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**Digital cellular telecommunications system (Phase 2+) (GSM);  
Universal Mobile Telecommunications System (UMTS);  
LTE;  
5G;  
Diameter applications;  
3GPP specific codes and identifiers  
(3GPP TS 29.230 version 18.3.0 Release 18)**



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# Contents

Intellectual Property Rights .....	2
Legal Notice .....	2
Modal verbs terminology.....	2
Foreword.....	4
1 Scope .....	6
2 References .....	6
3 Definitions and abbreviations.....	8
3.1 Definitions .....	8
3.2 Abbreviations .....	8
4 Application identifiers.....	8
4.1 3GPP specific application identifiers .....	8
5 Command codes .....	10
5.1 Command codes allocated for 3GPP .....	10
6 Vendor identifier .....	13
6.1 3GPP's vendor identifier.....	13
7 Attribute-Value-Pair codes.....	13
7.1 3GPP specific AVP codes .....	14
8 Experimental result codes .....	59
8.1 3GPP specific result codes .....	59
8.1.1 Informational .....	59
8.1.2 Success.....	59
8.1.3 Transient Failures .....	60
8.1.4 Permanent Failures .....	60
<b>Annex A (informative): Assignment of the Diameter codes and identifiers in 3GPP.....</b>	<b>65</b>
A.1 Application identifiers.....	65
A.2 Command codes .....	65
A.3 AVP codes.....	65
A.4 Result codes.....	65
<b>Annex B (informative): Change history .....</b>	<b>67</b>
History .....	79

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# Foreword

This Technical Specification has been produced by the 3rd 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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where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

In the present document, modal verbs have the following meanings:

- shall** indicates a mandatory requirement to do something
- shall not** indicates an interdiction (prohibition) to do something

The constructions "shall" and "shall not" are confined to the context of normative provisions, and do not appear in Technical Reports.

The constructions "must" and "must not" are not used as substitutes for "shall" and "shall not". Their use is avoided insofar as possible, and they are not used in a normative context except in a direct citation from an external, referenced, non-3GPP document, or so as to maintain continuity of style when extending or modifying the provisions of such a referenced document.

- should** indicates a recommendation to do something
- should not** indicates a recommendation not to do something
- may** indicates permission to do something
- need not** indicates permission not to do something

The construction "may not" is ambiguous and is not used in normative elements. The unambiguous constructions "might not" or "shall not" are used instead, depending upon the meaning intended.

- can** indicates that something is possible
- cannot** indicates that something is impossible

The constructions "can" and "cannot" are not substitutes for "may" and "need not".

- will** indicates that something is certain or expected to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document
- will not** indicates that something is certain or expected not to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document
- might** indicates a likelihood that something will happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

**might not** indicates a likelihood that something will not happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

In addition:

**is** (or any other verb in the indicative mood) indicates a statement of fact

**is not** (or any other negative verb in the indicative mood) indicates a statement of fact

The constructions "is" and "is not" do not indicate requirements.

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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.

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# 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: "Telecommunication management; Charging management; Diameter charging applications".
- [6] 3GPP TS 29.234, Release 11: "3GPP system to Wireless Local Area Network (WLAN) interworking; Stage 3".
- [7] 3GPP TS 29.109: "Generic Authentication Architecture (GAA); Zh and Zn Interfaces based on the Diameter protocol; Stage 3".
- [8] 3GPP TS 29.209, Release 6: "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; Charging management; Online Charging System (OCS): Applications and interfaces".
- [15] 3GPP TS 29.210, Release 6: "Charging rule provisioning over Gx interface".
- [16] 3GPP TS 29.140, Release 6: "Multimedia Messaging Service (MMS); MM10 interface based on Diameter protocol; Stage 3".

- [17] 3GPP TS 29.211, Release 6: "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 (PCC);Reference points".
- [20] 3GPP TS 29.273: "Evolved Packet System (EPS); 3GPP EPS AAA interfaces".
- [21] 3GPP TS 29.272: "Evolved Packet System (EPS); Mobility Management Entity (MME) and Serving GPRS Support Node (SGSN) related interfaces based on Diameter protocol".
- [22] 3GPP TS 29.215: "Policy and Charging Control (PCC) over S9 reference point; Stage 3".
- [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 (LCS); Evolved Packet Core (EPC) LCS Protocol (ELP) between the Gateway Mobile Location Centre (GMLC) and the Mobile Management Entity (MME); SLg interface".
- [25] 3GPP TS 29.173: "Location Services (LCS); Diameter-based SLh interface for Control Plane LCS".
- [26] 3GPP TS 29.219: "Policy and Charging Control: Spending Limit Reporting over Sy reference point".
- [27] 3GPP TS 29.368: "Tsp interface protocol between the MTC Interworking Function (MTC-IWF) and Service Capability Server (SCS)".
- [28] 3GPP TS 29.336: "Home Subscriber Server (HSS) diameter interfaces for interworking with packet data networks and applications".
- [29] 3GPP TS 29.337: "Diameter-based T4 interface for communications with packet data networks and applications".
- [30] 3GPP TS 29.338: "Diameter based protocols to support SMS capable MMEs".
- [31] 3GPP TS 29.468: "Group Communication System Enablers for LTE (GCSE\_LTE)".
- [32] 3GPP TS 29.343: "Proximity-services (ProSe) function to ProSe application server aspects (PC2)".
- [33] 3GPP TS 29.344: "Proximity-services (ProSe) Function to Home Subscriber Server (HSS) aspects".
- [34] 3GPP TS 29.345: "Inter-Proximity-services (ProSe) function signalling aspects; Stage 3".
- [35] 3GPP TS 29.217: "Policy and Charging Control over Np reference point".
- [36] 3GPP TS 29.128: "Diameter based T6a/T6b interface between the MME/SGSN and the SCEF".
- [37] 3GPP TS 29.153: "Service exposure functionality between SCEF and RCAF reference point".
- [38] 3GPP TS 29.154: "Service capability exposure functionality over Nt Reference point".
- [39] 3GPP TS 29.283: "Diameter Data Management applications".
- [40] 3GPP TS 29.388: "V2X Control Function to V2X Control Function to Home Subscriber Server (HSS) aspects (V4)".
- [41] 3GPP TS 29.389: "Inter-V2X Control Function Signalling aspects (V6)".
- [42] 3GPP TS 29.561: "Interworking between 5G Network and external Data Networks; Stage 3".
- [43] 3GPP TS 29.330: " IP Multimedia Subsystem (IMS); Sc Interface based on the Diameter protocol".



