



PUBLIC SAFETY LTE QoS SOLUTION

As public safety agencies adopt mobile broadband solutions, they need to ensure they have access to network resources when disaster strikes. They need the ability to establish call priorities based on the application, agency and responder roles. And they need to make informed decisions when they arrive on scene. With a Public Safety LTE network, agencies may require a higher grade Quality of Service (QoS) than typically offered on commercial wireless systems.

A Public Safety LTE QoS solution gives agencies the ability to prioritize resources based on factors important to their operations. The Motorola Public Safety LTE solution includes the controls necessary to successfully manage data flows and ensure the most important information at a particular point in time is prioritized. The solution provides more functionality than a standard carrier-grade LTE solution, including a management service that meets public safety QoS and prioritization requirements. The QoS solution consists of the Prioritization Service Manager and the Public Safety Subscriber and Policy Manager, which includes the Policy Charging and Rules Function (PCRF), Home Subscriber Server (HSS) and Quality of Service Broker (QoSB).

The Public Safety LTE QoS solution provides:

PRIORITIZATION

- Prioritized data flows based on application type, role and agency
- Dedicated emergency bearer path clearing the way for the highest priority data
- Bandwidth management to optimize individual resource utilization based on need and real-time RF conditions

CONTROL

- Agency configuration of priorities preserves agency autonomy while enabling resource sharing.
- Multiple network access support (WLAN, 3G, etc.) for maximum service and device flexibility
- Compatibility with the existing predominate public safety Mobile Virtual Private Networks (MVPN) for end-to-end security on shared network resources

MANAGEMENT

- Network provisioning portal with secure demarcations protects agency data from access or alterations by other agencies
- Fault management interfaces to the operator's management system via the SNMP standard Network interface to monitor and report the health of the system

PRIORITIZATION SERVICE MANAGER

Providing agency-based QoS management, the Prioritization Service Manager supports up to 10,000 provisioned users.

The Prioritization Service Manager solution provides:

- Public Safety QoS packet inspection and marking according to appropriate priority
- Route failure notifications to appropriate network higher level manager via SNMP v.3
- Optional integration with MVPN (Radio-IP or NetMotion™)
- Configuration and prioritization schema input via the Configuration Manager

PRIORITIZATION SERVER SPECIFICATIONS

Platform	Oracle® Sun Netra X4270
Processor	Intel Xeon L5518 2.13 GHz
Memory	8 GB (high tier)
Operating System/Software	Solaris 10 pre-installed
Hard Drives	2 x 146 GB (high tier)
Physical Specifications	2 rack units
Power	100-240 VAC 50-60 Hz Hot-swappable AC 760W power supplies
Size (HxWxD)	87.1 x 445 x 526 mm (3.43 x 17.52 x 20.71 in)
Weight	17.5 kg (38.5 lbs)

PRIORITIZATION SERVICE CONFIGURATION MANAGER SPECIFICATIONS

Platform	HP DL360 G6
Processor	Intel Xeon X5650 2.66 GHz
Memory	8 GB (High Tier)
Operating System/Software	Windows Server 2008 R2 Pre-Installed
Hard Drives	4 x 300 GB
Physical Specifications	1 Rack Unit
Power	100-240 VAC 50-60 Hz 2 460 W power supplies
Size(HxWxD)	43.2 x 426.2 x 692.2 mm (1.70 x 16.78 x 27.25 in)
Weight	17.9 kg (39.51 lbs)

PUBLIC SAFETY SUBSCRIBER AND POLICY MANAGER

The Motorola Subscriber and Policy Manager features Policy Charging and Rules Function (PCRF), Home Subscriber Server (HSS) and Quality of Service Broker (QoS) for the LTE core. It supports up to 100,000 subscribers.

- Subscriber/device profile and state information in a master repository
- Real-time network, application, and subscriber policy control to deliver personalized services
- Subscriber profile and usage data with sophisticated tools to broker the data to multiple systems and applications
- Public Safety policy used for regional QoS policy determination

PUBLIC SAFETY SUBSCRIBER AND POLICY MANAGER SPECIFICATIONS

Platform	HP DL380 G6
Processor	Intel Xeon X5670
Memory	48 GB
Operating System Software	Linux
Hard Drives	4 x 300 GB
Physical Specifications	2 Rack Units
Power	100-240 VAC 50-60Hz 2 hot-swappable AC750W
Size (HxWxD)	85.9 x 44.5 x 699.8 mm (3.38 x 17.25 x 27.25 in)
Weight	Approximately 21.45 kg (47.18 lbs)