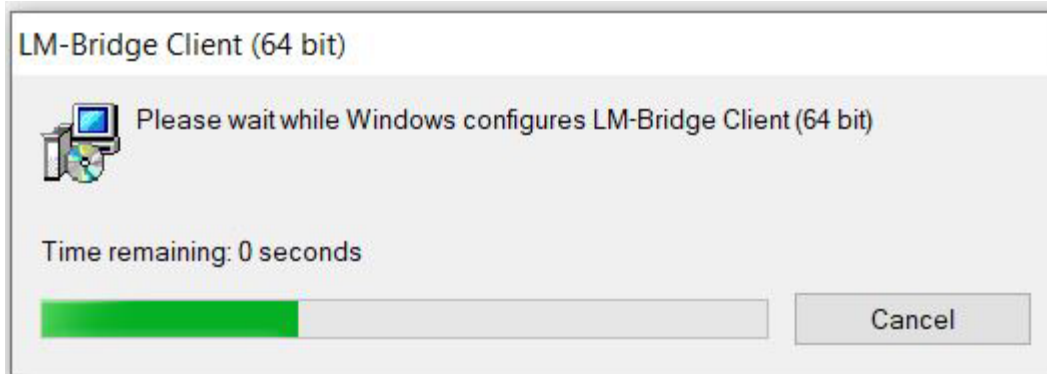


Figure 179: Installation of LM-Bridge-Client.msi File on Windows

After a successful install, the bridge client is available in Windows **Apps & features**, as shown in Figure 180 below.

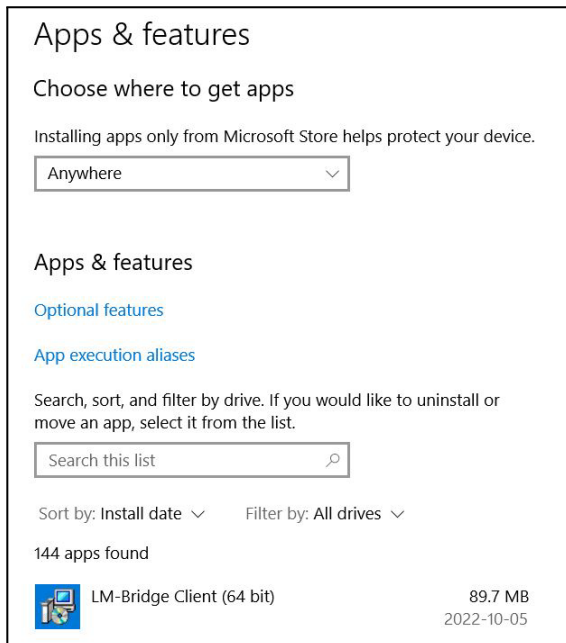


Figure 180: Bridge Client available in Windows Apps & features

macOS

To install the bridge client on a macOS-based thin client:

- 1 Download **LM-Bridge-Client.pkg** to the macOS thin client (physical system of the end user) where VMware Horizon client application is installed and connected.
- 2 Double-click .pkg file to proceed with the installation process. See Figure 181.

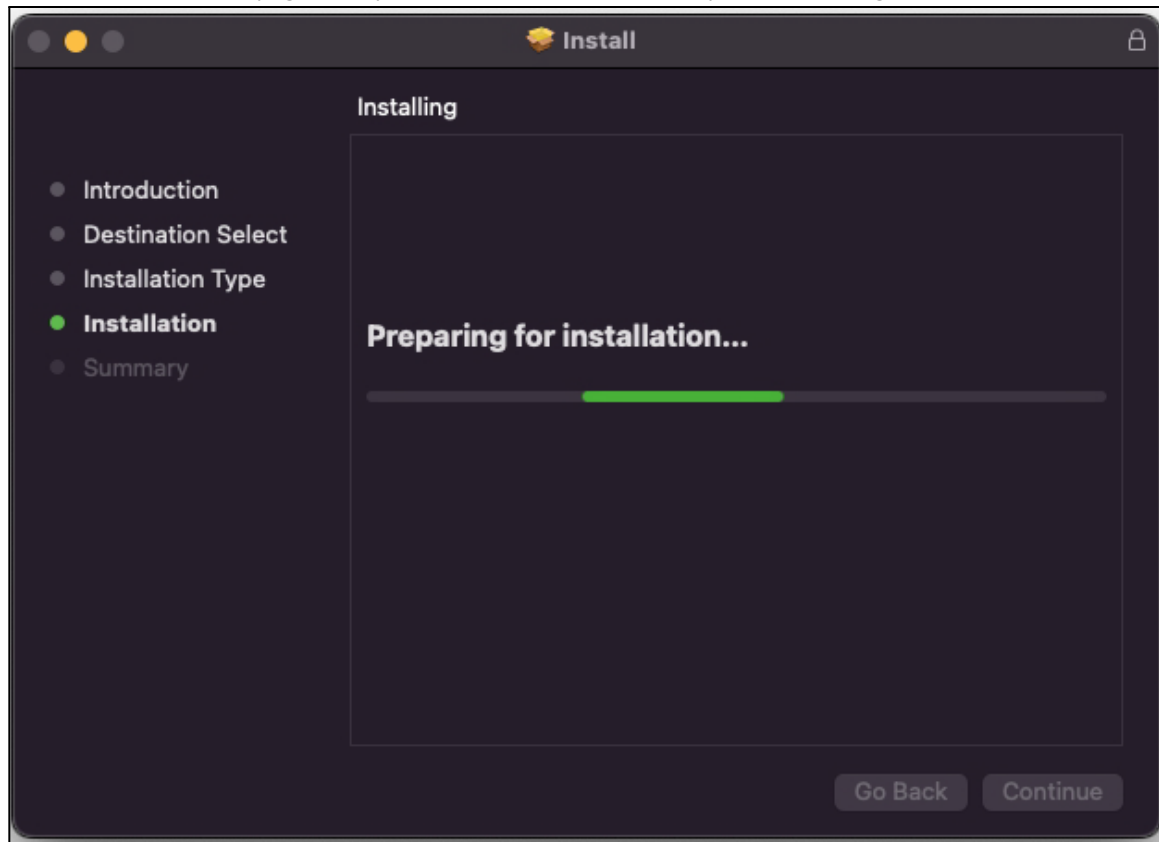


Figure 181: Installing Location Manager Bridge Client

A successful complete message is displayed as shown in Figure 182.

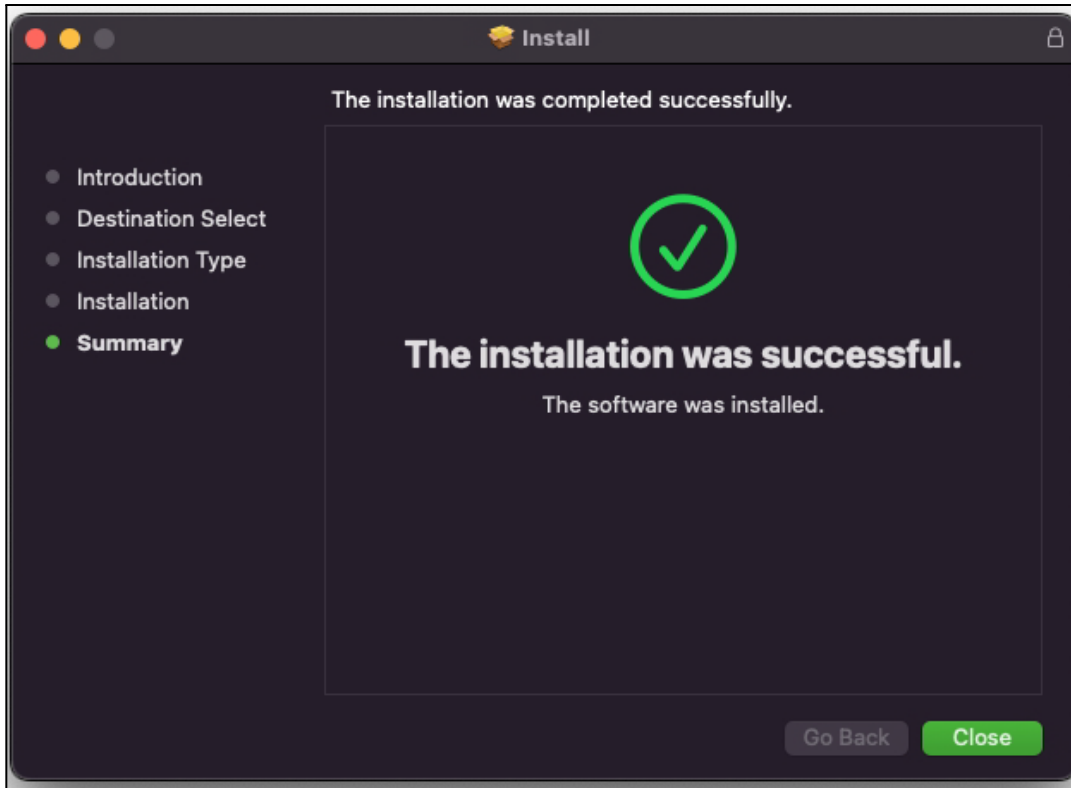


Figure 182: Installation Successfully Completed Message

After installation, the bridge client can be found in /Library/Application Support/ LM Bridge Client as shown in Figure 183.

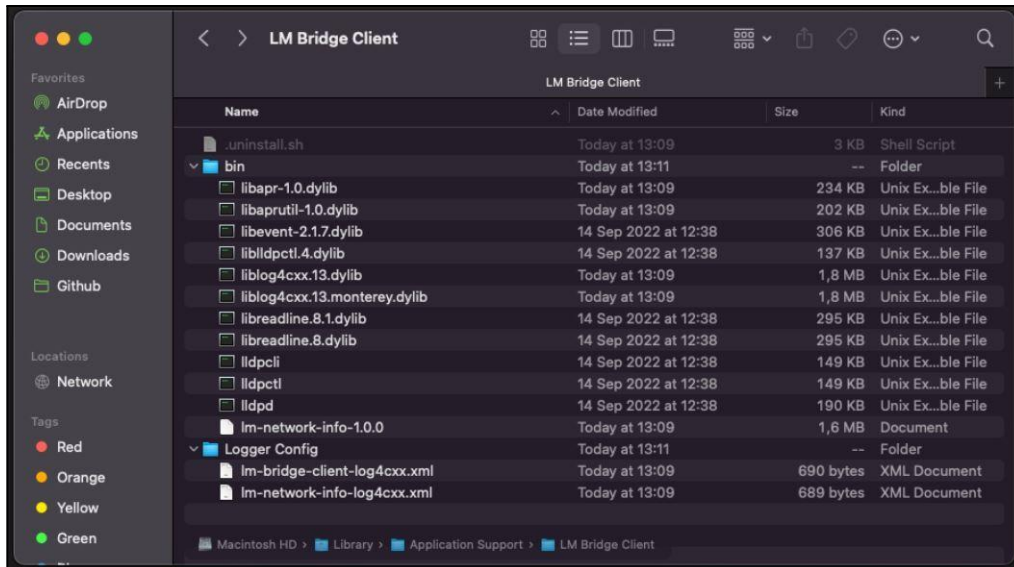


Figure 183: LM Bridge Client Location

Using 911 Location Manager 2.x

This section lists the various scenarios that the 911 Location Manager user encounters. This is intended for information purposes and helps you troubleshoot any issues the user may have.

Getting Started - Provide Subscriber ID

Upon launching the 911 Location Manager for the first time, users are prompted to register by entering their softphone number. This should be set as their 8x8 Work phone number as a ten digit number (i.e. without a leading 1).

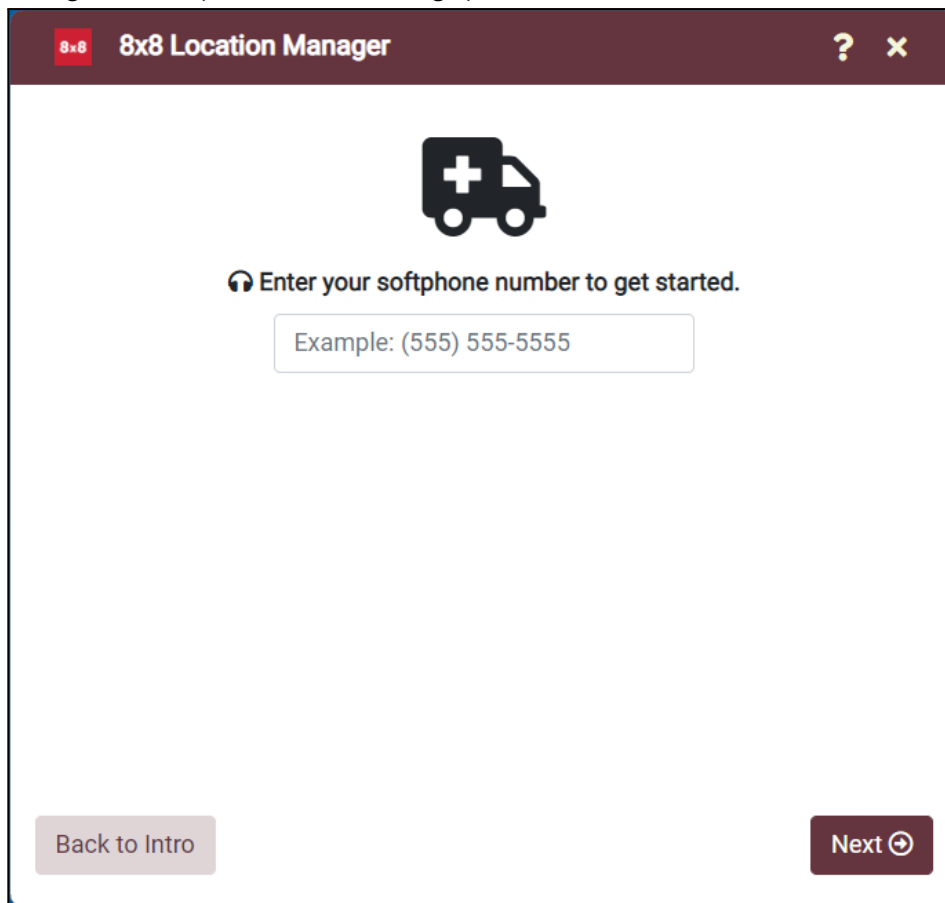


Figure 184: 911 Location Manager Registration Screen

The step links the caller to a specific Location Manager license. This license is given a unique ID in the ERS called the “Location Manager ID”.

NOTE: This step only needs to be performed once by the user when the application launches for the first time.

Troubleshooting — Incorrect Phone Number

If a user mistypes a softphone number, the following steps must be followed:

- 1 Close the Location Manager application. Please ensure that the application is not running in the background.
- 2 Right-click on the **Settings** file and delete it. See Figure Deleting Settings File for the path.

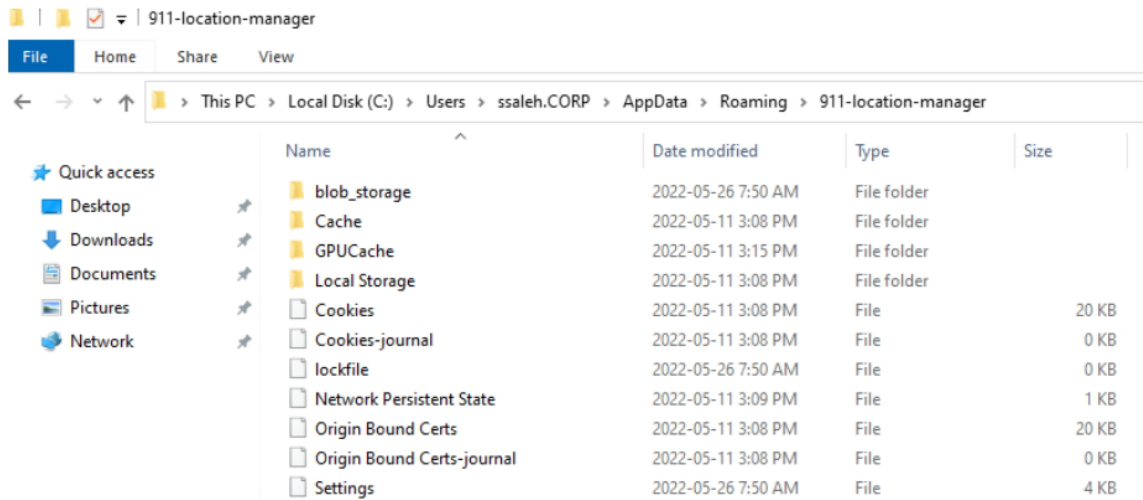


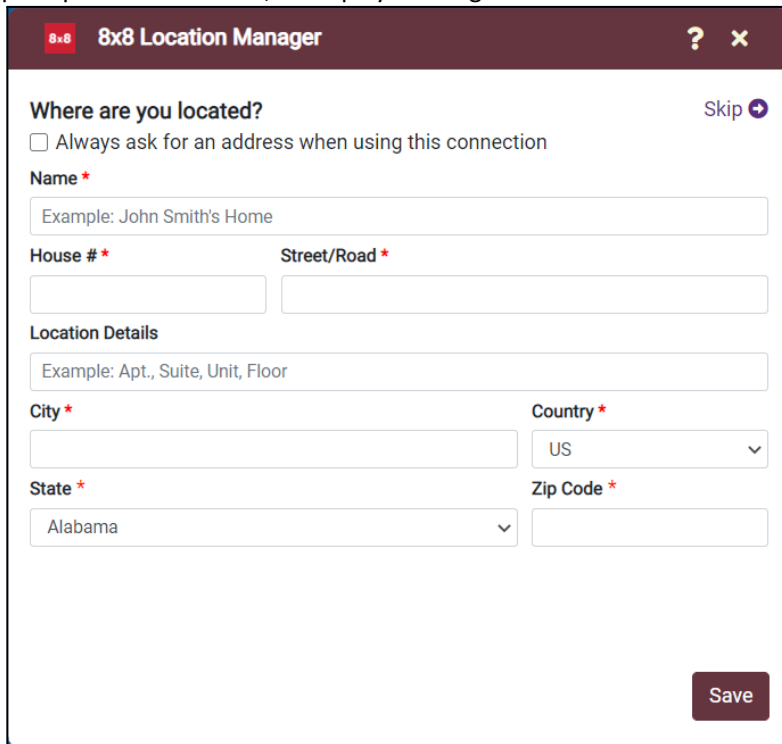
Figure 185: Deleting Settings File

- 3 Delete the user (subscriber) from ERS. See ERS User Guide for steps.
- 4 Restart Location Manager and provide the correct phone number.

User Location Tracking in 911 Location Manager 2.x

User Visits a New Off-Site Location

When the user visits a new and unfamiliar location, 911 Location Manager detects this and prompts for an address, as displayed in Figure 187.



The screenshot shows a web form titled "8x8 Location Manager" with a dark red header. The main heading is "Where are you located?" with a "Skip" link and a plus icon. Below the heading is a checkbox labeled "Always ask for an address when using this connection". The form contains several input fields: "Name" with an example "John Smith's Home", "House #" and "Street/Road" side-by-side, "Location Details" with an example "Apt., Suite, Unit, Floor", "City" and "Country" (with "US" selected), "State" (with "Alabama" selected) and "Zip Code". A "Save" button is located at the bottom right of the form.

Figure 187: Screen Presented to the Nomadic Emergency Caller to Enter Current Address

In Location Manager releases prior to 2.0, the address is displayed as shown in Figure 188.

Please note that some addresses may undergo auto-correction.

For Location Manager 2.0 and above releases, there is a minor delay in processing the address to ensure better accuracy of the user-provided address.