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## 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]
16777302	3GPP Sy	29.219 [26]
16777303	3GPP Sd	29.212 [19]
16777308	3GPP S7a	29.272 [21]
16777309	3GPP Tsp	29.368 [27]
16777310	3GPP S6m	29.336 [28]
16777311	3GPP T4	29.337 [29]
16777312	3GPP S6c	29.338 [30]
16777313	3GPP SGd	29.338 [30]
16777318	3GPP S15	29.212 [19]
16777319	3GPP S9a	29.215 [22]
16777320	3GPP S9a*	29.215 [22]
16777335	3GPP MB2-C	29.468 [31]
16777336	3GPP PC4a	29.344 [33]
16777337	3GPP PC2	29.343 [32]
16777340	3GPP PC6/PC7	29.345 [34]
16777342	3GPP Np	29.217 [35]
16777345	3GPP S6t	29.336 [28]
16777346	3GPP T6a/T6b	29.128 [36]
16777347	3GPP Ns	29.153 [37]
16777348	3GPP Nt	29.154 [38]
16777349	3GPP St	29.212 [19]
16777350	3GPP PC2	29.343 [32]
16777351	3GPP Diameter Data Management	29.283 [39]
16777355	3GPP V4	29.388 [40]
16777356	3GPP V6	29.389 [41]
16777358	3GPP Nta	29.154 [38]
16777363	3GPP Sc	29.330 [43]

## 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	29.329 [4]
306	User-Data-Request/-Answer	UDR/UDA	
307	Profile-Update-Request/-Answer	PUR/PUA	
308	Subscribe-Notifications-Request/-Answer	SNR/SNA	
309	Push-Notification-Request/-Answer	PNR/PNA	29.109 [7]
310	Boostrapping-Info-Request/Answer	BIR/BIA	
311	Message-Process-Request/Answer	MPR/MPA	
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 values allocated for 3GPP**

Command code value	Command name	Abbreviation	Specified in 3GPP TS
316	Update-Location-Request/Answer	ULR/ULA	29.272 [21]
317	Cancel-Location-Request/Answer	CLR/CLA	
318	Authentication- Information - Request/Answer	AIR/AIA	
319	Insert Subscriber Data-Request/Answer	IDR/IDA	
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]
8388635	Spending-Limit-Request/Answer	SLR/SLA	29.219 [26]
8388636	Spending-Status-Notification-Request/Answer	SNR/SNA	
8388637	TDF-Session-Request/Answer	TSR/TSA	29.212 [19]
8388731	TSSF-Notification-Request/Answer	TNR/TNA	
8388638	Update-VCSG-Location-Request/Answer	UVR/UVA	29.272 [21]
8388642	Cancel-VCSG-Location-Request/Answer	CVR/CVA	
8388639	Device-Action-Request/Answer	DAR/DAA	29.368 [27]
8388640	Device-Notification-Request/Answer	DNR/DNA	
8388641	Subscriber-Information-Request/Answer	SIR/SIA	29.336 [28]
8388718	Configuration-Information-Request/Answer	CIR/CIA	29.336 [28]
8388719	Reporting-Information-Request/Answer	RIR/RIA	
8388726	NIDD-Information-Request/Answer	NIR/NIA	29.337 [29]
8388643	Device-Trigger-Request/Answer	DTR/DTA	
8388644	Delivery-Report-Request/Answer	DRR/DRA	29.338 [30]
8388645	MO-Forward-Short-Message Request/Answer	OFR/OFA	
8388646	MT-Forward-Short-Message Request/Answer	TFR/TFA	
8388647	Send-Routing-Info-for-SM-Request/Answer	SRR/SRA	
8388648	Alert-Service-Centre-Request/Answer	ALR/ALA	
8388649	Report-SM-Delivery-Status-Request/Answer	RDR/RDA	
8388656	Trigger-Establishment-Request/Answer	TER/TEA	29.215 [30]
8388662	GCS-Action-Request/Answer	GAR/GAA	29.468 [31]
8388663	GCS-Notification-Request/Answer	GNR/GNA	
8388664	ProSe-Subscriber-Information-Request/Answer	PIR/PIA	29.344 [33]
8388665	Update-ProSe-Subscriber-Data-Request/Answer	UPR/UPA	
8388666	ProSe-Notify-Request/Answer	PNR/PNA	
8388713	ProSe-Initial-Location-Information-Request/Answer	PSR/PSA	
8388668	ProSe-Authorization-Request/Answer	PAR/PAA	29.345 [34]
8388669	ProSe-Discovery-Request/Answer	PDR/PDA	
8388670	ProSe-Match-Request/Answer	PMR/PMA	
8388671	ProSe-Match-Report-Info-Request/Answer	PIR/PIA	
8388672	ProSe-Proximity-Request/Answer	PRR/PRA	
8388673	ProSe-Location-Update-Request/Answer	PLR/PLA	
8388674	ProSe-Alert-Request/Answer	ALR/ALA	29.343 [32]
8388675	ProSe-Cancellation-Request/Answer	RPR/RPA	
8388676	ProXimity-Action-Request/Answer	PXR/PXA	29.343 [32]
8388727	ProXimity-Application-Request/Answer	XAR/XAA	
8388720	Non-Aggregated-RUCI-Report-Request/Answer	NRR/NRA	29.217 [35]
8388721	Aggregated-RUCI-Report-Request/Answer	ARR/ARA	
8388722	Modify-Uecontext-Request/Answer	MUR/MUA	29.153 [37]
8388724	Network-Status-Request/Answer	NSR/NSA	
8388725	Network-Status-Continuous-Report-Request/Answer	NCR/NCA	29.153 [37]
8388723	Background-Data-Transfer-Request/Answer	BTR/BTA	29.154 [38]
8388728	Data-Pull-Request/Answer	DPR/DPA	29.283 [39]
8388729	Data-Update-Request/Answer	DUR/DUA	
8388730	Notification-Data-Request/Answer	NDR/NDA	29.128 [36]
8388732	Connection-Management-Request/Answer	CMR/CMA	
8388733	MO-Data-Request/Answer	ODR/ODA	
8388734	MT-Data-Request/Answer	TDR/TDA	

