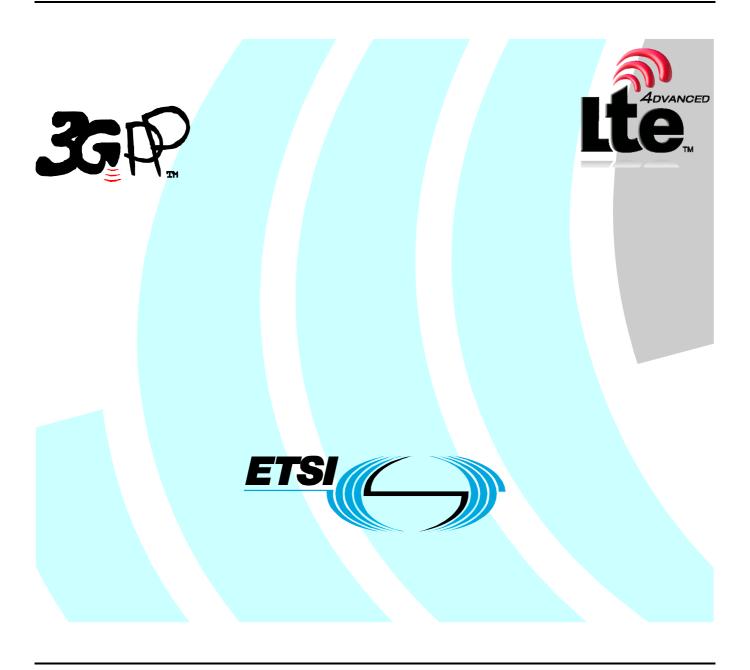# ETSI TS 129 230 V10.2.0 (2011-04)

*Technical Specification*

# Digital cellular telecommunications system (Phase 2+);
# Universal Mobile Telecommunications System (UMTS);
# LTE;
# Diameter applications;
# 3GPP specific codes and identifiers
# (3GPP TS 29.230 version 10.2.0 Release 10)

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# Foreword

This Technical Specification (TS) has been produced by ETSI 3rd Generation Partnership Project (3GPP).

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# Contents

# Foreword

This Technical Specification has been produced by the 3$^{rd}$ Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

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# 1      Scope

The present document lists the 3GPP specific Diameter protocol codes, including the AVP codes and Experimental result codes.

This document lists also the application identifiers assigned to 3GPP specific Diameter applications by IANA and the Diameter command code range which is assigned to 3GPP by IANA.

# 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.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies.  In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1]          3GPP TS 29.228: "IP Multimedia (IM) Subsystem Cx and Dx interfaces; Signalling flows and message contents".

[2]          3GPP TS 29.229:  "Cx and Dx interfaces based on the Diameter protocol; Protocol details".

[3]          3GPP TS 29.328: "IP Multimedia (IM) Subsystem Sh interface; Signalling flows and message contents".

[4]          3GPP TS 29.329: "Sh Interface based on the Diameter protocol; Protocol details".

[5]          3GPP TS 32.299: "3GPP Diameter charging application".

[6]          3GPP TS 29.234: "3GPP System to WLAN Interworking; Stage 3 Description".

[7]          3GPP TS 29.109: "Generic Authentication Architecture (GAA); Zh and Zn Interfaces based on the Diameter protocol; Protocol details".

[8]          3GPP TS 29.209: "Technical Specification Group Core Network; Policy control over Gq interface".

[9]          IETF RFC 3588: "Diameter Base Protocol".

[10]         IETF RFC 3589: "Diameter Command Codes for Third Generation Partnership Project (3GPP) Release 5".

[11]         IANA"s Enterprise-Numbers: http://www.iana.org/assignments/enterprise-numbers

[12]         IANA"s AAA parameters register: ftp://ftp.iana.org/assignments/aaa-parameters/

[13]         3GPP TS 29.061: "Interworking between the Public Land Mobile Network (PLMN) supporting packet based services and Packet Data Networks (PDN)".

[14]         3GPP TS 32.296: "Telecommunication management; Online Charging System (OCS): Applications and interfaces;".

[15]         3GPP TS 29.210: "Charging rule provisioning over Gx interface".

[16]         3GPP TS 29.140 Release 6: "Multimedia Messaging Service (MMS); MM10 interface based on Diameter protocol".

| [17] | 3GPP TS 29.211: "Rx Interface and Rx/Gx signalling flows". |
|---|---|
| [18] | 3GPP TS 29.214: "Policy and Charging Control over Rx reference point". |
| [19] | 3GPP TS 29.212: "Policy and Charging Control over Gx reference point". |
| [20] | 3GPP TS 29.273: "Evolved Packet System (EPS); 3GPP EPS AAA interfaces". |
| [21] | 3GPP TS 29.272: "MME and SGSN Related Interfaces Based on Diameter Protocol". |
| [22] | 3GPP TS 29.215: "Policy and Charging Control (PCC) over S9 reference point". |
| [23] | IETF RFC 5516: "Diameter Command Code Registration for Third Generation Partnership Project (3GPP) Evolved Packet System (EPS)". |
| [24] | 3GPP TS 29.172: "Location Services; EPC LCS Protocol (ELP) between the GMLC and the MME; SLg interface". |
| [25] | 3GPP TS 29.173: "Location Services; Diameter-based SLh interface for Control Plane LCS". |

# 3 Definitions and abbreviations

## 3.1 Definitions

For the purposes of the present document, the following terms and definitions apply.

**3GPP specific:** A definition which is used in conjunction with the 3GPP"s vendor identifier.

## 3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

| | |
|---|---|
| AVP | Attribute-Value-Pair |
| CR | Change Request |
| IANA | Internet Assigned Numbers Authority |
| IETF | Internet Engineering Task Force |
| LS | Liaison Statement |

# 4 Application identifiers

The Diameter applications are identified with the application identifiers as specified in the RFC 3588 [9]. There are two kind of applications: IETF standards track applications and vendor specific applications. All application identifiers are assigned by IANA [12]. This chapter lists the application identifiers assigned by IANA to all 3GPP Diameter applications.

The application identifiers are transferred in Diameter command"s header in the Application-ID field.

## 4.1 3GPP specific application identifiers

The 3GPP specific application identifiers allocated by IANA are listed in the following table.

**Table 4.1: 3GPP specific application identifiers**

| Application identifier | Application | 3GPP TS |
|---|---|---|
| 16777216 | 3GPP Cx/Px | 29.228 [1] and 29.229 [2] |
| 16777217 | 3GPP Sh/Ph | 29.328 [3] and 29.329 [4] |
| 16777218 | 3GPP Re | 32.296 [14] |
| 16777219 | 3GPP Wx | 29.234 [6] |
| 16777220 | 3GPP Zn | 29.109 [7] |
| 16777221 | 3GPP Zh | 29.109 [7] |
| 16777222 | 3GPP Gq | 29.209 [8] |
| 16777223 | 3GPP Gmb | 29.061 [13] |
| 16777224 | 3GPP Gx | 29.210 [15] |
| 16777225 | 3GPP Gx over Gy | 29.210 [15] |
| 16777226 | 3GPP MM10 | 29.140 [16] |
| 16777229 | 3GPP Rx | 29.211 [17] |
| 16777230 | 3GPP Pr | 29.234 [6] |
| 16777236 | 3GPP Rx | 29.214 [18] |
| 16777238 | 3GPP Gx | 29.212 [19] |
| 16777250 | 3GPP STa | 29.273 [20] |
| 16777251 | 3GPP S6a | 29.272 [21] |
| 16777252 | 3GPP S13/S13" | 29.272 [21] |
| 16777255 | 3GPP SLg | 29.172 [24] |
| 16777264 | 3GPP SWm | 29.273 [20] |
| 16777265 | 3GPP SWx | 29.273 [20] |
| 16777266 | 3GPP Gxx | 29.212 [19] |
| 16777267 | 3GPP S9 | 29.215 [22] |
| 16777268 | 3GPP Zpn | 29.109 [7] |
| 16777272 | 3GPP S6b | 29.273 [20] |
| 16777291 | 3GPP SLh | 29.173 [25] |
| 16777292 | 3GPP SGmb | 29.061 [13] |

# 5 Command codes

The command codes are used for communicating the command associated with the Diameter message. The command code is carried in the Diameter header"s Command-Code field. The command codes can be divided into standard command codes allocated by IANA and experimental command codes for testing purposes only.

## 5.1 Command codes allocated for 3GPP

Based on the IETF RFC 3589 [10] the IANA has allocated a standard command code range 300 - 313 for 3GPP. The command codes are presented in the following table.

**Table 5.1/1: Command code values allocated for 3GPP**

| Command code value | Command name | Abbreviation | Specified in 3GPP TS |
|---|---|---|---|
| 300 | User-Authorization-Request/-Answer | UAR/UAA | 29.229 [2] |
| 301 | Server-Assignment-Request/-Answer | SAR/SAA | |
| 302 | Location-Info-Request/-Answer | LIR/LIA | |
| 303 | Multimedia-Auth-Request/-Answer | MAR/MAA | |
| 304 | Registration-Termination-Request/-Answer | RTR/RTA | |
| 305 | Push-Profile-Request/-Answer | PPR/PPA | |
| 306 | User-Data-Request/-Answer | UDR/UDA | 29.329 [4] |
| 307 | Profile-Update-Request/-Answer | PUR/PUA | |
| 308 | Subscribe-Notifications-Request/-Answer | SNR/SNA | |
| 309 | Push-Notification-Request/-Answer | PNR/PNA | |
| 310 | Boostrapping-Info-Request/Answer | BIR/BIA | 29.109 [7] |
| 311 | Message-Process-Request/Answer | MPR/MPA | 29.140 [16] |
| 312 | GBAPush-Info-Request/Answer | GPR/GPI | 29.109 [7] |

Editor's Note:     The following command codes have been allocated to 3GPP, but they have not been used yet.

**Table 5.1/2: Command codes allocated for 3GPP**

| Command code value | Command name | Abbreviation | Specified in 3GPP TS |
|---|---|---|---|
| 313 | | | |

As defined in the IETF RFC 5516 [23]. IANA has allocated the following command code values for the S6a/S6d interface application and S13/S13" interface application.

