



ERS USA Service Guide

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Contents

1.	Introduction	1
2.	Services Features	1
2.1.	Emergency Call Flow	1
2.2.	Services Components	1
2.3.	Services Specifications	2
2.4.	Maintenance and Support	3
2.5.	Other	3
2.6.	ECRC	4
3.	Customer Responsibilities	4
4.	Intrado Responsibilities	5
5.	Services Limitations and Disclaimers	5
5.1.	Suspension of Services	5
5.2.	Audit Right	6
5.3.	Other Limitations	6
6.	Glossary	6

1. Introduction

This Service Guide describes Intrado’s Emergency Routing Service (“ERS”) USA services (“Services”). Services provide organizations with Emergency Call routing to over 5,500 PSAPs across the 50 United States and Puerto Rico, using a single session initiation protocol (“SIP”) or Public Switched Telephone Network (“PSTN”) connection. The definitions in Section 6 below will apply to this Service Guide.

2. Services Features

2.1. Emergency Call Flow

Figure 1 illustrates how Services route an Emergency Call, assuming that Customer has provided valid Subscriber data beforehand, Intrado Emergency Call termination components will use NENA standard interfaces where applicable (NENA i1, i2).

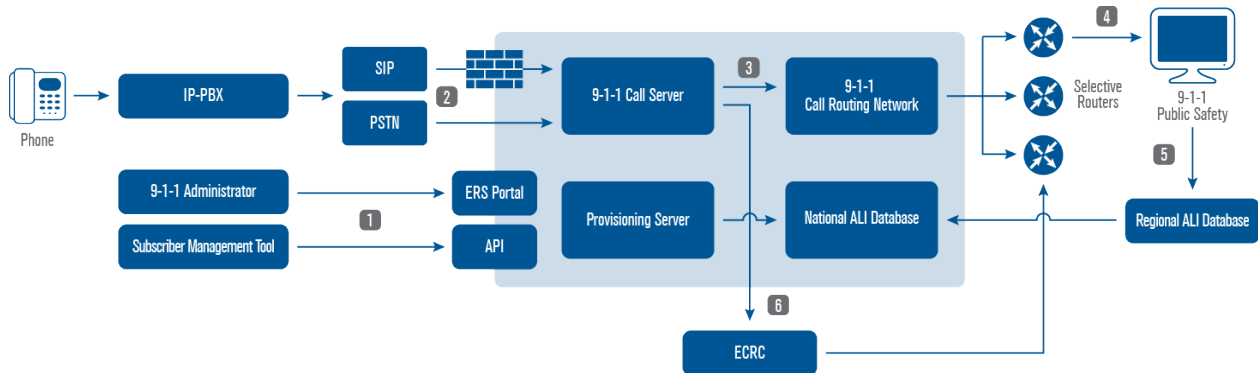


Figure 1

1. Customer validates location records in the ERS Provisioning Server using the ERS Portal or ERS API. These records are then stored in the National ALI Database.
2. A User makes an Emergency Call. The Emergency Call is routed from the enterprise’s IP-PBX or UC system via SIP or PSTN to the 9-1-1 Call Server.
3. The 9-1-1 Call Server retrieves the location of the User from the National ALI Database or from the incoming call’s SIP Invite and routes the Emergency Call to the 9-1-1 Call Routing Network.
4. The 9-1-1 Call Routing Network directs the Emergency Call to the appropriate selective router, which then delivers the Emergency Call to the local PSAP including the User’s phone number.
5. The PSAP retrieves User’s location record from the National ALI Database using a connection through the Regional ALI Database.
6. In a failover/unprovisioned Emergency Call scenario, the 9-1-1 Call Server directs the Emergency Call to the ECRC for User location verification and routing. In a SIP connectivity failure scenario, the Emergency Call is routed directly to the ECRC via PSTN by Customer.

2.2. Services Components

Table 1

Component	Description
ERS Portal	The ERS Portal is a web-based dashboard with administrator access to the ERS account for configuration, record provisioning, and reporting.
ERS API	The ERS API enables Customer to automatically add, modify, and delete locations and Users through integration with its user management tools.
Provisioning Server	The Provisioning Server geocodes and validates locations for insertion into the National ALI Database.