8388735	Event-Configuration-Request/Answer	ECR/ECA	29.154 [38]
8388736	Event-Reporting-Request/Answer	ERR/ERA	

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## 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]
101	3GPP-WLAN-QoS-Filter-Rule	UTF8String	
102	3GPP-WLAN-QoS-Filter-Support	OctetString	
Note: The AVP codes from 1 to 255 are reserved for backwards compatibility with 3GPP RADIUS Vendor Specific Attributes (See 3GPP TS 29.061 [13], 3GPP TS 29.561 [42] and 3GPP TS 29.234 [6])			
Note: The AVP codes from 256 to 299 are reserved for future use.			
300	Authentication-Method	Enumerated	29.234 [6]
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	
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 1: The AVP codes from 320 to 399 are reserved for TS 29.234			
Note 2: The 3GPP-AAA-Server-Name definition is moved to TS 29.273 starting from Rel-12.			
400	GBA-UserSecSettings	OctetString	29.109 [7]
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	
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	29.209 [8], 29.211 [17], 29.214 [18]
501	Access-Network-Charging-Address	Address	
502	Access-Network-Charging-Identifier	Grouped	
503	Access-Network-Charging-Identifier-Value	OctetString	
504	AF-Application-Identifier	OctetString	
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
524	Codec-Data	OctetString
525	Service-URN	OctetString
526	Acceptable-Service-Info	Grouped
527	Service-Info-Status	Enumerated
528	MPS-Identifier	OctetString
529	AF-Signalling-Protocol	Enumerated
530	Sponsored-Connectivity-Data	Grouped
531	Sponsor-Identity	OctetString
532	Application-Service-Provider-Identity	OctetString
533	Rx-Request-Type	Enumerated
534	Min-Requested-Bandwidth-DL	Unsigned32
535	Min-Requested-Bandwidth-UL	Unsigned32
536	Required-Access-Info	Enumerated
537	IP-Domain-Id	OctetString
538	GCS-Identifier	OctetString
539	Sharing-Key-DL	Unsigned32
540	Sharing-Key-UL	Unsigned32
541	Retry-Interval	Unsigned32
542	Sponsoring-Action	Enumerated
543	Max-Supported-Bandwidth-DL	Unsigned32
544	Max-Supported-Bandwidth-UL	Unsigned32
545	Min-Desired-Bandwidth-DL	Unsigned32
546	Min-Desired-Bandwidth-UL	Unsigned32
547	MCPTT-Identifier	OctetString
548	Service-Authorization-Info	Unsigned32
549	Media-Component-Status	Unsigned32
550	Priority-Sharing-Indicator	Enumerated
551	AF-Requested-Data	Unsigned32
552	Content-Version	Unsigned64
553	Pre-emption-Control-Info	Unsigned32
554	Extended-Max-Requested-BW-DL	Unsigned32
555	Extended-Max-Requested-BW-UL	Unsigned32
556	Extended-Max-Supported-BW-DL	Unsigned32
557	Extended-Max-Supported-BW-UL	Unsigned32
558	Extended-Min-Desired-BW-DL	Unsigned32
559	Extended-Min-Desired-BW-UL	Unsigned32
560	Extended-Min-Requested-BW-DL	Unsigned32
561	Extended-Min-Requested-BW-UL	Unsigned32
562	MCVideo-Identifier	OctetString
563	IMS-Content-Identifier	OctetString
564	IMS-Content-Type	Enumerated
565	Callee-Information	Grouped
566	FLUS-Identifier	OctetString
567	Desired-Max-Latency	Float32
568	Desired-Max-Loss	Float32
569	NID	OctetString
570	MA-Information	Grouped
571	MA-Information-Action	Unsigned32
572	5GS-RAN-NAS-Release-Cause	Grouped
573	5GMM-Cause	Unsigned32
574	5GSM-Cause	Unsigned32
575	NGAP-Cause	Grouped
576	NGAP-Group	Unsigned32
577	NGAP-Value	Unsigned32
578	Wireline-User-Reqested-Info	Grouped

579	HFC-Node-Identifier	OctetString	
580	GLI-Identifier	OctetString	
581	Line-Type	Unsigned32	
Note: The AVP codes from 582 to 599 are reserved for TS 29.209, TS 29.211 and TS 29.214			
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	
625	Confidentiality-Key	OctetString	
626	Integrity-Key	OctetString	
627	User-Data-Request-Type	Enumerated	
628	Supported-Features	Grouped	
629	Feature-List-ID	Unsigned32	29.229 [2]
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	Wildcarded-IMPU	UTF8String	
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	
651	Identity-with-Emergency-Registration	Grouped	
652	Priviledged-Sender-Indication	Enumerated	
653	LIA-Flags	Unsigned32	
654	Initial-CSeq-Sequence-Number	Unsigned32	
655	SAR-Flags	Unsigned32	
656	Allowed-WAF-WWSF-Identities	Grouped	
657	WebRTC-Authentication-Function-Name	UTF8String	
658	WebRTC-Web-Server-Function-Name	UTF8String	
659	RTR-Flags	Unsigned32	
660	P-CSCF-Subscription-Info	Grouped	

