# Emergency Routing Service for Canada Data Sheet

911 Enable's Emergency Routing Service (ERS) provides organizations with E911 call routing to Public Safety Answering Points (PSAPs) across Canada. Using a single SIP or PSTN connection, the ERS ensures that the caller's location information is delivered to the appropriate PSAP.

How it Works

The following diagram illustrates how a 911 call is routed to the PSAP using the 911 Enable Emergency Routing Service (ERS).
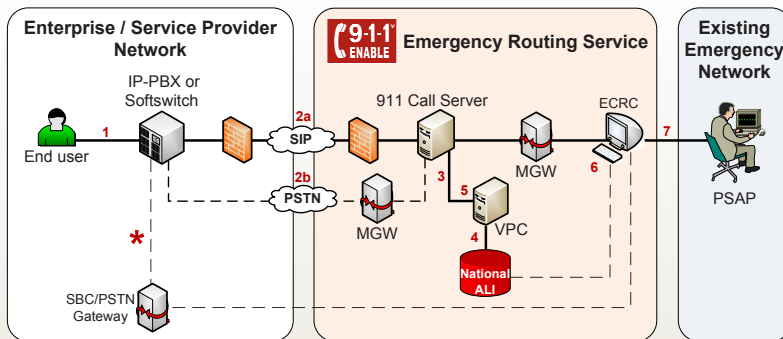
1. A 911 call is placed by an end user within the network.

2. The IP-PBX or softswitch delivers the emergency call to the ERS 911 Call Server
   a Using session initiation protocol (SIP).
   b Using PSTN via a media gateway (MGW).

3. The 911 Call Server recognizes the emergency call, and sends the call and referenced location to the VoIP Positioning Center (VPC) for routing instructions.

4. The VPC queries the National ALI database to get the end user's location (LO), which is delivered to the VPC, cached, and associated to the call.

5. The VPC delivers the call back to the 911 Call Server with instructions to route the call to the Emergency Call Response Centre (ECRC).

6. The 911 Call Server delivers the call and its Automatic Number Identification (ANI) to the ECRC via a Media Gateway (MGW). The ECRC operator receives the call. Simultaneously, the ANI is used to query the National ALI Database (nALI). The caller's record is displayed on the ECRC operator's monitor with the callback number, address, name, and the mapped 0-ECRS routing number that corresponds to the appropriate PSAP.

7. The ECRC operator verbally confirms the caller's address. The call is then routed to the PSAP using the mapped 0-ECRS routing number. The PSAP receives the call and obtains the caller's name, callback number, and location information from the ECRC operator. The ECRC operator puts the PSAP in touch with the caller.

✽ In the event of a 911 call originating from an unprovisioned DID, the call is routed to the Emergency Call Response Center (ECRC) via a PSTN gateway. The ECRC is staffed 24/7/365 by professionally trained personnel who obtain the caller's location information, and deliver the call and location information to the appropriate PSAP.

Compliance with all 911 Regulations
Standards-based call routing conforms to all CRTC regulations, enabling organizations to meet or exceed their 911 obligations.

Largest 911 Coverage
Provides 100% nationwide 911 coverage across Canada, ensuring reliable emergency service is available to users in all regions.

Superior Network Reliability
With carrier-grade redundant data centers and 100% up-time since 2005, the ERS delivers continuous 911 call routing services, 24 hours a day, 7 days a week, 365 days a year

National ALI Database
Serves as a central repository for all user records, offering advanced provisioning, address correction, and MSAG validation capabilities.

Simple to Deploy and Manage
Offers quick and easy implementation in as little as 24 hours. The user-friendly web-based management interface includes an administrative Dashboard and SOAP API.

Specifications

ERS Components

Component	Description
VoIP Positioning Center (VPC)	• Determines the caller's location using the nALI • Delivers routing instructions to the 911 Call Server • Provides the caller's location and callback number to the ECRC via the nALI
National ALI Database (nALI)	• Supports ERL, endpoint, and subscriber records • Accepts records from all 10 provinces and three territories • Address validation capabilities • Provides instantaneous corrections and alternatives
911 Call Server	• Handles 911 calls • Receives routing instructions from the VPC • Forwards calls to the ECRC
Media Gateway (MGW)	• Signaling and media interworking point between the IP domain and the conventional ISDN/PRI trunks • Converts calls from IP to PSTN • Uses routing information provided by the 911 Call Server to deliver calls to the appropriate destination
Emergency Call Response Center (ECRC)	• Operated 24/7/365 • APCO trained and certified staff • Confirms caller's address • Routes the call to the PSAP using the mapped 0-ECRS routing number • Provides the PSAP with the caller's name, callback number, and location information

Connectivity

Component	Description

Call Delivery	• Connectivity options
	  – PSTN via access number
	  – Public internet
	  – VPN
	  – Cross connect
	• Protocols
	  – SIP/UDP
	  – RTP/UDP, G.711

Provisioning	• Web-based administrative Dashboard • Real-time SOAP/XML interface • SSL encryption • 128 bit crypto key

Enhanced 911 Coverage	• 100% nationwide coverage
	• 0-ECRS Service with the following Canadian LECs:
	  – Bell Canada
	  – Telus Communications
	  – Aliant Telecom
	  – Saskatchewan Telecommunications
	  – MTS Allstream

911 Enable Emergency Gateway	• SIP connection for organizations using the Emergency Gateway appliance

Maintenance and Support

Component	Description
Technical Support Center (TSC)	• Customer support and troubleshooting • 24/7/365 Emergency number • Email and Web support
Network Operation Center (NOC)	• 24/7/365 Network monitoring

Other

Component	Description
Administrative Dashboard	• Used to administer E911 service • Audit data • View reports • View Call Detail Records (CDRs)
Data Centers	• Carrier grade, fully redundant • 60 Hudson Street, New York City, NY • 1 Wilshire Blvd, Los Angeles, CA
Security Desk Routing and Alerting	• Direct call delivery to security desk • Three-way call monitoring • Email alerts to designated distribution list
Product Number	• EN911-CLOMRC (Enterprise Location) • EN911-CEPMRC (Enterprise Endpoint) • RE911-CSUMRC (Residential Subscriber)
Licensing	• Monthly subscription service • Based on the number of records provisioned
Documentation	• ERS Standard Operating Procedures • ERS Support Policies • Dashboard Manual • ERS Networking Interface Description
Regulatory Compliance	• CRTC regulations (2005-21)

Standards Compliance	• RFC
	  – SIP: 2543, 3261, 2976, 3265, 3262, 3325
	  – RTSP: 2326
	  – RTP: 1889
	  – SOAP: 3902
	• SSL 3.0 Protocol Specification

Solution Applicability	• Enterprises • Small and Medium Businesses • VoIP Service Providers • Hosted PBX • Video Relay Service

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