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Contents

Foreword

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Introduction

Although network nodes in the IMS Core Network should have a very high availability, some maintenance downtime and occasional failures are unavoidable. Communication links although designed with robust protocols between the network elements are also subject to failures. This document specifies a set of standardized procedures for automatic restoration after loss or corruption of data reducing the impact of these problems in order to improve service to the users. The scenarios covered here for the IMS Domain are similar to those covered in 3GPP TS 23.007 [2] for the CS and PS Domains.

1 Scope

The present document specifies the procedures required in 3GPP IMS to handle a S-CSCF or a P-CSCF service interruption scenario with minimum impact to the service to the end user.

NOTE: IMS Restoration Procedures covering service interruption of other network elements are not defined in this version of the specification.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
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[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.007: "Restoration procedures".

[3] 3GPP TS 29.228: "IP Multimedia (IM) Subsystem Cx and Dx interfaces; Signalling flows and message contents".

[4] 3GPP TS 24.008: "Mobile radio interface Layer 3 specification".

[5] 3GPP TS 29.213: "Policy and charging control signalling flows and Quality of Service (QoS) parameter mapping".

[6] 3GPP TS 29.212: "Policy and Charging Control (PCC); Reference points".

[7] 3GPP TS 29.214: "Policy and Charging Control over Rx reference point".

[8] 3GPP TS 29.060: "General Packet Radio Service (GPRS); GPRS Tunnelling Protocol (GTP) across the Gn and Gp interface".

[9] 3GPP TS 29.061: "Interworking between the Public Land Mobile Network (PLMN) supporting packet based services and Packet Data Networks (PDN)".

[10] 3GPP TS 29.274: "3GPP Evolved Packet System. Evolved GPRS Tunnelling Protocol for EPS (GTPv2)".

[11] IETF RFC 3361: "Dynamic Host Configuration Protocol (DHCP-for-IPv4) Option for Session Initiation Protocol (SIP) Servers".

[12] IETF RFC 1034: "Session Initiation Protocol (SIP): Locating SIP Servers".

[13] IETF RFC 3319: "Dynamic Host Configuration Protocol (DHCPv6) Options for Session Initiation Protocol (SIP) Servers".

[14] IETF RFC 6223: "Indication of Support for Keep-Alive".

[15] 3GPP TS 29.275: "Proxy Mobile IPv6 (PMIPv6) based Mobility and Tunnelling protocols; Stage 3".

[16] IETF RFC 7077: "Update Notifications for Proxy Mobile IPv6".