661	Registration-Time-Out	Time	
662	Alternate-Digest-Algorithm	UTF8String	
663	Alternate-Digest-HA1	UTF8String	
664	Failed-PCSCF	Grouped	
665	PCSCF-FQDN	DiameterIdentity	
666	PCSCF-IP-Address	Address	
Note: The AVP codes from 667 to 699 are reserved for TS 29.229.			
700	User-Identity	Grouped	29.329 [4]
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	
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	
717	Pre-paging-Supported	Enumerated	
718	Local-Time-Zone-Indication	Enumerated	
719	UDR-Flags	Unsigned32	
720	Call-Reference-Info	Grouped	
721	Call-Reference-Number	OctetString	
722	AS-Number	OctetString	
Note: The AVP codes from 723 to 799 are reserved for TS 29.329.			
Note: The AVP codes from 800 to 822 are reserved for TS 32.299.			
823	Event-Type	Grouped	32.299 [5]
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	
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	Reserved	-	
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	Reserved	-	
891	Reserved	-	
892	Reserved	-	
893	Reserved	-	
894	Reserved	-	
895	Reserved	-	
896	Reserved	-	
897	Address-Data	UTF8String	
898	Address-Domain	Grouped	
899	Address-Type	Enumerated	
900	TMGI	OctetString	
901	Required-MBMS-Bearer-Capabilities	UTF8String	
902	MBMS-StartStop-Indication	Enumerated	
903	MBMS-Service-Area	OctetString	
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	29.061 [13]
911	MBMS-Time-To-Data-Transfer	Unsigned32	
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	
924	MBMS-GW-SSM-IP-Address	OctetString	
925	MBMS-GW-SSM-IPv6-Address	OctetString	
926	MBMS-BMSC-SSM-UDP-Port	OctetString	
927	MBMS-GW-UDP-Port	OctetString	
928	MBMS-GW-UDP-Port-Indicator	Enumerated	
929	MBMS-Data-Transfer-Start	Unsigned64	
930	MBMS-Data-Transfer-Stop	Unsigned64	
931	MBMS-Flags	Unsigned32	
932	Restart-Counter	Unsigned32	
933	Diagnostic-Info	Unsigned32	
934	MBMS-Cell-List	OctetString	
Note: The AVP codes from 935 to 999 are reserved for TS 29.061			
100 0	Bearer-Usage	Enumerated	29.212 [19]
100 1	Charging-Rule-Install	Grouped	
100 2	Charging-Rule-Remove	Grouped	
100 3	Charging-Rule-Definition	Grouped	
100 4	Charging-Rule-Base-Name	UTF8String	
100 5	Charging-Rule-Name	OctetString	
100 6	Event-Trigger	Enumerated	
100 7	Metering-Method	Enumerated	
100 8	Offline	Enumerated	
100 9	Online	Enumerated	
101 0	Precedence	Unsigned32	
101 1	Reporting-Level	Enumerated	
101 2	TFT-Filter	IPFilterRule	
101 3	TFT-Packet-Filter-Information	Grouped	
101 4	ToS-Traffic-Class	OctetString	
101 6	QoS-Information	Grouped	
101 8	Charging-Rule-Report	Grouped	
101 9	PCC-Rule-Status	Enumerated	
102 0	Bearer-Identifier	OctetString	
102 1	Bearer-Operation	Enumerated	
102 2	Access-Network-Charging-Identifier-Gx	Grouped	
102 3	Bearer-Control-Mode	Enumerated	
102 4	Network-Request-Support	Enumerated	
102 5	Guaranteed-Bitrate-DL	Unsigned32	
102 6	Guaranteed-Bitrate-UL	Unsigned32	

102 7	IP-CAN-Type	Enumerated
102 8	QoS-Class-Identifier	Enumerated
102 9	QoS-Negotiation	Enumerated
103 0	QoS-Upgrade	Enumerated
103 1	Rule-Failure-Code	Enumerated
103 2	RAT-Type	Enumerated
103 3	Event-Report-Indication	Grouped
103 4	Allocation-Retention-Priority	Grouped
103 5	CoA-IP-Address	Address
103 6	Tunnel-Header-Filter	IPFilterRule
103 7	Tunnel-Header-Length	Unsigned32
103 8	Tunnel-Information	Grouped
103 9	CoA-Information	Grouped
104 0	APN-Aggregate-Max-Bitrate-DL	Unsigned32
104 1	APN-Aggregate-Max-Bitrate-UL	Unsigned32
104 2	Revalidation-Time	Time
104 3	Rule-Activation-Time	Time
104 4	Rule-DeActivation-Time	Time
104 5	Session-Release-Cause	Enumerated
104 6	Priority-Level	Unsigned32
104 7	Pre-emption-Capability	Enumerated
104 8	Pre-emption-Vulnerability	Enumerated
104 9	Default-EPS-Bearer-QoS	Grouped
105 0	AN-GW-Address	Address
105 1	QoS-Rule-Install	Grouped
105 2	QoS-Rule-Remove	Grouped
105 3	QoS-Rule-Definition	Grouped
105 4	QoS-Rule-Name	OctetString
105 5	QoS-Rule-Report	Grouped
105 6	Security-Parameter-Index	OctetString
105 7	Flow-Label	OctetString
105 8	Flow-Information	Grouped
105 9	Packet-Filter-Content	IPFilterRule

106 0	Packet-Filter-Identifier	OctetString
106 1	Packet-Filter-Information	Grouped
106 2	Packet-Filter-Operation	Enumerated
106 3	Resource-Allocation-Notification	Enumerated
106 4	Session-Linking-Indicator	Enumerated
106 5	PDN-Connection-ID	OctetString
106 6	Monitoring-Key	OctetString
106 7	Usage-Monitoring-Information	Grouped
106 8	Usage-Monitoring-Level	Enumerated
106 9	Usage-Monitoring-Report	Enumerated
107 0	Usage-Monitoring-Support	Enumerated
107 1	CSG-Information-Reporting	Enumerated
107 2	Packet-Filter-Usage	Enumerated
107 3	Charging-Correlation-Indicator	Enumerated
107 4	QoS-Rule-Base-Name	UTF8String
107 5	Routing-Rule-Remove	Grouped
107 6	Routing-Rule-Definition	Grouped
107 7	Routing-Rule-Identifier	OctetString
107 8	Routing-Filter	Grouped
107 9	Routing-IP-Address	Address
108 0	Flow-Direction	Enumerated
108 1	Routing-Rule-Install	Grouped
108 2	Credit-Management-Status	Unsigned32
108 5	Redirect-Information	Grouped
108 6	Redirect- Support	Enumerated
108 7	TDF-Information	Grouped
108 8	TDF-Application-Identifier	OctetString
108 9	TDF-Destination-Host	DiameterIdentity
109 0	TDF-Destination-Realm	DiameterIdentity
109 1	TDF-IP-address	Address
109 2	ADC-Rule-Install	Grouped
109 3	ADC-Rule-Remove	Grouped
109 4	ADC-Rule-Definition	Grouped

109 5	ADC-Rule-Base-Name	UTF8String	
109 6	ADC-Rule-Name	OctetString	
109 7	ADC-Rule-Report	Grouped	
109 8	Application-Detection-Information	Grouped	
109 9	PS-to-CS-Session-Continuity	Enumerated	
Note: The AVP codes from 1083 to 1084 are reserved for TS 29.212			
110 0	Served-User-Identity	Grouped	29.140 [16]
110 1	VASP-ID	UTF8Str	
110 2	VAS-ID	UTF8String	
110 3	Trigger-Event	Enumerated	
110 4	Sender-Address	UTF8String	
110 5	Initial-Recipient-Address	Grouped	
110 6	Result-Recipient-Address	Grouped	
110 7	Sequence-Number	Unsigned32	
110 8	Recipient-Address	UTF8String	
110 9	Routeing-Address	UTF8String	
111 0	Originating-Interface	Enumerated	
111 1	Delivery-Report	Enumerated	
111 2	Read-Reply	Enumerated	
111 3	Sender-Visibility	Enumerated	
111 4	Service-Key	UTF8String	
111 5	Billing-Information	UTF8String	
111 6	Status	Grouped	
111 7	Status-Code	UTF8String	
111 8	Status-Text	UTF8String	
Note: The AVP codes from 1119 to 1199 are reserved for TS 29.140			
120 0	Domain-Name	UTF8String	32.299 [5]
120 1	Recipient-Address	Grouped	
120 2	Submission-Time	Time	
120 3	MM-Content-Type	Grouped	
120 4	Type-Number	Enumerated	
120 5	Additional-Type-Information	UTF8String	
120 6	Content-Size	Unsigned32	
120 7	Additional-Content-Information	Grouped	