**Table 5.1/3: SAE related Standard Command code valuess allocated for 3GPP**

| Command code value | Command name | Abbreviation | Specified in 3GPP TS |
|---|---|---|---|
| 316 | Update-Location-Request/Answer | ULR/ULA | |
| 317 | Cancel-Location-Request/Answer | CLR/CLA | |
| 318 | Authentication- Information - Request/Answer | AIR/AIA | |
| 319 | Insert Subscriber Data-Request/Answer | IDR/IDA | 29.272 [21] |
| 320 | Delete-Subscriber-Data-Request/Answer | DSR/DSA | |
| 321 | Purge-UE-Request/Answer | PUR/PUA | |
| 322 | Reset-Request/Answer | RSR/RSA | |
| 323 | Notify-Request/Answer | NOR/NOA | |
| 324 | ME-Identity-Check-Request/Answer | ECR/ECA | |

Besides the standard command code values allocated for 3GPP, IANA has allocated the following vendor-specific command code values for 3GPP vendor-specific Diameter applications:

**Table 5.1/4: Vendor-specific command codes allocated for 3GPP**

| Command code value | Command name | Abbreviation | Specified in 3GPP TS |
|---|---|---|---|
| 8388620 | Provide-Location-Request/Answer | PLR/PLA | 29.172 [24] |
| 8388621 | Location-Report-Request/Answer | LRR/LRA | |
| 8388622 | LCS-Routing-Info-Request/Answer | RIR/RIA | 29.173 [25] |

# 6 Vendor identifier

The vendor identifier (also known as Enterprise number) indicates the vendor specific attributes, result codes and application identifiers in Diameter commands. The vendor identifier is used in the Vendor-ID field of the AVP header and in the Vendor-Id AVP. The Vendor-Id AVP is used to identify the vendor in the Vendor-Specific-Application-Id and Experimental-Result-Code grouped AVPs.

## 6.1 3GPP"s vendor identifier

The IANA has allocated a vendor identifier value 10415 for 3GPP [11].

# 7 Attribute-Value-Pair codes

The AVP codes are used together with the vendor identifier to identify each attribute uniquely. There are multiple AVP namespaces. The IETF IANA namespace, that is, the AVPs with vendor identifier zero or without vendor identifier, is controlled by IANA. Each vendor controls the AVP codes within their AVP namespaces.

# 7.1 3GPP specific AVP codes

The 3GPP specific AVPs have the Vendor-Specific bit ('V' bit) set in the AVP header and they carry the 3GPP"s vendor identifier in the Vendor-ID field of the AVP header. The 3GPP specific AVP codes are presented in the following table.

**Table 7.1: 3GPP specific AVP codes**

| AVP Code | Attribute Name | Data Type | Specified in the 3GPP TS |
|---|---|---|---|
| 100 | 3GPP-WLAN-APN-Id | OctetString | 29.234 [6] |
| Note: The AVP codes from 1 to 255 are reserved for backwards compatibility with 3GPP RADIUS Vendor Specific Attributes (See TS 29.061 [13]) | | | |
| Note: The AVP codes from 256 to 299 are reserved for future use. | | | |
| 300 | Authentication-Method | Enumerated | |
| 301 | Authentication-Information-SIM | OctetString | |
| 302 | Authorization -Information-SIM | OctetString | |
| 303 | WLAN-User-Data | Grouped | |
| 304 | Charging-Data | Grouped | |
| 305 | WLAN-Access | Enumerated | |
| 306 | WLAN- 3GPP-IP-Access | Enumerated | |
| 307 | APN-Authorized | Grouped | |
| 308 | APN-Id | | |
| 309 | APN-Barring-Type | Enumerated | 29.234 [6] |
| 310 | WLAN-Direct-IP-Access | Enumerated | |
| 311 | Session-Request-Type | Enumerated | |
| 312 | Routing-Policy | IPFilterRule | |
| 313 | Max-Requested-Bandwidth | OctetString | |
| 314 | Charging-Characteristics | Integer | |
| 315 | Charging-Nodes | Grouped | |
| 316 | Primary-OCS-Charging-Function-Name | DiameterIdentity | |
| 317 | Secondary-OCS-Charging-Function-Name | DiameterIdentity | |
| 318 | 3GPP-AAA-Server-Name | DiameterIdentity | |
| 319 | Maximum-Number-Accesses | Unsigned32 | |
| Note: The AVP codes from 320 to 399 are reserved for TS 29.234 | | | |
| 400 | GBA-UserSecSettings | OctetString | |
| 401 | Transaction-Identifier | OctetString | |
| 402 | NAF-Hostname | OctetString | |
| 403 | GAA-Service-Identifier | OctetString | |
| 404 | Key-ExpiryTime | Time | |
| 405 | ME-Key-Material | OctetString | |
| 406 | UICC-Key-Material | OctetString | |
| 407 | GBA_U-Awareness-Indicator | Enumerated | |
| 408 | BootstrapInfoCreationTime | Time | |
| 409 | GUSS-Timestamp | Time | |
| 410 | GBA-Type | Enumerated | 29.109 [7] |
| 411 | UE-Id | OctetString | |
| 412 | UE-Id-Type | Enumerated | |
| 413 | UICC-App-Label | OctetString | |
| 414 | UICC-ME | Enumerated | |
| 415 | Requested-Key-Lifetime | Time | |
| 416 | Private-Identity-Request | Enumerated | |
| 417 | GBA-Push-Info | OctetString | |
| 418 | NAF-SA-Identifier | OctetString | |
| 419 | Security-Feature-Request | OctetString | |
| 420 | Security-Feature-Response | OctetString | |
| Note: The AVP codes from 421 to 499 are reserved for TS 29.109 | | | |
| 500 | Abort-Cause | Enumerated | |
| 501 | Access-Network-Charging-Address | Address | |
| 502 | Access-Network-Charging-Identifier | Grouped | |
| 503 | Access-Network-Charging-Identifier-Value | OctetString | |
| 504 | AF-Application-Identifier | OctetString | 29.209 [8], 29.211 [17] |
| 505 | AF-Charging-Identifier | OctetString | |
| 506 | Authorization-Token | OctetString | |
| 507 | Flow-Description | IPFilterRule | |
| 508 | Flow-Grouping | Grouped | |
| 509 | Flow-Number | Unsigned32 | |

| | | | |
|---|---|---|---|
| 510 | Flows | Grouped | |
| 511 | Flow-Status | Enumerated | |
| 512 | Flow-Usage | Enumerated | |
| 513 | Specific-Action | Enumerated | |
| 514 | Max-Requested-Bandwidth | Unsigned32 | |
| 515 | Max-Requested-Bandwidth-DL | Unsigned32 | |
| 516 | Max-Requested-Bandwidth-UL | Unsigned32 | |
| 517 | Media-Component-Description | Grouped | |
| 518 | Media-Component-Number | Unsigned32 | |
| 519 | Media-Sub-Component AVP | Grouped | |
| 520 | Media-Type | Enumerated | |
| 521 | RR-Bandwidth | Unsigned32 | |
| 522 | RS-Bandwidth | Unsigned32 | |
| 523 | SIP-Forking-Indication | Enumerated | |
| Note: The AVP codes from 524 to 599 are reserved for TS 29.209 and TS 29.211 | | | |
| 600 | Visited-Network-Identifier | OctetString | |
| 601 | Public-Identity | UTF8String | |
| 602 | Server-Name | UTF8String | |
| 603 | Server-Capabilities | Grouped | |
| 604 | Mandatory-Capability | Unsigned32 | |
| 605 | Optional-Capability | Unsigned32 | |
| 606 | User-Data | OctetString | |
| 607 | SIP-Number-Auth-Items | Unsigned32 | |
| 608 | SIP-Authentication-Scheme | UTF8String | |
| 609 | SIP-Authenticate | OctetString | |
| 610 | SIP-Authorization | OctetString | |
| 611 | SIP-Authentication-Context | OctetString | |
| 612 | SIP-Auth-Data-Item | Grouped | |
| 613 | SIP-Item-Number | Unsigned32 | |
| 614 | Server-Assignment-Type | Enumerated | |
| 615 | Deregistration-Reason | Grouped | |
| 616 | Reason-Code | Enumerated | |
| 617 | Reason-Info | UTF8String | |
| 618 | Charging-Information | Grouped | |
| 619 | Primary-Event-Charging-Function-Name | DiameterURI | |
| 620 | Secondary-Event-Charging-Function-Name | DiameterURI | |
| 621 | Primary-Charging-Collection-Function-Name | DiameterURI | |
| 622 | Secondary-Charging-Collection-Function-Name | DiameterURI | |
| 623 | User-Authorization-Type | Enumerated | |
| 624 | User-Data-Already-Available | Enumerated | 29.229 [2]] |
| 625 | Confidentiality-Key | OctetString | |
| 626 | Integrity-Key | OctetString | |
| 627 | User-Data-Request-Type | Enumerated | |
| 628 | Supported-Features | Grouped | |
| 629 | Feature-List-ID | Unsigned32 | |
| 630 | Feature-List | Unsigned32 | |
| 631 | Supported-Applications | Grouped | |
| 632 | Associated-Identities | Grouped | |
| 633 | Originating-Request | Enumerated | |
| 634 | Wildcarded-Public-Identity | UTF8String | |
| 635 | SIP-Digest-Authenticate | Grouped | |
| 636 | reserved | | |
| 637 | UAR-Flags | Unsigned32 | |
| 638 | Loose-Route-Indication | Enumerated | |
| 639 | SCSCF-Restoration-Info | Grouped | |
| 640 | Path | OctetString | |
| 641 | Contact | OctetString | |
| 642 | Subscription-Info | Grouped | |
| 643 | Call-ID-SIP-Header | OctetString | |
| 644 | From-SIP-Header | OctetString | |
| 645 | To-SIP-Header | OctetString | |
| 646 | Record-Route | OctetString | |
| 647 | Associated-Registered-Identities | Grouped | |
| 648 | Multiple-Registration-Indication | Enumerated | |
| 649 | Restoration-Info | Grouped | |

