

## **E911 Call Routing Solution for Epygi IP Telephony**

### Solution Brief

Epygi provides organizations with powerful IP telephony capabilities that deliver cost savings while improving employee productivity and customer relationships. By implementing Epygi's solutions, organizations can take advantage of the benefits of IP telephony in a simple and cost-effective manner.

#### **E911 Challenges**

Although Epygi offers a simple, cost-effective, and extremely reliable voice communication solution, it faces certain challenges in regard to emergency calling, including:

- Ensuring 911 calls and accurate location information are routed to the appropriate Public Safety Answering Point (PSAP)
- Providing E911 support for branch offices and teleworkers
- Compliance with state and local E911 regulations

911 Enable provides an enterprise-wide E911 solution that responds to these challenges and is certified with Epygi.

#### **Solution Highlights**

- **E911 support for employees in all workspaces, including on the main campus, at branch offices, and working remotely**
- **Simple and easy to implement**
- **Complies with all E911 regulations and standards**

## The Emergency Routing Service

911 Enable's Emergency Routing Service (ERS) provides Epygi deployments with the E911 call routing capabilities they require to support the entire deployment and meet all state and local E911 regulations. The ERS ensures that when 911 is dialed, the call and location information are delivered to the appropriate Public Safety Answering Point (PSAP).

### Key Features

- **Compliance with All E911 Regulations**  
Highly granular location provisioning (to the building, floor, or room level) helps organizations meet or exceed the strictest of E911 obligations.
- **Largest E911 Coverage**  
100% nationwide 911 coverage across the US and Canada, including E911 access to over 6,000 PSAPs, ensures reliable emergency service for the entire workforce.
- **Superior Network Reliability**  
With carrier-grade redundant data centers and 100% up-time since 2005, the ERS delivers continuous E911 call routing service 24/7/365.
- **Single National ALI Database**  
Serves as a central repository for all user records and offers advanced real-time provisioning capabilities. It eliminates the need to maintain multiple regional ALI databases.

- **Real-time Master Street Address Guide Validation**  
Locations are validated using the Master Street Address Guide (MSAG) and any errors are automatically returned in real-time, along with suggested alternatives. This ensures locations are civic-valid and properly formatted to display at the PSAP.
- **Security Desk Routing and Notification**  
Notification email alerts can be sent to designated distribution lists based on the caller's location. Email alerts include the caller's name, callback number, and location information, and can be directed to alpha-numeric pagers, smartphones, or SMS gateways. Security personnel can monitor 911 calls sent to the local PSAP via three-way conference call with security personnel on one-way mute. 911 calls may also be sent directly to on-site security personnel to assess the situation prior to connecting the call to the PSAP.
- **Support for the Entire Workforce**  
Eliminates the need to provide dedicated trunks and local gateways for 911 purposes. This allows organizations to support workers at headquarters, in branch offices, and working remotely.
- **Simple and Easy to Manage**  
Offers quick and easy implementation in as little as 24 hours. The user-friendly web-based management interface includes an administrative Dashboard (see screenshot below) and SOAP API.

**911 ENABLE DASHBOARD** version 2.10  
Welcome, Simon Admin  
Last login: Jun 17 2008 4:27PM  
Help | Log Out

System Manager | **911 Provisioning**

PBX Manager | Provisioning | View

Emergency Responder Location (ERL) [ Clear Form ]

Location Type:	On-site
ERL ID:	001
Street Number:	123
Street Name:	MAIN ST
Address Type:	Building
Address Type Number:	1
City:	NEW YORK
Country:	United States
State:	New York
Zip Code:	10044
Security Desk Option:	Direct Call Delivery
Security Desk Number:	1234567891
Private ALI Database:	Yes (135) 628 - 4997
Crisis Email Alert:	andrew@connexon.com

[ Edit ]

Record added successfully

Position Status:	Full Address
Civic Status:	Preferred Full Address
Msg Status:	Found
Routing Status:	Selective Router
Responder Type:	Security Desk

Status: disabled  
Location Key: 100542  
Location Type: On-site  
Private ALI Database: 1356284997

ERS Web-based Administrative Dashboard Screenshot

## Professional Implementation Services

911 Enable's professional services team is highly knowledgeable and experienced, having deployed its solutions across hundreds of organizations. Step-by-step support is offered throughout the planning, implementation, and rollout phases, including:

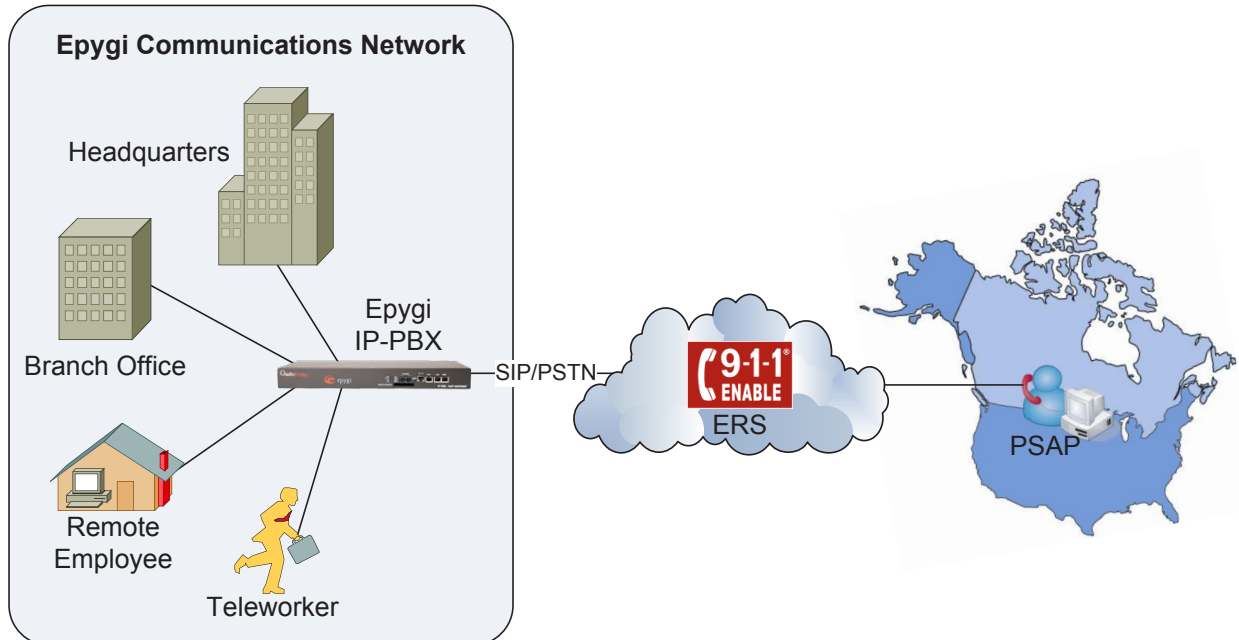
- Preliminary needs assessment
- Database provisioning
- Address validation
- Acceptance testing
- Training



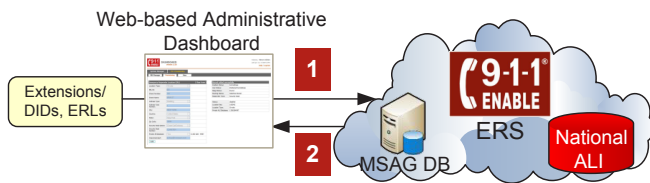
## Deploying the Emergency Routing Service with Epygi

### Network Architecture

The diagram below illustrates a typical network architecture for organizations using the ERS with Epygi.



## Provisioning Data Flow

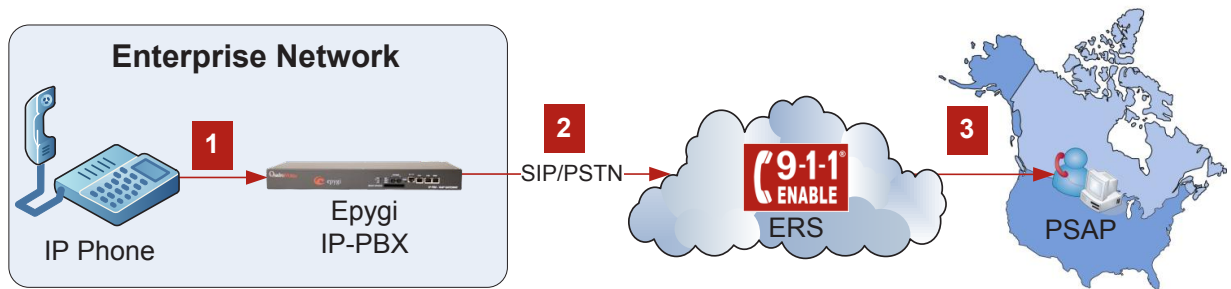


### Description

1	Organizations must first enter extensions/DIDs and ERLs into the ERS - using the web-based administrative Dashboard - for real-time MSAG validation and provisioning in the national ALI database. An ERL is a precise location found in a building or campus environment, and may be defined to the building, floor, or room level.
2	The ERS instantly returns any errors for correction, along with suggested alternatives.

## E911 Call Flow

The diagram below illustrates a typical E911 call flow for organizations using the ERS with Epygi.



### Description

1	IP phone initiates a 911 call.
2	Epygi IP-PBX sends the call and extension/DID to the ERS. The ERS determines the appropriate PSAP based on the caller's geographic area.
3	The ERS delivers the call and location information to the appropriate PSAP.