120 8	Addressee-Type	Enumerated
120 9	Priority	Enumerated
121 0	Message-ID	UTF8String
121 1	Message-Type	Enumerated
121 2	Message-Size	Unsigned32
121 3	Message-Class	Grouped
121 4	Class-Identifier	Enumerated
121 5	Token-Text	UTF8String
121 6	Delivery-Report-Requested	Enumerated
121 7	Adaptations	Enumerated
121 8	Applic-ID	UTF8String
121 9	Aux-Applic-Info	UTF8String
122 0	Content-Class	Enumerated
122 1	DRM-Content	Enumerated
122 2	Read-Reply-Report-Requested	Enumerated
122 3	Reply-Applic-ID	UTF8String
122 4	File-Repair-Supported	Enumerated
122 5	MBMS-User-Service-Type	Enumerated
122 6	Unit-Quota-Threshold	Unsigned32
122 7	PDP-Address	Address
122 8	SGSN-Address	Address
122 9	PoC-Session-Id	UTF8String
123 0	Deferred-Location-Even-Type	UTF8String
123 1	LCS-APN	UTF8String
123 2	LCS-Client-Id	Grouped
123 3	LCS-Client-Dialed-By-MS	UTF8String
123 4	LCS-Client-External-ID	UTF8String
123 5	LCS-Client-Name	Grouped
123 6	LCS-Data-Coding-Scheme	UTF8String
123 7	LCS-Format-Indicator	Enumerated
123 8	LCS-Name-String	UTF8String
123 9	LCS-Requestor-Id	Grouped
124 0	LCS-Requestor-Id-String	UTF8String

124 1	LCS-Client-Type	Enumerated
124 2	Location-Estimate	OctetString
124 3	Location-Estimate-Type	Enumerated
124 4	Location-Type	Grouped
124 5	Positioning-Data	UTF8String
124 6	Reserved	-
124 7	PDP-Context-Type	Enumerated
124 8	MMBox-Storage-Requested	Enumerated
124 9	Service-Specific-Info	Grouped
125 0	Called-Asserted-Identity	UTF8String
125 1	Requested-Party-Address	UTF8String
125 2	PoC-User-Role	Grouped
125 3	PoC-User-Role-IDs	UTF8String
125 4	PoC-User-Role-info-Units	Enumerated
125 5	Talk-Burst-Exchange	Grouped
125 6	Service-Generic-Information	Grouped
125 7	Service-Specific-Type	Unsigned32
125 8	Event-Charging-TimeStamp	Time
125 9	Participant-Access-Priority	Enumerated
126 0	Participant-Group	Grouped
126 1	PoC-Change-Conditions	Enumerated
126 2	PoC-Change-Time	Time
126 3	Access-Network-Information	OctetString
126 4	Trigger	Grouped
126 5	Base-Time-Interval	Unsigned32
126 6	Envelope	Grouped
126 7	Envelope-End-Time	Time
126 8	Envelope-Reporting	Enumerated
126 9	Envelope-Start-Time	Time
127 0	Time-Quota-Mechanism	Grouped
127 1	Time-Quota-Type	Enumerated
127 2	Early-Media-Description	Grouped
127 3	SDP-TimeStamps	Grouped

127		Time	
4	SDP-Offer-Timestamp		
127		Time	
5	SDP-Answer-Timestamp		
127		Grouped	
6	AF-Correlation-Information		
127		Enumerated	
7	PoC-Session-Initiation-type		
127		Grouped	
8	Offline-Charging		
127		Enumerated	
9	User-Participating-Type		
128		UTF8String	
0	Alternate-Charged-Party-Address		
128		UTF8String	
1	IMS-Communication-Service-Identifier		
128		Unsigned32	
2	Number-Of-Received-Talk-Bursts		
128		Unsigned32	
3	Number-Of-Talk-Bursts		
128		Unsigned32	
4	Received-Talk-Burst-Time		
128		Unsigned32	
5	Received-Talk-Burst-Volume		
128		Unsigned32	
6	Talk-Burst-Time		
128		Unsigned32	
7	Talk-Burst-Volume		
128		UTF8String	
8	Media-Initiator-Party		
Note: The AVP codes from 1289 to 1299 are reserved for TS 32.299			
130		Enumerated	32.299 [5]
0	PC5-Radio-Technology		
130		Time	
1	RAN-End-Time		
130		Grouped	
2	RAN-Secondary-RAT-Usage-Report		
130		Time	
3	RAN-Start-Time		
130		OctetString	
4	Secondary-RAT-Type		
130		UTF8String	
5	Civic-Address-Information		
130		Grouped	
6	WLAN-Operator-Id		
130		UTF8String	
7	WLAN-Operator-Name		
130		UTF8String	
8	WLAN-PLMN-Id		
130		UTF8String	
9	API-Content		
131		Enumerated	
0	API-Direction		
131		OctetString	
1	API-Identifier		
131		Time	
2	API-Invocation-Timestamp		
131		Unsigned32	
3	API-Result-Code		
131		Unsigned64	
4	API-Size		
131		Enumerated	
5	API-Network-Service-Node		
131		Grouped	
6	Exposure-Function-API-Information		
131		Address	
7	SCEF-Address		

1318	TLTRI	Unsigned32	
1319	TTRI	Unsigned32	
1320	3GPP-OC-Specific-Reduction	Grouped	
1321	3GPP-OC-Rating-Group	Unsigned32	
1322	3GPP-OC-Request-Type	Enumerated	
1323	VoLTE-Information	Grouped	
Note: The AVP codes from 1324 to 1399 are reserved for TS 32.229.			
1400	Subscription-Data	Grouped	29.272 [21]
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	
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	Unsigned32	

