Next-generation emergency communication

Enhancing safety with advanced technology

Application note

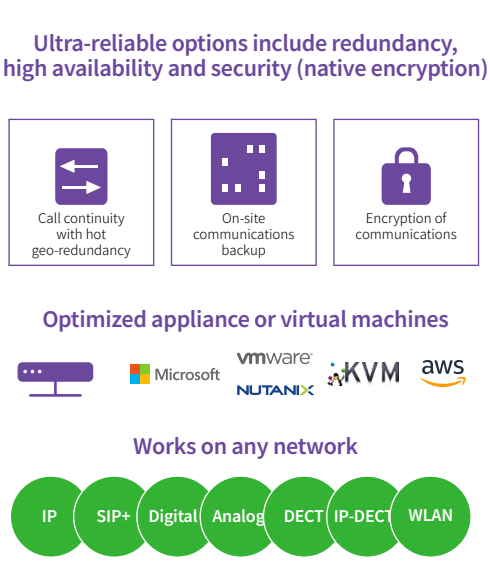
Alcatel·Lucent
Enterprise

Emergency communication solutions are the backbone of emergency response services. Ensuring secure, reliable communication is critical to the public's trust, but until now, voice has been the main and — in some countries — sole communication method. As services begin to work differently and have different requirements, the modernization of emergency communications is required.

Next-generation emergency communication harnesses advanced technologies like internet of things (IoT) and artificial intelligence (AI) to enhance collaboration, streamline communication and improve efficiency. These innovations can accelerate incident resolution, strengthen situational awareness and deliver better outcomes while bolstering security against cyber threats. As public safety answering points (PSAPs) evolve to integrate new technologies and communication methods, their ability to handle calls efficiently and accurately remains vital for saving lives and ensuring public safety.

Alcatel-Lucent Enterprise (ALE) allows public safety organizations to modernize their emergency communications infrastructure with full IP capabilities to enable next-generation services. This transition ensures faster, more reliable communications, robust redundancy options and seamless handling of different media types, including images, video and IoT sensor data.

ALE's standards-based REST APIs and open communication solutions facilitate easy integration with ecosystem applications such as computer aided dispatch (CAD), recording, closed-circuit television (CCTV), and supervisory control and data acquisition (SCADA). In addition to multimedia interactions within the PSAP solution, our technology enhances collaboration and supports short message service (SMS), real-time text (RTT) and real-time data (RTD) for more efficient emergency response.

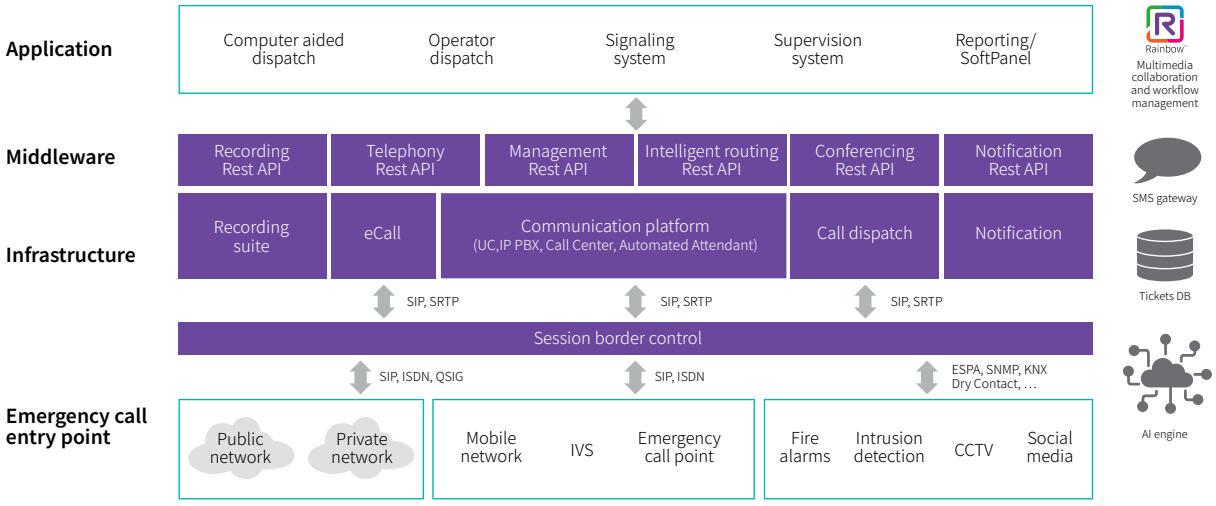


Alcatel-Lucent Enterprise emergency communication solutions include:

- **OmniPCX Enterprise Purple** is the core of the call-handling process and delivers 5x9s high availability with hot redundancy of the core components, in addition to fully secured and encrypted voice flows. A standards-based open, distributed communication system supporting traditional phone connectivity and IP configurations, which can be deployed on a physical server or virtual machine.
- Routing calls to the best available resource available is critical to efficient call handling and minimizing response times. ALE **OmniTouch Contact Center Standard Edition** is a world-class automated call distribution (ACD) system that provides proven, robust tools and features integrated into the Communication Server, with the same level of security and redundancy.
- Call recording is provided by the **OmniPCX Record Suite** and features web-based audio and video call recordings in addition to analysis tools.
- The **Alcatel-Lucent Enterprise Dispatch Console** allows operators to pick up or dispatch calls, park them or set up a conference for emergencies. Extremely flexible, fully featured and customizable, the solution offers operators full call control.
- **Rainbow** provides collaboration and communications platform-as-a-service (CpaaS) capabilities, integrating real-time communications and multimedia interactions into the PSAP such as chat, video, screen sharing and conferencing, enabling greater situational awareness.
- On-site safety is supported by the **Visual Notification Assistant** that provides mass notifications along with location information for emergency number callers.
- Simple and redundant **eCall modem and Next Generation eCall Session Initiation Protocol (SIP)** solutions can support emergency calls from drivers during a collision. The in-vehicle system (IVS) activates automatically during car incidents, calls an emergency number, and sends a minimum set of data (MSD) including location coordinates, number of passengers and vehicle detail.
- The **ALE OpenTouch Session Border Controller (SBC)** is the gateway of the PSAP communication architecture. It plays a vital role by enabling communication between traditional telephony systems (such as a public switched telephone network, or PSTN) and next-generation systems such as NG112, which support multimedia such as text, video and eCalls. The ALE SBC ensures security between enterprise and SIP trunking providers. It enhances the enterprise firewall with specialized protection against SIP-based attacks.
- **Click to connect** helps the PSAP connect with citizens for situational awareness. In the case of an incident, it provides the ability to escalate from a telephone call to a video call through a single click on an SMS sent by the agent.

Call handling involves receiving, managing and responding to emergency calls made to the designated emergency number. It represents the initial and most crucial phase in the emergency response process, ensuring that assistance is dispatched promptly and efficiently. Below is a framework that represents the ALE solution integrated into the PSAP.

Public Safety Answering Point — Call handling framework



At ALE, solutions and services comply with applicable regulations and standards, keeping your data, networks and information secure, and your work practices environmentally friendly.

Learn more about Alcatel-Lucent Enterprise Public Safety Solutions

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