Component	Description
National ALI Database	The 9-1-1 National ALI Database contains the address and location records for all ERS users for all US states. It is accessed by local PSAP and regional ALI systems when a 911 call is received.
9-1-1 Call Server	The 9-1-1 Call Server receives Emergency Calls and determines the appropriate routing actions based on the location of the User and relevant call routing configurations.
9-1-1 Call Routing Network	The 9-1-1 Call Routing Network receives and routes the Emergency Call from the ERS to the terminating 9-1-1 infrastructure and PSAP throughout the US.
ECRC	ECRC handles unprovisioned and failover Emergency Calls. The ECRC is staffed by APCO-certified dispatchers, who orally confirm the User's location and transfer the Emergency Call via the selective router network to the appropriate PSAP.

2.3. Services Specifications

Table 2

Data Centers	<ul style="list-style-type: none"> • Geo-Redundant Data Centers • Active-Active load-balanced call servers • Flexible connectivity via Internet, VPN, NNI
Emergency Call Delivery	<ul style="list-style-type: none"> • SIP and PSTN connectivity • Network monitoring with SIP options • SIP UDP/TCP protocols • RTP/UDP with G.711 • Configurable dial plans for emergency and test calls • Individual PSTN number for routing contingency on failover
Integrations	<ul style="list-style-type: none"> • Intrado Emergency Gateway • Microsoft Teams Direct Routing with Dynamic E911 • Microsoft Operator Connect, Operator Connect Mobile • Mitel MiVb, MiConnect, MiVO. • Certified with Skype for Business • Cisco Emergency Responder with native integration for provisioning • Certified with Avaya Aura Communication and Session Managers • Most IP-PBX/UC platforms and softswitches using SIP trunking
ECRC	<ul style="list-style-type: none"> • US-based and operated by Intrado • APCO-trained Emergency Call takers • 24/7/365 operations • Enhanced transfers to most PSAPs using emergency lines with location (ALI) delivery • Support for unprovisioned Emergency Calls and remote workers; back-up answering point for contingency routing
Test Calls	<ul style="list-style-type: none"> • Built-in testing with configurable test call number • Playback of call details including address and 9-1-1 coverage • Two-way audio verification • Email confirmation of every test call with results
9-1-1 Call Notification	<ul style="list-style-type: none"> • Email alert with location details • SMS-formatted alerts • Support for Skype for Business Notification URI

Security Desk Call Monitoring	<ul style="list-style-type: none"> • Conference security personnel for real-time call monitoring • Security phone number configurable per location • Configurable one-way or two-way audio • Support for Skype for Business Security Desk URI
Address Validation and Provisioning	<ul style="list-style-type: none"> • Real-time address validation and geocoding • Link with geocoordinates for address mapping • Simplified error correction process
Administrative ERS Portal	<ul style="list-style-type: none"> • Secure portal for service administration • Easy provisioning of records • Batch files for bulk provisioning • User profiles for managing access levels • Individual sub-accounts for separating access to records and reports • Network Map provisioning for Subnets and Wireless Access Points' • Comprehensive reporting: call records, locations and subscriber, provisioning audits • Optional Portal branding for Service Providers
Location Manager	<ul style="list-style-type: none"> • Optional client software used for tracking and automatically updating the location of softphones • Automated location tracking when on the enterprise LAN using the network map • User provided location when using the softphone outside of the enterprise (remote usage). • Customizable disclaimer and application text • Licensed at additional charge on a per-user basis
Location Information Service	<ul style="list-style-type: none"> • Optional Location Service for location aware phones • Provides location based on Network Map • Supported SIP IP Phones: <ul style="list-style-type: none"> • Cisco SIP phones running multi-platform firmware version 11.1 and up • Polycom SIP phones firmware version 5.7 and up • Yealink SIP phones firmware version 82 and up • Mitel SIP phones (various PBX and models) • Licensed at additional charge on a per-user basis.
Pseudo MAC	<ul style="list-style-type: none"> • Ability to receive a pseudo-MAC in the Intrado proprietary SIP header "E911-User-Info" as the subscriber ID • Subscriber ID is used to lookup the corresponding Emergency Response Location and custom call back number.
E911-User-Info SIP Header	<p>An Intrado-Proprietary header that can be used for the following purposes:</p> <ul style="list-style-type: none"> • To include the subscriber's geo-coordinates (latitude and longitude) for a call originating from a Dynamic Routing account. • To include the subscriber's IP address for customers that use "Dynamic Routing using Layer 3" • To include the subscriber's BSSID for customers that have WLAN Routing activated in their Enterprise accounts