| 650 | Session-Priority | Enumerated | |
|---|---|---|---|
| Note: The AVP codes from 651 to 699 are reserved for TS 29.229. | | | |
| 700 | User-Identity | Grouped | |
| 701 | MSISDN | OctetString | |
| 702 | User-Data | OctetString | |
| 703 | Data-Reference | Enumerated | |
| 704 | Service-Indication | OctetString | |
| 705 | Subs-Req-Type | Enumerated | |
| 706 | Requested-Domain | Enumerated | |
| 707 | Current-Location | Enumerated | |
| 708 | Identity-Set | Enumerated | 29.329 [4] |
| 709 | Expiry-Time | Time | |
| 710 | Send-Data-Indication | Enumerated | |
| 711 | DSAI-Tag | OctetString | |
| 712 | One-Time-Notification | Enumerated | |
| 713 | Requested-Nodes | Unsigned32 | |
| 714 | Serving-Node-Indication | Enumerated | |
| 715 | Repository-Data-ID | Grouped | |
| 716 | Sequence-Number | Unsigned32 | |
| Note: The AVP codes from 717 to799 are reserved for TS 29.329. | | | |
| Note: The AVP codes from 800 to 822 are reserved for TS 32.299. | | | |
| 823 | Event-Type | Grouped | |
| 824 | SIP-Method | UTF8String | |
| 825 | Event | UTF8String | |
| 826 | Content-Type | UTF8String | |
| 827 | Content-Length | Unsigned32 | |
| 828 | Content-Disposition | UTF8String | |
| 829 | Role-of-Node | Enumerated | |
| 830 | User-Session-Id | UTF8String | |
| 831 | Calling-Party-Address | UTF8String | |
| 832 | Called-Party-Address | UTF8String | |
| 833 | Time-Stamps | Grouped | |
| 834 | SIP-Request-Timestamp | Time | |
| 835 | SIP-Response-Timestamp | Time | |
| 836 | Application-Server | UTF8String | |
| 837 | Application-provided-called-party-address | UTF8String | |
| 838 | Inter-Operator-Identifier | Grouped | |
| 839 | Originating-IOI | UTF8String | |
| 840 | Terminating-IOI | UTF8String | |
| 841 | IMS-Charging-Identifier | UTF8String | |
| 842 | SDP-Session-Description | UTF8String | |
| 843 | SDP-Media-Component | Grouped | |
| 844 | SDP-Media-Name | UTF8String | |
| 845 | SDP-Media-Description | UTF8String | 32.299 [5] |
| 846 | CG-Address | Address | |
| 847 | GGSN-Address | Address | |
| 848 | Served-Party-IP-Address | Address | |
| 849 | Authorized-QoS | UTF8String | |
| 850 | Application-Server-Information | Grouped | |
| 851 | Trunk-Group-Id | Grouped | |
| 852 | Incoming-Trunk-Group-Id | UTF8String | |
| 853 | Outgoing-Trunk-Group-Id | UTF8String | |
| 854 | Bearer-Service | OctetString | |
| 855 | Service-Id | UTF8String | |
| 856 | Associated-URI | UTF8String | |
| 857 | Charged-Party | UTF8String | |
| 858 | PoC-Controlling-Address | UTF8String | |
| 859 | PoC-Group-Name | UTF8String | |
| 860 | Cause | Grouped | |
| 861 | Cause-Code | Integer32 | |
| 862 | Node-Functionality | Enumerated | |
| 863 | Service-Specific-Data | UTF8String | |
| 864 | Originator | Enumerated | |
| 865 | PS-Furnish-Charging-Information | Grouped | |
| 866 | PS-Free-Format-Data | OctetString | |

| | | | |
|---|---|---|---|
| 867 | PS-Append-Free-Format-Data | Enumerated | |
| 868 | Time-Quota-Threshold | Unsigned32 | |
| 869 | Volume-Quota-Threshold | Unsigned32 | |
| 870 | Trigger-Type | Enumerated | |
| 871 | Quota-Holding-Time | Unsigned32 | |
| 872 | Reporting-Reason | Enumerated | |
| 873 | Service-Information | Grouped | |
| 874 | PS-Information | Grouped | |
| 875 | WLAN-Information | Grouped | |
| 876 | IMS-Information | Grouped | |
| 877 | MMS-Information | Grouped | |
| 878 | LCS-Information | Grouped | |
| 879 | PoC-Information | Grouped | |
| 880 | MBMS-Information | Grouped | |
| 881 | Quota-Consumption-Time | Unsigned32 | |
| 882 | Media-Initiator-Flag | Enumerated | |
| 883 | PoC-Server-Role | Enumerated | |
| 884 | PoC-Session-Type | Enumerated | |
| 885 | Number-Of-Participants | Unsigned32 | |
| 886 | Originator-Address | Grouped | |
| 887 | Participants-Involved | UTF8String | |
| 888 | Expires | Unsigned32 | |
| 889 | Message-Body | Grouped | |
| 890 | WAG-Address | Address | |
| 891 | WAG-PLMN-Id | OctetString | |
| 892 | WLAN-Radio-Container | Grouped | |
| 893 | WLAN-Technology | Unsigned32 | |
| 894 | WLAN-UE-Local-IPAddress | Address | |
| 895 | PDG-Address | Address | |
| 896 | PDG-Charging-Id | Unsigned32 | |
| 897 | Address-Data | UTF8String | |
| 898 | Address-Domain | Grouped | |
| 899 | Address-Type | Enumerated | |
| | | | |
| 900 | TMGI | OctectString | |
| 901 | Required-MBMS-Bearer-Capabilities | UTF8String | |
| 902 | MBMS-StartStop-Indication | Enumerated | |
| 903 | MBMS-Service-Area | OctectString | |
| 904 | MBMS-Session-Duration | Unsigned32 | |
| 905 | Alternative-APN | UTF8String | |
| 906 | MBMS-Service-Type | Enumerated | |
| 907 | MBMS-2G-3G-Indicator | Enumerated | |
| 908 | MBMS-Session-Identity | OctetString | |
| 909 | RAI | UTF8String | |
| 910 | Additional-MBMS-Trace-Info | OctetString | |
| 911 | MBMS-Time-To-Data-Transfer | Unsigned32 | 29.061 [13] |
| 912 | MBMS-Session-Identity-Repetition-Number | Unsigned32 | |
| 913 | MBMS-Required-QoS | UTF8String | |
| 914 | MBMS-Counting-Information | Enumerated | |
| 915 | MBMS-User-Data-Mode-Indication | Enumerated | |
| 916 | MBMS-GGSN-Address | UTF8String | |
| 917 | MBMS-GGSN-IPv6-Address | UTF8String | |
| 918 | MBMS-BMSC-SSM-IP-Address | UTF8String | |
| 919 | MBMS-BMSC-SSM-IPv6-Address | UTF8String | |
| 920 | MBMS-Flow-Identifier | OctetString | |
| 921 | CN-IP-Multicast-Distribution | Enumerated | |
| 922 | MBMS-HC-Indicator | Enumerated | |
| 923 | MBMS-Access-Indicator | Enumerated | |
| Note: The AVP codes from 924 to 999 are reserved for TS 29.061 | | | |
| 1000 | Bearer-Usage | Enumerated | |
| 1001 | Charging-Rule-Install | Grouped | |
| 1002 | Charging-Rule-Remove | Grouped | 29.212 [19] |
| 1003 | Charging-Rule-Definition | Grouped | |
| 1004 | Charging-Rule-Base-Name | UTF8String | |
| 1005 | Charging-Rule-Name | OctetString | |

| 1006 | Event-Trigger | Enumerated | |
|------|---------------|------------|--|
| 1007 | Metering-Method | Enumerated | |
| 1008 | Offline | Enumerated | |
| 1009 | Online | Enumerated | |
| 1010 | Precedence | Unsigned32 | |
| 1011 | Reporting-Level | Enumerated | |
| 1012 | TFT-Filter | IPFilterRule | |
| 1013 | TFT-Packet-Filter-Information | Grouped | |
| 1014 | ToS-Traffic-Class | OctetString | |
| 1016 | QoS-Information | Grouped | |
| 1018 | Charging-Rule-Report | Grouped | |
| 1019 | PCC-Rule-Status | Enumerated | |
| 1020 | Bearer-Identifier | OctetString | |
| 1021 | Bearer-Operation | Enumerated | |
| 1022 | Access-Network-Charging-Identifier-Gx | Grouped | |
| 1023 | Bearer-Control-Mode | Enumerated | |
| 1024 | Network-Request-Support | Enumerated | |
| 1025 | Guaranteed-Bitrate-DL | Unsigned32 | |
| 1026 | Guaranteed-Bitrate-UL | Unsigned32 | |
| 1027 | IP-CAN-Type | Enumerated | |
| 1028 | QoS-Class-Identifier | Enumerated | |
| 1029 | QoS-Negotiation | Enumerated | |
| 1030 | QoS-Upgrade | Enumerated | |
| 1031 | Rule-Failure-Code | Enumerated | |
| 1032 | RAT-Type | Enumerated | |
| 1033 | Event-Report-Indication | Grouped | |
| 1034 | Allocation-Retention-Priority | Grouped | |
| 1035 | CoA-IP-Address | Address | |
| 1036 | Tunnel-Header-Filter | IPFilterRule | |
| 1037 | Tunnel-Header-Length | Unsigned32 | |
| 1038 | Tunnel-Information | Grouped | |
| 1039 | CoA-Information | Grouped | |
| 1040 | APN-Aggregate-Max-Bitrate-DL | Unsigned32 | |
| 1041 | APN-Aggregate-Max-Bitrate-UL | Unsigned32 | |
| 1042 | Revalidation-Time | Time | |
| 1043 | Rule-Activation-Time | Time | |
| 1044 | Rule-DeActivation-Time | Time | |
| 1045 | Session-Release-Cause | Enumerated | |
| 1046 | Priority-Level | Unsigned32 | |
| 1047 | Pre-emption-Capability | Enumerated | |
| 1048 | Pre-emption-Vulnerability | Enumerated | |
| 1049 | Default-EPS-Bearer-QoS | Grouped | |
| 1050 | AN-GW-Address | Address | |
| 1051 | QoS-Rule-Install | Grouped | |
| 1052 | QoS-Rule-Remove | Grouped | |
| 1053 | QoS-Rule-Definition | Grouped | |
| 1054 | QoS-Rule-Name | OctetString | |
| 1055 | QoS-Rule-Report | Grouped | |
| 1056 | Security-Parameter-Index | OctetString | |
| 1057 | Flow-Label | OctetString | |
| 1058 | Flow-Information | Grouped | |
| 1059 | Packet-Filter-Content | IPFilterRule | |
| 1060 | Packet-Filter-Identifier | OctetString | |
| 1061 | Packet-Filter-Information | Grouped | |
| 1062 | Packet-Filter-Operation | Enumerated | |
| 1063 | Resource-Allocation-Notification | Enumerated | |
| 1064 | Session-Linking-Indicator | Enumerated | |
| 1065 | PDN-Connection-ID | OctetString | |
| 1066 | Monitoring-Key | OctetString | |
| 1067 | Usage-Monitoring-Information | Grouped | |
| 1068 | Usage-Monitoring-Level | Enumerated | |
| 1069 | Usage-Monitoring-Report | Enumerated | |
| 1070 | Usage-Monitoring-Support | Enumerated | |
| 1071 | CSG-Information-Reporting | Enumerated | |
| 1072 | Packet-Filter-Usage | Enumerated | |

