PRIORITIZED ACCESS TO NETWORK RESOURCES

PUBLIC SAFETY LTE QoS SOLUTION

As public safety agencies adopt mobile broadband solutions, they need to ensure certain personnel, devices and applications receive prioritized access to network resources. They need to establish priorities based on multiple criteria such as agency, role, application and incident. To support this higher level of prioritization, a Public Safety LTE network requires a higher grade Quality of Service (QoS) solution than typically offered on carrier-operated wireless systems.

Motorola Solutions' Public Safety LTE QoS Solution includes the controls necessary to successfully manage data flows to ensure that the most important information is delivered to the right personnel. It meets public safety quality-of-service and prioritization requirements and provides more functionality than carrier-grade LTE networks. The QoS solution gives agencies or regional authorities the ability to prioritize data based on users' roles, agency affiliation and applications. Priorities can also be dynamically elevated via Computer Aided Dispatch (CAD) for all responders assigned to an incident.

A Web-based portal enables triggering and monitoring the dynamic priority elevation. The components of Motorola Public Safety LTE QoS Solution are Priority Management (PM) and Policy Charging and Rules Function (PCRF).

Motorola Public Safety LTE QoS Solution offers the following capabilities:

PRIORITIZATION

- Prioritized data flows based on application type, user, role, agency, and incident priority

- Dedicated emergency bearer path clearing the way for the highest priority data

- Bandwidth management optimizes resource use based on need and real-time RF conditions

- Prioritization and presence APIs (Application Programming Interface) provided for customization and integration

CONTROL

- Agency configuration of priorities preserves agency autonomy while enabling resource sharing

- Priority levels among agencies can be controlled at regional level

- Compatible with commonly used public safety Mobile Virtual Private Networks (MVPN) for end-to-end security on shared network resources

MANAGEMENT

- To maximize return on investment, multiple agencies can share server resources and provision their Quality of Service attributes

PRIORITY MANAGEMENT SPECIFICATIONS

Providing agency-based QoS management, Priority Management scales up to support the capacity needs of the typical agency or regional network, ranging from 1000s of subscribers to several 100,000s of subscribers.

The Packet Processing Server provides:

- Public Safety QoS packet inspection and marking according to appropriate priority
- Optional integration with MVPN

The Configuration Manager provides:

- Interface to configure prioritization based on users and roles

POLICY CHARGING AND RULES FUNCTION

The Motorola Solutions Policy Charging and Rules Function (PCRF) offers a range of capabilities that meets the required subscriber capacities:

- Real-time network, application, and subscriber policy control to deliver personalized services
- Subscriber profile and usage data, with sophisticated tools to broker the data among multiple systems and applications
- Public Safety policy used for regional QoS policy determination

OFFERED HARDWARE

- Priority Management Server: Hewlett-Packard ProLiant(TM) DL380 server running VMWare 5.5 virtual machine, hosting the Packet Processing Server running on a Red Hat® Enterprise Linux® 6.5, and the Configuration Manager running on a Microsoft Windows® Server 2008 R2. Fully configured by Motorola, and offered in Non-Redundant and Redundant hardware configurations. The Configuration Manager is shared with the Unified Network Services (UNS) suite
- Policy Charging and Rules Function (PCRF)

SUPPORTED CLIENTS

Any device on the network is subject to management by the Public Safety QoS Solution. Client software that indicates a device's priority on the network is available for Motorola Solutions Android devices (LEX755, LEX L10) and devices running Windows 7.

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