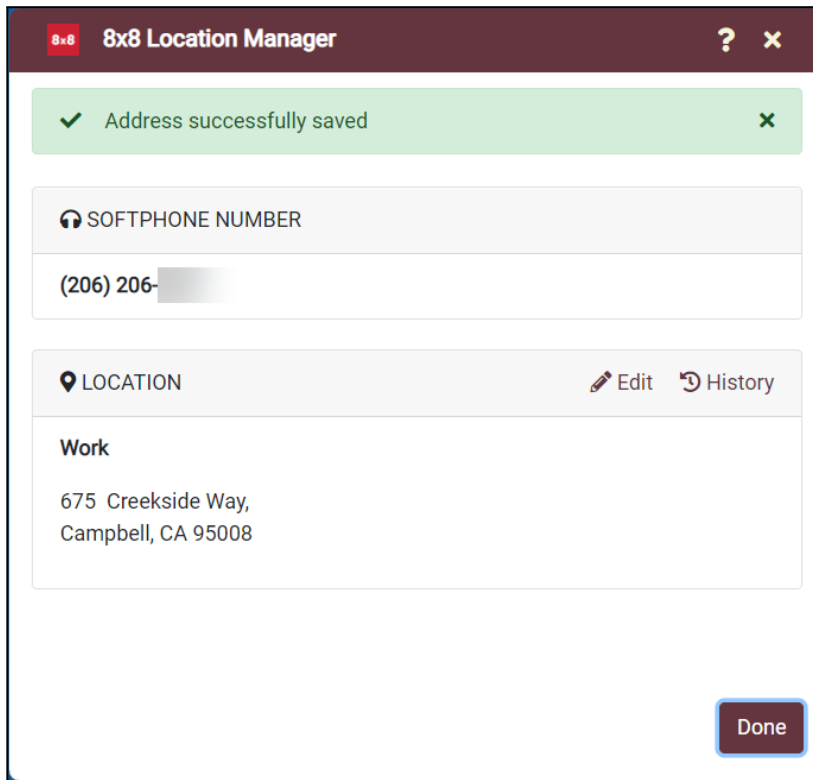
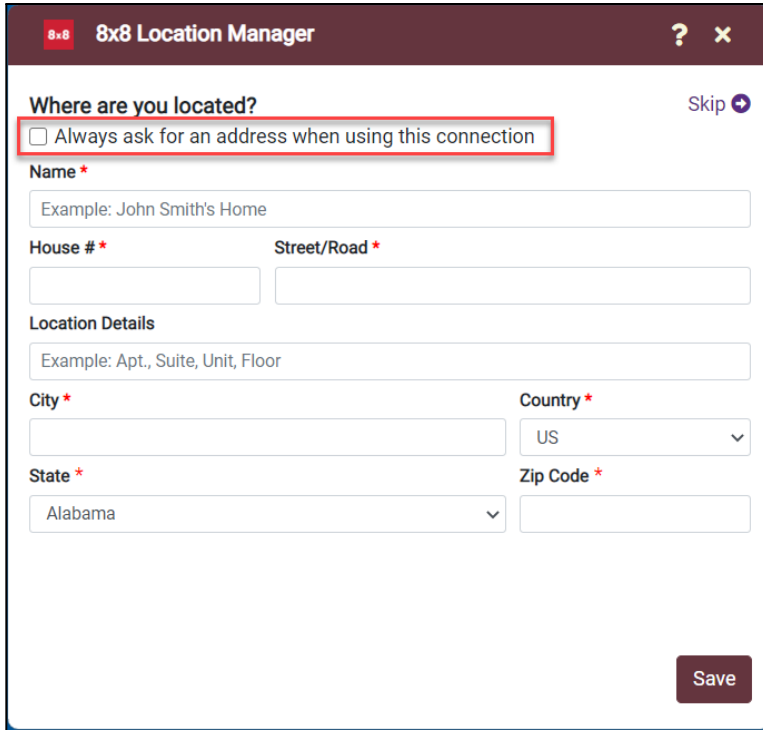


Figure 188: Address Saved Message - Location Manager 2.0 and above versions

For Location Manager release 2.x and above, the user has the option to choose whether they are connected to a hotspot. A user can be connected through the same hotspot from various locations. To resolve this issue, users can enable the option "Always ask for a location when using this connection".

When this option is enabled, Location Manager will prompt the user every time the user reconnects to this particular hotspot. See Figure 189.



8x8 Location Manager ? x

Where are you located? Skip ↕

Always ask for an address when using this connection

Name *
Example: John Smith's Home

House # * **Street/Road ***

Location Details
Example: Apt., Suite, Unit, Floor

City * **Country ***
US

State * **Zip Code ***
Alabama

Save

Figure 189: Option for user to choose if they are connected to a hotspot

911 Location Manager Detects User to be On-Site

When the subscriber is on-site, 911 Location Manager does not prompt the caller for an address. It automatically assigns an address, based on the network map.

When the user clicks the 911 Location Manager icon, the address determined through network maps is displayed. The user cannot modify this address. See Figure 191.

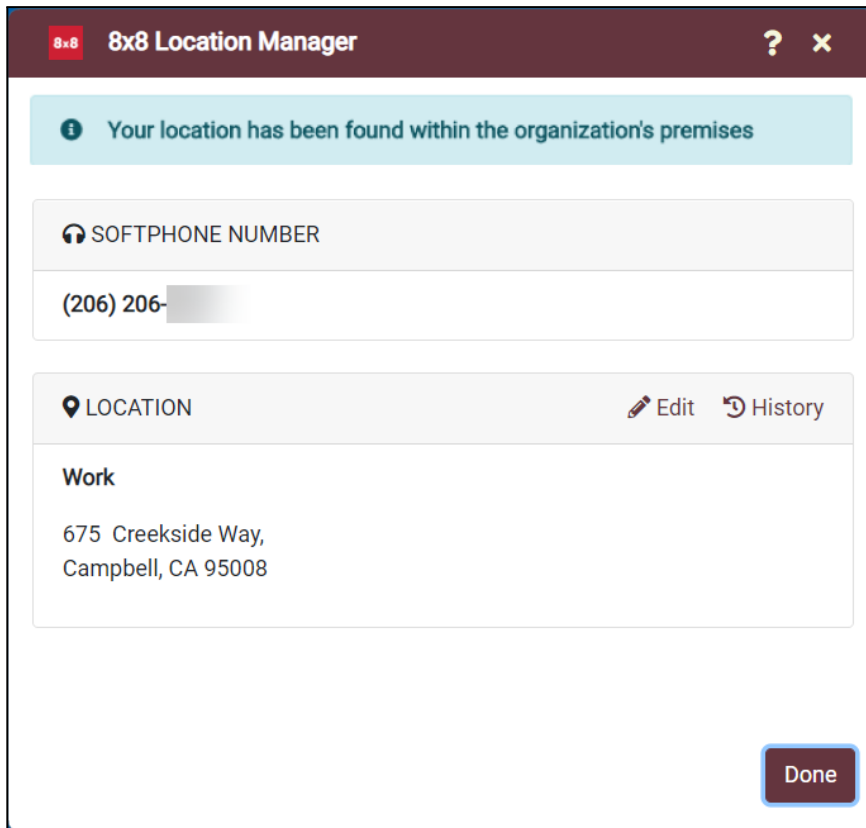


Figure 191: On-Site User's Location Displayed on 911 Location Manager Screen

On-Site User's Location Could Not Be Determined

When the user is on-site but their location could not be determined, the message in Figure 192 is displayed. This could be due to the fact that network maps have not been properly configured.

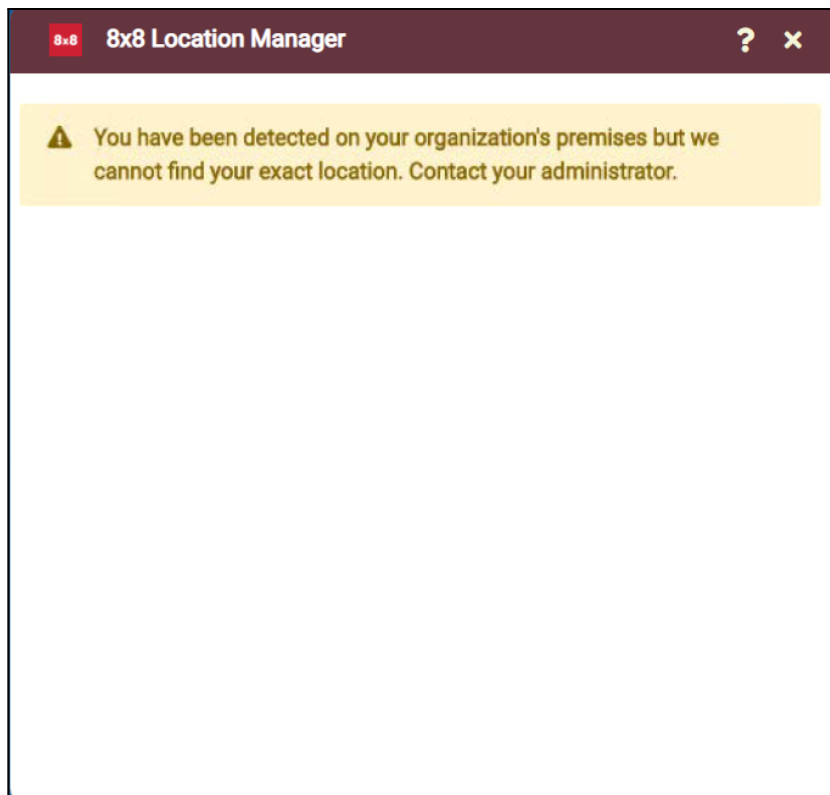


Figure 192: Message Displayed When User's Location Undetermined

Starting with Location Manager 2.x release, the user on a static extended office network is presented with the capability to manually enter an address if no match is found with network map. See Figure 193 User on a Static Extended Office Network.

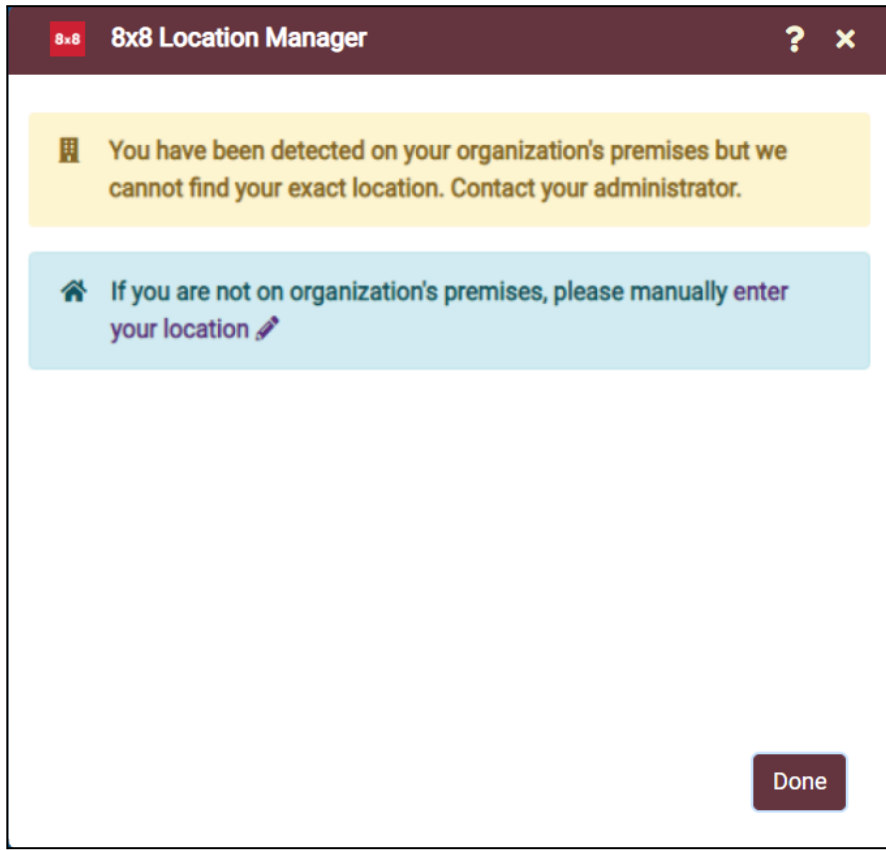


Figure 193: Message Displayed When User's Location Undetermined

For users with a mobile extended office network, the user is presented with the option to flag a connection to always prompt for an address. See User on a Mobile Extended Network.



Figure 194: User on a Mobile Extended Network

Prompting Behavior

IMPORTANT

This section applies to Location Manager 2.x versions and above.

Location Manager can be configured to prompt the user or do not prompt the user according to an organization's requirements. The following scenarios are possible and configuration to prompt or stay silent is possible to perform in the ERS portal. Procedural steps on how to setup Location Manager 2.x for these scenarios are provided in "[Configure and Manage Location Manager 2.x](#)".

Scenario I: Configure Off-site to Prompt user to enter a location and On-site to Prompt the user to enter a location

Use this configuration if Location Manager does not need to detect whether the user is onsite or off-site. In this case, the application does not check whether the user is using an FQDN or VPN connection. The user is prompted to provide a location when they change their network.

Scenario II: Configure Off-site to Prompt user to enter a location and On-site to Do not prompt. User Location determined by matching ERS Network Maps

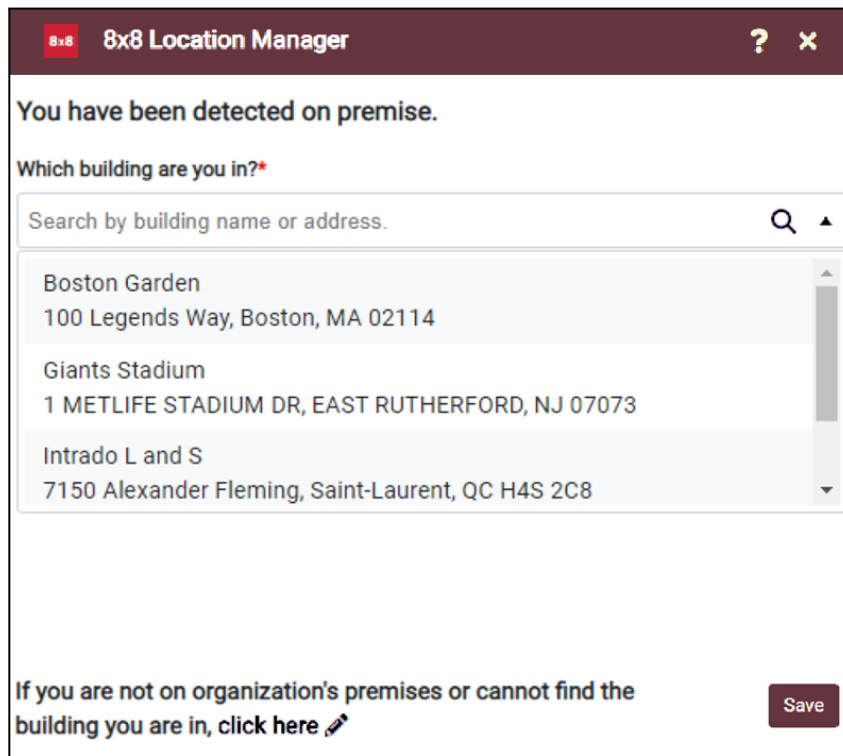
Use this configuration if you want the user's location to be determined by using ERS network maps. In this case, Location Manager client performs On-Site/Off-Site detection, by resolving the user's FQDN and checking if their device is connected via VPN. The user is prompted based on the following:

- If Location Manager detects the user as being off-Site, it prompts the user to enter a location.
- If Location Manager detects the user as being on-Site, it does not prompt the user to enter a location. The location is automatically determined by matching network maps.

Scenario III: Configure Off-site to Prompt user to enter a location and On-site to User location determined by matching ERS Network Maps. On failure, prompt the user with a list of building locations.

Use this configuration if you want the user's location to be determined by using ERS network maps or provide the ability for the user to choose the building they are located at. In this case, Location Manager performs On-Site/Off-Site detection, by resolving the user's FQDN and checking if their device is connected via VPN. The user is prompted based on the following:

- If Location Manager detects the user as being off-Site, it prompts the user to enter a location.
- If Location Manager detects the user as being on-site, it does not prompt the user to enter a location. The location is automatically determined by matching network maps.
- If the user's location cannot be determined by network maps, the user is prompted with a list of buildings to choose from. See Figure below.



The screenshot shows the 8x8 Location Manager interface. At the top, there is a dark red header with the 8x8 logo and the text "8x8 Location Manager". Below the header, the main content area has a white background. It starts with the message "You have been detected on premise." followed by the question "Which building are you in?*" in bold. Below this is a search input field with the placeholder text "Search by building name or address." and a magnifying glass icon. A dropdown menu is open, showing three building options: "Boston Garden" with address "100 Legends Way, Boston, MA 02114", "Giants Stadium" with address "1 METLIFE STADIUM DR, EAST RUTHERFORD, NJ 07073", and "Intrado L and S" with address "7150 Alexander Fleming, Saint-Laurent, QC H4S 2C8". At the bottom of the form, there is a link that says "If you are not on organization's premises or cannot find the building you are in, click here" with a pencil icon, and a "Save" button.

Figure 195: Manual on-site mode- choosing from list of buildings

Scenario IV: Configure Off-site to Prompt user to enter a location and On-site to Prompt user with a list of building locations

In this configuration:

- If Location Manager detects the user as being off-Site, it prompts the user to enter a location.
- If Location Manager detects the user as being on-site, it prompts the user to select from the list of buildings that were provisioned in ERS.

Network Requirements

Certain parameters may need to be configured in your enterprise network to enable Location Manager.

NOTE | Action items such as modifying the enterprise network may be geared towards an organization's IT personnel rather than the ERS Portal administrator. So, use discretion in allocating tasks.

Ports, Protocols and Host Names

Location Manager only supports TLS 1.2 protocol. TLS 1.0, TLS 1.1 and SSL are not supported.

Table: Network Connectivity Information

Protocols	Ports	FQDN	IP Addresses
TLS 1.2	HTTPS (TCP/443)	Production URL: https://admin.e911.8x8.com/	<ul style="list-style-type: none">• 208.71.179.31• 208.71.176.31

Protocols Ports FQDN IP Addresses

Chapter 8

Filter and Export Records

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Overview

Given the large number of records an account can have, ERS provides various filtering and exporting capabilities through the *Call Details Records* and *Provisioning* screens.

After filtering records, you can then export the records into a comma-separated values (.CSV) text file. Furthermore, you can schedule automatic generation of reports. For instance, you can configure ERS to generate a record of all calls processed by the Security Desk at the end of every month.

NOTE	The procedure and the steps used to filter, generate a report, and schedule the periodic generation of reports are the same for provisioning data (done through the <i>Provisioning</i> screen) and for call record data (done through the <i>CDRs List</i> screen).
-------------	--

To filter and export records:

Step One -- Setup filters to narrow down the search results.

Step Two – Save your filter choices.

After saving your filter choices, you can choose to apply the filters right away and download the results as a CSV file. Alternatively, you can schedule a report (Step Three) to download the results at a later time.

Step Three – Setup a report schedule.

Setup and Apply Filters

The ERS portal contains two screens containing data that lend themselves to filtering, exporting, and automatic periodic file generation: *Provisioning* and *Call Details Records*.

NOTE | The instructions below use the *Call Detail Records* screen as an example, but the procedure is the same for records available on the *Provisioning* screen.

ERS contains and displays a large amount of data. To enable users to easily view, edit, and audit data, ERS contains various filters that are instrumental in narrowing down the search results. This way, you can retrieve only the data you need and make the required changes.

For example, as an ERS admin, using filters, you can easily retrieve a list of unprovisioned calls made from your account for the past month.

- 1 Access the screen where you want to filter records. Click on **Monitoring** → **Call Detail Records**, as shown in Figure 196 below.