| | | | |
|---|---|---|---|
| 1073 | Flow-Direction | Enumerated | |
| 1074 | QoS-Rule-Base-Name | UTF8String | |
| Note: The AVP codes from 1075 to 1099 are reserved for TS 29.212 | | | |
| 1100 | Served-User-Identity | Groupe | |
| 1101 | VASP-ID | UTF8Str | |
| 1102 | VAS-ID | UTF8String | |
| 1103 | Trigger-Event | Enumerated | |
| 1104 | Sender-Address | UTF8String | |
| 1105 | Initial-Recipient-Address | Grouped | |
| 1106 | Result-Recipient-Address | Grouped | |
| 1107 | Sequence-Number | Unsigned32 | |
| 1108 | Recipient-Address | UTF8String | |
| 1109 | Routeing-Address | UTF8String | 29.140 [16] |
| 1110 | Originating-Interface | Enumerated | |
| 1111 | Delivery-Report | Enumerated | |
| 1112 | Read-Reply | Enumerated | |
| 1113 | Sender-Visibility | Enumerated | |
| 1114 | Service-Key | UTF8String | |
| 1115 | Billing-Information | UTF8String | |
| 1116 | Status | Grouped | |
| 1117 | Status-Code | UTF8String | |
| 1118 | Status-Text | UTF8String | |
| Note: The AVP codes from 1119 to 1199 are reserved for TS 29.140 | | | |
| 1200 | Domain-Name | UTF8String | |
| 1201 | Recipient-Address | Grouped | |
| 1202 | Submission-Time | Time | |
| 1203 | MM-Content-Type | Grouped | |
| 1204 | Type-Number | Enumerated | |
| 1205 | Additional-Type-Information | UTF8String | |
| 1206 | Content-Size | Unsigned32 | |
| 1207 | Additional-Content-Information | Grouped | |
| 1208 | Addressee-Type | Enumerated | |
| 1209 | Priority | Enumerated | |
| 1210 | Message-ID | UTF8String | |
| 1211 | Message-Type | Enumerated | |
| 1212 | Message-Size | Unsigned32 | |
| 1213 | Message-Class | Grouped | |
| 1214 | Class-Identifier | Enumerated | |
| 1215 | Token-Text | UTF8String | |
| 1216 | Delivery-Report-Requested | Enumerated | |
| 1217 | Adaptations | Enumerated | |
| 1218 | Applic-ID | UTF8String | |
| 1219 | Aux-Applic-Info | UTF8String | |
| 1220 | Content-Class | Enumerated | |
| 1221 | DRM-Content | Enumerated | 32.299 [5] |
| 1222 | Read-Reply-Report-Requested | Enumerated | |
| 1223 | Reply-Applic-ID | UTF8String | |
| 1224 | File-Repair-Supported | Enumerated | |
| 1225 | MBMS-User-Service-Type | Enumerated | |
| 1226 | Unit-Quota-Threshold | Unsigned32 | |
| 1227 | PDP-Address | Address | |
| 1228 | SGSN-Address | Address | |
| 1229 | PoC-Session-Id | UTF8String | |
| 1230 | Deferred-Location-Even-Type | UTF8String | |
| 1231 | LCS-Client-Name | UTF8String | |
| 1232 | LCS-Client-Id | Grouped | |
| 1233 | LCS-Client-Dialed-By-MS | UTF8String | |
| 1234 | LCS-Client-External-ID | UTF8String | |
| 1235 | LCS-Client-Name | Grouped | |
| 1236 | LCS-Data-Coding-Scheme | UTF8String | |
| 1237 | LCS-Format-Indicator | Enumerated | |
| 1238 | LCS-Name-String | UTF8String | |
| 1239 | LCS-Requestor-Id | Grouped | |
| 1240 | LCS-Requestor-Id-String | UTF8String | |
| 1241 | LCS-Client-Type | Enumerated | |

| | | | |
|---|---|---|---|
| 1242 | Location-Estimate | OctetString | |
| 1243 | Location-Estimate-Type | Enumerated | |
| 1244 | Location-Type | Grouped | |
| 1245 | Positioning-Data | UTF8String | |
| 1246 | WLAN-Session-Id | UTF8String | |
| 1247 | PDP-Context-Type | Enumerated | |
| 1248 | MMBox-Storage-Requested | Enumerated | |
| 1249 | Service-Specific-Info | Grouped | |
| 1250 | Called-Asserted-Identity | UTF8String | |
| 1251 | Requested-Party-Address | UTF8String | |
| 1252 | PoC-User-Role | Grouped | |
| 1253 | PoC-User-Role-IDs | UTF8String | |
| 1254 | PoC-User-Role-info-Units | Enumerated | |
| 1255 | Talk-Burst-Exchange | Grouped | |
| 1256 | Service-Generic-Information | Grouped | |
| 1257 | Service-Specific-Type | Unsigned32 | |
| 1258 | Event-Charging-TimeStamp | Time | |
| 1259 | Participant-Access-Priority | Enumerated | |
| 1260 | Participant-Group | Grouped | |
| 1261 | PoC-Change-Conditions | Enumerated | |
| 1262 | PoC-Change-Time | Time | |
| 1263 | Access-Network-Information | OctetString | |
| 1264 | Trigger | Grouped | |
| 1265 | Base-Time-Interval | Unsigned32 | |
| 1266 | Envelope | Grouped | |
| 1267 | Envelope-End-Time | Time | |
| 1268 | Envelope-Reporting | Enumerated | |
| 1269 | Envelope-Start-Time | Time | |
| 1270 | Time-Quota-Mechanism | Grouped | |
| 1271 | Time-Quota-Type | Enumerated | |
| 1272 | Early-Media-Description | Grouped | |
| 1273 | SDP-TimeStamps | Grouped | |
| 1274 | SDP-Offer-Timestamp | Time | |
| 1275 | SDP-Answer-Timestamp | Time | |
| 1276 | AF-Correlation-Information | Grouped | |
| 1277 | PoC-Session-Initiation-type | Enumerated | |
| 1278 | Offline-Charging | Grouped | |
| 1279 | User-Participating-Type | Enumerated | |
| 1280 | Alternate-Charged-Party-Address | UTF8String | |
| 1281 | IMS-Communication-Service-Identifier | UTF8String | |
| 1282 | Number-Of-Received-Talk-Bursts | Unsigned32 | |
| 1283 | Number-Of-Talk-Bursts | Unsigned32 | |
| 1284 | Received-Talk-Burst-Time | Unsigned32 | |
| 1285 | Received-Talk-Burst-Volume | Unsigned32 | |
| 1286 | Talk-Burst-Time | Unsigned32 | |
| 1287 | Talk-Burst-Volume | Unsigned32 | |
| 1288 | Media-Initiator-Party | UTF8String | |
| Note: The AVP codes from 1289 to 1399 are reserved for TS 32.299 | | | |
| 1400 | Subscription-Data | Grouped | |
| 1401 | Terminal-Information | Grouped | |
| 1402 | IMEI | UTF8String | |
| 1403 | Software-Version | UTF8String | |
| 1404 | QoS-Subscribed | UTF8String | |
| 1405 | ULR-Flags | Unsigned32 | |
| 1406 | ULA-Flags | Unsigned32 | |
| 1407 | Visited PLMN Id | OctetString | |
| 1408 | Requested-EUTRAN-Authentication-Info | Grouped | 29.272 [21] |
| 1409 | Requested-UTRAN- GERAN-Authentication-Info | Grouped | |
| 1410 | Number-Of-Requested-Vectors | Unsigned32 | |
| 1411 | Re-Synchronization-Info | OctetString | |
| 1412 | Immediate-Response-Preferred | Unsigned32 | |
| 1413 | Authentication-Info | Grouped | |
| 1414 | E-UTRAN-Vector | Grouped | |
| 1415 | UTRAN-Vector | Grouped | |
| 1416 | GERAN-Vector | Grouped | |

| 1417 | Network-Access-Mode | Enumerated | |
|---|---|---|---|
| 1418 | HPLMN-ODB | Enumerated | |
| 1419 | Item-Number | Unsigned32 | |
| 1420 | Cancellation-Type | Enumerated | |
| 1421 | DSR-Flags | Unsigned32 | |
| 1422 | DSA-Flags | Unsigned32 | |
| 1423 | Context-Identifier | Unsigned32 | |
| 1424 | Subscriber-Status | Enumerated | |
| 1425 | Operator-Determined-Barring | Unsigned32 | |
| 1426 | Access-Restriction-Data | UTF8String | |
| 1427 | APN-OI-Replacement | UTF8String | |
| 1428 | All-APN-Configurations-Included-Indicator | Enumerated | |
| 1429 | APN-Configuration-Profile | Grouped | |
| 1430 | APN-Configuration | Grouped | |
| 1431 | EPS-Subscribed-QoS-Profile | Grouped | |
| 1432 | VPLMN-Dynamic-Address-Allowed | Enumerated | |
| 1433 | STN-SR | OctetString | |
| 1434 | Alert-Reason | Enumerated | |
| 1435 | AMBR | Grouped | |
| 1436 | CSG-Subscription-Data | Grouped | |
| 1437 | CSG-Id | Unsigned32 | |
| 1438 | PDN-GW-Allocation-Type | Enumerated | |
| 1439 | Expiration-Date | Time | |
| 1440 | RAT-Frequency-Selection-Priority-ID | Unsigned32 | |
| 1441 | IDA-Flags | Unsigned32 | |
| 1442 | PUA-Flags | Unsigned32 | |
| 1443 | NOR-Flags | Unsigned32 | |
| 1444 | User-Id | UTF8String | |
| 1445 | Equipment-Status | Enumerated | |
| 1446 | Regional-Subscription-Zone-Code | OctetString | |
| 1447 | RAND | OctetString | |
| 1448 | XRES | OctetString | |
| 1449 | AUTN | OctetString | |
| 1450 | KASME | OctetString | |
| 1451 | Reserved | - | |
| 1452 | Trace-Collection-Entity | Address | |
| 1453 | Kc | OctetString | |
| 1454 | SRES | OctetString | |
| 1455 | Reserved | - | |
| 1456 | PDN-Type | Enumerated | |
| 1457 | Roaming-Restricted-Due-To-Unsupported-Feature | Enumerated | |
| 1458 | Trace-Data | Grouped | |
| 1459 | Trace-Reference | OctetString | |
| 1460 | Reserved | - | |
| 1461 | Reserved | - | |
| 1462 | Trace-Depth | Enumerated | |
| 1463 | Trace-NE-Type-List | OctetString | |
| 1464 | Trace-Interface-List | OctetString | |
| 1465 | Trace-Event-List | OctetString | |
| 1466 | OMC-Id | OctetString | |
| 1467 | GPRS-Subscription-Data | Grouped | |
| 1468 | Complete-Data-List-Included-Indicator | Enumerated | |
| 1469 | PDP-Context | Grouped | |
| 1470 | PDP-Type | OctetString | |
| 1471 | 3GPP2-MEID | OctetString | |
| 1472 | Specific-APN-Info | Grouped | |
| 1473 | LCS-Info | Grouped | |
| 1474 | GMLC-Number | OctetString | |
| 1475 | LCS-PrivacyException | Grouped | |
| 1476 | SS-Code | OctetString | |
| 1477 | SS-Status | Grouped | |
| 1478 | Notification-To-UE-User | Enumerated | |
| 1479 | External-Client | Grouped | |
| 1480 | Client-Identity | OctetString | |
| 1481 | GMLC-Restriction | Enumerated | |