142 7	APN-OI-Replacement	UTF8String
142 8	All-APN-Configurations-Included-Indicator	Enumerated
142 9	APN-Configuration-Profile	Grouped
143 0	APN-Configuration	Grouped
143 1	EPS-Subscribed-QoS-Profile	Grouped
143 2	VPLMN-Dynamic-Address-Allowed	Enumerated
143 3	STN-SR	OctetString
143 4	Alert-Reason	Enumerated
143 5	AMBR	Grouped
143 6	CSG-Subscription-Data	Grouped
143 7	CSG-Id	Unsigned32
143 8	PDN-GW-Allocation-Type	Enumerated
143 9	Expiration-Date	Time
144 0	RAT-Frequency-Selection-Priority-ID	Unsigned32
144 1	IDA-Flags	Unsigned32
144 2	PUA-Flags	Unsigned32
144 3	NOR-Flags	Unsigned32
144 4	User-Id	UTF8String
144 5	Equipment-Status	Enumerated
144 6	Regional-Subscription-Zone-Code	OctetString
144 7	RAND	OctetString
144 8	XRES	OctetString
144 9	AUTN	OctetString
145 0	KASME	OctetString
145 1	Reserved	-
145 2	Trace-Collection-Entity	Address
145 3	Kc	OctetString
145 4	SRES	OctetString
145 5	Reserved	-
145 6	PDN-Type	Enumerated
145 7	Roaming-Restricted-Due-To-Unsupported-Feature	Enumerated
145 8	Trace-Data	Grouped
145 9	Trace-Reference	OctetString

146 0	Reserved	-
146 1	Reserved	-
146 2	Trace-Depth	Enumerated
146 3	Trace-NE-Type-List	OctetString
146 4	Trace-Interface-List	OctetString
146 5	Trace-Event-List	OctetString
146 6	OMC-Id	OctetString
146 7	GPRS-Subscription-Data	Grouped
146 8	Complete-Data-List-Included-Indicator	Enumerated
146 9	PDP-Context	Grouped
147 0	PDP-Type	OctetString
147 1	3GPP2-MEID	OctetString
147 2	Specific-APN-Info	Grouped
147 3	LCS-Info	Grouped
147 4	GMLC-Number	OctetString
147 5	LCS-PrivacyException	Grouped
147 6	SS-Code	OctetString
147 7	SS-Status	OctetString
147 8	Notification-To-UE-User	Enumerated
147 9	External-Client	Grouped
148 0	Client-Identity	OctetString
148 1	GMLC-Restriction	Enumerated
148 2	PLMN-Client	Enumerated
148 3	Service-Type	Grouped
148 4	ServiceTypeIdentity	Unsigned32
148 5	MO-LR	Grouped
148 6	Teleservice-List	Grouped
148 7	TS-Code	Enumerated
148 8	Call-Barring-Info	Grouped
148 9	SGSN-Number	OctetString
149 0	IDR-Flags	Unsigned32
149 1	ICS-Indicator	Enumerated
149 2	IMS-Voice-Over-PS-Sessions-Supported	Enumerated

149 3	Homogeneous-Support-of-IMS-Voice-Over-PS-Sessions	Enumerated		
149 4	Last-UE-Activity-Time	Time		
149 5	EPS-User-State	Grouped		
149 6	EPS-Location-Information	Grouped		
149 7	MME-User-State	Grouped		
149 8	SGSN-User-State	Grouped		
149 9	User-State	Enumerated		
150 0	Non-3GPP-User-Data	Grouped		29.273 [20]
150 1	Non-3GPP-IP-Access	Enumerated		
150 2	Non-3GPP-IP-Access-APN	Enumerated		
150 3	AN-Trusted	Enumerated		
150 4	ANID	UTF8String		
150 5	Trace-Info	Grouped		
150 6	MIP-FA-RK	OctetString		
150 7	MIP-FA-RK-SPI	Unsigned32		
150 8	PPR-Flags	Unsigned32		
150 9	WLAN-Identifier	Grouped		
151 0	TWAN-Access-Info	Grouped		
151 1	Access-Authorization-Flags	Unsigned32		
151 2	TWAN-Default-APN-Context-Id	Unsigned32		
151 3	Reserved	-		
151 4	Reserved	-		
151 5	Reserved	-		
151 6	Full-Network-Name	OctetString		
151 7	Short-Network-Name	OctetString		
151 8	AAA-Failure-Indication	Unsigned32		
151 9	Transport-Access-Type	Enumerated		
152 0	DER-Flags	Unsigned32		
152 1	DEA-Flags	Unsigned32		
152 2	RAR-Flags	Unsigned32		
152 3	DER-S6b-Flags	Unsigned32		
152 4	SSID	UTF8String		
152 5	HESSID	UTF8String		

152		Grouped	
6	Access-Network-Info		
152		Unsigned32	
7	TWAN-Connection-Mode		
152		Grouped	
8	TWAN-Connectivity-Parameters		
152		Unsigned32	
9	Connectivity-Flags		
153		OctetString	29.272 [21]
0	TWAN-PCO		
153		Address	
1	TWAG-CP-Address		
153		UTF8String	
2	TWAG-UP-Address		
153		Unsigned32	
3	TWAN-S2a-Failure-Cause		
153		Unsigned32	
4	SM-Back-Off-Timer		
153		OctetString	
5	WLCP-Key		
318	3GPP-AAA-Server-Name	DiameterIdentity	
153		Unsigned64	
6	Origination-Time-Stamp		
153		Unsigned32	
7	Maximum-Wait-Time		
153		Unsigned32	
8	Emergency-Services		
153		Unsigned32	
9	AAR-Flags		
154		Unsigned32	
0	IMEI-Check-In-VPLMN-Result		
154		Unsigned32	
1	ERP-Authorization		
154		Unsigned32	
2	High-Priority-Access-Info		
Note 1: The AVP codes from 1543 to 1599 are reserved for TS 29.273			
Note 2: The AVP 3GPP-AAA-Server-Name was originally defined in 3GPP TS 29.234 and is now defined in 3GPP TS 29.273 from Rel-12.			
160		Grouped	29.272 [21]
0	MME-Location-Information		
160		Grouped	
1	SGSN-Location-Information		
160		OctetString	
2	E-UTRAN-Cell-Global-Identity		
160		OctetString	
3	Tracking-Area-Identity		
160		OctetString	
4	Cell-Global-Identity		
160		OctetString	
5	Routing-Area-Identity		
160		OctetString	
6	Location-Area-Identity		
160		OctetString	
7	Service-Area-Identity		
160		OctetString	
8	Geographical-Information		
160		OctetString	
9	Geodetic-Information		
161		Enumerated	
0	Current-Location-Retrieved		
161		Unsigned32	
1	Age-Of-Location-Information		
161		Grouped	
2	Active-APN		
161		Enumerated	
3	SIPTO-Permission		