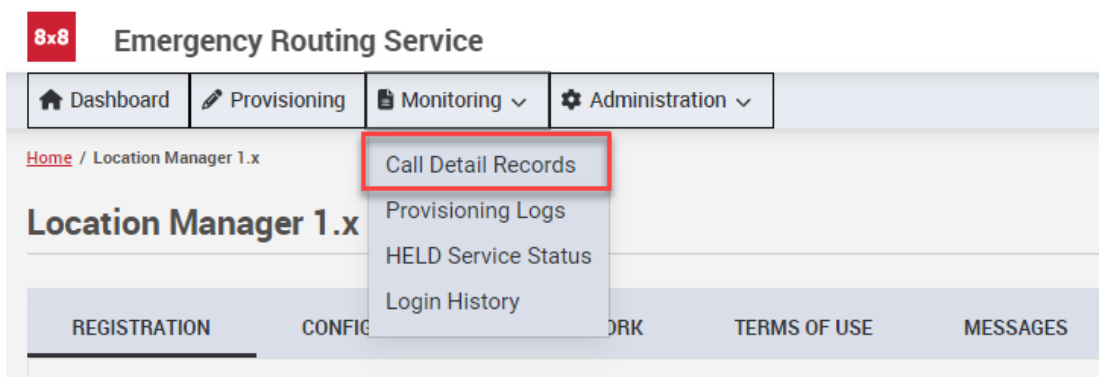


Figure 196: Choosing Call Detail Records from Monitoring menu (Call Details Records example shown)

- 2 The *Call Details Records* screen displays. By default, the available filter menu choices and the call detail records for the current account are displayed.

NOTE | When you access the *Call Details Records* screen from a Level 1 account, CDRs belonging to all your Deployment and Sub Accounts are displayed. To search by a specific account, you can enter the account's name in the Search bar and press **Enter**.

- 3 Under **Filter**, apply the desired filters to narrow down the CDRs by **Call Type**, **Call Destination**, **Call Status**, and **Last Updated date**. See [Figure 238](#) for an example.

NOTE The filter criteria and choices vary based on the ERS screen. For instance, the *Call Details Records* screen contains **Call Type**, **Call Destination**, **Call Status**, and **Last Updated** filters. Whereas, the *Provisioning* screen contains **Responder Type**, **Routing Status**, **Address Status**, and **Last Updated** filters. All the filter choices are described in [Appendix D: “CDR Search and Filter Parameters”](#).

By default, ERS contains a default filter called **All Records**. Applying this filter displays all records belonging to the current account, based on the screen.

> FILTER

My Saved Filters
All Records

Responder Type: None selected
Routing Status: None selected
Address Status: None selected
Provisioning Source: None selected
Last Updated: Last Updated

FILTER SAVE AS... RESET FILTER

Figure 197: Filtering CDRs List

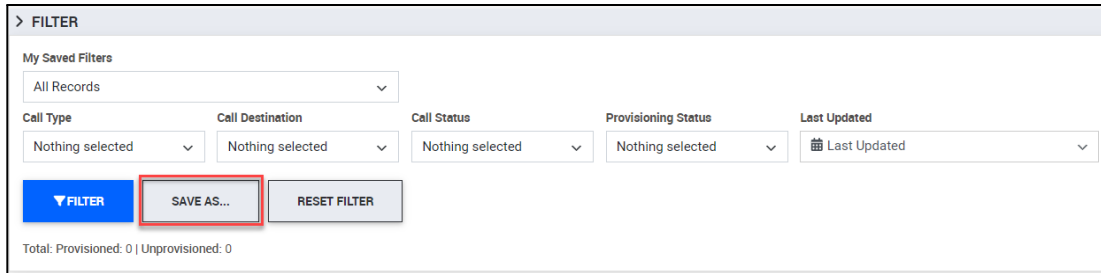
- 4 Click the **Filter** button. ERS retrieves all CDR results that match the filter criteria you selected, and the screen updates to reflect the matching results.

Saving Filters and Displaying Records

You can also save your filter choices. This can save time if you want, for example, to repeatedly retrieve the list of all unprovisioned calls in a month.

To save your filter criteria:

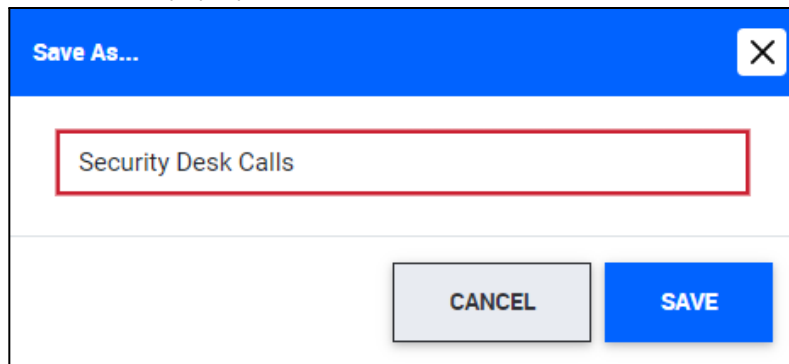
- 1 After choosing your filters, as described in [“Setup and Apply Filters”](#) above, click on the **Save As** button.



The screenshot shows a 'FILTER' interface with a header '> FILTER'. Below the header is a section 'My Saved Filters' with a dropdown menu currently set to 'All Records'. Below this are five filter categories, each with a dropdown menu: 'Call Type' (Nothing selected), 'Call Destination' (Nothing selected), 'Call Status' (Nothing selected), 'Provisioning Status' (Nothing selected), and 'Last Updated' (Last Updated). At the bottom of the filter section are three buttons: 'FILTER', 'SAVE AS...' (highlighted with a red box), and 'RESET FILTER'. Below the buttons, it says 'Total: Provisioned: 0 | Unprovisioned: 0'.

Figure 198: Choose Filters and Click Save As

- 2 In the *Save As* pop-up screen, enter a name for the filter and click on the **Save** button.



The screenshot shows a 'Save As...' pop-up screen with a blue header and a close button (X) in the top right corner. Below the header is a text input field containing the text 'Security Desk Calls', which is highlighted with a red box. At the bottom of the pop-up are two buttons: 'CANCEL' and 'SAVE'.

Figure 199: Enter a Name to Identify the Saved Filters

The filter is saved and available under *My Saved Filters*, in the *Call Details Records* screen.

Exporting Results

After applying the required filters, you can download the results you see on your screen into a CSV file.

To export results:

- 1 Click on **Export** button from the CDR List screen. See Figure 200.

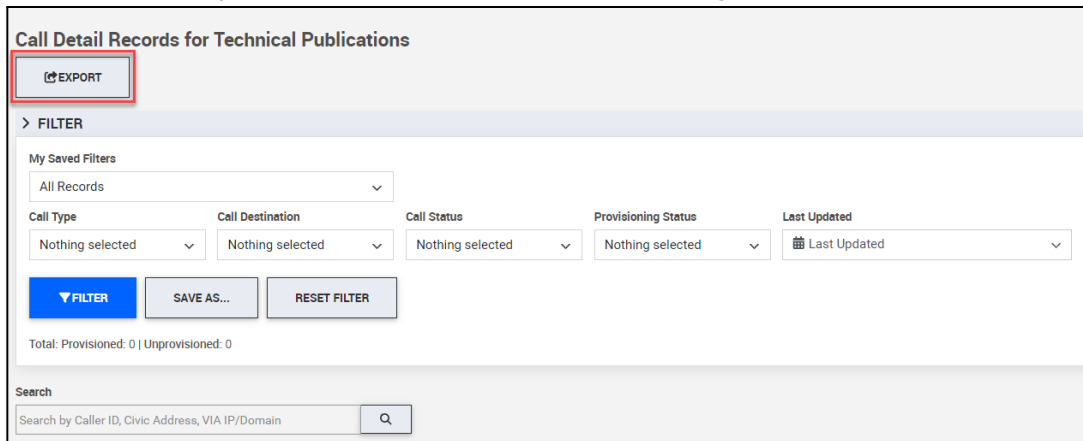


Figure 200: Click on the Export button to generate a CSV file with all the results that were retrieved after filtering

- 2 The *Export* screen appears. Enter an appropriate file name and click **OK**.

The export file is generated and stored in the **File Manager**. When required, you may click on the file to download it. on top right of the screen.

Editing or Deleting a Saved Filter

Once you save a filter, you can:

- Edit the filter name
- Delete the filter

Editing or deleting a saved filter:

- 1 Click the **My Saved Filters** drop-down icon, and select **Manage Filters**.

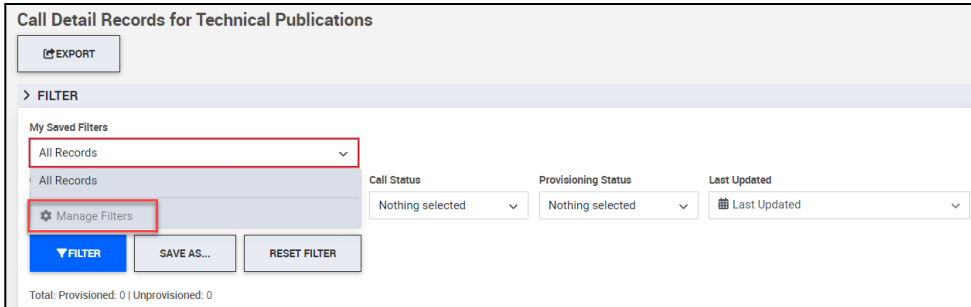


Figure 201: Click on Manage Filters to edit or delete a saved filter

- 2 From the *Manage Filters* pop-up screen, click on the filter’s name to edit it. This is shown in Figure 202 below:

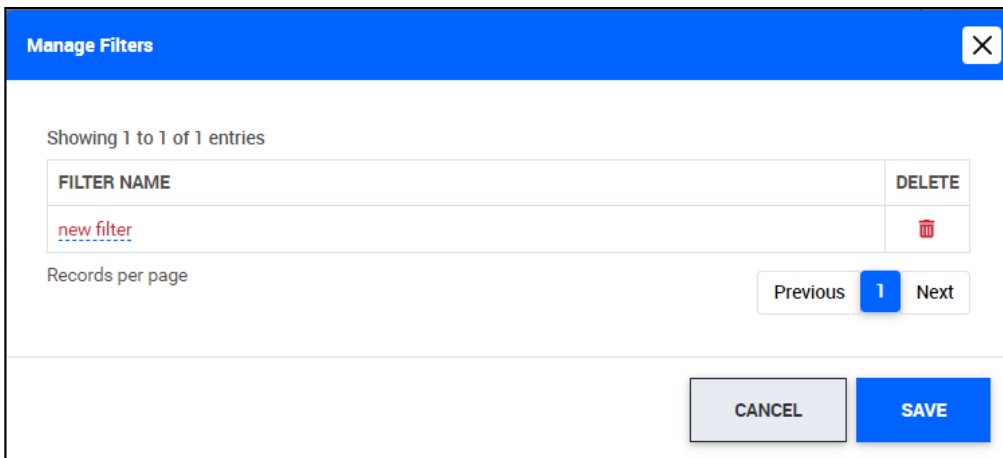


Figure 202: Click on the Filter’s Name to Edit

- 3 The filter name becomes an editable field. Enter a new name and click the check mark. Make Changes to the Filter Name and Click the Check Mark Icon
- 4 To delete a filter, click on the associated delete icon.
- 5 After making the required changes to the filter, click the **Save** button.

Chapter 9

Monitor Activity and Call Details

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Overview

The ERS portal contains various auditing and monitoring functions that enable you to keep track of activity in the ERS.

In the ERS, various events trigger the creation of a record. These events include the addition of an ERL or subscriber record, calls processed by the ERS, and ERS portal user logins. These records are stored in the ERS portal as:

- **Call Details Records:** enabling you to review the details of each call processed by the ERS.
- **Provisioning Logs:** enabling you to audit provisioning activity related to your account.
- **HELD Service Status:** enabling you to view and audit the transactions that occur between the ERS and the HELD phone.
- **Login History:** enabling you to view user activity on the portal.

Call Detail Records

When a call is processed by the ERS, a record of the call is saved and is called a Call Detail Record or **CDR**.

The *Call Details Records* screen lists all the calls originating from your account including provisioned and unprovisioned calls. All information related to the calls such as your Account Name, Account ID, ERL ID, and Subscriber ID are displayed in this screen.

Each call detail record also contains a link to its *CDR Details* screen. This screen contains additional information related to your call. For example, the reason a call was routed to the ECRC as opposed to the PSAP.

To view a call detail record, go to **Monitoring** → **Call Detail Records**.

CDR Details

To obtain more details related to a specific call, click on **CDR Details** icon from the **Actions** column, as shown in Figure 244.

Call Detail Records for ABC Company

> FILTER

Search

Search by all fields

Showing 1 to 2 of 2 entries

EXPORT

START TIME	ACCOUNT NAME	CALL TYPE	CALL STATUS	DURATION (S)	SUBSCRIBER ID	ERL ID	ACTIONS
Mar 11 09:44:05 EST 2016	ABC Lync	911	COMPLETED	64		0	
Mar 11 09:44:03 EST 2016	1ABC Company	911	COMPLETED	30		0	

Records per page 10

Previous Next

Click to View CDR Details Screen

Figure 203: Click the CDR Details Button From the Actions Column

The *Details* screen is displayed, as shown in Figure 204 below.

Home / CDR List / Details					
Account Name	ABC Lync	VIA Header	F96A5111-3564-4E4B-AAE-4F5D879148EA	ERL ID	0
Account ID	8BED17F8-3DCA-486E-87D8-830F20C970DF	Incoming DNIS	D53CE84F-318E-413E-B9E4-0E4A848289E7	Name <NAM>	1986756433
Call Received	Fri Mar 11 09:44:05 EST 2016	Incoming FROM	B199954E-478D-40AA-B09A-EF135402C8F3	House Number <HNO>	0
Call Answered	Fri Mar 11 09:44:05 EST 2016	Incoming CONTACT	883472D2-B66D-4FA9-B8ED-2A37A287D313	Street/Road <RD>	5 82DF2965-C822-47C7-AB50-250500F7B472.4 3
Call Terminated	Fri Mar 11 09:44:05 EST 2016	Incoming PAI		Location	73396951
Call Duration	64	Incoming E911-USER-INFO		City/Town <A3>	1674748796
Call Type	EMERGENCY	Call Destination	ECRC	State <A1>	69
Call Status	COMPLETED	Callback Number	(157) 893-4077	ZIP Code <PC>	58797
ERL Determination Method				Country	9AD6C8B7-83FB-4F73-8B17-80570C1077BA
Account mode	DEMO			Latitude	
SIP Call ID	47DFD25A-D9B3-4272-B15E-AAB5314D87A2			Longitude	
Info Message				Provisioned	Yes
				Subscriber ID	

Figure 204: Details Screen Displaying Details Relevant to the Routing of a Specific Call

The *Details* screen provides more details regarding the call flow and call routing information. Fields displayed in this screen vary depending on the type of call and the account configuration. Explanation of each field and possible values are provided in [“CDR Details Table”](#).

Furthermore, the *Details* screen also provides the *Info Message* field. The *Info Message* provides details as to why the call was routed to the ECRC. There are various reasons as to why a call is routed to the ECRC. They are:

- Account is configured to direct calls with a specific address status to the ECRC
- Call originated from an ERL that does not have PSAP coverage
- ERL’s address status dictates that the call should be routed to the ECRC

See [“Info Message Field”](#) for a detailed description.

Provisioning Logs

The **Provisioning Logs** screen provides a list of all provisioning changes made in your account. This includes the creation, modification, and deletion of fixed ERLs as well as caller-reported ERLs, subscribers, subnets, switches, wireless access points and Sub Accounts.

NOTE | The **Provisioning Logs** option is available from the ERS main menu only from **Deployment** and **Sub Accounts**.

To access **Provisioning Logs**:

- 1 From the ERS portal main menu, choose **Monitoring** → **Provisioning Logs**

The *Provisioning Logs* screen displays, as shown in Figure 205 below with all the changes made in your account. The **Action** column identifies the nature of the modification.

Provisioning Logs

EXPORT

FILTER

Item: Nothing selected
Action: Nothing selected
Date: Nothing selected
 Hide SOAP API User

FILTER
RESET FILTER

Search

Q

Showing 1 to 10 of 26 entries

ACCOUNT ID	ACCOUNT NAME	ITEM	ID	ADDRESS	LOCATION	NAME	ACTION	USER	DATE
68EE7299-89E1-4AA2-855E-A659043DF792	8x8 UK Editions	SUBSCRIBER	(669) 900-	Determined at call time			Modified	setToECRCService	Mon Nov 13 03:03:20 EST 2023
68EE7299-89E1-4AA2-855E-A659043DF792	8x8 UK Editions	SUBSCRIBER	(669) 900-	100 Main St., Campbell, CA 95008 US		Main Office	Modified	SOAP API	Mon Nov 13 02:56:28 EST 2023
68EE7299-89E1-4AA2-855E-A659043DF792	8x8 UK Editions	SUBSCRIBER	(206) 206-	675 Creekside Way, Campbell, CA 95008 US		Work	Modified	SOAP API	Fri Nov 10 05:07:00 EST 2023
68EE7299-89E1-4AA2-855E-A659043DF792	8x8 UK Editions	SUBSCRIBER	(408) 457-	673 Creekside Way, Campbell, CA 95008 US	Floor 2	Hugh Test Floor 2	Modified	8x8.com	Wed Nov 8 04:46:39 EST 2023
68EE7299-89E1-4AA2-855E-A659043DF792	8x8 UK Editions	BUILDING	Creek	673 Creekside Way, Campbell, CA 95008			Modified	8x8.com	Wed Nov 8 04:12:58 EST 2023

Figure 205: Provisioning Logs Screen

You can also filter and search records displayed in this screen.

HELD Service Status

The *HELD Service Status* screen provides records of the information exchanged between HELD-compliant desk phones and the ERS. This includes information about the HELD requests that are sent to the ERS from the phone and the responses that the ERS sends to the phone.

NOTE | Records of HELD transactions are kept for a maximum for 30 days in the ERS. They are deleted after this time frame.

To view the status of the HELD transactions:

- 1 From the ERS portal main menu, choose **Monitoring** → **HELD Service Status**. See Figure 206.

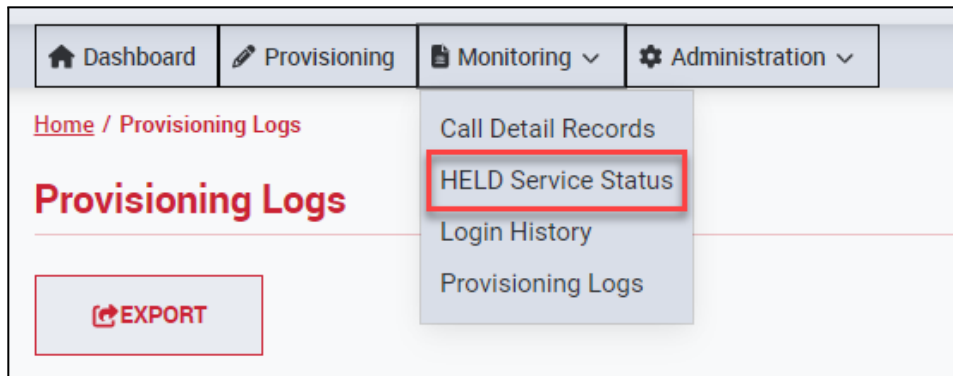


Figure 206: Choosing HELD Service Status Option from Main Menu

The *HELD Service Status* screen displays, as shown in Figure 248 with all the HELD transactions that occurred in your account. The **Status** column identifies whether the HELD request was valid or invalid. For a complete description of the columns displayed in this screen, see "[HELD Service Status Field Descriptions](#)".

