

NG9-1-1 by Atos Public Safety

Next-generation 9-1-1: Transition from legacy enhanced to next-gen (NG) 9-1-1 systems with modern VoIP environments supported by a variety of cloud options.



Atos

Trusted partner for your **Digital Journey**

OpenScape Voice and OpenScape First Response

OpenScape Voice is the voice communication system at the core of Atos NG9-1-1. Designed to operate in business-critical, carrier-grade environments, its clustered architecture delivers high levels of availability and scalability. OpenScape Voice supports 60,000 simultaneous SIP calls with 100,000 endpoints and 350 busy-hour calls per second. It's developed and supported in compliance with ISO 9001:2015, and it holds cybersecurity accreditation from the DoD Joint Interoperability Test Command (JITC).

OpenScape First Response is a browser-based application that provides an intuitive, NENA i3-compliant, unified desktop for processing emergency 9-1-1 calls. Simplified web-based deployment requires minimal computing hardware for operation. And its user interface offers flexible layouts as well as preconfigured templates to support established call center workflows.

OpenScape First Response can be combined with numerous Unify phone endpoints and audio peripherals. Combine it with **OpenScape Contact Center and IVR**, for example, to get:

- Automated call distribution
- Advanced skills-based routing
- Support for 1,500 concurrent agents per system or 7,500 agents clustered between five sites

Atos is a trusted partner to global public and private organizations, guiding their digital transformation journeys for more than 30 years. We do this as a team of 100,000 technologists and industry experts in an ecosystem of partnerships with other leading technology companies. Together we deliver the strongest solutions for each engagement.

The Atos NG9-1-1 portfolio focuses this experience and approach on the public safety sector.

Next-generation core services (NGCS)

Our NGCS infrastructure begins with the **OpenScape Emergency Router**, a module extension to OpenScape Voice that supports NENA i3-compliant emergency services routing proxy (ESRP) capabilities. OpenScape Emergency Router is a highly available and scalable system, preserving media during failure conditions.

Geospatial routing of emergency calls, the essence of NG9-1-1, is supported by standards-based interfaces for emergency call routing functions (ECRF), location databases (LDB) and location information servers (LIS). The OpenScape Emergency Router uses a policy routing function (PRF) to route calls based on standard policy routing rules (PRR).

OpenScape Bridging Services provide normalized conference and transfer capabilities across an entire ESInet. Positioned at the ingress and egress of the NGCS, the **OpenScape Border Control Function (BCF)** is a robust session-border controller and UC firewall providing secured access to critical communications. Combined with media gateways and SIP trunks, OpenScape BCF supports legacy telephony protocols and NENA i3 standards-based SIP signaling.

We maintain close relationships and continuous testing with industry-leading LIS/LDB and ECRF vendors to provide integrated location-based services and GIS as part of the overall NGCS solution.

Atos managed services

Beyond the functional elements of NGCS and call handling, Atos NG9-1-1 provides complete end-to-end managed services such as design, implementation and support of the entire infrastructure, including the ESInet itself.

Atos provides managed services at a large scale. We are the lead technology integrator of the PyeongChang 2018 Winter Olympic Games, just as one example. And we apply these experiences to mission-critical communications for public safety.

Working closely with all stakeholders in ESInet design, we ensure appropriate redundancy, availability, throughput and security are achieved for each implementation.

Advanced performance management provides:

- 24/7 health checks of services and applications
- Threshold monitoring for early identification of capacity problems
- Health reporting on performance issues and recommended responses
- Accurate configuration management data that is critical for safely implementing change
- Cybersecurity threat surveillance

Oversight of SLA compliance is offered through web portals providing transparent alerting and system health dashboards, including network quality of service and security posture.

Cybersecurity services positioned at the ESInet ingress provide safeguards against distributed denial of service, telephony denial of service and advanced persistent threats. During the Rio 2016 Summer Olympic Games, we neutralized 570 million security events, managing 400 events per second. Security information and event management (SIEM) is provided as an appliance, **SIEM by Bullion**, a valuable tool in our security operations center managed service.

Atos datacenters around the world offer colocation services as well as hosted cloud solutions such as **Canopy Orchestrated Hybrid Cloud**. These solutions provide cost-effective alternatives to building and maintaining pure on-premises systems infrastructure.

Atos Public Safety provides managed services for transitioning legacy E9-1-1 data to NG9-1-1 data. This is critical for the correct routing of emergency calls and providing dispatchable incident locations for first responders. Ongoing support and maintenance of service order input records from originating service providers ensures validation of new locations for call routing, and accuracy of GIS data for precise location mapping.

Atos Bullion S Servers

The Atos Public Safety NG9-1-1 solution also includes the server hardware on which mission-critical NGCS applications operate. The modular **Bullion S Servers from Atos** are based on familiar x86 architecture that scales from 2 to 16 Intel® Xeon® E7 v4 processors and up to 24TB of memory. With a condensed footprint, the Bullion S Server minimizes datacenter rack space, lowers energy consumption and reduces radiant heat. The Bullion S Server is VMware® certified and can host all of the virtual machines required for NGCS, call handling and managed services.

Multi-agency collaboration

Communications within and between public safety agencies is critical for low incident response times and for first responder safety. **Unify Circuit by Atos** is a team collaboration application based on WebRTC architecture. This allows for easy deployment to all popular mobile phones, workstation desktops and web browsers. Circuit enables real-time multimedia communication supporting voice, video, IM, presence and file sharing. Implemented within the First Responder Network Authority (FirstNet), Circuit is a powerful tool in public safety for sharing incident information and coordinating responses.

Although Circuit is capable of running on commodity smartphones, mission-critical public safety environments need a secure mobile platform. **Bull Hoox by Atos** is an ultra-secure tactical 4G/LTE communication solution that combines the power and usability of civilian smartphones with the confidentiality and resilience that first responders require.



About Atos

Atos SE (Societas Europaea) is a leader in digital transformation with circa 100,000 employees in 72 countries and pro forma annual revenue of circa € 12 billion. Serving a global client base, the Group is the European leader in Big Data, Cybersecurity, Digital Workplace and provides Cloud services, Infrastructure & Data Management, Business & Platform solutions, as well as transactional services through Worldline, the European leader in the payment industry. With its cutting edge technologies, digital expertise and industry knowledge, the Group supports the digital transformation of its clients across different business sectors: Defense, Financial Services, Health, Manufacturing, Media, Utilities, Public sector, Retail, Telecommunications, and Transportation. The Group is the Worldwide Information Technology Partner for the Olympic & Paralympic Games and is listed on the Euronext Paris market. Atos operates under the brands Atos, Atos Consulting, Atos Worldgrid, Bull, Canopy, Unify and Worldline.

For More Information

For more information about Atos Public Safety and NG9-1-1, visit



<https://pages.atos.net/public-safety-ng911/>



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