| 1482 | PLMN-Client | Enumerated | |
|------|-------------|------------|---|
| 1483 | Service-Type | Grouped | |
| 1484 | ServiceTypeIdentity | Unsigned32 | |
| 1485 | MO-LR | Grouped | |
| 1486 | Teleservice-List | Grouped | |
| 1487 | TS-Code | Enumerated | |
| 1488 | Call-Barring-Infor-List | Grouped | |
| 1489 | SGSN-Number | OctetString | |
| 1490 | IDR-Flags | Unsigned32 | |
| 1491 | ICS-Indicator | Enumerated | |
| 1492 | IMS-Voice-Over-PS-Sessions-Supported | Enumerated | |
| 1493 | Homogeneous-Support-of-IMS-Voice-Over-PS-Sessions | Enumerated | |
| 1494 | Last-UE-Activity-Time | Time | |
| 1495 | EPS-User-State | Grouped | |
| 1496 | EPS-Location-Information | Grouped | |
| 1497 | MME-User-State | Grouped | |
| 1498 | SGSN-User-State | Grouped | |
| 1499 | User-State | Enumerated | |
| | | | |
| 1500 | Non-3GPP-User-Data | Grouped | |
| 1501 | Non-3GPP-IP-Access | Enumerated | |
| 1502 | Non-3GPP-IP-Access-APN | Enumerated | 29.273 [20] |
| 1503 | AN-Trusted | Enumerated | |
| 1504 | ANID | UTF8String | |
| 1505 | Trace-Info | Grouped | |
| Note: The AVP codes from 1506 to 1599 are reserved for TS 29.273 | | | |
| 1600 | MME-Location-Information | Grouped | |
| 1601 | SGSN-Location-Information | Grouped | |
| 1602 | E-UTRAN-Cell-Global-Identity | OctetString | |
| 1603 | Tracking-Area-Identity | OctetString | |
| 1604 | Cell-Global-Identity | OctetString | |
| 1605 | Routing-Area-Identity | OctetString | |
| 1606 | Location-Area-Identity | OctetString | |
| 1607 | Service-Area-Identity | OctetString | |
| 1608 | Geographical-Information | OctetString | |
| 1609 | Geodetic-Information | OctetString | |
| 1610 | Current-Location-Retrieved | Enumerated | |
| 1611 | Age-Of-Location-Information | Unsigned32 | |
| 1612 | Active-APN | Grouped | |
| 1613 | SIPTO-Permission | Enumerated | |
| 1614 | Error-Diagnostic | Enumerated | |
| 1615 | UE-SRVCC-Capability | Enumerated | |
| 1616 | MPS-Priority | Unsigned32 | 29.272 [21] |
| 1617 | VPLMN-LIPA-Allowed | Enumerated | |
| 1618 | LIPA-Permission | Enumerated | |
| 1619 | Subscribed-Periodic-RAU-TAU-Timer | Unsigned32 | |
| 1620 | Ext-PDP-Type | OctetString | |
| 1621 | Ext-PDP-Address | Address | |
| 1622 | MDT-Configuration | Grouped | |
| 1623 | Job-Type | Enumerated | |
| 1624 | Area-Scope | Grouped | |
| 1625 | List-Of-Measurements | Unsigned32 | |
| 1626 | Reporting-Trigger | Unsigned32 | |
| 1627 | Report-Interval | Enumerated | |
| 1628 | Report-Amount | Enumerated | |
| 1629 | Event-ThresholdRSRP | Unsigned32 | |
| 1630 | Event-ThresholdRSRQ | Unsigned32 | |
| 1631 | Logging-Interval | Enumerated | |
| 1632 | Logging-Duration | Enumerated | |
| 1633 | Relay-Node-Indicator | Enumerated | |
| Note: The AVP codes from 1633 to 1699 are reserved for TS 29.272. | | | |
| 2000 | SMS-Information | Grouped | |
| 2001 | Data-Coding-Scheme | Integer32 | 32.299 [5] |
| 2002 | Destination-Interface | Grouped | |
| 2003 | Interface-Id | UTF8String | |

| | | | |
|---|---|---|---|
| 2004 | Interface-Port | UTF8String | |
| 2005 | Interface-Text | UTF8String | |
| 2006 | Interface-Type | Enumerated | |
| 2007 | SM-Message-Type | Enumerated | |
| 2008 | Originating-SCCP-Address | Address | |
| 2009 | Originator-Interface | Grouped | |
| 2010 | Recipient-SCCP-Address | Address | |
| 2011 | Reply-Path-Requested | Enumerated | |
| 2012 | SM-Discharge-Time | Time | |
| 2013 | SM-Protocol-ID | OctetString | |
| 2014 | SM-Status | OctetString | |
| 2015 | SM-User-Data-Header | OctetString | |
| 2016 | SMS-Node | Enumerated | |
| 2017 | SMSC-Address | Address | |
| 2018 | Client-Address | Address | |
| 2019 | Number-of-Messages-Sent | Unsigned32 | |
| 2020 | Low-Balance-Indication | Enumerated | |
| 2021 | Remaining-Balance | Grouped | |
| 2022 | Refund-Information | OctetString | |
| 2023 | Carrier-Select-Routing-Information | UTF8String | |
| 2024 | Number-Portability-Routing-Information | UTF8String | |
| 2025 | PoC-Event-Type | Enumerated | |
| 2026 | Recipient-Info | Grouped | |
| 2027 | Originator-Received-Address | Grouped | |
| 2028 | Recipient-Received-Address | Grouped | |
| 2029 | SM-Service-Type | Enumerated | |
| 2030 | MMTel-Information | Grouped | |
| 2031 | Service-Type | Unsigned32 | |
| 2032 | Service-Mode | Unsigned32 | |
| 2033 | Subscriber-Role | Enumerated | |
| 2034 | Number-Of-Diversions | Unsigned32 | |
| 2035 | Associated-Party-Address | UTF8String | |
| 2036 | SDP-Type | Enumerated | |
| 2037 | Change-Condition | Integer32 | |
| 2038 | Change-Time | Time | |
| 2039 | Diagnostics | Integer32 | |
| 2040 | Service-Data-Container | Grouped | |
| 2041 | Start-Time | Time | |
| 2042 | Stop-Time | Time | |
| 2043 | Time-First-Usage | Time | |
| 2044 | Time-Last-Usage | Time | |
| 2045 | Time-Usage | Unsigned32 | |
| 2046 | Traffic-Data-Volumes | Grouped | |
| 2047 | Serving-Node-Type | Enumerated | |
| 2048 | Supplementary-Service | Grouped | |
| 2049 | Participant-Action-Type | Enumerated | |
| 2050 | PDN-Connection-Id | Enumerated | |
| 2051 | Dynamic-Address-Flag | Enumerated | |
| 2052 | Accumulated-Cost | Grouped | |
| 2053 | AoC-Cost-Information | Grouped | |
| 2054 | AoC-Information | Grouped | |
| 2055 | AoC-Request-Type | Enumerated | |
| 2056 | Current-Tariff | Grouped | |
| 2057 | Next-Tariff | Grouped | |
| 2058 | Rate-Element | Grouped | |
| 2059 | Scale-Factor | Grouped | |
| 2060 | Tariff-Information | Grouped | |
| 2061 | Unit-Cost | Grouped | |
| 2062 | Incremental-Cost | Grouped | |
| 2063 | Local-Sequence-Number | Unsigned32 | |
| 2064 | Node-Id | UTF8String | |
| 2065 | SGW-Change | Enumerated | |
| 2066 | Charging-Characteristic-Selection-Mode | Enumerated | |
| Note: The AVP codes from 2067 to 2099 are reserved for TS 32.299 | | | |
| 2100 | reserved | - | 32.299 [5] |

