ATIS-1000086.v002

ATIS Standard on -

LTE and IMS Parameters for Supporting NS/EP Priority Services in NGN

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Published by

Alliance for Telecommunications Industry Solutions
1200 G Street, NW, Suite 500
Washington, DC 20005

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Alliance for Telecommunications Industry Solutions

Approved May 22, 2024

Abstract

This Technical Report provides guidelines for provisioning relevant Long-Term Evolution (LTE) and IP Multimedia System (IMS) parameters and values (e.g., QoS/Priority Values), such that National Security / Emergency Preparedness (NS/EP) Priority Services communications receive the highest probability of delivery over other service traffic in Next Generation Networks (NGNs).

Foreword

The Alliance for Telecommunications Industry Solutions (ATIS) serves the public through improved understanding between carriers, customers, and manufacturers. The Packet Technologies and Systems Committee (PTSC) develops and recommends standards and technical reports related to services, architectures, and signaling, in addition to related subjects under consideration in other North American and international standards bodies. PTSC coordinates and develops standards and technical reports relevant to telecommunications networks in the U.S., reviews and prepares contributions on such matters for submission to U.S. International Telecommunication Union Telecommunication Sector (ITU-T) and U.S. ITU Radiocommunication Sector (ITU-R) Study Groups or other standards organizations, and reviews for acceptability or per contra the positions of other countries in related standards development and takes or recommends appropriate actions.

The mandatory requirements are designated by the word *shall* and recommendations by the word *should*. Where both a mandatory requirement and a recommendation are specified for the same criterion, the recommendation represents a goal currently identifiable as having distinct compatibility or performance advantages. The word *may* denotes a optional capability that could augment the standard. The standard is fully functional without the incorporation of this optional capability.

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Suggestions for improvement of this document are welcome. They should be sent to the Alliance for Telecommunications Industry Solutions, PTSC, 1200 G Street NW, Suite 500, Washington, DC 20005.

At the time of consensus on this document, PTSC, which was responsible for its development, had the following leadership:

M. Dolly, PTSC Chair (AT&T)

V. Shaikh, PTSC Vice-Chair (Peraton Labs)

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1 Scope, Purpose, & Application

1.1 Scope

National Security / Emergency Preparedness (NS/EP) Priority Services requires priority treatment during network congestion. This treatment is required end-to-end (originating/transit/terminating) and from invocation to release in the IP-based Next Generation Network (NGN). Several parameters have been defined within Long-Term Evolution (LTE), IP Multimedia System (IMS) and supporting protocol standards applicable for providing network priority to NS/EP communications in the NGN environment. Examples include the LTE Allocation and Retention Priority (ARP), Access Class (AC), Multimedia Priority Service Identifier (MPS-Identifier), and Resource Priority Header (RPH). National specific values and/or the rules for their use need to be identified and reserved in order to effectively support NS/EP Next Generation Network Priority Service (NS/EP NGN-PS). At a minimum, operational rules need to be specified such that the values reserved for NS/EP priority communications are unique, where possible, and provide priority treatment over all other services.

This ATIS standard provides operational guidance on protocol parameters and values (e.g., QoS/Priority Values) relevant to NS/EP Priority Services support in NGN. It provides guidance on the national specific values and/or the rules for their use, such that NS/EP priority communications receive the highest probability of delivery over other service traffic.

1.2 Purpose

The purpose of this ATIS standard is to provide the best opportunity for interoperability and a common user experience regardless of the network or networks involved, i.e., end-to-end in the multiple service provider and equipment vendor public network environment.

1.3 Application

This ATIS standard is applicable to the support of NS/EP Priority Services in the evolved public IP-based NGN infrastructure.

1.4 ETS Relationship

This ATIS standard makes use of the terms and definitions described in [ATIS-1000057] and the description of the NS/EP Priority Services under the umbrella of Emergency Telecommunication Service (ETS).

National Security / Emergency Preparedness Next Generation Network Priority Service (NS/EP NGN-PS), Legacy Government Emergency Telecommunication Service (GETS), and Wireless Priority Service (WPS) are all facets of the U.S.A. instantiation of the international standard for Emergency Telecommunications Service (ETS) [E.107]. The relationship of the terms is portrayed in Figure 1.1.