HELD Service Status

▼ FILTER

Status

Nothing selected ▼

ERL Found

Nothing selected ▼

▼ FILTER

RESET FILTER

Search

Search by NAI, IP Address, BSSID, Chassis ID, Port ID, MAC Address, Gateway MAC, ERL ID or Originating IP Q

Showing 1 to 25 of 25 entries

NAI	RECEIVED	STATUS	LOC TYPE VALUE	LOC TYPE EXACT	IP ADDRESS	BSSID	CHASSIS ID	PORT ID	MAC ADDRESS	GATEWAY MAC	FQDN RESOLVED
▶	Mon Apr 24 04:54:36 EDT 2023	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false
▶	Fri Feb 17 10:50:13 EDT 2023	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false
▶	Tue Dec 20 07:18:27 EDT 2022	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false
▶	Mon Dec 19 09:00:28 EDT 2022	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false
▶	Tue Feb 15 17:25:07 EDT 2022	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false
▶	Tue Feb 15 17:01:31 EDT 2022	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false
▶	Tue Feb 15 16:40:07 EDT 2022	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false

Figure 207: HELD Service Status Screen

- 2 In this screen, you can perform the following actions:
 - A Apply filters to truncate the list of entries.
 - ◆ **Example 1:** To view the list of invalid HELD requests, choose `Invalid` under the `Status` filter and then click the **Filter** button. The screen updates to display only invalid HELD transactions. See Figure 208 for an example.

HELD Service Status

▼ FILTER

Status: Invalid (dropdown) ERL Found: Nothing selected (dropdown)

▼ FILTER RESET FILTER

Search

Search by NAI, IP Address, BSSID, Chassis ID, Port ID, MAC Address, Gateway MAC, ERL ID or Originating IP

Showing 1 to 25 of 25 entries

NAI	RECEIVED	STATUS	LOC TYPE VALUE	LOC TYPE EXACT	IP ADDRESS	BSSID	CHASSIS ID	PORT ID	MAC ADDRESS	GATEWAY MAC	FQDN RESOLVED
▶	Mon Apr 24 04:54:36 EDT 2023	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false
▶	Fri Feb 17 10:50:13 EDT 2023	Invalid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false
▶	Tue Dec 20 07:18:27 EDT 2022	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false
▶	Mon Dec 19 09:00:28 EDT 2022	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false
▶	Tue Feb 15 17:25:07 EDT 2022	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false

Figure 208: Filtering Search Results in HELD Service Status Screen

- ◆ Example 2: To view the list of HELD transactions where the ERL was found using the Subnet-ERL association, choose **Subnet** from the **ERL Found** filter option and click **Filter**. The screen updates to display only HELD transactions where the phone’s location was found using the Subnet-ERL association that was pre-provisioned in the network map. See Figure 209 for an example.

▼ FILTER

Status: Nothing selected (dropdown) ERL Found: Subnet (dropdown)

▼ FILTER RESET FILTER

Search

Search by NAI, IP Address, BSSID, Chassis ID, Port ID, MAC Address, Gateway MAC, ERL ID or Originating IP

Showing 1 to 23 of 23 entries

NAI	RECEIVED	STATUS	LOC TYPE VALUE	LOC TYPE EXACT	IP ADDRESS	BSSID	CHASSIS ID	PORT ID	MAC ADDRESS	GATEWAY MAC	FQDN RESOLVED	VPN CONNECTED	ERL FOUND	ERL ID RETURNED	ORIGINATING IP	ONSITE REQUEST
	Mon Apr 24 04:54:36 EDT 2023	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false	false	Subnet	D206852A-04ED-4E38-BDC2-1ED90B4CBEBD	82.163.145.169	true
	Fri Feb 17 10:50:13 EDT 2023	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false	false	Subnet	D206852A-04ED-4E38-BDC2-1ED90B4CBEBD	78.143.210.61	true
	Tue Dec 20 07:18:27 EDT 2022	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false	false	Subnet	D206852A-04ED-4E38-BDC2-1ED90B4CBEBD	195.110.73.62	true

Figure 210: Filtering Search Results in HELD Service Status Screen

- B Clear the filters by clicking the **Reset Filter** button.
- C View the ERL that was discovered for the phone by clicking the hyperlink under the **ERL ID Returned** column. See Figure 211 for an example.

FILTER

Status: Nothing selected | ERL Found: Subnet

FILTER **RESET FILTER**

Search

Search by NAI, IP Address, BSSID, Chassis ID, Port ID, MAC Address, Gateway MAC, ERL ID or Originating IP

Showing 1 to 23 of 23 entries

NAI	RECEIVED	STATUS	LOC TYPE VALUE	LOC TYPE EXACT	IP ADDRESS	BSSID	CHASSIS ID	PORT ID	MAC ADDRESS	GATEWAY MAC	FQDN RESOLVED	VPN CONNECTED	ERL FOUND	ERL ID RETURNED	ORIGINATING IP	ONSITE REQUEST
	Mon Apr 24 04:54:36 EDT 2023	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false	false	Subnet	D906852A-D4ED-4E38-8DC2-1FD90B4C8EBD	82.163.145.169	true
	Fri Feb 17 10:50:13 EDT 2023	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false	false	Subnet	D906852A-D4ED-4E38-8DC2-1FD90B4C8EBD	78.143.210.61	true
	Tue Dec 20 07:18:27 EDT 2022	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false	false	Subnet	D906852A-D4ED-4E38-8DC2-1FD90B4C8EBD	195.110.73.62	true

Figure 211: Hyperlink under ERL ID Returned Column

You can search for a specific IP Address by entering the value in the Search text box. See Figure 212 for an example.

FILTER

Status: Nothing selected | ERL Found: Subnet

FILTER **RESET FILTER**

Search

Search by NAI, IP Address, BSSID, Chassis ID, Port ID, MAC Address, Gateway MAC, ERL ID or Originating IP

Showing 1 to 23 of 23 entries

NAI	RECEIVED	STATUS	LOC TYPE VALUE	LOC TYPE EXACT	IP ADDRESS	BSSID	CHASSIS ID	PORT ID	MAC ADDRESS	GATEWAY MAC	FQDN RESOLVED	VPN CONNECTED	ERL FOUND	ERL ID RETURNED	ORIGINATING IP	ONSITE REQUEST
	Mon Apr 24 04:54:36 EDT 2023	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false	false	Subnet	D906852A-D4ED-4E38-8DC2-1FD90B4C8EBD	82.163.145.169	true
	Fri Feb 17 10:50:13 EDT 2023	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false	false	Subnet	D906852A-D4ED-4E38-8DC2-1FD90B4C8EBD	78.143.210.61	true
	Tue Dec 20 07:18:27 EDT 2022	Valid	locationURI	True	192.168.2.10				11-22-33-44-55-66		false	false	Subnet	D906852A-D4ED-4E38-8DC2-1FD90B4C8EBD	195.110.73.62	true

Figure 212: Searching by IP Address

D View any warnings or notices that the ERS displays regarding the HELD transactions. See Figure 213 for an example.

- I Some HELD requests sent in the last 24 hours could not be processed properly. See details.

When you click on the See Details hyperlink, the screen updates to only display HELD transactions with Status as Invalid.

- II In the last 24 hours, some phones could not retrieve a location due to missing data. See details.

When you click on the See Details hyperlink, the screen updates to only display HELD transactions whose ERL Found status is Not Found. That is, ERS could not determine the phone's location and a 9-1-1 call from the phone will be routed to ECRC. This message is displayed when the network map was not properly provisioned in the ERS account or the phone did not provide the required data in the HELD request to permit location determination.

HELD Service Status

⚠ Some HELD requests sent in the last 24 hours could not be processed properly. [See details.](#) ✕

ⓘ In the last 24 hours, some phones could not retrieve a location due to missing data. [Show me phone routing to ECRC.](#) ✕

▼ FILTER

Search

Search by NAI, IP Address, BSSID, Chassis ID, Port ID or ERL ID 🔍

Showing 1 to 9 of 9 entries

NAI	RECEIVED	STATUS	LOC TYPE VALUE	LOC TYPE EXACT	IP ADDRESS	BSSID	CHASSIS ID	PORT ID	MAC ADDRESS	ERL FOUND	ERL ID RETURNED
5147451114	2021-02-16 13:57:28.0	Invalid - Not Authorized	locationURI	True	192.168.8.101		88-5a-92-6a-8a-80	G12/0/172	64-16-7f-1b-85-e6		
5147451114	2021-02-16 13:53:14.0	Valid	locationURI	True	192.168.8.101		88-5a-92-6a-8a-80	G12/0/172	64-16-7f-1b-85-e6	Not Found	ECRC
5147451113	2021-02-16 13:48:09.0	Valid	locationURI	True	192.168.8.102		88-5a-92-6a-8a-80	G12/0/172	64-16-7f-1b-85-e7	Switch/Port	ETHS-Subnet.L2

Figure 213: Warnings and Notices Displayed in HELD Service Status Screen

Appendix A

Field Descriptions

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General Information

Table 9: General Information Field Definitions

Field Name	Description	Example
Account Name	The name of the account. Name must have a minimum of 1 and maximum 100 characters. All special characters are accepted.	ABC Group of Industries
Account Type	Type of account. This field cannot be edited and configured by Support.	Enterprise SIP
NOC Contact	NOC number that can be called by the ECRC under exigent circumstances. For example, if a call is unprovisioned, and the caller cannot confirm their address, the ECRC will call this number to try to confirm the emergency address.	
Account ID	The account ID is auto-generated at the time of account creation. The account ID varies by each account and is not inherited by Deployment or Sub Account from the Level 1 account.	
Emergency Calls	The email and SMS address (es) configured to receive emergency calls notifications.	email: jane.smith@ABCcompany.com SMS: 5147452143@att.txt.com
Maintenance Activities	The email and SMS address (es) configured to receive maintenance notifications	email: jane.smith@ABCcompany.com SMS: 5147452143@att.txt.com
NOC Contact	NOC number that can be called by the ECRC under exigent circumstances. For example, if a call is unprovisioned, and the caller cannot confirm their address, the ECRC will call this number to try to confirm the emergency address.	

Table 9: General Information Field Definitions (Continued)

Field Name	Description	Example
PSAP	Public Safety Answering Point. An agency responsible for answering 911 calls for emergency assistance from police, fire, and ambulance services. When selected as a delivery method, a two-way communication is established between the caller and the PSAP operator.	
Security Desk	An organization's internal security personnel. When selected as a delivery method, a two-way communication is established between the caller and the internal security desk personnel.	
System Alerts	The email address (es) configured to receive operational alerts related to your service.	
Test Calls	Any call made by dialing the Test call Direct Inward Dialing (DID) will be routed to an Interactive Voice Recording (IVR) that informs you of the status of your account, the status of your address, and the location coverage.	
Three way	A call delivery method that when chosen routes the call to the Security Desk as well as the PSAP. A three-way communication is established between the caller, PSAP operator, and the Security Desk personnel.	
Unprovisioned Calls	The email address (es) configured to receive unprovisioned call notifications	

ERL Name, Civic Address, and Geo-Coordinates

Table 10: ERL Name, Civic Address, and Geo-Coordinates Field Definitions

Field Name	Description	Example
City	Name of the city or township	Alphanumeric, 32 characters maximum, including numerical characters. Examples: New York, Los Angeles, Chicago
Country	A 2-letter country identifier.	2-characters maximum. The only valid options are: US or CA
ERL Name	The name of the customer. This field will appear on the PSAP screen as the "Name".	1 to 32 characters Alphanumeric Accepted special characters include [# @ & * () - _ + , . : ; ' ' /]
Find or enter Lat/Long	Radio Button to enter a location using Latitude and Longitude Geo-Coordinate Information to define a location—particularly a location that does not have a civic address, such as an oil rig.	Radio button—Select (checked) or deselect (unchecked)
House Number	House number including the House Number suffix	800, 101-236, 101-236A 10 characters maximum. Alphanumeric Accepted special characters include . : / _ -
Label	The ERL label is not sent to the PSAP. It provides additional identifying information about a location. It is often used to define a group of locations.	Alphanumeric 0 to 80 characters, including spaces and the following characters _ , . # () / The same ERL label can be assigned to multiple locations (ERLs) and do not need to be unique.

Table 10: ERL Name, Civic Address, and Geo-Coordinates Field Definitions (Continued)

Field Name	Description	Example
Latitude	Used in Google Maps, Latitude can be entered into the Google Map search field to define an Emergency Response Location.	A numeric decimal value representing a geo-coordinate global position. Expressed as a positive or negative decimal. A positive Latitudinal decimal represents North of the Equator; negative represents South of the Equator. Example: 15.23456, -15.23456
Location	Information that provides a more specific description of the location.	Alphanumeric from 1 to 60 characters (20 characters or less is recommended) Special characters include [# @ & * () - _ + , . : ; " ' /] Example: Suite 200, Floor 2 Note: Due to PSAP display limitations, some addresses may be truncated at the PSAP to 20 characters or less. If possible, it is a best practice to use shorter addresses for E911. It is recommended to test with the local PSAPs before going into production.
Longitude	Used in Google Maps, Longitude can be entered into the Google Map search field to define an Emergency Response Location.	A numeric decimal value representing a geo-coordinate global position. Expressed as a positive or negative decimal. A positive longitudinal decimal represents East of the Equator; negative represents West of the Equator. Example: 30.23456, -30.23456
State/Province	The state or province of the location.	2 characters maximum. The validation is country specific. Examples: CO, QC

Table 10: ERL Name, Civic Address, and Geo-Coordinates Field Definitions (Continued)

Field Name	Description	Example
Street/Road Name	<p>Primary road or street</p> <p><i>Due to PSAP display limitations, an error may be returned for any values submitted that are over 48 characters. It is a best practice to provision the RD field between 1-48 characters.</i></p> <p>For more information, see Appendix C: "ERS Civic Address Validation".</p>	
ZIP Code	US ZIP Code or CA Postal Code	<p>US</p> <p>A five-digit zip code. Must include a leading zero, if the zip code has one. Example: 07827 is acceptable, 7827 is not.</p> <p>CA</p> <p>A six-digit, alphanumeric postal code. Capitals letters and spaces are acceptable. Example: H2X 1R3</p>

Provisioning Source

Provisioning Source column provides information on the method that a specific ERL was provisioned into the ERS records.

Table 11: Provisioning Source Possible Values

Possible Value	Description
ERS Interfaces	ERL was provisioned by one of the following methods: <ul style="list-style-type: none">■ ERS Portal■ ERS SOAP Methods■ Batch functionality
Location Manager	ERL was provisioned via the Location Manager application.
Remote User Location Service	ERL was provisioned through the Remote User Location service.

Routing Options

Table 12: Routing Options Field Definitions

Field Name	Description	Example
Language	<p>When Country is chosen as US when adding an ERL, this option is not displayed.</p> <p>When Country is chosen as Canada (CA) when adding an ERL, two language options are displayed: English and French.</p>	
Custom Callback	<p>The Custom Callback is a Direct Inward Dial (DID) number that is used as the caller ID sent to the PSAP.</p> <p>The Custom Callback field can be used to over-ride the global callback setting, when you need to allocate a custom callback number on a per-ERL basis. For example, you can use a custom number to route a PSAP callback to a central answering point, security desk, or receptionist.</p>	10-digit number

Table 12: Routing Options Field Definitions (Continued)

Field Name	Description	Example
Delivery Method	An ERL-level delivery method that instructs how an emergency call will be routed.	<p>Three options:</p> <p>PSAP Direct: A PSAP Direct call is routed directly to the PSAP.</p> <p>Three-way: A three-way call establishes a connection between the caller, a PSAP, and the security desk.</p> <p>Security Desk: An emergency call is delivered directly to the security desk. The call is not directed to the PSAP.</p> <p>Note: If you have chosen to override the ERL Security Desk DID, the Security Desk DID configured here will not take precedence. In such an instance, then the Security Desk DID configured at the dial plan will apply.</p>
Emergency Call Notification	<p>Email or SMS addresses that will receive system notifications when an emergency call is made. It is highly recommended to use email distribution lists for easier maintenance.</p> <p>Note: To receive notifications via SMS, you must be subscribed to an email-to-text service with your telephony provider. The SMS notifications are in the form of abridged email alerts.</p>	<p>Email: johnsmith@company.com</p> <p>SMS: 5147452143@txt.att.net</p>
ERL ID	<p>A unique identifier that the ERS system uses to access the ERL. Specifying an ERL ID is optional. If an ERL ID is not provided, ERS will auto-generate one.</p> <p>Note: We recommend that you use the ERL Label to group ERLs since they need not be unique.</p>	<p>Alphanumeric 1 to 36 characters including spaces and the following characters: _-'()</p> <p>Auto-generated format: 63DA2355-AOFB-4B19-9FDA-839DCF81E2BA</p> <p>Example: All employees on Floor 3.</p>

Table 12: Routing Options Field Definitions (Continued)

Field Name	Description	Example
ERL Label	The ERL Label is not sent to the PSAP. It provides additional identifying information about a location. It is often used to define a group of locations.	Alphanumeric 0 to 80 characters, including spaces and the following characters _-,.#'()/
		The same ERL label can be assigned to multiple locations (ERLs) and do not need to be unique.
Notification Display	Either the original or a remapped phone number that displays at the security desk.	Original: The original 10-digit DID or the extension number of the caller displays as the callback number. Remapped: Remapped callback number that shows the 10-digit number from Extension-Bind, or custom callback number.
Security Desk DID	10-digit phone number that is used to reach the enterprise Security Desk.	10-digit number
Security Desk Mute	Only applicable if the delivery Method is set to Three-way . The setting is applicable for the duration of the call.	Options: Unmute or Mute

Subnets

Field	Description	Format and Example
Subnet Name	Name for the Subnet. Enter an easily identifiable name for your subnet.	Example: Basement Office
Subnet Mask	IP address of the Subnet that is associated to the ERL.	Must be in standard IPv4 address format. Example: 192.168.92.2/24

Wireless Access Points

Field	Description	Format and Example
Wireless Access Point Name	Name of the Wireless Access Point	Example: Floor 1
BSSID	Wireless Access Point's BSSID that is associated to the ERL.	Must be in standard MAC address format. Example: 34:8a:ae:68:87:ef
Access Point ID	System-generated ID for the Wireless Access Point.	

Switches and Ports

Field	Description	Example
Switch Name	Name of the switch.	Example: Conference Room
Chassis ID	Chassis ID of the switch. Acceptable formats include: <ul style="list-style-type: none">■ Hostname■ IP Address■ MAC Address	Up to 256 alphanumeric and special characters are accepted. Examples: Host Name: Floor1.enterprise.com IP Address: 192.168.92.3 MAC Address: 11:22:33:44:55:66
Port Name	Name of the port.	Example: Coffee Room, Gi01/9/8
Port ID	Switch Port or port associated to an ERL. Acceptable formats include: <ul style="list-style-type: none">■ IP Address■ MAC Address■ Port Name	Up to 256 alphanumeric and special characters are accepted. Examples: IP Address: 192.168.92.3 MAC Address: 11:22:33:44:55:66

Appendix B

Batch Provisioning History and Log Codes

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Batch Provisioning History

Table 14: Batch Provisioning History

Column Name	Description
Batch Files	This column lists the names of all the batch files that were uploaded into the system.
Batch Log	This column lists the batch log files and error log files that were generated during the provisioning process.
Date Loaded	This column gives the day, date, and the time the batch file was uploaded into the ERS.
Status	This column gives the final status of the batch files that were provisioned.
Records	This column refers to the number of records that were provisioned.
Successes	This column refers to the number of successful records provisioned.
Errors	This column refers to the number of erroneous records.
Actions	This column displays the various actions you can perform.

Batch Provisioning Log Codes

ERS generates a log file in CSV format to record the results of the batch operations and to provide feedback on the result of the operation. ERS also generates an “error log” if rows failed validation. Table 15 describes the operators that appear in the **OP** column of the CSV file; Table 16, lists the messages displayed after batch processing, including error messages.

Table 15: Operators used in Batch Results

Operator	Description
A	Add or Modify
D	Delete
X	Delete an ERL and its associated subscribers and any subnets
M	Move a subscriber or subnet from one ERL to another

Table 16: Batch Provisioning Log Codes

Batch Results	A	D	X	M
Validation Successful. <string from validation result>	X			
Successfully Validated Location. Automatically corrected address to MSAG format.'	X			
ERL created.	X			
ERL modified.	X			
ERL modified and added to the VPC.	X			
ERL modified and deleted from the VPC.	X			
ERL added to the VPC.	X			
ERL deleted from the VPC.	X			
ERL Deleted.		X	X	
ERL cannot be deleted. Subscribers are still assigned to the ERL.		X		
No changes required.	X			
ERL record does not exist.	X			
Record does not have the correct number of fields.	X			
Operation is invalid.				