2.4. Maintenance and Support

Table 3

Technical Support Center ("TSC")	<ul style="list-style-type: none"> • Customer support and troubleshooting • 24/7/365 Emergency number • Email and Web support
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Network Operation Center (“<u>NOC</u>”)	• 24/7/365 Network monitoring
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2.5. Other

Table 4

Documentation	<ul style="list-style-type: none"> • ERS Technical Support Policies • ERS Network Interface Guide • ERS Portal User Guide
Standards Compliance	<ul style="list-style-type: none"> • NENA i2 (08-001) • SIP: 2543, 3261, 2976, 3265, 3262, 3325, 3863, 4119, 5139 • RTSP: 2326, RTP: 1889, SOAP: 3902, HELD: 5985 TLS 1.2: 5246

2.6. ECRC

Failover Emergency Calls will be routed to the ECRC via an SBC/PSTN gateway. The ECRC is staffed continually by professionally trained personnel who obtain the User’s location information and deliver the Emergency Call and location information to the appropriate PSAP. Where possible, the ECRC will route the Emergency Call to the PSAP using i2 protocols.

Table 5

Call Situation	ECRC Treatment
Call with location, no location, or wrong location at ECRC	ECRC Emergency Call taker confirms location, makes any necessary corrections, and routes Emergency Call to PSAP, based on actual location of the User.
Dropped Emergency Call with location	Emergency Call taker informs appropriate PSAP, and PSAP follows internal SOP to callback the User and dispatch emergency responders.
Dropped Emergency Call with no location	Emergency Call taker uses other means to contact the Customer associated with DID, to determine location of the User. Emergency Call taker then informs appropriate PSAP, and PSAP follows internal SOP to callback the User and dispatch emergency responders.
Emergency Call originating in Canada	ECRC Emergency Call taker transfers the Emergency Call to the PSAP.
No i2 coverage available (optional)	The i1 to call center feature configures Services to send all i1 calls to the ECRC.
No User record in National ALI Database	If the User record does not exist in the National ALI Database, the Emergency Call is routed to the ECRC for manual verification. Under this scenario, charges are applicable for ECRC Emergency Calls on a per Emergency Call basis.
Emergency Call made from a non-validated address	Customers that allow Users to enter non-validated address information can have the Emergency Calls sent to the ECRC for validation and PSAP routing.
Network connectivity failure between Customer and ERS, or between ERS and 9-1-1 Routing Network	ECRC Emergency Call taker confirms location and routes Emergency Call to PSAP based on actual location of the User. Under this scenario, charges are applicable for Emergency Calls on a per Emergency Call basis unless caused by Intrado or its suppliers.

3. Customer Responsibilities

Customer is responsible to collect, upload, and maintain accurate Provisioning Data and Endpoint inventory to ensure 911 calls are processed and billed correctly.

If required by applicable telecommunications carriers or applicable law, Customer will provide Intrado with written authorization to work with the telecommunications provider on Customer's behalf for the purpose of establishing interconnections between Intrado, Customer and/or the telecommunications carrier that are necessary to enable Intrado to provide Services.

Customer will only use Services for the routing of Emergency Calls and for no other purpose and will take all reasonable steps to ensure that Services are not used for any other purpose by its Users.

Customer will be responsible for providing, at its cost, all facilities and networks required to operate with and interconnect to Services.

Customer will regularly configure, monitor, and manage its network and equipment to ensure that there is no interruption in connectivity with Services.

If either Customer or Intrado becomes aware of any security vulnerability that arises from the interconnection of Services with Customer's networks and equipment, the parties agree that they will provide all reasonable cooperation to promptly address such vulnerabilities.

Customer will comply with all applicable laws in relation to its use of Services to provide emergency dialing services to Users.

Customer will install required Location Manager application on end user workstations requiring that Service.