| 2101 | Application-Server-ID | UTF8String | |
|------|-----------------------|------------|---|
| 2102 | Application-Service-Type | Enumerated | |
| 2103 | Application-Session-ID | Unsigned32 | |
| 2104 | Delivery-Status | UTF8String | |
| 2105 | reserved | - | |
| 2106 | reserved | - | |
| 2107 | reserved | - | |
| 2108 | reserved | - | |
| 2109 | reserved | - | |
| 2110 | IM-Information | Grouped | |
| 2111 | Number-Of-Messages-Successfully-Exploded | Unsigned32 | |
| 2112 | Number-Of-Messages-Successfully-Sent | Unsigned32 | |
| 2113 | Total-Number-Of-Messages-Exploded | Unsigned32 | |
| 2114 | Total-Number-Of-Messages-Sent | Unsigned32 | |
| 2115 | DCD-Information | Grouped | |
| 2116 | Content-ID | UTF8String | |
| 2117 | Content-provider-ID | UTF8String | |
| Note: The AVP codes from 2118 to 2199 are reserved for TS 32.299 | | | |
| 2200 | Subsession-Decision-Info | Grouped | |
| 2201 | Subsession-Enforcement-Info | Grouped | |
| 2202 | Subsession-Id | Unsigned32 | 29.215 [22] |
| 2203 | Subsession-Operation | Enumerated | |
| 2204 | Multiple-BBERF-Action | Enumerated | |
| Note: The AVP codes from 2205 to 2299 are reserved for TS 29.215 | | | |
| 2300 | reserved | - | |
| 2301 | SIP-Request-Timestamp-Fraction | Unsigned32 | |
| 2302 | SIP-Response-Timestamp-Fraction | Unsigned32 | |
| 2303 | Online-Charging-Flag | Enumerated | |
| 2304 | CUG-Information | OctetString | |
| 2305 | Real-Time-Tariff-Information | Grouped | |
| 2306 | Tariff-XML | UTF8String | |
| 2307 | MBMS GW-Address | Address | |
| 2308 | IMSI-Unauthenticated-Flag | Enumerated | |
| 2309 | Account-Expiration | Time | |
| 2310 | AoC-Format | Enumerated | 32.299 [5] |
| 2311 | AoC-Service | Enumerated | |
| 2312 | AoC-Service-Obligatory-Type | Grouped | |
| 2313 | AoC-Service-Type | Enumerated | |
| 2314 | AoC-Subscription-Information | Grouped | |
| 2315 | Preferred-AoC-Currency | Unsigned32 | |
| 2316 | Reason-Code | Enumerated | |
| 2317 | CSG-Access-Mode | Enumerated | |
| 2318 | CSG-Membership-Indication | Enumerated | |
| 2319 | User-CSG-Information | Grouped | |
| Note: The AVP codes from 2320 to 2399 are reserved for TS 32.299 | | | |
| 2400 | LMSI | OctetString | |
| 2401 | Serving-Node | Grouped | |
| 2402 | MME-Name | DiameterIdentity | |
| 2403 | MSC-Number | OctetString | |
| 2404 | LCS-Capabilities-Sets | Unsigned32 | 29.173 [25] |
| 2405 | GMLC-Address | Address | |
| 2406 | Additional-Serving-Node | Grouped | |
| 2407 | PPR-Address | Address | |
| Note: The AVP codes from 2408 to 2499 are reserved for TS 29.173 | | | |
| 2500 | Location-Type | Enumerated | |
| 2501 | LCS-EPS-Client-Name | Grouped | |
| 2502 | LCS-Requestor-Name | Grouped | |
| 2503 | LCS-Priority | Unsigned32 | |
| 2504 | LCS-QoS | Grouped | |
| 2505 | Horizontal-Accuracy | Unsigned32 | 29.172 [24] |
| 2506 | Vertical-Accuracy | Unsigned32 | |
| 2507 | Vertical-Requested | Enumerated | |
| 2508 | Velocity-Requested | Enumerated | |
| 2509 | Response-Time | Enumerated | |
| 2510 | Supported-GAD-Shapes | Unsigned32 | |

| 2511 | LCS-Codeword | UTF8String | |
|------|-------------------------------|-------------|---|
| 2512 | LCS-Privacy-Check | Enumerated | |
| 2513 | Accuracy-Fulfilment-Indicator | Enumerated | |
| 2514 | Age-Of-Location-Estimate | Unsigned32 | |
| 2515 | Velocity-Estimate | OctetString | |
| 2516 | EUTRAN-Positioning-Data | OctetString | |
| 2517 | ECGI | OctetString | |
| 2518 | Location-Event | Enumerated | |
| 2519 | Pseudonym-Indicator | Enumerated | |
| 2520 | LCS-Service-Type-ID | Unsigned32 | |
| 2521 | LCS-Privacy-Check-Non-Session | Grouped | |
| 2522 | LCS-Privacy-Check-Session | Grouped | |
| 2523 | LCS-QoS-Class | Enumerated | |
| Note: The AVP codes from 2524 to 2599 are reserved for TS 29.172 | | | |

# 8 Experimental result codes

The Diameter answer messages must carry either Result-Code AVP or Experimental-Result AVP. The values of Result-Code AVP are controlled by IANA. The Experimental-Result AVP is a grouped AVP containing the Vendor-Id AVP and Experimental-Result-Code AVP, thus the experimental result codes are controlled in a vendor-specific manner.

## 8.1 3GPP specific result codes

The 3GPP specific result codes are always transferred in the Experimental-Result AVP, which has the Vendor-Id with value of 3GPP"s vendor identifier. The 3GPP specific result codes shall follow the same classification as defined for the values of Result-Code AVP in IETF RFC 3588 [9]. That means, the result codes are grouped to following ranges:

- 1xxx (Informational)

- 2xxx (Success)

- 4xxx (Transient Failures)

- 5xxx (Permanent Failures)

### 8.1.1 Informational

The Informational result codes shall use the values from 1001 to 1999 in the Experimental-Result-Code AVP.

Editor"s note: No informational result codes have been yet defined in 3GPP.

### 8.1.2 Success

The Success result codes shall use the values from 2001 to 2999 in the Experimental-Result-Code AVP. The reserved 3GPP specific Success result codes are presented in the following table.

**Table 8.1.2: 3GPP specific Success result codes**

| Experimental Result Code | Result text | Specified in the TS |
|---|---|---|
| 2001 | DIAMETER_FIRST_REGISTRATION | 29.229 [2] |
| 2002 | DIAMETER_SUBSEQUENT_REGISTRATION | |
| 2003 | DIAMETER_UNREGISTERED_SERVICE | |
| 2004 | DIAMETER_SUCCESS_SERVER_NAME_NOT_STORED | |
| 2005 | *Deprecated value* | |
| Note: The Experimental Result Codes from 2006 to 2020 are reserved for the TS 29.229. | | |
| 2021 | DIAMETER_PDP_CONTEXT_DELETION_INDICATION | 29.061 [13] |
| Note: The Experimental Result Codes from 2022 to 2040 are reserved for the TS 29.061 | | |
| | | 29.109 [7] |
| Note: The Experimental Result Codes from 2401 to 2420 are reserved for the TS 29.109. | | |

## 8.1.3 Transient Failures

The Transient Failure result codes shall use the values from 4001 to 4999 in the Experimental-Result-Code AVP. The reserved 3GPP specific Transient Failure result codes are presented in the following table.

**Table 8.1.3: 3GPP specific Transient Failure result codes**

| Experimental Result Code | Result text | Specified in the TS |
|---|---|---|
| 4100 | DIAMETER_USER_DATA_NOT_AVAILABLE | 29.329 [4] |
| 4101 | DIAMETER_PRIOR_UPDATE_IN_PROGRESS | |
| Note: The Experimental Result Codes from 4102 to 4120 are reserved for the TS 29.329. | | |
| | | 29.061 [13] |
| Note: The Experimental Result Codes from 4121 to 4140 are reserved for the TS 29.061. | | |
| 4141 | DIAMETER_PCC_BEARER_EVENT | 29.212 [19] |
| Note: The Experimental Result Codes from 4142 to 4160 are reserved for the TS 29.212 | | |
| | | 32.299 [5] |
| Note: The Experimental Result Codes from 4161 to 4180 are reserved for the TS 32.299. | | |
| 4181 | DIAMETER_AUTHENTICATION_DATA_UNAVAILABLE | 29.272 [21] |
| Note: The Experimental Result Codes from 4182 to 4200 are reserved for the TS 29.272. | | |
| 4201 | DIAMETER_ERROR_ABSENT_USER | 29.173 [25] |
| Note: The Experimental Result Codes from 4202 to 4220 are reserved for the TS 29.173. | | |
| 4221 | DIAMETER_ERROR_UNREACHABLE_USER | 29.172 [24] |
| 4222 | DIAMETER_ERROR_SUSPENDED_USER | |
| 4223 | DIAMETER_ERROR_DETACHED_USER | |
| 4224 | DIAMETER_ERROR_POSITIONING_DENIED | |
| 4225 | DIAMETER_ERROR_POSITIONING_FAILED | |
| 4226 | DIAMETER_ERROR_UNKNOWN_UNREACHABLE LCS_CLIENT | |
| Note: The Experimental Result Codes from 4227 to 4240 are reserved for the TS 29.172. | | |

## 8.1.4 Permanent Failures

The Permanent Failure result codes shall use the values from 5001 to 5999 in the Experimental-Result-Code AVP. The reserved 3GPP specific Permanent Failure result codes are presented in the following table.