Table 16: Batch Provisioning Log Codes (Continued)

Batch Results	A	D	X	M
Validation Failed < Detailed results string from Validation request >	X			
Crisis Email format is not valid.	X			
Security Desk DID format is not valid.	X			X
Security Desk Mute option value is not valid.	X			
Notification Display Option value is not valid.	X			
Custom Callback DID format is not valid.	X			
Subscribers cannot be moved from one ERL type to another.				X

Appendix C

ERS Civic Address Validation

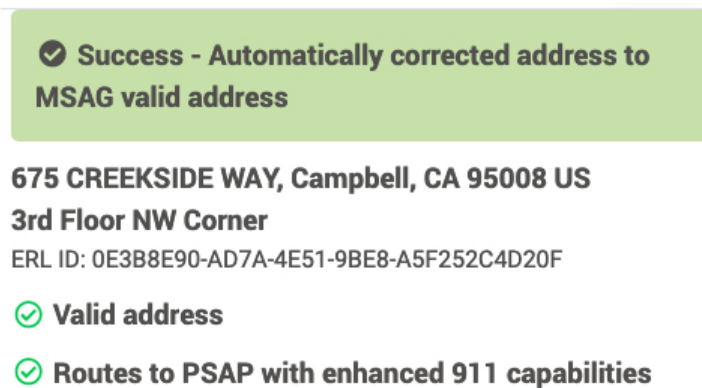
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Overview

The Emergency Routing Service (ERS) validates the accuracy of the address you enter when you add an Emergency Response Location (ERL). During the address validation process, ERS tries to match the civic address information you entered to the address records already present in the Master Street Address Guide (MSAG) authority records. The MSAG is a list of all known valid address locations within a 911 service area. If the civic address information you entered matches a known MSAG record, then the ERS returns a “Valid” status and you can add the emergency location address record to ERS.

In some cases when an address is validated, the system automatically corrects the address information. An example showing a corrected address is shown in Figure 214 below.



✔ Success - Automatically corrected address to MSAG valid address

675 CREEKSIDE WAY, Campbell, CA 95008 US
3rd Floor NW Corner
ERL ID: 0E3B8E90-AD7A-4E51-9BE8-A5F252C4D20F

✔ Valid address

✔ Routes to PSAP with enhanced 911 capabilities

Figure 214: An ERL Address Record That is Automatically Corrected During Address Validation

Level of Service

When an address is validated, level of service indicates the Responder Type, Routing Status, and Address Status.

Table 17: Level of Service Types

Service Level Type	Description
Responder Type	<p>Indicates the final destination of the call.</p> <p>PSAP: The call will be routed directly to the PSAP.</p> <p>ECRC: The call will first be routed to the Emergency Call Relay Center (ECRC) to then be transferred to the PSAP. This is usually the case for remote PSAPs that are not served directly by an Enhanced 911 selective router.</p>
Routing Status	<p>Indicates whether the PSAP or the ECRC receives the caller's address information at call time.</p> <p>Enhanced: The PSAP receiving the call will also automatically receive the civic address and location information associated with the call.</p> <p>Basic: The PSAP receiving the call will not receive the location of the caller. The address and location information will have to be provided verbally to the 911 call taker.</p> <p>None: There is no coverage for this location and the call will first be routed to the ECRC to then be transferred to the PSAP.</p>
Address Status	<p>Indicates the accuracy of the address information entered.</p> <p>Valid: The address provided is valid and matches with the MSAG records. See "Overview". This is a permanent state and will not change.</p> <p>Pending-Civic: The address has failed to match any of the records present at the MSAG authority. This could be due to an error in the House Number or Street Name. It has been submitted to the DIU for processing. This is not a permanent state and after review, will be changed. For more information, see "Address Status Post-Processing".</p> <p>Pending-Geo: The address has failed validation and could not be geocoded. This address is then sent to the DIU for processing. This is not a permanent state and after review, will be changed. For more information, see "Address Status Post-Processing".</p> <p>Pending-MSAG: Address is valid but the MSAG authority does not have this address in its records. This might happen when the address belongs to a new housing development or a similar scenario. A notice is sent to the MSAG authority to add this address to their records. After processing, the address status becomes "Corrected". See "Address Status Post-Processing".</p>

Note: The ECRC handles unprovisioned and failover 911 calls. The ECRC is staffed by APCO-certified emergency call takers who confirm the caller’s location and transfer the call.

Address Status Post-Processing

Addresses that return a status other than “Valid” must be processed and corrected by the DIU. See [“Overview”](#). Some statuses, even after DIU processing, may require action on your part.

Invalid-Civic: The address was processed by the DIU but they could not correct it. The address information was either missing the House Number or the Street Name.

Invalid-Geo: The address was processed by the DIU but the address still fails to geocode.

Corrected: The address has been corrected by the DIU. No further action is required.

Corrected-Other: The address information was corrected by the DIU. Geo-coordinates were manually entered by the DIU but an MSAG match could not be found. The record will not be added to the MSAG authority.

The following table maps the initial value of the address status to the final value seen on the ERS portal after processing by the DIU:

Initial address status after validation	Final address status after processing
Pending –Civic	Corrected
	Invalid-Civic
Pending-Geo	Corrected
	Invalid-Civic
	Invalid-Geo
	Corrected-Other

Appendix D

CDR Search and Filter Parameters

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CDR List Field Descriptions

The **CDR List** page shows the emergency calls made from your account. By default, all of the emergency calls made from your account are displayed.

Table 18: CDR List Field Descriptions

Field	Description
Address Information	Civic address information associated with the call. Alternatively, this can also be Geo-coordinate (latitude and longitude) information used to define a location and provision the ERL along with any optional address information.
Start Time	Start time for the call. Provided in this format: Day Month Date Time Timezone Year. Example: Fri Mar 11 09:44:11 EST 2018
Company Name	Name of your company provided at the time of account creation.
Call Type	Type of call that was processed. Possible values are: <ul style="list-style-type: none"> ■ Callback: Call made by the PSAP or ECRC operator to reach the caller, if required. ■ CRN: Back-door call made by customer in case SIP connectivity to the ERS is lost. ■ 911: Call made by dialing 9-1-1. ■ Security Desk: Call made to the organization's Security Desk. ■ Test: Call made by dialing a pre-configured test call number. ■ Three Way: Call that takes place between the caller, PSAP operator, and the Security Desk personnel. ■ PSAP Link: Call made by the ECRC operator in order to transfer the 911 caller to the PSAP.
Call Status	Outcome of the call. Possible values are: <ul style="list-style-type: none"> ■ Canceled: The call was terminated by the caller. ■ Completed: The call was terminated after it was answered by the PSAP. ■ Connected: The call was answered by the PSAP and the caller is currently connected to the PSAP. ■ Dialing: The processing was completed and the call routing module is dialing the call destination. ■ Failed: The call was terminated before it could be answered by the PSAP. ■ Failed Over: The call has failed over to the other data center. ■ Incoming: The call was received by the call routing module and is being processed. ■ Ringling: The call is ringing at the PSAP.

Table 18: CDR List Field Descriptions (Continued)

Field	Description
Duration(s)	The duration that the call lasted (in seconds).
Subscriber ID	Subscriber ID of the caller.
ERL ID	ERL ID of the caller.
Address Information	Address information associated with the call.
Callback Number	10-digit callback number of the caller, if applicable.
Call Destination	<p>Indicates the destination of the call. Possible values are:</p> <ul style="list-style-type: none"> ■ ECRC: the call was routed to the ECRC. ■ PSAP: the call was routed to the PSAP. ■ VPSAP: the call was routed to the VPSAP. ■ Security Desk: the call was routed to the Security Desk. ■ ECRC+Security_Desk: the call was routed to the ECRC as well as the Security Desk. ■ PSAP+Security_Desk: the call was routed to the PSAP as well as the Security Desk. ■ VPSAP+Security Desk: the call was routed to the VPSAP as well as the Security Desk. S ■ Test: the call was a test call.
Provisioned Call	Yes or No to indicate whether the call was provisioned or unprovisioned.
Actions	CDR Details are available under this column. See “CDR Details Table” .

CDR Details Table

Note: The fields marked with an asterisk (*) below are also present in the *CDR List* screen.

Table 19: CDR Details Screen Field Descriptions

Field	Description and Possible Values (where applicable)
Account Name*	Name of your company provided at the time of account creation.
Account ID*	Identifier for your account.
Call Received*	Time that the call was received.
Call Answered	Time that the call was answered.
Call Terminated	Time that the call was terminated.
Call Duration*	Duration that the call lasted, in seconds.
Call Type*	Type of call that was processed.
Call Status*	Status of the call that was processed.
Account Mode	Mode that the account is currently in, depending on the account configuration. Possible values: Live Demo
SIP Call ID	Identifier for the SIP call.
Info Message	Field displays the reason why the call was routed to the ECRC. Only populated when the call is routed to the ECRC; otherwise it is blank.
VIA Header	Can be used to trace the account from where the call originated as well as the path of the call.
Incoming DNIS	Dialed Number Identification Service contains the callback number of the caller or the Subscriber ID.
Incoming FROM	Field that displays the originating information related to the call.
Incoming CONTACT	Field that can be used to trace the account from where the call originated as well as the path of the call.
Incoming PAI	The P-Asserted-Identity that comes in with the call. Depending on your account configuration settings, this field most often contains the caller's Subscriber ID or the callback number.

Table 19: CDR Details Screen Field Descriptions (Continued)

Field	Description and Possible Values (where applicable)
Incoming E911-USER-INFO	SIP header can be used for one of the following: <ul style="list-style-type: none"> ■ To include the caller's IP address and is used to identify the subnet to which the IP address belongs to. ■ To include the caller's geo-coordinate information (latitude and longitude) for enterprises that do not wish to send geo-coordinates in the PIDF-LO.
Incoming Geo-Location	Geo-coordinates (latitude, longitude) that were sent at call time.
Incoming SDP Session Name	This is the name of the SDP session in the incoming SIP Invite. In ERS, it is used to identify a HELD-compliant device that does not send a LocationUri at call time.
Call Destination*	The destination of the call.
Callback Number	The callback number associated with the call.
ERL ID*	ERL ID of the subscriber who placed the call.
Name <NAM>*	Name of the ERL associated with the subscriber who placed the call.
House Number <HNO>*	House Number of the ERL associated with the subscriber who placed the call.
Street/Road <RD>*	Street name or the road name of the ERL associated with the subscriber who placed the call.
Location*	Location of the ERL associated with the subscriber who placed the call.
City/Town <A3>*	City or township of the ERL associated with the subscriber who placed the call.
State <A1>*	State (or province) of the ERL associated with the subscriber who placed the call.
Zip Code <PC>*	Zip or postal code of the ERL associated with the subscriber who placed the call.
Country*	Country name of the ERL associated with the subscriber who placed the call.
Latitude	A numeric decimal value representing a geo-coordinate global position. Expressed as a positive or negative decimal. A positive Latitudinal decimal represents North of the Equator; negative represents South of the Equator.

Table 19: CDR Details Screen Field Descriptions (Continued)

Field	Description and Possible Values (where applicable)
Longitude	A numeric decimal value representing a geo-coordinate global position. Expressed as a positive or negative decimal. A positive longitudinal decimal represents East of the Equator; negative represents West of the Equator.
User-Provided Lat/Long	Yes indicates that the ERL was provisioned using Latitude and Longitude Geo-coordinates.
Provisioned*	Yes or No to indicate whether the call was provisioned or unprovisioned.
Subscriber ID	Identifier of the subscriber that made the call.
Security Desk Destination	Applicable only for calls made to a Security Desk. Provides the Security Desk DID that was configured for your account.
Security Desk Status	Outcome of the three-way or Security Desk call. Possible values are: <ul style="list-style-type: none"> ■ Canceled: The call was terminated by the 911 caller. ■ Completed: The call was terminated after it was answered by the Security Desk and PSAP, or only the Security Desk. ■ Connected: The call was answered by the Security Desk and PSAP or only the PSAP and the 911 caller are currently connected to the respective parties. ■ Dialing: The processing was completed and call routing module is dialing the call destination. ■ Failed: The call was terminated before it could be answered by the appropriate parties. ■ Failed Over: The call has failed over to the other data center. ■ Incoming: The call was received by the call routing module and is being processed ■ Ringling: The call is ringing at the Security Desk and PSAP or only the Security Desk.
Security Desk Call Duration	Duration in seconds that the Security Desk call lasted for. Applicable only for Three-Way and Security Desk calls.
Security Desk Call Date Answered	Day, date, and time that the Security Desk call was answered. Applicable only for Three-Way and Security Desk calls. Ex: Fri May 4 17:07:37 EDT 2018
Security Desk Call Date Terminated	Day, date, and time that the Security Desk call was terminated. Applicable only for Three-Way and Security Desk calls.

Note: The `Via` Header, `Incoming DNIS`, `Incoming FROM`, `Incoming CONTACT` and `Incoming PAI` fields are SIP headers that are present in the SIP message that comes in at call time.

Info Message Field

The `Info Message` field in the *CDR Details* page provides additional information about why the emergency call was routed to the ECRC. The `Info Message` field is only populated if the call was routed to the ECRC, otherwise it is blank.

Table 20: Info Message Table

Info Message	Description
Account configuration - route to ECRC with basic location	The call was routed to the ECRC since the subscriber's account is configured in this manner. Additionally, the subscriber's location is not displayed at the ECRC terminal and the subscriber is asked to verbally confirm their location.
Account configuration – route to ECRC with enhanced location	The call was routed to the ECRC since the subscriber's account is configured in this manner. However, the subscriber's location is automatically displayed at the ECRC terminal.
ERL has no PSAP coverage – route to ECRC	The call was routed to the ECRC since the subscriber's location is not served by any PSAP.
ERL not found – route to ECRC	The call was routed to the ECRC since the subscriber's location information was not found in the ERS database. To fix this issue and ensure call is routed to the PSAP, please re-provision this subscriber's location.
Address in Invalid-Geo Status – route to ECRC	The call was routed to the ECRC since the subscriber's address was in "Invalid-Geo" status. See "Address Status Post-Processing" for more information.
Address in Pending-Geo status - route to ECRC	The call was routed to the ECRC since the subscriber's address was in "Pending- Geo" status. See "Level of Service" for more information.
Expired/Unassigned Extension Bind DID - route to ECRC	The call was routed to the ECRC since the call could not be processed by the ERS due to the following reasons: <ul style="list-style-type: none"> ■ PSAP has called the subscriber back with an expired number. ■ Automated call from a number that is unallocated.
Address in Pending-Geo status - route to ECRC	The call was routed to the ECRC since the subscriber's address was in "Pending- Geo" status. See "Level of Service" for more information.

Appendix E

Provisioning Log Field Descriptions

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Provisioning Log Field Descriptions

Table 21: Provisioning Log Screen Field Descriptions

Field	Description
Account ID	<p>ID of the account under which a modification was made.</p> <p>Example: When a Sub Account is added, the Deployment account ID under which the Sub Account is created is displayed in the Account ID column.</p> <p>Example: When a subscriber is added to a Sub Account, the Sub Account's ID is displayed here.</p>
Account Name	<p>Name of the account under which modification was made.</p> <p>Example: When an ERL is added to a Sub Account, the Sub Account's name is displayed in this field.</p>
Item	<p>Type of ERS data that was modified. Possible values are:</p> <ul style="list-style-type: none"> ■ Account ■ Location ■ Subscriber ■ Subnet ■ Wireless Access Point ■ Switch <p>Example: When an ERL is modified, the term "Location" is displayed in this field.</p> <p>Example: When a subnet is associated to an ERL, the term "Subnet" is displayed in this field.</p>
ID	<p>Displays the identifier pertaining to the data that was modified.</p> <p>Example: When a subscriber is added, the subscriber ID is displayed here. On the other hand, if a Sub Account is created, the Sub Account ID is displayed here.</p>
Address	<p>Could be one of the following:</p> <ul style="list-style-type: none"> ■ Location information associated to the ERL or subscriber. This field is not populated when a Sub Account is created or modified. ■ "Determined at call time" is displayed for subscribers whose address is determined when the call is received by the ERS. No address information is stored in the ERS for these subscribers.
Location	<p>Optional additional location information that was provided when the ERL was modified. This field is not populated when a Sub Account is created or modified or for subscribers whose address is determined at call time.</p>

Table 21: Provisioning Log Screen Field Descriptions (Continued)

Field	Description
Name	<p>Name of the account to which the modification was made.</p> <p>When modifications are made to the ERS provisioning data—that is, ERLs, subscribers, subnets or switches—the <code>Name</code> column and the <code>Account Name</code> column are the same.</p> <p>However, when a Sub Account is created, the <code>Name</code> column displays the new Sub Account name; whereas, the <code>Account Name</code> displays the Deployment account name to which the Sub Account was added.</p>
Action	<p>Displays the exact action performed that warranted the creation of this record. Possible values are:</p> <ul style="list-style-type: none"> ■ Added: When information is added to the account ■ Modified: When information is modified ■ Deleted: When information is deleted from the account ■ REFERRAL COMPLETE: When the Data Integrity Unit (DUI) updates addresses with “Pending.” This action also creates a log.
User	<p>The ERS Portal user who made the modification. If the modification was made by a nomadic emergency caller, this field displays “Location Manager”. Possible values are:</p> <ul style="list-style-type: none"> ■ User name of the ERS Portal user ■ SOAP API: when the SOAP API user updates their location ■ Location Manager: when the caller updates their location using the 911 Location Manager application. ■ HELD auto-registration: when auto-registration feature was activated in the account. ■ SYSTEM: when the DUI updates locations from “Pending” status to “Corrected” status.
Date	Date and time the modification was made.

Provisioning Log Filter Parameters

Table 22: Provisioning Log Filter Parameters

Field	Description and Possible Values (where applicable)
Item	Filter by: <ul style="list-style-type: none"> ■ Account ■ Location ■ Subscriber ■ Subnet ■ Wireless Access Point ■ Switch
Action	Filter by: <ul style="list-style-type: none"> ■ Added ■ Modified ■ Deleted ■ Referred
Date	Pick a specific month from the drop-down list.
Hide SOAP API User	On or Off When checked, modifications made by a SOAP API user are not included in the provisioning logs.
Include Sub Accounts	On or Off When checked, the Provisioning Logs will include the Sub Accounts that are associated with the Deployment account from which you are generating the Provisioning Logs. Note: The <code>Include Sub Accounts</code> filter is only available for Deployment accounts.
Reset Filter	Removes all configured filters.