161		Enumerated
4	Error-Diagnostic	
161		Enumerated
5	UE-SRVCC-Capability	
161		Unsigned32
6	MPS-Priority	
161		Enumerated
7	VPLMN-LIPA-Allowed	
161		Enumerated
8	LIPA-Permission	
161		Unsigned32
9	Subscribed-Periodic-RAU-TAU-Timer	
162		OctetString
0	Ext-PDP-Type	
162		Address
1	Ext-PDP-Address	
162		Grouped
2	MDT-Configuration	
162		Enumerated
3	Job-Type	
162		Grouped
4	Area-Scope	
162		Unsigned32
5	List-Of-Measurements	
162		Unsigned32
6	Reporting-Trigger	
162		Enumerated
7	Report-Interval	
162		Enumerated
8	Report-Amount	
162		Unsigned32
9	Event-ThresholdRSRP	
163		Unsigned32
0	Event-ThresholdRSRQ	
163		Enumerated
1	Logging-Interval	
163		Enumerated
2	Logging-Duration	
163		Enumerated
3	Relay-Node-Indicator	
163		Enumerated
4	MDT-User-Consent	
163		Unsigned32
5	PUR-Flags	
163		Enumerated
6	Subscribed-VSRVCC	
163		Grouped
7	Equivalent-PLMN-List	
163		Unsigned32
8	CLR-Flags	
163		Unsigned32
9	UVR-Flags	
164		Unsigned32
0	UVA-Flags	
164		Grouped
1	VPLMN-CSG-Subscription-Data	
164		UTF8String
2	Time-Zone	
164		OctetString
3	A-MSISDN	
164		-
4	Reserved	
164		OctetString
5	MME-Number-for-MT-SMS	
164		-
6	Reserved	

164	7	Reserved	-
164	8	SMS-Register-Request	Enumerated
164	9	Local-Time-Zone	Grouped
165	0	Daylight-Saving-Time	Enumerated
165	1	GMLC-Info	Grouped
165	2	GMLC-Name	DiameterIdentity
165	3	GMLC-Realm	DiameterIdentity
165	4	Subscription-Data-Flags	Unsigned32
165	5	Measurement-Period-LTE	Enumerated
165	6	Measurement-Period-UMTS	Enumerated
165	7	Collection-Period-RRM-LTE	Enumerated
165	8	Collection-Period-RRM-UMTS	Enumerated
165	9	Positioning-Method	OctetString
166	0	Measurement-Quantity	OctetString
166	1	Event-Threshold-Event-1F	Integer32
166	2	Event-Threshold-Event-1I	Integer32
166	3	Restoration-Priority	Unsigned32
166	4	SGs-MME-Identity	UTF8String
166	5	SIPTO-Local-Network-Permission	Unsigned32
166	6	Coupled-Node-Diameter-ID	DiameterIdentity
166	7	WLAN-offloadability	Grouped
166	8	WLAN-offloadability-EUTRAN	Unsigned32
166	9	WLAN-offloadability-UTRAN	Unsigned32
167	0	Reset-ID	OctetString
167	1	MDT-Allowed-PLMN-Id	OctetString
167	2	Adjacent-PLMNs	Grouped
167	3	Adjacent-Access-Restriction-Data	Grouped
167	4	DL-Buffering-Suggested-Packet-Count	Integer32
167	5	IMSI-Group-Id	Grouped
167	6	Group-Service-Id	Unsigned32
167	7	Group-PLMN-Id	OctetString
167	8	Local-Group-Id	OctetString
167	9	AIR-Flags	Unsigned32

168 0	UE-Usage-Type	Unsigned32
168 1	Non-IP-PDN-Type-Indicator	Enumerated
168 2	Non-IP-Data-Delivery-Mechanism	Unsigned32
168 3	Additional-Context-Identifier	Unsigned32
168 4	SCEF-Realm	DiameterIdentity
168 5	Subscription-Data-Deletion	Grouped
168 6	Preferred-Data-Mode	Unsigned32
168 7	Emergency-Info	Grouped
168 8	V2X-Subscription-Data	Grouped
168 9	V2X-Permission	Unsigned32
169 0	PDN-Connection-Continuity	Unsigned32
169 1	eDRX-Cycle-Length	Grouped
169 2	eDRX-Cycle-Length-Value	OctetString
169 3	UE-PC5-AMBR	Unsigned32
169 4	MBSFN-Area	Grouped
169 5	MBSFN-Area-ID	Unsigned32
169 6	Carrier-Frequency	Unsigned32
169 7	RDS-Indicator	Enumerated
169 8	Service-Gap-Time	Unsigned32
169 9	Aerial-UE-Subscription-Information	Unsigned32
170 0	Broadcast-Location-Assistance-Data-Types	Unsigned64
170 1	Paging-Time-Window	Grouped
170 2	Operation-Mode	Unsigned32
170 3	Paging-Time-Window-Length	OctetString
170 4	Core-Network-Restrictions	Unsigned32
170 5	eDRX-Related-RAT	Grouped
170 6	Interworking-5GS-Indicator	Enumerated
170 7	Ethernet-PDN-Type-Indicator	Enumerated
170 8	Subscribed-ARPI	Unsigned32
170 9	IAB-Operation-Permission	Enumerated
171 0	V2X-Subscription-Data-Nr	Grouped
171 1	UE-PC5-QoS	Grouped
171 2	PC5-QoS-Flow	Grouped

171 3	5QI	Integer32	
171 4	PC5-Flow-Bitrates	Grouped	
171 5	Guaranteed-Flow-Bitrates	Integer32	
171 6	Maximum-Flow-Bitrates	Integer32	
171 7	PC5-Range	Integer32	
171 8	PC5-Link-AMBR	Integer32	
171 9	Third-Context-ID	Unsigned32	
Note: The AVP codes from 1720 to 1799 are reserved for TS 29.272.			
200 0	SMS-Information	Grouped	
200 1	Data-Coding-Scheme	Integer32	
200 2	Destination-Interface	Grouped	
200 3	Interface-Id	UTF8String	
200 4	Interface-Port	UTF8String	
200 5	Interface-Text	UTF8String	
200 6	Interface-Type	Enumerated	
200 7	SM-Message-Type	Enumerated	
200 8	Originating-SCCP-Address	Address	
200 9	Originator-Interface	Grouped	
201 0	Recipient-SCCP-Address	Address	
201 1	Reply-Path-Requested	Enumerated	
201 2	SM-Discharge-Time	Time	
201 3	SM-Protocol-ID	OctetString	32.299 [5]
201 4	SM-Status	OctetString	
201 5	SM-User-Data-Header	OctetString	
201 6	SMS-Node	Enumerated	
201 7	SMSC-Address	Address	
201 8	Client-Address	Address	
201 9	Number-of-Messages-Sent	Unsigned32	
202 0	Low-Balance-Indication	Enumerated	
202 1	Remaining-Balance	Grouped	
202 2	Refund-Information	OctetString	
202 3	Carrier-Select-Routing-Information	UTF8String	
202 4	Number-Portability-Routing-Information	UTF8String	
202 5	PoC-Event-Type	Enumerated	