## Specifications

### ERS Connectivity

Item	Specifications
<b>Call Delivery</b>	<ul style="list-style-type: none"> <li>Connectivity options                             <ul style="list-style-type: none"> <li>PSTN via access number</li> <li>Public internet</li> <li>VPN</li> <li>MPLS (via Verizon)</li> <li>Cross connect</li> </ul> </li> <li>Protocols                             <ul style="list-style-type: none"> <li>SIP/UDP</li> <li>RTP/UDP, G.711</li> </ul> </li> </ul>
<b>Provisioning</b>	<ul style="list-style-type: none"> <li>Web-based administrative Dashboard</li> <li>Real-time SOAP/XML interface</li> <li>SSL encryption</li> <li>128 bit crypto key</li> </ul>
<b>Enhanced 911 Coverage</b>	<ul style="list-style-type: none"> <li>6,000 Public Safety Answering Points (PSAPs) across the US and Canada</li> <li>Delivers basic 911 calls to PSAPs in NENA i1 coverage areas</li> </ul>

### Maintenance and Support

Item	Specifications
<b>Technical Support Center (TSC)</b>	<ul style="list-style-type: none"> <li>Customer support and troubleshooting</li> <li>24/7/365 Emergency number</li> <li>Email and Web support</li> </ul>
<b>Network Operation Center (NOC)</b>	<ul style="list-style-type: none"> <li>24/7/365 Network monitoring</li> </ul>



### Other

Item	Specifications
<b>Administrative Dashboard</b>	<ul style="list-style-type: none"> <li>Used to administer E911 service</li> <li>Audit data</li> <li>View reports</li> <li>View Call Detail Records (CDRs)</li> </ul>
<b>Data Centers</b>	<ul style="list-style-type: none"> <li>Carrier grade, fully redundant</li> <li>60 Hudson Street, New York City, NY</li> <li>1 Wilshire Blvd, Los Angeles, CA</li> </ul>
<b>Security Desk Routing and Alerting</b>	<ul style="list-style-type: none"> <li>Direct call delivery to security desk</li> <li>Three-way call monitoring</li> <li>Email alerts to designated distribution list</li> </ul>
<b>Product Numbers</b>	<ul style="list-style-type: none"> <li>Emergency Routing Service for the US                             <ul style="list-style-type: none"> <li>EN911-LOCMRC (Enterprise Location)</li> <li>EN911-EPOMRC (Enterprise Endpoint)</li> <li>RE911-SUBMRC (Residential Subscriber)</li> </ul> </li> <li>Emergency Routing Service for Canada                             <ul style="list-style-type: none"> <li>EN911-CLOMRC (Enterprise Location)</li> <li>EN911-CEPMRC (Enterprise Endpoint)</li> <li>RE911-CSUMRC (Residential Subscriber)</li> </ul> </li> </ul>
<b>ERS Licensing</b>	<ul style="list-style-type: none"> <li>Monthly subscription service</li> <li>Based on number of records provisioned</li> </ul>
<b>ERS Documentation</b>	<ul style="list-style-type: none"> <li>ERS Standard Operating Procedures</li> <li>ERS Support Policies</li> <li>Dashboard Manual</li> <li>ERS Networking Interface Description</li> </ul>
<b>ERS Regulatory Compliance</b>	<ul style="list-style-type: none"> <li>All state E911 legislations</li> <li>FCC regulations (Title 47, Section 20.18)</li> </ul>
<b>ERS Standards Compliance</b>	<ul style="list-style-type: none"> <li>NENA i2 (08-001)</li> <li>RFC                             <ul style="list-style-type: none"> <li>SIP: 2543, 3261, 2976, 3265, 3262, 3325, 3863, 4119, 5139</li> <li>RTSP: 2326</li> <li>RTP: 1889</li> <li>SOAP: 3902</li> </ul> </li> <li>SSL 3.0 Protocol Specification</li> </ul>
<b>Solution Applicability</b>	<ul style="list-style-type: none"> <li>Enterprises</li> <li>Small and Medium Businesses</li> </ul>

## Who Is It For?

If you answer yes to any of the following questions, 911 Enable's call routing solution for Epygi may be the right choice for you:

- Do you require E911 support for branch offices, work-at-home employees, and/or teleworkers?**
- Are you looking to comply with your state E911 legislation?**
- Would you like to take the guesswork out of implementing a highly reliable, cost-effective E911 solution for your organization?**

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## For More Information

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To learn more about 911 Enable's solution for Epygi, contact a 911 Enable sales representative:

Call 1-877-862-2835  
Visit [www.911enable.com](http://www.911enable.com)  
Email [info@911enable.com](mailto:info@911enable.com)

## Additional Resources

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Emergency Routing Service Data Sheet for the US

[http://www.911enable.com/pdf/emergency\\_routing\\_service\\_datasheet.pdf](http://www.911enable.com/pdf/emergency_routing_service_datasheet.pdf)

Emergency Routing Service Data Sheet for Canada

[http://www.911enable.com/pdf/emergency\\_routing\\_service\\_datasheet\\_canada.pdf](http://www.911enable.com/pdf/emergency_routing_service_datasheet_canada.pdf)

Top 10 Reasons Businesses Choose 911 Enable Brochure

[http://www.911enable.com/pdf/top\\_ten\\_brochure.pdf](http://www.911enable.com/pdf/top_ten_brochure.pdf)

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