ATIS-1000102.v002

Invocation/Revocation of the National Security / Emergency Preparedness (NS/EP) Data Transport Service for the Evolved Packet System (EPS)

TECHNICAL REPORT

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ATIS Technical Report on

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Alliance for Telecommunications Industry Solutions

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Abstract

The National Security / Emergency Preparedness (NS/EP) Data Transport Service enables an NS/EP Service Provider to provide acceptable throughput and performance to the Service User for applications using the Default Bearer within a designated PDN Connection in the Evolved Packet System (EPS) during periods of severe network congestion when normal commercial data service is degraded.

This Technical Report (TR) analyzes NS/EP Data Transport Service invocation / revocation for several use case scenarios and identifies the implied requirements on the EPS, in order to facilitate a common approach for NS/EP Data Transport Service invocation / revocation across multiple NS/EP Service Providers.

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 an optional capability that could augment the standard. The standard is fully functional without the incorporation of this optional capability.

> NOTE - The user's attention is called to the possibility that compliance with this standard may require use of an invention covered by patent rights. By publication of this standard, no position is taken with respect to whether use of an invention covered by patent rights will be required, and if any such use is required no position is taken regarding the validity of this claim or any patent rights in connection therewith. Please refer to [https://www.atis.org/policy/patent-assurances/] to determine if any statement has been filed by a patent holder indicating a willingness to grant a license either without compensation or on reasonable and non-discriminatory terms and conditions to applicants desiring to obtain a license.

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

At the time of consensus on this document, the 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

The proliferation of advanced data communications introduces new opportunities and challenges for National Security / Emergency Preparedness (NS/EP) communications. Expanded data capabilities enhance the ability for Service Users to carry out their NS/EP mission. At the same time, high data traffic volumes place significant demands upon Service Provider's networks and can hamper their ability to support the offered traffic load when these networks are impaired due to congestion and/or damage from natural or human-caused disasters. The NS/EP Data Transport Service is designed to address these needs.

This Technical Report (TR) analyzes NS/EP Data Transport Service invocation / revocation for an Evolved Packet System (EPS), including the associated user interactions with the NS/EP Service Provider, for several key use case scenarios as specified in TS 22.153 [Ref 1]. It describes support of the NS/EP Data Transport Service based on updated Policy and Charging Control (PCC) features for the EPS Bearer Service as specified in 3GPP Release 17, plus an enhancement that is recommended for 3GPP Release 18 deployments of the NS/EP Data Transport Service.

1.2 Purpose

The purpose of this TR is to use the TS 22.153 [Ref 1] use case scenarios to identify the implied requirements on the EPS and the Policy and Charging Control (PCC) architecture supporting the NS/EP Data Transport Service.

The objective is to facilitate a common approach for NS/EP Data Transport Service invocation / revocation across multiple NS/EP Service Providers.

1.3 Application

This TR is applicable to the public network infrastructure. It could also be utilized within a non-public network infrastructure.

2 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

3rd Generation Partnership Project (3GPP)

[Ref 1] 3GPP TS 22.153, Multimedia priority service (Release 17).

[Ref 2] 3GPP TS 23.203, Policy and Charging Control Architecture (Release 17).