**Table 8.1.4: 3GPP specific Permanent Failure result codes**

| Experimental Result Code | Result text | Specified in the TS |
|---|---|---|
| 5001 | DIAMETER_ERROR_USER_UNKNOWN | 29.229 [2] |
| 5002 | DIAMETER_ERROR_IDENTITIES_DONT_MATCH | |
| 5003 | DIAMETER_ERROR_IDENTITY_NOT_REGISTERED | |
| 5004 | DIAMETER_ERROR_ROAMING_NOT_ALLOWED | |
| 5005 | DIAMETER_ERROR_IDENTITY_ALREADY_REGISTERED | |
| 5006 | DIAMETER_ERROR_AUTH_SCHEME_NOT_SUPPORTED | |
| 5007 | DIAMETER_ERROR_IN_ASSIGNMENT_TYPE | |
| 5008 | DIAMETER_ERROR_TOO_MUCH_DATA | |
| 5009 | DIAMETER_ERROR_NOT_SUPPORTED_USER_DATA | |
| 5010 | unassigned | |
| 5011 | DIAMETER_ERROR_FEATURE_UNSUPPORTED | |
| Note: The Experimental Result Codes from 5012 to 5020 are reserved for the TS 29.229. | | |
| | | 32.299 [5] |
| Note: The Experimental Result Codes from 5021 to 5040 are reserved for the TS 32.299. | | |
| 5041 | DIAMETER_ERROR_USER_NO_WLAN_SUBSCRIPTION | 29.234 [6] |
| 5042 | DIAMETER_ERROR_W-APN_UNUSED_BY_USER | |
| 5043 | DIAMETER_ERROR_NO_ACCESS_INDEPENDENT_SUBSCRIPTION | |
| 5044 | DIAMETER_ERROR_USER_NO_W-APN_SUBSCRIPTION | |
| 5045 | DIAMETER_ERROR_UNSUITABLE_NETWORK | |
| Note: The Experimental Result Codes from 5046 to 5060 are reserved for the TS 29.234. | | |
| 5061 | INVALID_SERVICE_INFORMATION | 29.209 [8], 29.211 [17] |
| 5062 | FILTER_RESTRICTIONS | |
| Note: The Experimental Result Codes from 5063 to 5080 are reserved for TS 29.209 and TS 29.211. | | |
| 5100 | DIAMETER_ERROR_USER_DATA_NOT_RECOGNIZED | 29.329 [4] |
| 5101 | DIAMETER_ERROR_OPERATION_NOT_ALLOWED | |
| 5102 | DIAMETER_ERROR_USER_DATA_CANNOT_BE_READ | |
| 5103 | DIAMETER_ERROR_USER_DATA_CANNOT_BE_MODIFIED | |
| 5104 | DIAMETER_ERROR_USER_DATA_CANNOT_BE_NOTIFIED | |
| 5105 | DIAMETER_ERROR_TRANSPARENT_DATA_OUT_OF_SYNC | |
| 5106 | DIAMETER_ERROR_SUBS_DATA_ABSENT | |
| 5107 | DIAMETER_ERROR_NO_SUBSCRIPTION_TO_DATA | |
| 5108 | DIAMETER_ERROR_DSAI_NOT_AVAILABLE | |
| Note: The Experimental Result Codes from 5109 to 5119 are reserved for the TS 29.329. | | |
| 5120 | DIAMETER_ERROR_START_INDICATION | 29.061 [13] |
| 5121 | DIAMETER_ERROR_STOP_INDICATION | |
| 5122 | DIAMETER_ERROR_UNKNOWN_MBMS_BEARER_SERVICE | |
| 5123 | DIAMETER_ERROR_SERVICE_AREA | |
| Note: The Experimental Result Codes from 5124 to 5139 are reserved for the TS 29.061. | | |
| 5140 | DIAMETER_ERROR_INITIAL_PARAMETERS | 29.212 [19] |
| 5141 | DIAMETER_ERROR_TRIGGER_EVENT | |
| 5142 | DIAMETER_PCC_RULE_EVENT | |
| 5143 | DIAMETER_ERROR_BEARER_NOT_AUTHORIZED | |
| 5143 | DIAMETER_ERROR_TRAFFIC_MAPPING_INFO_REJECTED | |
| Note: The Experimental Result Codes from 5144 to 5159 are reserved for the TS 29.212. | | |
| 5401 | DIAMETER_ERROR_IMPI_UNKNOWN | 29.109 [7 |
| 5402 | DIAMETER_ERROR_NOT_AUTHORIZED | |
| 5403 | DIAMETER_ERROR_TRANSACTION_IDENTIFIER_INVALID | |
| Note: The Experimental Result Codes from 5404 to 5419 are reserved for the TS 29.109. | | |
| 5420 | DIAMETER_ERROR_UNKNOWN_EPS_SUBSCRIPTION | 29.272 [21] |
| 5421 | DIAMETER_ERROR_RAT_NOT_ALLOWED | |
| 5422 | DIAMETER_ERROR_EQUIPMENT_UNKNOWN | |
| 5423 | DIAMETER_ERROR_UNKNOWN_SERVING_NODE | |
| Note: The Experimental Result Codes from 5424 to 5449 are reserved for the TS 29.272. | | |
| 5450 | DIAMETER_ERROR_USER_NO_NON_3GPP_SUBSCRIPTION | 29.273 [20] |
| 5451 | DIAMETER_ERROR_USER_NO_APN_SUBSCRIPTION | |
| 5452 | DIAMETER_ERROR_RAT_TYPE_NOT_ALLOWED | |

| | | |
|---|---|---|
| Note: The Experimental Result Codes from 5453 to 5469 are reserved for the TS 29.273. | | |
| 5470 | DIAMETER_ERROR _SUBSESSION | 29.215 [22] |
| Note: The Experimental Result Codes from 5471 to 5489 are reserved for the TS 29.215. | | |
| 5490 | DIAMETER_ERROR_UNAUTHORIZED_REQUESTING_NETWORK | 29.173 [25] |
| Note: The Experimental Result Codes from 5491 to 5509 are reserved for the TS 29.173. | | |

# Annex A (informative):
# Assignment of the Diameter codes and identifiers in 3GPP

This annex defines the recommended assignment procedure of Diameter codes and identifiers within the 3GPP.

# A.1      Application identifiers

If a working group detects it will require a new application identifier, it should contact the 3GPP TSG-CN WG 4 via a Liaison Statement. The LS shall contain the name of the Diameter application and a reference to the corresponding 3GPP TS. The 3GPP TSG-CN WG 4 will then request the application identifier from IANA. When the application identifier is received, the corresponding working group will be informed by 3GPP TSG-CN WG 4 and the table 4.1 in this specification will be updated.

According to RFC 3588 the creation of a new application should be avoided if at all possible and therefore it is recommended to use the existing application identifiers whenever possible.

# A.2      Command codes

If a working group detects there is a need for a new command code(s) from the 3GPP"s range, it should contact the 3GPP TSG-CN WG 4 via an LS. The LS shall contain the reference to the 3GPP TS, which specifies the command(s). The 3GPP TSG-CN WG 4 will inform the assigned command code(s) to the corresponding working group and the table 5.1 in this specification will be updated.

It should be noted that the standard command codes allocated for 3GPP are scarce resource and getting new ones would require IETF specification work to be done. Therefore it is recommended to use the existing command codes whenever possible.

# A.3      AVP codes

If a working group detects a Diameter application needs new 3GPP specific AVP codes, it should contact the 3GPP TSG-CN WG 4 via an LS. The LS shall contain the name of the Diameter application and a reference to the corresponding 3GPP TS. The 3GPP TSG-CN WG 4 will allocate a range of 100 AVP codes for the application. The range will be informed to the corresponding working group and the table 7.1 will be updated in this specification to show the reserved range. The working group can use the allocated range as a working assumption when defining the actual AVPs.

When the corresponding working group has specified the AVPs, and the specification has been approved and is under CR control, it should inform the AVPs to the 3GPP TSG-CN WG 4 via an LS. The LS should list the used AVP codes in the form of the table 7.1.

If there will be defined new AVPs for a Diameter application through the CR procedure, the assigned AVP range can be used, but the 3GPP TSG-CN WG 4 should be also informed about the new AVP codes via an LS.

Re-using of the existing AVPs is recommended, but special attention should be paid on the use of enumerated AVPs. Defining new values for an enumerated AVP should be agreed case by case with the working group responsible of the particular enumerated AVP. 3GPP TSG-CN WG 4 shall be informed via an LS about the new values assigned to the enumerated AVP.

# A.4      Result codes

If a working group detects a Diameter application needs new 3GPP specific result codes, it should contact the 3GPP TSG-CN WG 4 via an LS. The LS shall contain the name of the Diameter application and a reference to the corresponding 3GPP TS. The 3GPP TSG-CN WG 4 will allocate a range of 20 result codes from each required result

code group for the application. The ranges will be informed to the corresponding working group and the tables in the chapter 8 of this specification will be updated to show the reserved ranges. The working group can use the allocated ranges as a working assumption when defining the actual result codes.

When the corresponding working group has specified the result codes, and the specification has been approved and  is under CR control, it should convey the codes to the 3GPP TSG-CN WG 4 via an LS. The LS should list the used result codes in the form of the tables in chapter 8.

If there will be defined new result codes for a Diameter application through the CR procedure, the assigned result code ranges can be used, but the 3GPP TSG-CN WG 4 should be also informed about the new result codes via an LS.

Re-using of the existing result codes is recommended.