4. Intrado Responsibilities

Intrado will provide to Customer a web based management interface ("Interface"). The Interface will allow either Customer or a User to provision Endpoint Data into the National ALI Database. The Interface will allow Customer or each User to update the Endpoint Data using only User or Customer premises or equipment necessary to access its VoIP telephone service. If the Endpoint Data is not provisioned in the Interface by either Customer or the User, then the Endpoint Data must be provided with the Emergency Call.

Intrado will provide, at its cost, all facilities, software, equipment, and necessary interconnect circuits required to operate Services.

Intrado will regularly configure, monitor, and manage its network and equipment to minimize any interruption in connectivity with Customer's network.

Intrado will use commercially reasonable efforts, consistent with industry practices and standards, to (a) maintain the security of Services and the facilities in which Services' servers reside; and (b) protect against the introduction of any "virus" into Services or into Customer's network.

5. Services Limitations and Disclaimers

The following Services limitations and disclaimers apply:

5.1. Suspension of Services

Intrado may temporarily suspend Services, if:

- Customer's equipment or network causes damage, or in the reasonable opinion of Intrado, is likely to cause damage to Intrado's equipment, databases or networks;
- Customer's use of Services disrupts the normal use of Services for other customers of Intrado; or
- Customer is past due in making undisputed payment to Intrado under this or any other agreement between the parties, provided that Intrado has delivered to Customer written notice that payment is past due and Customer has failed to cure such default within ten business days thereafter.

Intrado will promptly notify Customer on any suspension of Services.

5.2. Audit Right

During Services term and for a period of one year thereafter, Intrado (or its authorized representative) may request from Customer documentation to verify billing and payment accuracy. Such documentation will be specifically described by Intrado and will consist of reports generally maintained in or that may be generated by the systems utilized as part of Services. Customer will provide such documentation within ten business days. Intrado may not audit more than once in any 12 month period. On receipt of the documentation, Intrado will promptly audit such records and provide Customer the results of such audit. Customer will have ten business days to dispute such results and if such a dispute exists, the parties will work in good faith to resolve the dispute. If any audit establishes that Customer underpaid Intrado by more than five percent of the amount due for the period examined, Customer will pay to Intrado its reasonable expenses incurred for such audit, in addition to any amounts shown to be underpaid, within 30 days after the date of written notice from Intrado. If any audit establishes that Customer has overpaid Intrado, Intrado will credit Customer the amount of the overpayment within two invoice cycles from the date of the determination of Customer's overpayment.

5.3. Other Limitations

Services may not function correctly, or at all, in the following circumstances:

- if Customer's equipment or network fails, is not configured correctly or does not meet the system specifications for use with Services;
- due to a network outage, extended power failure or network congestion that it is outside the control of Intrado or its suppliers;
- if Customer fails to provide and maintain current and accurate Endpoint Data; or
- if the Emergency Call taker does not promptly or properly answer or route the Emergency Call, or if errors or omissions are made by the PSAP or the local exchange carrier servicing the PSAP.

Customer acknowledges and agrees that Intrado will not be liable for any Services outage, degradation or error, or any inability to, or delay in, accessing emergency service personnel due to any of the circumstances described in this Section 5.3 above.

6. Glossary

These definitions are for this Service Guide only and are not necessarily the definitions used by the Federal Communication Commission ("FCC") or any other governmental, industry, or private organization or entity.

Emergency Call means a 9-1-1 call placed by a User.

Emergency Call Relay Center ("ECRC") means Intrado's inbound Emergency Call center, staffed 24 hours per day, seven days per week, and 365 days per year for Emergency Call handling customer support. For purposes of this Service Guide and Services provided hereunder, ECRC may include a third party contracted by Intrado to perform call center services.

Endpoint means a hardware device or software instance that can make and receive voice calls.

Endpoint Data means information on the specific location of an Endpoint, including GPS coordinates municipal address, building name, floor number, and/or suite number.

Public Safety Answering Point (“PSAP”) means a facility equipped and staffed to receive Emergency Calls.

Service Provider means carriers or VoIP service providers.

Use means actual use of Services by a User for the purpose for which such Services is provided.

Users means Customer’s and its Affiliates’ personnel and, if applicable, Customer’s customers or Subscribers, and their respective personnel, employees, visitors and other users of Services.