Appendix F

HELD Service Status Field Descriptions

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Field Descriptions

Table 23: HELD Service Status Field Descriptions

Field	Description	Formats and Examples
NAI	Subscriber's identifying information that was sent in the HELD request.	<p>Possible Formats:</p> <ul style="list-style-type: none"> ■ subscriber@fqdn ■ subscriber@ip ■ subscriber <p>Examples:</p> <ul style="list-style-type: none"> ■ 5147452143@192.168.10.190
Received	<p>Date and time the HELD Request was received by the ERS.</p> <p>Format: YYYY-MM-DD HH:MM:SS</p>	<p>Format: YYYY-MM-DD HH:MM:SS</p> <p>Example: 2021-03-12 12:30:35</p>
Status	<p>Status of the HELD Request.</p> <p>Possible Values:</p> <ul style="list-style-type: none"> ■ Valid: The HELD request was valid and processed by the ERS. ■ Invalid - HELD Disabled: The HELD Service option was not activated on your account. ■ Invalid - XML Parsing Error: The XML request could not be parsed since it was not RFC5985- compliant. ■ Invalid - Not Authorized: The account is not authorized to use the HELD service since the certificate provided is invalid or has been disabled. 	
LOC Type Value	<p>Type of location information the phone requested from ERS in the HELD request.</p> <p>Possible Values:</p> <ul style="list-style-type: none"> ■ locationURI 	

Table 23: HELD Service Status Field Descriptions

Field	Description	Formats and Examples
LOC Type Exact	<p>Accuracy of the location information requested. This value in conjunction with the <code>LOC Type Value</code> determine the values that ERS should return in the HELD Response.</p> <p>Possible Values:</p> <ul style="list-style-type: none"> ■ True ■ False <p>Note: Please note that even though ERS can process HELD requests with <code>LOC Type Exact</code> value as <code>False</code>, it is recommended to send this value as <code>True</code>.</p>	
IP Address	IP address sent in the HELD Request.	Example: 198.168.8.101
BSSID	BSSID sent in the HELD Request.	Example: 11:22:33:44:66:77
Chassis ID	Chassis ID sent in the HELD Request.	Example: 88-5a-92-6a-8a-80
Port ID	Port ID sent in the HELD Request.	Example: Gi2/0/17
MAC Address	MAC Address sent in the HELD Request.	Example: 64-16-7f-1b85-e6

Table 23: HELD Service Status Field Descriptions

Field	Description	Formats and Examples
ERL Found	<p>Network element that the ERS used to find the phone's location. ERS finds the ERL by matching the network element sent in the HELD request to the pre-provisioned network map in the account.</p> <p>Possible Values:</p> <ul style="list-style-type: none"> ■ Subnet: IP address sent in the HELD Request was matched to a subnet provisioned in the account. ■ Wireless Access Point: BSSID sent in the HELD Request was matched to the Wireless Access Point provisioned in the account. ■ Switch: Chassis ID that was sent in the HELD request was matched to a switch provisioned in the account. ■ Port: Port ID that was sent in the HELD request was matched to the port (if available) or the switch (under which the port was added) provisioned in the account. ■ Not Found: ERS could not find a match between the network element sent in the HELD request and the pre-provisioned network map. 	
ERL ID Returned	<p>ERL ID of the phone's location found by ERS by matching the network element in the HELD request with the pre-provisioned network map. This ERL ID was sent to the phone in the HELD response.</p> <p>Possible Values:</p> <p>ERL ID: ERL ID of the phone, determined by ERS</p> <p>ECRC: ERS was unable to find a match. 9-1-1 call from this phone will be routed to ECRC.</p>	

Appendix G

Location Manager 1.x

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Important Concepts and Guidelines in LM 1.x

On-Site vs Off-Site

On-site users are physically present at the enterprise's location. On the contrary, off-site users are not physically present at the enterprise location. They typically connect and access the company's resources via a VPN connection.

911 Location Manager determines whether the user is on-site or off-site based on the configured "FQDN" and "Subnet".

Off-site subscribers are prompted to self-report their location whereas on-site subscribers will have their location determined automatically.

On-Network vs Off-Network

When a user is on-network, it means they are connected to the organization's internal network- irrespective of whether they are on-site or off-site. Off-site users typically use a VPN connection to access the organization's internal network- these users are considered on-network.

A user is considered off-network when they are not connected to the organization's network.

911 Location Manager determines whether the user is on-network or off-network by attempting to reach the enterprise's internal "FQDN".

FQDN

An FQDN or Fully Qualified Domain Name that can be reached only when the user is on-network, is configured. If 911 Location Manager can reach this internal FQDN, then the user is determined to be on-network.

But the user could be on-network but off-site. This is why "Subnet" configuration should be considered.

Subnet

Off-site users generally connect to an organization's network via a VPN connection. These VPN connections are added as subnets. When 911 Location Manager determines that the users are located on these subnets, then these users are considered off-site.

Registration

All users need to provide their phone number to 911 Location Manager upon initial installation. This links the user to the specific instance of the application- this is called "Registration".

How does 911 Location Manager Work?

Is the user on the enterprise network?

911 Location Manager attempts to reach the configured FQDN.

- If the FQDN cannot be reached or has not been configured, 911 Location Manager considers the user to be off-site and prompts the user for their address.

- If the FQDN can be reached, 911 Location Manager considers the user to be on- network and proceeds to check if there are any subnets configured.

Is the user on-site or off-site?

911 Location Manager checks to see if it is connected to any of the subnets configured in ERS under Location Manager to see whether it should ignore the on-site behavior and prompt the user for their location.

- If the user is on the subnet and “Prompt for Location” is enabled, then 911 Location Manager prompts the user for their address.
- If the user is not on the configured subnets, 911 Location Manager decides that the user is on-site. It then proceeds to examine the associated ERS account for a network map.

IMPORTANT The subnets checked by Location Manager to determine whether it considers itself to be on-site or off-site are configured in the Location Manager page of ERS and should not be confused with the subnets under the Provisioning page.

Determining the User’s Location

To determine the subscriber’s on-site location, 911 Location Manager first identifies whether the user is connected via a wired or WiFi connection.

- For subscribers using a wired connection, 911 Location Manager first identifies the subscriber’s IP address. Then, using the subnet-ERL association configured as a part of the network map, the subscriber’s address is determined.
- For subscriber’s using a WiFi connection, 911 Location Manager identifies the subscriber device’s BSSID. Then, using the WiFi Access point’s BSSID to ERL association configured as a part of the network map, the subscriber’s address is determined.

IMPORTANT If 911 Location Manager can reach the enterprise’s FQDN but cannot find its network map, then the subscriber is **not** prompted for their address and the call is routed to the ECRC.

Setup Instructions for LM 1.7

Step 1: Choose your User Scenario

Identify the 911 Location Manager use case that best describes your enterprise. See [“User Scenarios”](#).

Step 2: Provision Subscribers and Network Maps

Provision all required data, based on your specific 911 Location Manager scenario. This can include ERLs,, network maps and network settings depending on the 911 Location Manager use case determined for your enterprise. Provisioning instructions are provided separately in [“Step-by-Step Provisioning Instructions”](#).

Step 3: Configure 911 Location Manager

To get 911 Location Manager up and running, you must set licenses, setup network and related configuration. See [“Configure 911 Location Manager”](#).

Step 4: Install 911 Location Manager

See [“Install 911 Location Manager”](#)

User Scenarios for LM 1.7

This section lists the various scenarios for which 911 Location Manager 1.7 can be used.

On-Site Users

On-site users are employees or subscribers that will **not** work remotely. They always work within the premises of their organization and connect to their enterprise network.

Example 1: An enterprise with employees that will not work remotely. They are free to move around with their laptops within their enterprise's network boundaries. This enterprise's network map is provisioned in the ERS Portal. 911 Location Manager's network configuration is configured in the ERS Portal to ensure on-site employees are not prompted.

Example 2: A clinic where nurses and doctors always need to be present and work within the clinic's premises. This clinic's network map is provisioned in the ERS Portal. 911 Location Manager's network configuration is configured in the ERS Portal to ensure on-site employees are not prompted.

Work flow for this use case involves:

1. **Adding FDQN** of the enterprise. When 911 Location Manager can reach this FQDN, the user is not prompted. See ["Configure Network"](#) for more information.
2. **Adding ERLs** into your enterprise account to define areas describing your network configuration. See ["Step-by-Step Provisioning Instructions"](#).

For instance, if you have divided your enterprise network into each subnet for each floor of the building, then you can add one ERL for each floor.

On the other hand, if you have 5 Access Points providing WiFi connection to your employees, then you can add the location of these access points as five separate ERLs.

3. **Associating Subnets to ERLs** to define wired network connections of your enterprise. When the user registers, 911 Location Manager determines their IP address. This IP address is matched to one of the pre-provisioned subnets. Then, the ERL associated to the matched subnet is pre-determined as the user's location. See ["Step-by- Step Provisioning Instructions"](#).

For example, associate a subnet to the ERL Floor # 1.

4. **Associating Access Points to ERLs** to define WiFi access points present in your enterprise's network. When the user connects to the WiFi network, 911 Location Manager determines their BSSID. This BSSID is matched to one of the pre-provisioned

access point BSSIDs. Then the ERL associated to the matched Access Point is pre-determined as the user's location.

For example, associate the conference room's Access Point to the ERL you added for the conference room.

What happens when the user clicks on 911 Location Manager?

911 Location Manager automatically assigns the on-site user's location. Upon clicking 911 Location Manager from the system tray, the following message is displayed to the user:

The screenshot shows a dialog box titled "8x8 Location Manager". It has a dark header bar with the "8x8" logo and window control icons. Below the header, there are two main sections. The first section is labeled "SOFTPHONE NUMBER" and contains the text "(209) 442-9362". The second section is labeled "LOCATION" and contains the address "Alden Bell's Home", "123 Poplar Ave", "Apartment 5", and "Manteca, CA, 95336". To the right of the "LOCATION" section are "Edit" and "History" buttons. At the bottom right of the dialog is a "Done" button.

Figure 215: On-site User's Location

IMPORTANT | The on-site user cannot modify their location.

What happens when the user makes a 9-1-1 call?

Wired connection: 911 Location Manager determines the location by matching the user's IP address to the subnet in the network map. The ERL that this subnet was associated to is displayed as the subscriber's location at the PSAP.

WiFi connection: 911 Location Manager determines the location by matching the subscriber's BSSID to the access points in the network map. The ERL that was associated to this access point is displayed as the subscriber's location at the PSAP.

Off-Site Users

The Off-site only use case supports employees that perform 100% of their work remotely. These employees may connect to your enterprise network via a VPN tunnel. In this case, the 911 Location Manager will always prompt the user when they move to an unknown location.

Alternatively, these may be employees for whom you do not want to enable 911 Location Manager when they are on-site. This may be due to the fact that you have already provisioned your on-site employees as fixed subscribers. That is, the fixed subscribers are already provisioned as per [“Scenario A: Fixed Subscribers”](#).

Example: A company that consists entirely of sales personnel that are always remote. It does have a small office with a receptionist and payroll personnel. These personnel are provisioned in the ERS as “fixed subscribers”. The sales personnel have installed 911 Location Manager on their laptops. They are always prompted to enter their location when they are in an unknown location.

In this case, no configuration needs to be performed. Installing 911 Location Manager on the off-site user’s workstation is sufficient.

What happens when an off-site user makes a 9-1-1 call?

9-1-1 call from an off-site user is directed to the PSAP with the user-provided address.

Combination of On-Site and Off-Site Users

This use case supports enterprises with a combination of on-site and off-site users.

Example 1: Sales personnel that travel frequently for trade shows or to customer sites. These employees switch back and forth between traveling and staying on-site, as required. When off-site, 911 Location Manager will prompt them for an address. When on-site, it will stay silent since their address is determined using network maps.

Example 2: A three-story building housing both on-site and off-site employees. These on-site employees use a wired as well as a WiFi network connection. 911 Location Manager stays silent for on-site employees even when they disconnect from their wired connection and connect to a WiFi connection, for example, from a conference room.

Work flow for this use case involves:

Adding FDQN of the enterprise. When 911 Location Manager can reach this FQDN, the user determined to be on the enterprise network. Refer to [“Step 2 Configure the FQDN”](#).

Adding Subnets and setting them to “Prompt for user location”. These subnets are reserved for providing VPN tunnels of users that are on the enterprise network but are off-site. See [“Step 3 Configure subnets”](#) for more information.

Adding ERLs into your enterprise account to define areas describing your network configuration.

For instance, if you have divided your enterprise network into each subnet for each floor of the building, then you can add one ERL for each floor.

On the other hand, if you have 5 Access Points providing WiFi connection to your employees, then you can add the location of these access points as five separate ERLs.

Associating Subnets to ERLs to define wired network connections that your employees will connect to from these desks. 911 Location Manager matches the user’s IP address to this

subnet and determines the user's location.

Associating Access Points to ERLs to define WiFi access points that your employees will be connected to using their wireless devices, such as laptops. 911 Location Manager matches the user's BSSID to the BSSID of the access point and determines the user's location.

For example, associate the conference room's Access Point to the ERL you added for the conference room.

Configure 911 Location Manager

Configure Network

To enable 911 Location Manager to detect a user's on-site location, you must configure FQDN and optionally subnets as required in the **Network** tab.

To configure network settings for 911 Location Manager:

Step 1 Choose the appropriate configuration

In the **Network** tab, choose between one of the following options:

- On-site only
- On-site/Off-site
- Off-site only

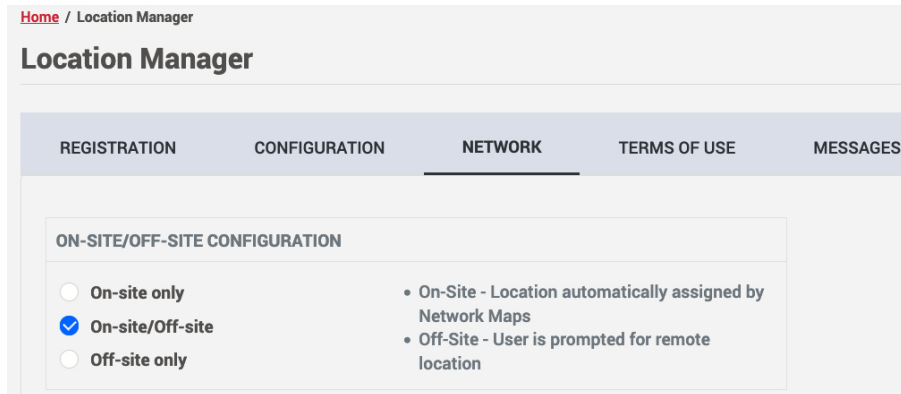


Figure 216: Choosing On-site only Option for 911 Location Manager

Step 2 Configure the FQDN

Provide your enterprise's FQDN and click +, as shown in Figure 217.

Note that providing the FQDN is **mandatory** for the **On-Site Only** and **On-site/Off-site** scenario.



Figure 217: Adding the Enterprise's FQDN

Step 3 Configure subnets

Provide specific subnets and choose whether the user needs to be prompted when they are

at these subnets. Click **Save** to complete the configuration.

For instance, if you have chosen **On-site/Off-site** in **Step 1**, you can add the VPN tunnel subnets here and configure 911 Location Manager to prompt. Off-site but on-network users whose IP address falls within this subnet will be prompted.

SUBNETS

Subnet name * Subnet Mask *

Example: First floor Example: 192.168.0.0/24 +

Search

Search

Showing 1 to 2 of 2 entries

SUBNET NAME	SUBNET MASK	LM BEHAVIOR	DELETE
Silent Zone	192.168.57.101/32	<input checked="" type="checkbox"/> Prompt for user location	
VPN	192.168.58.1/24	<input checked="" type="checkbox"/> Prompt for user location	

Records per page 10

Previous 1 Next

Figure 218: Configure Subnets

Configure Add-On Options

You can add the following optional settings to 911 Location Manager. When the 911 Location Manager is installed, it contains the default settings enlisted.

Table 8: 911 Location Manager Optional Settings

Add-on options	Description	Default setting
Softphones	Prompt user for their location only when 8x8 Work Desktop is running.	None
Hide Exit Option	To hide or display the Exit option when the caller right-clicks the application icon	Enabled
Block Softphone if no valid address	To terminate 8x8 Work Desktop if the user provides an invalid address	Disabled
Hide Skip Option	To hide or display the Skip button so the caller can skip providing their address	Enabled
Terms of Use	Customizable "Terms of Use" to display to the caller	None
Customizable notification	Customizable notifications to display to the caller	Default messages provided; can be edited

NOTE You can also install 911 Location Manager first and then configure its behavior. The configuration settings will be applied to the application when the application

connects to the ERS.

Manage Softphones

You can configure 911 Location Manager to detect when 8x8 Work Desktop is running on the user's workstation by specifying its executable name in the Location Manager *Behavior* screen.

Desktop O/S	8x8 Work Process Name
Windows	8x8 Work.exe
MacOS	8x8 Work

If configured then Location Manager prompts the user for a location only when 8x8 Work Desktop is running on the user's computer.

If not configured then Location Manager prompts the user for a location regardless of whether or not 8x8 Work Desktop is running on their computer.

This configuration also relates to the `Block Softphone if no valid address provided` feature to determine the application's behavior. That is, if you do specify the 8x8 Work Desktop process name and enable `Block softphone if no valid address provided` setting, 911 Location Manager will.

Block softphone usage

Through the `Block softphone if no valid address` setting, you can block the user's Work Desktop if an invalid address is provided. By default, this option is disabled.

NOTE | The user's Work Desktop is not blocked until the registration process is complete. That is, as long as the phone number is not provided, 8x8 Work Desktop is not blocked even if the option is enabled. Please refer to ["Registration"](#) for more information on registering Location Manager.

Impact on 8x8 Work Desktop

When this setting is enabled, the 8x8 Work desktop is closed if the user does not provide a valid address to 911 Location Manager. System tray notifications with the following messages are displayed to the caller.

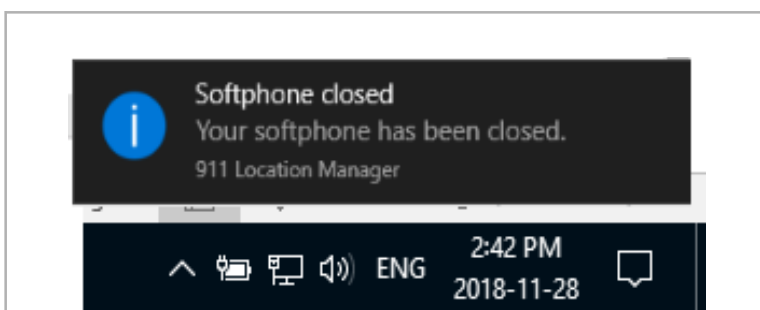


Figure 219: System Tray Notification to Caller When 911 Location Manager closes 8x8 Work Desktop

Configure “Hide exit option”

Through the `Hide Exit Option` setting, you can choose whether or not to let your users exit the 911 Location Manager application. By default, this setting is enabled, which means the `Exit` option is **not** displayed to users. This prevents them from right-clicking and choosing `Exit`.

If you disable this setting, callers can right-click and choose `Exit`, thereby terminating the process. Users can still close the application using the **x** on the top right corner of the *911 Location Manager* screen but this will not terminate the application process.

To edit this setting:

- 1 Check or uncheck the `Hide exit option` check box in the *Location Manager Configuration* screen as shown in Figure 220.

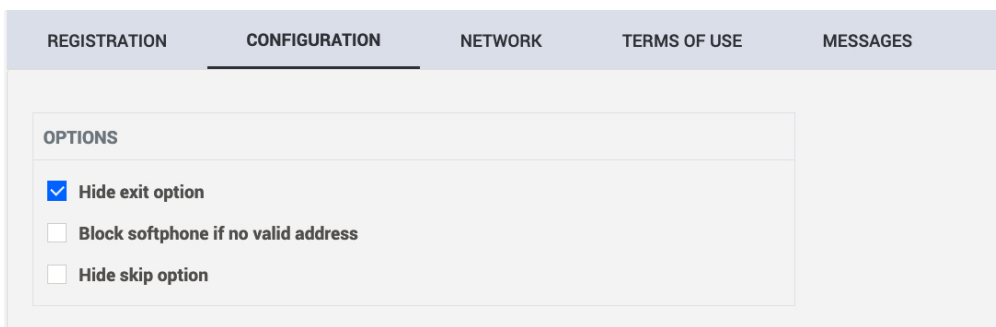


Figure 220: Editing “Hide exit option” Functionality

- 2 Click on the **Save** button at the bottom of the screen to retain your changes.

Impact to the user

When the `Hide Exit` option is enabled, users cannot exit the application by right clicking its icon.