# Annex B (informative):
# Change history

| Change history | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Date** | **TSG #** | **TSG Doc.** | **CR** | **Rev** | **Subject/Comment** | | **Old** | **New** |
| 2004-06 | CN#24 | NP-040292 | | | Version 2.0.0 presented for information and approval | | 2.0.0 | 6.0.0 |
| 2004-09 | CN#25 | NP-040401 | 001 | | Correction of Charging application reference | | 6.0.0 | 6.1.0 |
| 2004-09 | CN#25 | NP-040401 | 002 | | Correction of the Application-Id code | | 6.0.0 | 6.1.0 |
| 2004-09 | CN#25 | NP-040401 | 003 | | Removal of User Data Request Type AVP | | 6.0.0 | 6.1.0 |
| 2004-09 | CN#25 | NP-040412 | 004 | 1 | Re-numbering of 3GPP specific AVP codes. | | 6.0.0 | 6.1.0 |
| 2004-12 | CN#26 | NP-040579 | 006 | | Inclusion of missing Cx AVPs | | 6.1.0 | 6.2.0 |
| 2004-12 | CN#26 | NP-040580 | 007 | 1 | Reservation of command code 310 | | 6.1.0 | 6.2.0 |
| 2004-12 | CN#26 | NP-040579 | 009 | 1 | Addition of Gmb interface | | 6.1.0 | 6.2.0 |
| 2004-12 | CN#26 | NP-040600 | 010 | 2 | Documenting the Reuse of the 3GPP specific application identifier of Ro for Re on the Charging Interfaces | | 6.1.0 | 6.2.0 |
| 2004-12 | CN#26 | NP-040579 | 011 | | Gq interface allocations | | 6.1.0 | 6.2.0 |
| 2004-12 | CN#26 | NP-040579 | 012 | | Addition of Gx interface | | 6.1.0 | 6.2.0 |
| 2005-03 | CN#27 | NP-050047 | 040 | 1 | WLAN Diameter AVP and result codes | | 6.2.0 | 6.3.0 |
| | | NP-050039 | 043 | | Allocations for Gx interface | | | |
| | | NP-050039 | 045 | | Allocations for Gmb interface | | | |
| | | NP-050039 | 046 | | Allocations for MMS, MM10 Interface | | | |
| 2005-06 | CT#28 | CP-050088 | 0050 | | Gx interface allocation correction | | 6.3.0 | 6.4.0 |
| | | CP-050196 | 0051 | 1 | Addition of Maximum-Number-Accesses AVP | | | |
| 2005-09 | CT#29 | CP-050440 | 0052 | 1 | Private identities on the Cx | | 6.4.0 | 6.5.0 |
| | | CP-050310 | 0053 | | Addition of Pr reference point to TS 29.230 | | | |
| | | CP-050310 | 0054 | | Error code cleanup | | | |
| | | CP-050310 | 0056 | | Addition of Rx ref. point and renaming of Experimental Result Codes | | | |
| 2005-09 | CT#29 | CP-050317 | 0055 | | Addition of GUSS timestamp AVP | | 6.5.0 | 7.0.0 |
| 2005-12 | CT#30 | CP-050624 | 0058 | | Addition of GBA-Type AVP | | 7.0.0 | 7.1.0 |
| | | CP-050612 | 0063 | | Additional Gmb AVP Allocation | | | |
| | | CP-050612 | 0065 | | Reservation of AVP codes for 32.299 | | | |
| | | CP-050625 | 0066 | | Management of Sh subscriptions | | | |
| 2006-03 | CT#31 | CP-060073 | 0069 | | Adding data type of some of WLAN-related AVPs | | 7.1.0 | 7.2.0 |
| | | CP-060084 | 0071 | | User-Data in the response to Sh-Subs-Notif | | | |
| | | CP-060084 | 0072 | 1 | New error indications for the Sh-Subs-Notif procedure | | | |
| 2006-06 | CT#32 | CP-060302 | 0075 | | S-CSCF reselection removal | | 7.2.0 | 7.3.0 |
| 2006-09 | CT#33 | CP-060417 | 0077 | 3 | New AVP Code | | 7.3.0 | 7.4.0 |
| | | CP-060417 | 0080 | | Errors to be sent in response to Sh-Notif | | | |
| | | CP-060417 | 0081 | | Definition of specific Diameter codes for DSAI | | | |
| 2006-12 | CT#34 | CP-060566 | 0085 | 1 | Optimization of handling of Wildcarded PSIs | | 7.4.0 | 7.5.0 |
| | | CP-060562 | 0086 | | Addition of Diameter Error Code for Emergency Purposes | | | |
| | | CP-060555 | 0087 | | Allocation of new AVP codes for Gmb | | | |
| | | CP-060555 | 0089 | | AVP code allocations for Rf and Ro interfaces | | | |
| | | CP-060566 | 0091 | | Allocation of Success Result Code Range for Gi Interface | | | |
| 2007-03 | CT#35 | CP-070020 | 0093 | | C3 requested addition of new AVP code values to 3GPP TS 29.230 | | 7.5.0 | 7.6.0 |
| | | CP-070020 | 0093 | | Allocation of new AVP code for DSAI-Tag AVP | | | |
| | | CP-070020 | 0093 | | Allocation of Experimental-Result-Code AVP for Gi Interface | | | |
| 2007-06 | CT#36 | CP-070318 | 0096 | | Diameter application ID for the Rel-7 Rx interface | | 7.6.0 | 7.7.0 |
| | | CP-070312 | 0098 | | Experimental-Result-Codes for Gmb interface | | | |
| | | CP-070312 | 0100 | | Correction of Diameter AVP code allocation | | | |
| 2007-09 | CT#37 | CP-070527 | 0102 | | Application ID for Gx protocol | | 7.7.0 | 7.8.0 |
| 2007-12 | CT#38 | CP-070743 | 0104 | | AVP code reservation for 32.299 in Rel-7 | | 7.8.0 | 7.9.0 |
| | | | 0105 | | Allocation of 3GPP specific AVP codes and Experimental Result Codes for Gx protocol | | | |
| 2007-12 | CT#38 | CP-070755 | 0101 | 4 | AVP assignments to support SIP Digest Authentication | | 7.9.0 | 8.0.0 |
| | | | 0103 | | AVP code reservation for 32.299 in Rel-8 | | | |
| 2008-03 | CT#39 | CP-080015 | 0109 | | Correction of reference to TS 29.140 | | 8.0.0 | 8.1.0 |
| | | CP-080019 | 0111 | | AVP code reservation for TS 32.299 in Rel-8 | | | |
| | | CP-080019 | 0107 | | Wildcarded Public User Identities | | | |
| | | CP-080191 | 0112 | 1 | Correction on AVP code allocation reservation for TS 32.299 in Rel-7 | | | |
| | | CP-080204 | 0113 | 1 | Correction on AVP code allocation reservation for TS 32.299 | | | |
| 2008-06 | CT#40 | CP-080267 | 0117 | 1 | A new Diameter Permanent Failure Code for Gx | | 8.1.0 | 8.2.0 |
| 2008-09 | CT#41 | CP-080456 | 0119 | | Emergency Public User Identity Removal | | 8.2.0 | 8.3.0 |
| 2008-09 | CT#41 | CP-080460 | 0121 | 1 | Support of "Loose-Route" indication from HSS | | | |
| 2008-09 | CT#41 | CP-080460 | 0122 | 1 | STaMIP Application Id | | | |
| 2008-09 | CT#41 | CP-080463 | 0123 | | Cx Impacts of IMS Restoration Procedures (New AVP Codes | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | Assignment) | | |
| 2008-09 | CT#41 | CP-080463 | 0124 | | New AVP Code Assignment for Forking Service Restoration | 8.2.0 | 8.3.0 |
| 2008-12 | CT#42 | CP-080691 | 0127 | 2 | Diameter Protocol Codes Assignments for S6a/S6d/S13 | 8.3.0 | 8.4.0 |
| 2008-12 | CT#42 | CP-080691 | 0128 | 1 | Diameter code assignments for 3GPP TS 29.273 | 8.3.0 | 8.4.0 |
| 2009-03 | CT#43 | CP-090044 | 0130 | 1 | Update for ReadyForSM | 8.4.0 | 8.5.0 |
| 2009-03 | CT#43 | CP-090044 | 0131 | 1 | Handling LCS Subscription Data | 8.4.0 | 8.5.0 |
| 2009-03 | CT#43 | CP-090026 | 0132 | | Update for Restoration | 8.4.0 | 8.5.0 |
| 2009-03 | CT#43 | CP-090024 | 0133 | | AppIds for Gxx and S9 | 8.4.0 | 8.5.0 |
| 2009-03 | CT#43 | CP-090033 | 0134 | 2 | AppId and command code for Zpn | 8.4.0 | 8.5.0 |
| 2009-03 | CT#43 | CP-090024 | 0137 | 1 | AVP codes for S9 protocol | 8.4.0 | 8.5.0 |
| 2009-03 | CT#43 | CP-090024 | 0138 | 1 | Diameter AVP Code allocation | 8.4.0 | 8.5.0 |
| 2009-03 | CT#43 | CP-090024 | 0140 | 1 | Location of Permanent Failure result code range for the S9 application | 8.4.0 | 8.5.0 |
| 2009-03 | CT#43 | CP-090024 | 0141 | | AVPs for TS 29.273 | 8.4.0 | 8.5.0 |
| 2009-03 | CT#43 | CP-090024 | 0142 | 1 | Error code allocation for authentication failure | 8.4.0 | 8.5.0 |
| 2009-06 | CT#44 | CP-090299 | 0129 | 4 | Update of the AVP Codes | 8.5.0 | 8.6.0 |
| | | CP-090299 | 0143 | | AVP code reservation for TS 32.299 | | |
| | | CP-090299 | 0145 | | Diameter Command Codes for S6a/S6d/S13/S13" | | |
| | | | 0146 | | Removal of Requesting Node Type from AIR | | |
| | | CP-090299 | 0147 | | S6b Application ID | | |
| 2009-09 | CT#45 | CP-090530 | 0149 | | Allocation of Experimental-Result-Codes for S9 protocol | 8.6.0 | 8.7.0 |
| | | CP-090530 | 0152 | | AVP code allocation for TS 29.212 | | |
| | | CP-090531 | 0150 | | Update of the AVP type for the User-Id | | |
| | | CP-090531 | 0153 | | Trace Depth per session | | |
| 2009-09 | CT#45 | CP-090557 | 0148 | | AVP code range for charging | 8.7.0 | 9.0.0 |
| 2009-12 | CT#46 | CP-090800 | 0154 | 1 | ICS-Flag | 9.0.0 | 9.1.0 |
| | | CP-091032 | 0156 | | From GMLC-Address to GMLC-Number | | |
| | | | 0160 | | Session-Priority AVP | | |
| | | | 0163 | 2 | Introduction of SLh application related AVPs and Experimental Result codes | | |
| | | | 0166 | | Missing AVP error codes | | |
| | | CP-090797 | 0167 | 1 | Introduction of SLg application related AVPs and Application Identifier | | |
| 2010-03 | CT#47 | CP-100031 | 0158 | 1 | Wildcarded Public Identity | 9.1.0 | 9.2.0 |
| | | CP-100034 | 0168 | 1 | Correction on AVP code allocation reservation for TS 32.299 in Rel-9 | | |
| | | CP-100046 | 0169 | 1 | AVP code allocation for 29.172 | | |
| | | CP-100036 | 0172 | | GPL_U support in TS 29.109 | | |
| | | CP-100046 | 0173 | | Error codes in 29.172 for SLg | | |
| | | CP-100048 | 0174 | 1 | AVPs in 29.272 for TADS support | | |
| | | CP-100040 | 0175 | | Error codes in 29.272 for Unknown MME | | |
| | | CP-100236 | 0176 | 4 | EPS Subcsriber State and Location Information Request | | |
| | | CP-100033 | 0180 | | One time notification AVP allocation | | |
| | | CP-100046 | 0181 | | Addition of the LCS-QoS-Class attribute value | | |
| | | CP-100175 | 0182 | | Introduction of the LCS-Capabilities-Sets AVP in SLh interface | | |
| 2010-06 | CT#48 | CP-100263 | 0188 | 1 | AVP Codes for PCC | 9.2.0 | 9.3.0 |
| | | | 0183 | | EPS state and location retrieval | | |
| | | CP-100287 | 0186 | | SGmb Application ID | | |
| | | CP-100277 | 0190 | 1 | New APVs in S6a protocol | | |
| 2010-09 | CT#49 | CP-100463 | 0197 | 1 | Addition of Diameter codes and identifiers for the SLg and SLh interfaces | 9.3.0 | 9.4.0 |
| | | CP-100464 | 0196 | | AVP Codes Allocation for PCC | | |
| 2010-09 | CT#49 | CP-100465 | 0193 | 1 | SIPTO Permission Indicator | 9.4.0 | 10.0.0 |
| | | CP-100466 | 0198 | 2 | Location data including only serving node address | | |
| | | CP-100466 | 0199 | 1 | AVP for Update-Eff feature | | |
| 2010-12 | CT#50 | CP-100699 | 0205 | | Enhanced SRVCC Subscriber Data | 10.0.0 | 10.1.0 |
| | | CP-100687 | 0201 | 1 | Allocate codes for AVPs on eMPS | | |
| | | CP-100683 | 0200 | 1 | Allocate codes for AVPs on LIPA | | |
| | | CP-100688 | 0206 | 1 | Periodic TAU/RAU timer in HSS subscription | | |
| | | CP-100846 | 0203 | 1 | S6a Error Diagnostic | | |
| 2011-03 | CT#51 | CP-110051 | 0212 | | PDP-Address correction | 10.1.0 | 10.2.0 |
| | | CP-110054 | 0215 | | Essential correction on the value type of the ELP Application AVPs | | |
| | | CP-110087 | 0207 | 2 | Minimization of Drive Tests (MDT) | | |
| | | CP-110088 | 0209 | 1 | Relay Node Indicator AVPs | | |

# History

| Document history | | |
|---|---|---|
| V10.2.0 | April 2011 | Publication |
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