Disabled (default) setting:

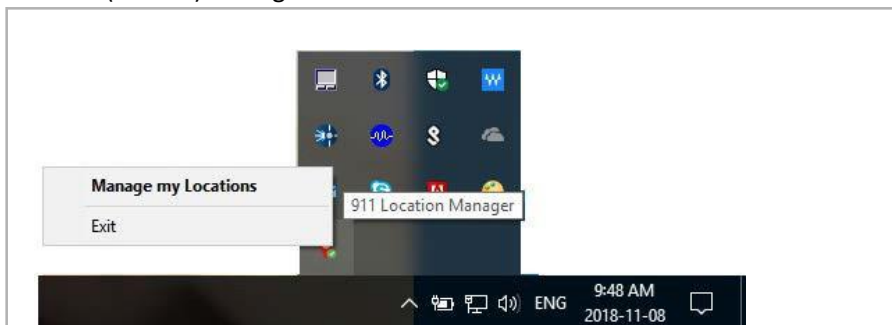


Figure 221: Application Tray Before Enabling Setting

Enabled setting:

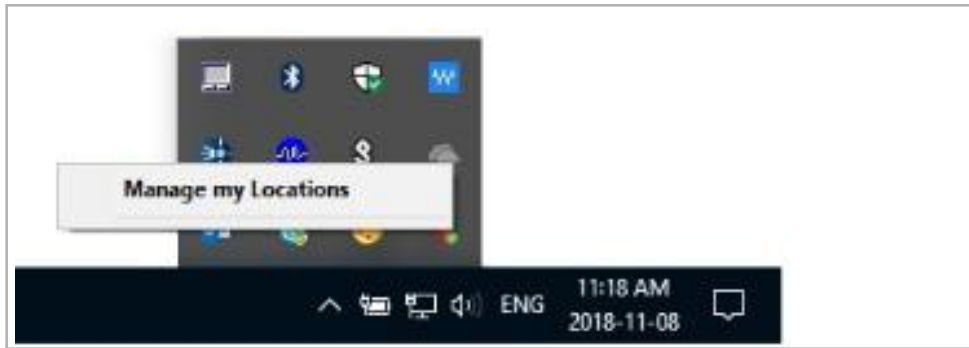


Figure 222: 911 Location Manager Application Tray After Enabling Setting

Configure “Hide skip option”

Through the `Hide skip option`, you can configure 911 Location Manager to force the user to provide their location. This is the application’s default setting.

You can change this setting to display to the caller a **Skip** button on the *911 Location Manager* screen. When users click this button, they can avoid entering an address.

For example, users that frequent a coffee shop for just a few moments can skip entering an address.

When users re-visit this location, 911 Location Manager remembers this setting and will not prompt the caller for a location. When an emergency call is placed under this condition, it is routed to the ECRC.

However, it will display the following tray notification to remind users of this setting and give them the chance to decide to remain in this state or provision their address. This will ensure their safety in case they decide to stay in this location longer and wish to provide their emergency location.

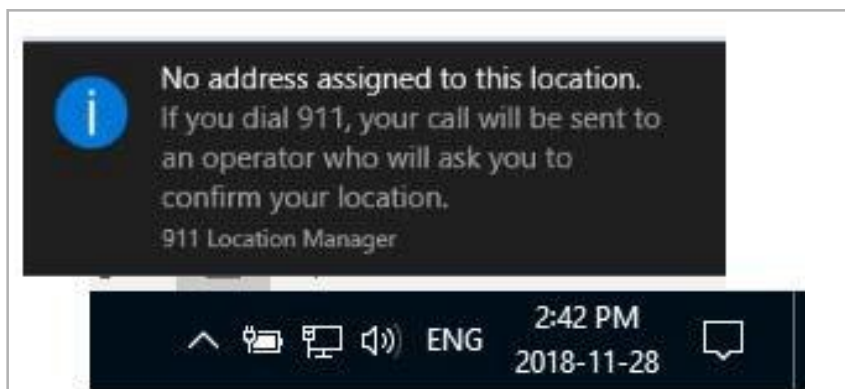
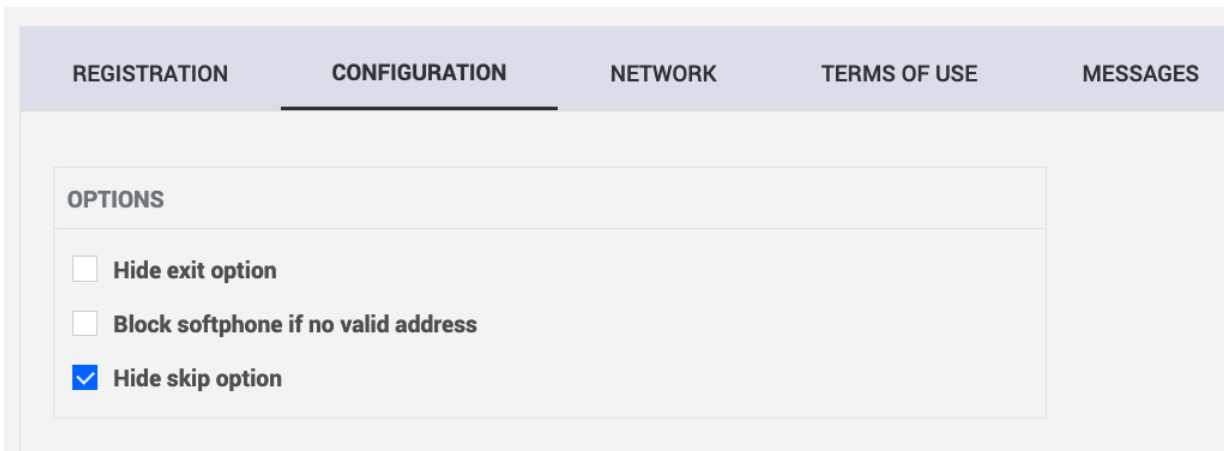


Figure 223: Tray Notification Displayed to Caller

To edit this setting:

- 1 Check or uncheck the `Hide skip option` check box in the *Location Manager Configuration* screen as shown in Figure 224 below.



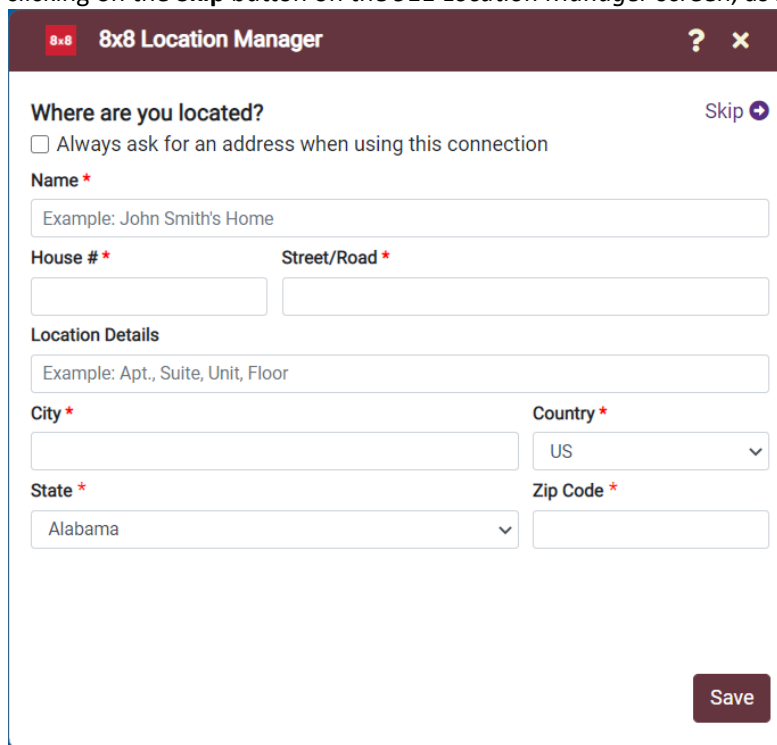
The screenshot shows the 'CONFIGURATION' tab of the 8x8 Location Manager interface. The 'OPTIONS' section contains three checkboxes: 'Hide exit option' (unchecked), 'Block softphone if no valid address' (unchecked), and 'Hide skip option' (checked).

Figure 224: Editing Hide Skip Functionality

- 2 Click on **Save** button on the bottom of the screen to retain your changes.

Impact to the user

If the `Hide skip option` is not selected (disabled), the caller can avoid entering an address by clicking on the **Skip** button on the *911 Location Manager* screen, as shown in



The screenshot shows the '8x8 Location Manager' user interface. The title bar reads '8x8 Location Manager'. The main heading is 'Where are you located?' with a 'Skip' button. Below this is a checkbox 'Always ask for an address when using this connection'. The form includes fields for 'Name', 'House #', 'Street/Road', 'Location Details', 'City', 'Country', 'State', and 'Zip Code'. A 'Save' button is located at the bottom right.

Figure 225.

Figure 225: "Skip" Button Displayed to Caller in the 911 Location Manager Screen

When the `Hide skip option` is selected (enabled), the caller no longer sees the **Skip** button, as shown in Figure 226 below:

8x8 Location Manager ? x

Where are you located?

Name *

House # * **Street/Road ***

Location Details

City * **Country ***

State * **Zip Code ***

Figure 226: 911 Location Manager Screen Displayed to Caller Without “Skip” Button

Customize Terms of Use

You can customize the *Terms of Use* screen displayed to your callers. You can also configure the display frequency of the *Terms of Use* screen.

By default, the 911 Location Manager does contain any in-built *Terms of Use* screen text.

NOTE | You must enter relevant text in the `Terms of Use` text box. Configuring only the display frequency but leaving the text box empty will not display any *Terms of Use* to the caller.

To configure the *Terms of Use*:

- 1 Click on **Terms of Use** tab from the *Location Manager* screen. The *Terms of Use* screen displays as shown in Figure 227.

REGISTRATION CONFIGURATION NETWORK **TERMS OF USE** MESSAGES

TERMS OF USE

Display Frequency

Never

First time

Always

Daily Every days

Terms of Use

Example: The terms of use are as follows...

Terms of Use Button Text

CANCEL SAVE

Figure 227: Location Manager Terms of Use Default Settings

- 1 Choose the `Display Frequency`, as required. An example is shown in Figure 228. Frequency choices are:
 - A **Never**: The screen is never displayed to the caller.
 - B **First Time**: The screen is displayed when the user opens 911 Location Manager for the first time.
 - C **Always**: The screen is always displayed to the user, upon each interaction with the 911 Location Manager. That is:
 - ◆ Upon starting the configured softphone
 - ◆ Upon changing networks. *For example, moving to a new location.*
 - ◆ Upon opening the application
 - D **Daily**: The screen is displayed to the user every “X” days. More specifically, upon the first interaction with the 911 Location Manager since the number of days configured for daily frequency expired:
 - ◆ Upon starting the configured softphone

- ◆ Upon changing networks
- ◆ Upon opening the application

For example: Terms of Use frequency is set as `Daily` and every 3 days. 911 Location Manager displays the Terms of Use every 3 days until one of the requirements is met. If a user visits a new location on 21st November and stays there for the next 5 days, the Terms of Use will be displayed to the user once on the 21st of November and then again on the 24th of November. If, for some reason, the caller decides to leave this new location on the 22nd of November and visits another new location, the Terms of Use will be displayed to the caller again, even though 3 days have not elapsed. From then on, if the user stays at this location, the Terms of Use is displayed on the 25th November, 28th November and so on.

Figure 228: Choosing Terms of Use Display Frequency (Example is Daily, Every 3 Days)

Note: By default, the display frequency is set as `Never`.

- 2 Enter your organization's Terms of Use under `Terms of Use` text box. An example is shown in Figure 229.

Figure 229: Entering Terms of Use in Legal Disclaimer Box

- 3 Enter the `Terms of Use Button Text`. This is the button the user has to click to accept the Terms Of Use of the 911 Location Manager.

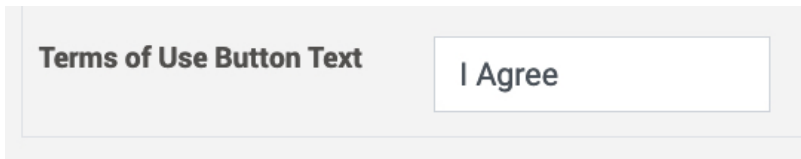


Figure 230: Configurable Button Name

Note: By default, the button name is set as **I Agree**.

4 Click on the **Save** button on the bottom of the screen to retain your changes.

Customize Notification Messages

You can configure custom messages to be displayed to callers.

Default messages are provided. You can edit these messages or enter new messages that you want to display to the caller.

To edit these messages:

1 Click on the **Messages** tab from the *Location Manager* screen. The *Messages* screen displays as shown in Figure 231.

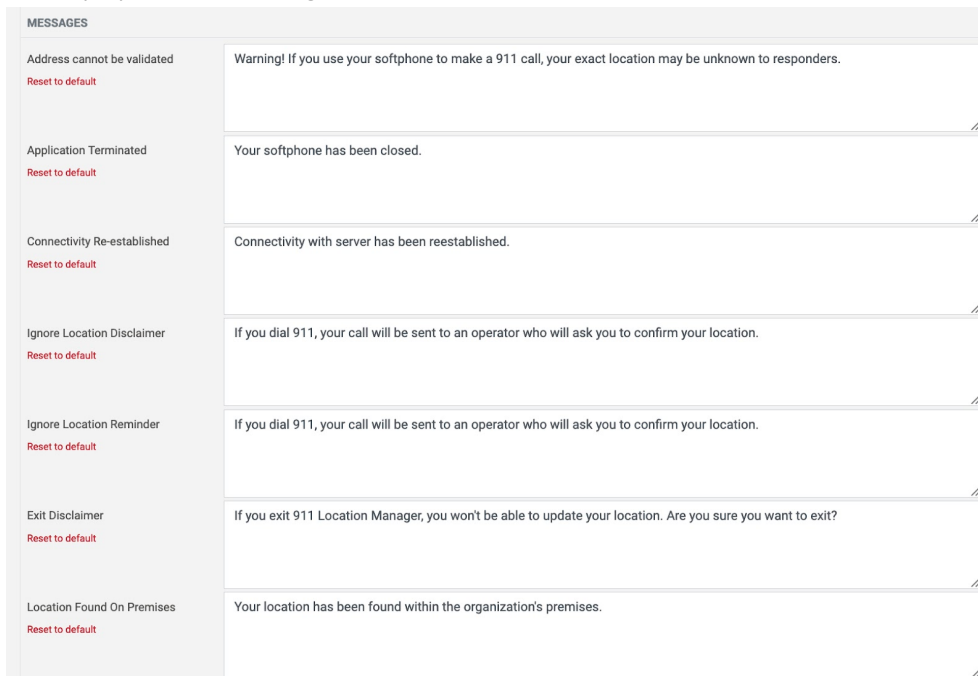


Figure 231: Messages Screen to Configure Text Displayed to User (Top Two Messages Shown)

2 Click in the `No location Set` box and enter your custom text. An example is shown below.

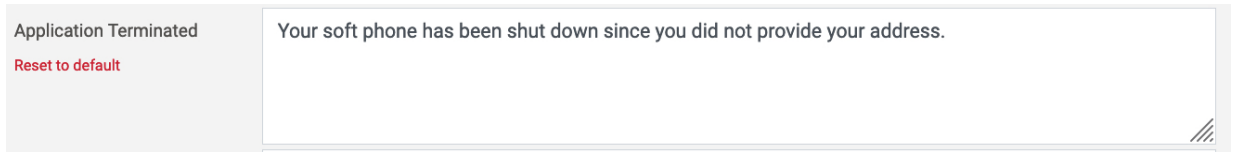


Figure 232: Editing Message Text (Application Terminated Example Shown)

- 3 If you are not content with the text, you can click on `Reset to default`.
- 4 Click the **Save** button at the bottom of the screen to retain these changes.

Install 911 Location Manager 1.7

Requirements

Prior to installing 911 Location Manager, ensure that your workstations meet the following operating system requirements:

- Windows 7 and higher
- Mac OS X version 10.10 and higher (64-bit systems only)

IMPORTANT

Location Manager application is not compatible in systems where “Use random hardware addresses” feature has been turned on.

To disable random hardware addresses:

- 1 In your Windows system, go to **Start > Network and Internet > WiFi**.
- 2 Under **Random Hardware Addresses**, ensure the setting is turned off.

Installation Steps

To install 911 Location Manager:

- 3 Download the installation file from the following 8x8 Support article:
https://support.8x8.com/cloud-phone-service/voice/admin-console/setup/Nomadic_911/Download_Location_Manager
- 4 Double click on the file and accept the End User License agreement to complete the installation.

After the 911 Location Manager is installed, it appears in the system tray menu of the user’s workstation. The 911 Location Manager icon is shown below, as it appears to the user (Windows):

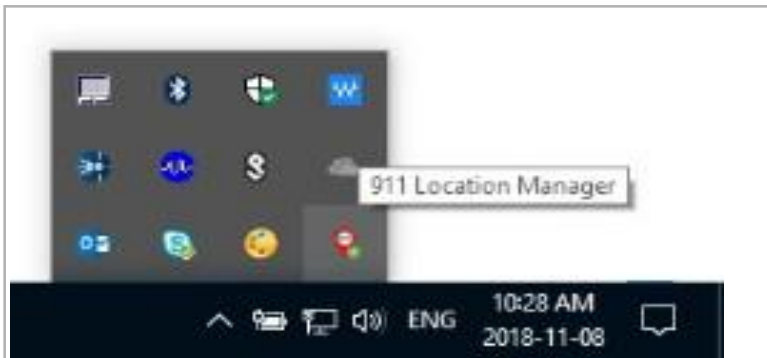


Figure 233: 911 Location Manager Icon Displayed in the System Tray Menu of a Caller's Workstation

Administer 911 Location Manager 1.7

Unlink Subscriber

If someone in your organization no longer requires the 911 Location Manager functionality, or if they need to install Location Manager on a different device, you can unlink the application from the subscriber in the ERS portal. When you unlink a subscriber from Location Manager in the ERS Portal, you are asked to provide a location for the associated subscriber. This ensures that the subscriber is still attached to a valid ERL in the ERS.

To unlink a 911 Location Manager license:

- 1 From the ERS main menu, click **Administration** → **Location Manager**.
- 2 From the *Location Manager* screen, choose the **Registration** tab. The *Registration* screen displays, as shown in Figure 234 below.

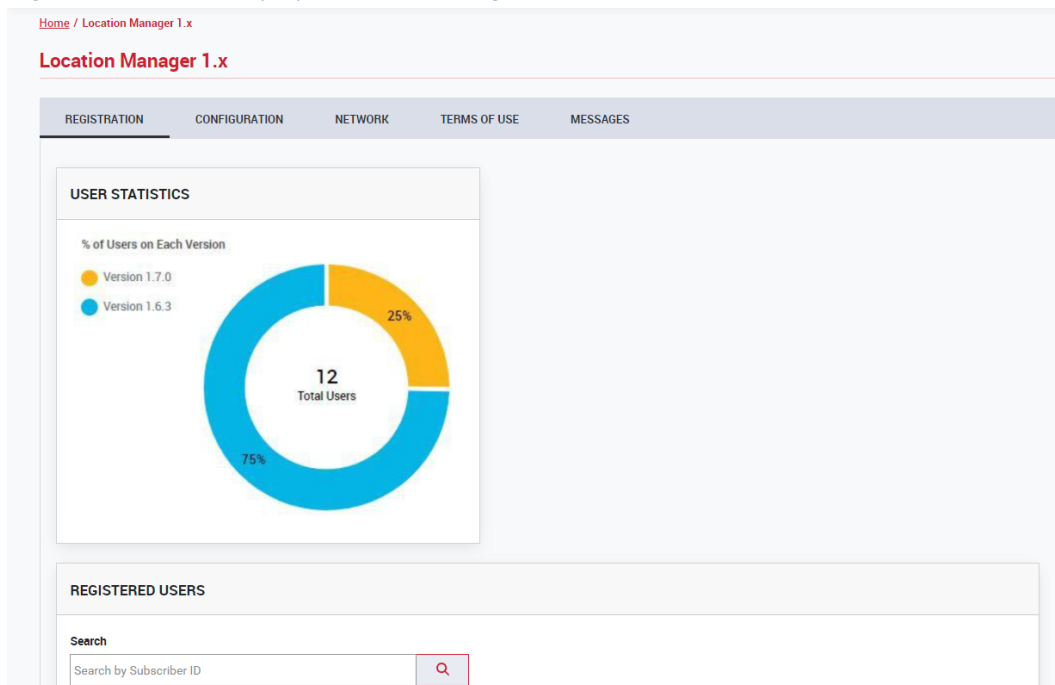


Figure 234: Registration Screen Displaying Subscribers and their Associated Licenses Currently in Use

- 3 Locate the end user you wish to unlink either by scrolling through the list of subscriber IDs or by searching for it.
- 4 Click the **Unlink** icon under the `Unlink Subscriber` column. ERS displays a pop-up screen asking you to enter a new address for this subscriber, as shown in Figure 235 below.

Unlink license

The license is attached to a subscriber that has no current address. Please provision an address for the subscriber before unlinking the license.

ABC Inc

ERL Name * * Required

ABC Inc

House # * Street/Road *

City * Country *

US

State * ZIP Code *

Alabama

Location

e.g. Floor, Suite ...

CANCEL SAVE

Figure 235: Enter an Address Before Unlinking a Caller from Their Self-Reported Location

5 Enter an address and click **Validate**. ERS performs the same address validation procedure as when you provision an address through the *Provisioning* screen.

Unlink license

The license is attached to a subscriber that has no current address. Please provision an address for the subscriber before unlinking the license.

ABC Inc

ERL Name * * Required

ABC Inc

House # * Street/Road *

City * Country *

Alabama US

State * ZIP Code *

Location

e.g. Floor, Suite ...

CANCEL SAVE

Figure 236: Enter the Address and Click Validate

6 ERS validates the address and asks for confirmation to finish saving the address and unlinking the subscriber from the 911 Location Manager application.

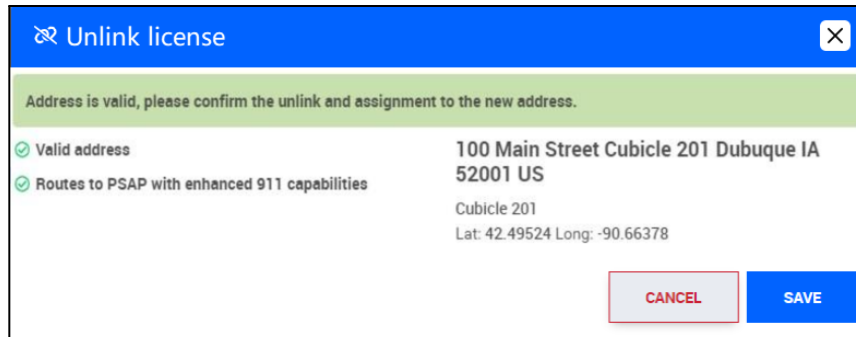


Figure 237: Warning Message Displayed After Clicking the Unlink Icon

- Click the **Save and unlink** button to finish unlinking the subscriber from the 911 Location Manager application. ERS displays that the 911 Location Manager license is now ready to be reused for another subscriber.

Viewing Application Usage Details

You can view the following application usage details in the *Registration* screen:

- Subscriber IDs of the users
- The application software version installed
- Date that the user registered to the 911 Location Manager application
- ERS-assigned Location Manager ID

SUBSCRIBER ID	VERSION	LAST UPDATED	LOCATION MANAGER ID	UNLINK SUBSCRIBER
4444444446	1.0.0.0	2018-06-19	278FFF98-A34C-401A-9E46-F3576B3A504D	
3335000007	1.0.0.0	2018-06-26	362B0EC7-CDBE-43CC-927D-FBEC8CAB7610	

Figure 238

View User Details

The ERS Portal administrator can:

- View the emergency location set by the caller
- Check whether or not the user provided an emergency address
- Check whether or not the user clicked “Skip”
- Check if the user has moved to a silent zone

The user’s self-reported location can be viewed in the *Provisioning* screen.

NOTE | You cannot edit a location set by the user. The **Edit** button (pencil icon) is not available for subscribers who use the 911 Location Manager.

IMPORTANT | If you delete the ERL record for a 911 Location Manager user, the ERL and subscriber record are also removed from the ERS and the subscriber is unlinked from the 911 Location Manager application.

Other scenarios the user encounters that have an effect on their location are also recorded in the *Provisioning* screen. Three such scenarios are possible (listed below) and they are listed as the first three rows in the **ERLs** tab.

- **User did not provide a location:** When the user does not provide their location to the 911 Location application, the *Provisioning* screen ERL Address field displays the following message: No address. No address set by subscriber in Location Manager.

Upon choosing this ERL row, you can also see all the subscribers who have chosen to not enter their address in the application.

- **User is on-site and on-network:** When 911 Location Manager detects that the caller is on-site and on-network, the ERL Address field displays the address that was discovered using network maps.

Upon choosing this ERL row, all subscribers that are detected on-site and on-network are displayed to the right of the screen.

- **User clicked “Skip” and did not provide a location:** When the caller avoids entering an address by choosing **Skip**, the ERL address field is populated with the following message: No address. Subscriber skipped setting an address in Location Manager.

Using 911 Location Manager 1.7

This section lists the various scenarios that the 911 Location Manager user encounters. This is intended for information purposes and helps you troubleshoot any issues the user may have.

Getting Started - Provide Subscriber ID

Upon launching the 911 Location Manager for the first time, users are prompted to register by entering their softphone number. This should be set as their 8x8 Work phone number as a ten digit number (i.e. without a leading 1).

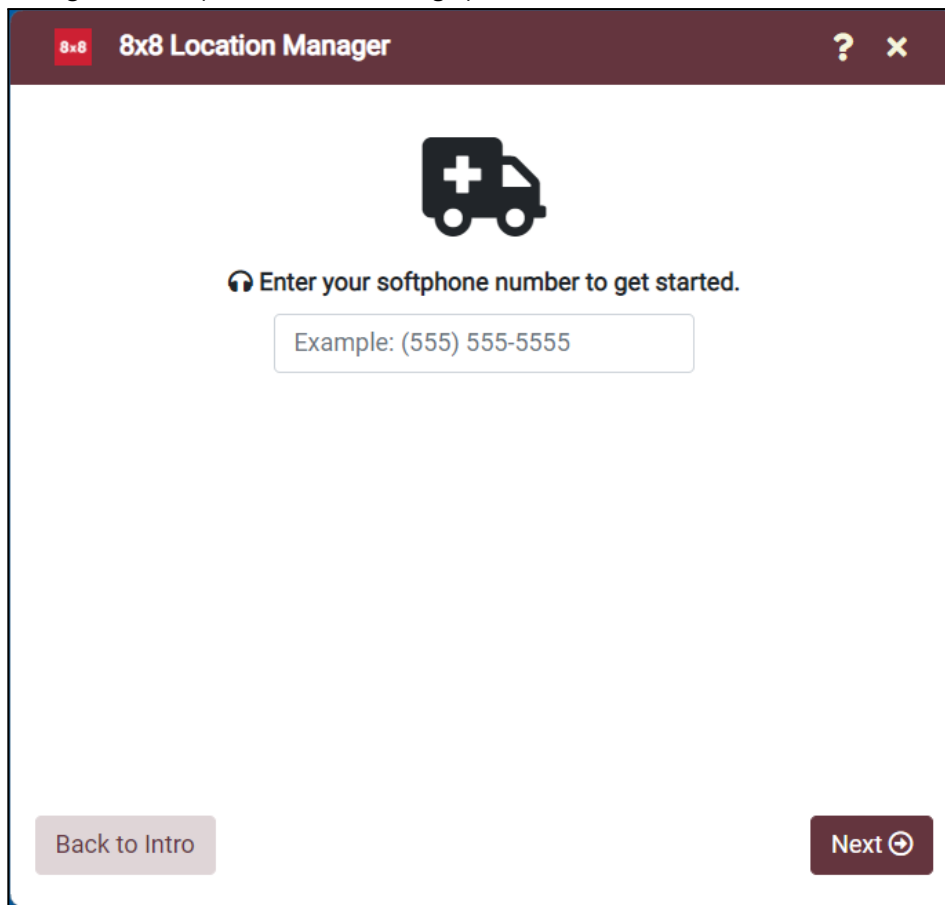


Figure 239: 911 Location Manager Registration Screen

This step links the user's device to their subscriber in the ERS portal with a unique Location Manager ID.

NOTE | This step only needs to be performed once by the caller when the application launches for the first time.

Accept License Agreement

In most cases, users will be presented with a license agreement. You can customize this according to your organization's needs, as mentioned earlier.

Figure 240 below shows an example.

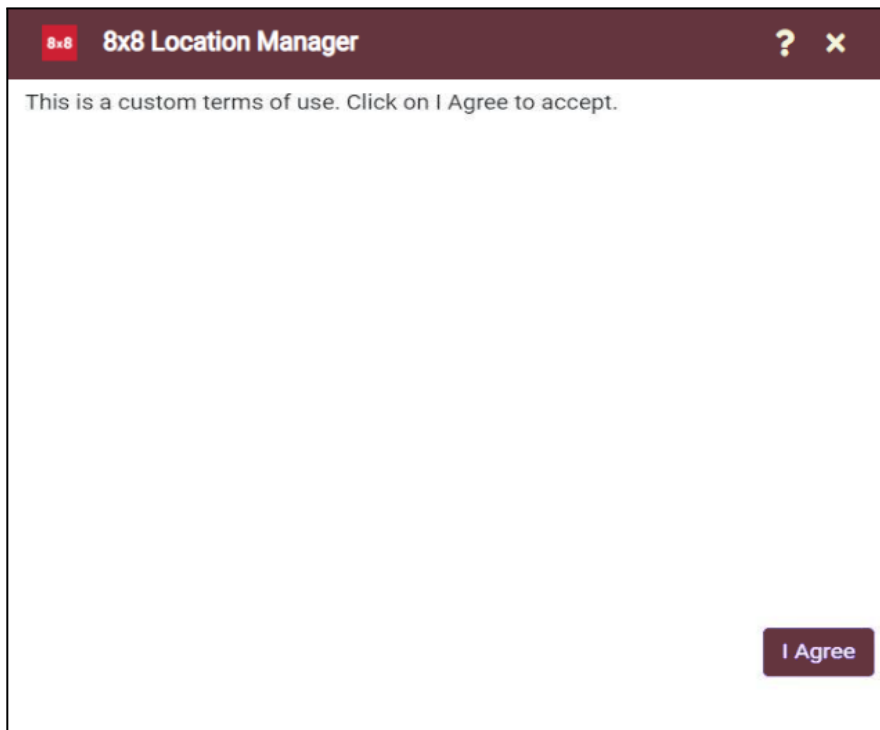
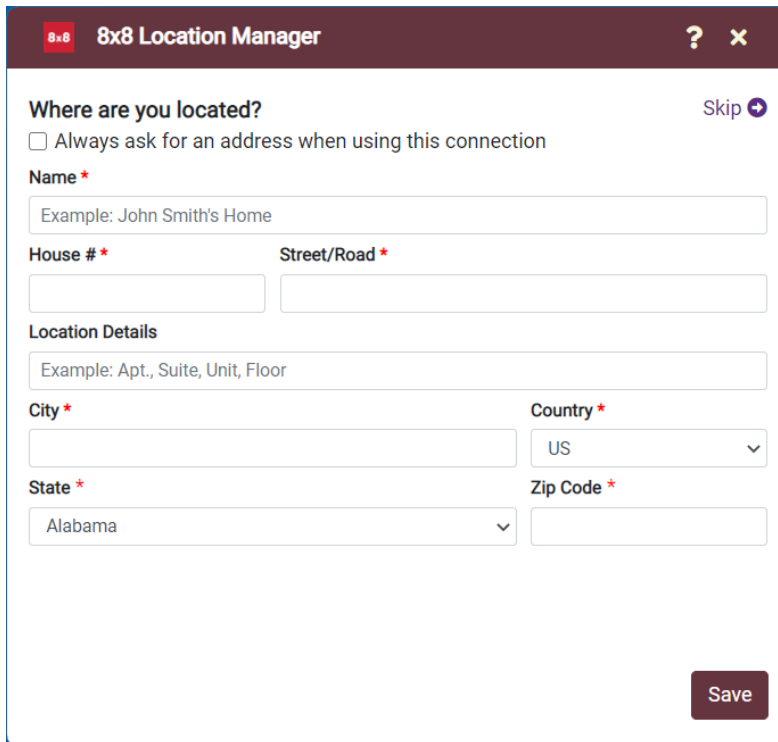


Figure 240: Sample Terms of Use Displayed to Users

User Location Tracking in 911 Location Manager 1.7

User Visits a New Off-Site Location

When the user visits a new and unfamiliar location, 911 Location Manager detects this and prompts for an address, as displayed in Figure 241.



The screenshot shows the 8x8 Location Manager interface. At the top, there is a dark red header with the 8x8 logo and the text "8x8 Location Manager". To the right of the header are a question mark icon and a close icon. Below the header, the main content area has a white background. It starts with the question "Where are you located?" followed by a "Skip" button with a right-pointing arrow. Below this is a checkbox labeled "Always ask for an address when using this connection". The form then asks for "Name" with a red asterisk, followed by a text input field with the placeholder text "Example: John Smith's Home". Next are two input fields for "House #" and "Street/Road", both with red asterisks. Below these is a section titled "Location Details" with a text input field and the placeholder text "Example: Apt., Suite, Unit, Floor". This is followed by four fields: "City" (with a red asterisk), "Country" (with a red asterisk and a dropdown menu showing "US"), "State" (with a red asterisk and a dropdown menu showing "Alabama"), and "Zip Code" (with a red asterisk). A dark red "Save" button is located at the bottom right of the form.

Figure 241: Screen Presented to the Nomadic Emergency Caller to Enter Current Address

911 Location Manager Detects User to be On-Site

When the subscriber is on-site, 911 Location Manager does not prompt the caller for an address. It automatically assigns an address, based on the network map.

When the user clicks the 911 Location Manager icon, the address determined through network maps is displayed. The user cannot modify this address. See Figure 242.

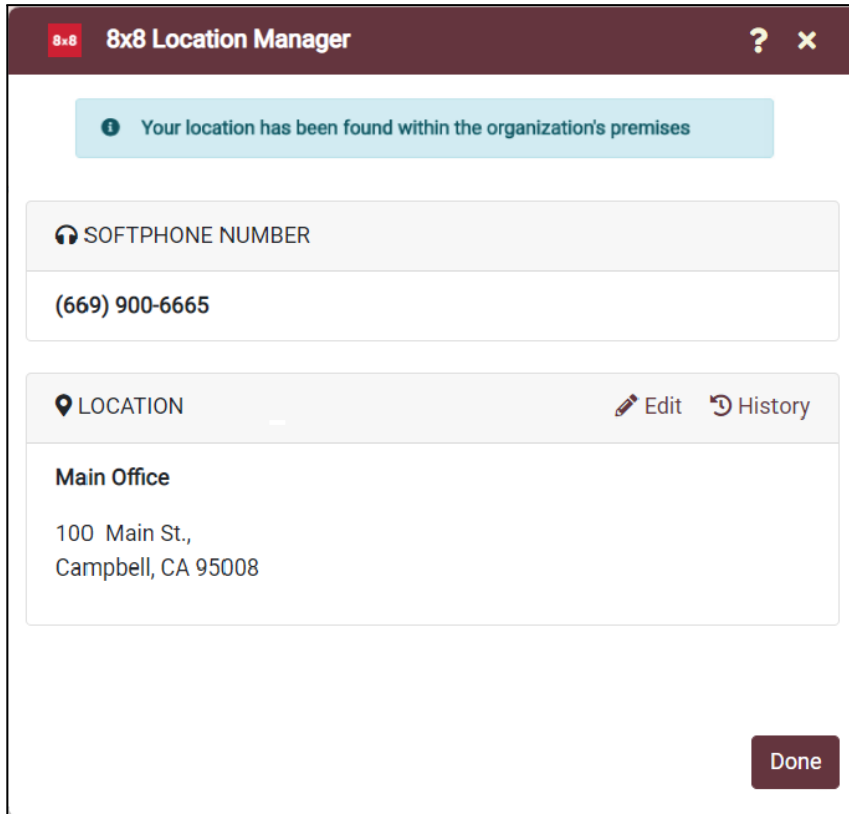


Figure 242: On-Site User's Location Displayed on 911 Location Manager Screen

On-Site User's Location Could Not Be Determined

When the user is on-site but their location could not be determined, the message in Figure 243 is displayed. This could be due to the fact that network maps have not been properly configured.

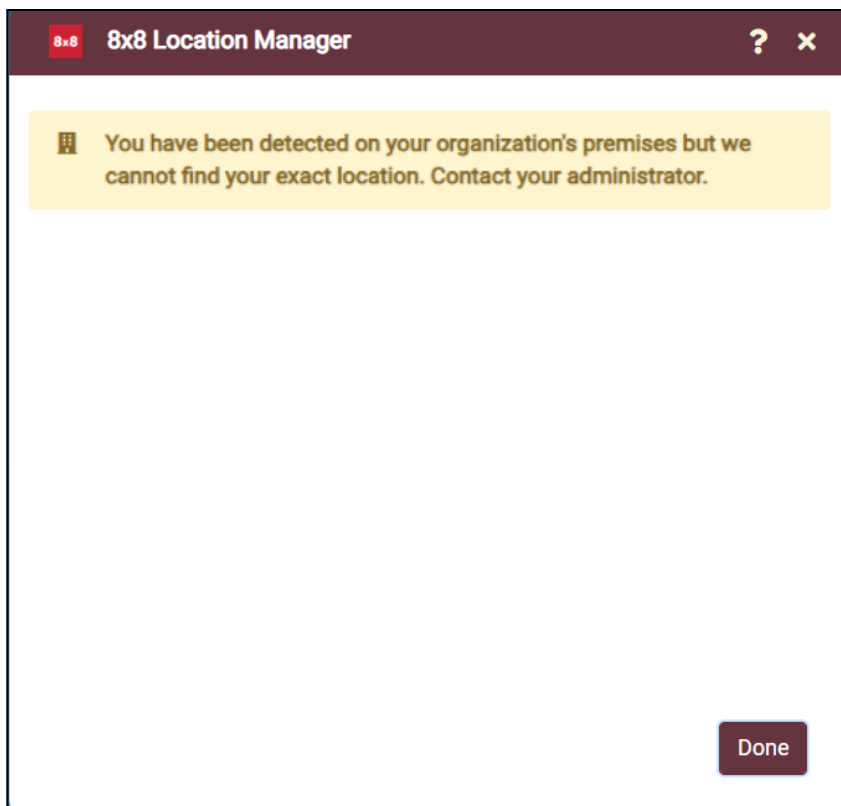


Figure 243: Message Displayed When User's Location Undetermined

User Visits a Known Off-Site Location

When the user visits a known location- that is, a location that the user has already visited and provided their address for, 911 Location Manager will not prompt the caller to re-enter this address.

911 Location Manager can remember and auto-detect up to 100 such locations.

It discreetly informs the detection of the address to the caller through a system tray notification.

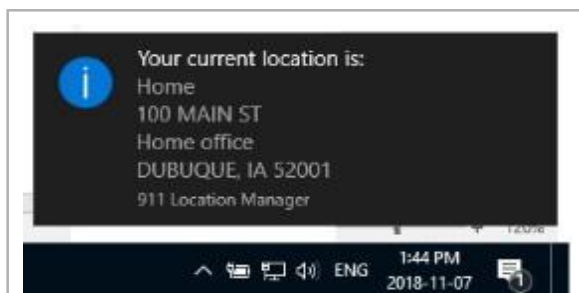


Figure 244: System Tray Notification That the Caller Location is Auto-Detected