202 6	Recipient-Info	Grouped
202 7	Originator-Received-Address	Grouped
202 8	Recipient-Received-Address	Grouped
202 9	SM-Service-Type	Enumerated
203 0	MMTel-Information	Grouped
203 1	MMTel-Sservice-Type	Unsigned32
203 2	Service-Mode	Unsigned32
203 3	Subscriber-Role	Enumerated
203 4	Number-Of-Diversions	Unsigned32
203 5	Associated-Party-Address	UTF8String
203 6	SDP-Type	Enumerated
203 7	Change-Condition	Integer32
203 8	Change-Time	Time
203 9	Diagnostics	Integer32
204 0	Service-Data-Container	Grouped
204 1	Start-Time	Time
204 2	Stop-Time	Time
204 3	Time-First-Usage	Time
204 4	Time-Last-Usage	Time
204 5	Time-Usage	Unsigned32
204 6	Traffic-Data-Volumes	Grouped
204 7	Serving-Node-Type	Enumerated
204 8	Supplementary-Service	Grouped
204 9	Participant-Action-Type	Enumerated
205 0	PDN-Connection-Charging-ID	Unsigned32
205 1	Dynamic-Address-Flag	Enumerated
205 2	Accumulated-Cost	Grouped
205 3	AoC-Cost-Information	Grouped
205 4	AoC-Information	Grouped
205 5	AoC-Request-Type	Enumerated
205 6	Current-Tariff	Grouped
205 7	Next-Tariff	Grouped
205 8	Rate-Element	Grouped

205 9	Scale-Factor	Grouped	
206 0	Tariff-Information	Grouped	
206 1	Unit-Cost	Grouped	
206 2	Incremental-Cost	Grouped	
206 3	Local-Sequence-Number	Unsigned32	
206 4	Node-Id	UTF8String	
206 5	SGW-Change	Enumerated	
206 6	Charging-Characteristic-Selection-Mode	Enumerated	
206 7	SGW-Address	Address	
206 8	Dynamic-Address-Flag-Extension	Enumerated	
Note: The AVP codes from 2069 to 2099 are reserved for TS 32.299.			
210 0	reserved	-	32.299 [5]
210 1	Application-Server-ID	UTF8String	
210 2	Application-Service-Type	Enumerated	
210 3	Application-Session-ID	Unsigned32	
210 4	Delivery-Status	UTF8String	
210 5	reserved	-	
210 6	reserved	-	
210 7	reserved	-	
210 8	reserved	-	
210 9	reserved	-	
211 0	IM-Information	Grouped	
211 1	Number-Of-Messages-Successfully-Exploded	Unsigned32	
211 2	Number-Of-Messages-Successfully-Sent	Unsigned32	
211 3	Total-Number-Of-Messages-Exploded	Unsigned32	
211 4	Total-Number-Of-Messages-Sent	Unsigned32	
211 5	DCD-Information	Grouped	
211 6	Content-ID	UTF8String	
211 7	Content-provider-ID	UTF8String	
211 8	Charge-Reason-Code	Enumerated	
Note: The AVP codes from 2119 to 2199 are reserved for TS 32.299.			
220 0	Subsession-Decision-Info	Grouped	29.215 [22]
220 1	Subsession-Enforcement-Info	Grouped	
220 2	Subsession-Id	Unsigned32	

220 3	Subsession-Operation	Enumerated		
220 4	Multiple-BBERF-Action	Enumerated		
220 5	UE-Local-IPv6-Prefix	OctetString		
220 6	DRA-Deployment	Enumerated		
220 7	PCRF-Address	DiameterIdentity		
220 8	DRA-Binding	Enumerated		
Note: The AVP codes from 2209 to 2299 are reserved for TS 29.215.				
230 0	reserved	-	32.299 [5]	
230 1	SIP-Request-Timestamp-Fraction	Unsigned32		
230 2	SIP-Response-Timestamp-Fraction	Unsigned32		
230 3	Online-Charging-Flag	Enumerated		
230 4	CUG-Information	OctetString		
230 5	Real-Time-Tariff-Information	Grouped		
230 6	Tariff-XML	UTF8String		
230 7	MBMS GW-Address	Address		
230 8	IMSI-Unauthenticated-Flag	Enumerated		
230 9	Account-Expiration	Time		
231 0	AoC-Format	Enumerated		
231 1	AoC-Service	Enumerated		
231 2	AoC-Service-Obligatory-Type	Grouped		
231 3	AoC-Service-Type	Enumerated		
231 4	AoC-Subscription-Information	Grouped		
231 5	Preferred-AoC-Currency	Unsigned32		
231 6	Reserved	-		
231 7	CSG-Access-Mode	Enumerated		
231 8	CSG-Membership-Indication	Enumerated		
231 9	User-CSG-Information	Grouped		
232 0	Outgoing-Session-Id	UTF8String		
232 1	Initial-IMS-Charging-Identifier	UTF8String		
232 2	IMS-Emergency-Indicator	Enumerated		
232 3	MBMS-Charged-Party	Enumerated		
Note: The AVP codes from 2324 to 2399 are reserved for TS 32.299.				
240 0	LMSI	OctetString		29.173 [25]
240 1	Serving-Node	Grouped		

240 2	MME-Name	DiameterIdentity	
240 3	MSC-Number	OctetString	
240 4	LCS-Capabilities-Sets	Unsigned32	
240 5	GMLC-Address	Address	
240 6	Additional-Serving-Node	Grouped	
240 7	PPR-Address	Address	
240 8	MME-Realm	DiameterIdentity	
240 9	SGSN-Name	DiameterIdentity	
241 0	SGSN-Realm	DiameterIdentity	
241 1	RIA-Flags	Unsigned32	
Note: The AVP codes from 2412 to 2499 are reserved for TS 29.173.			
250 0	SLg-Location-Type	Enumerated	29.172 [24]
250 1	LCS-EPS-Client-Name	Grouped	
250 2	LCS-Requestor-Name	Grouped	
250 3	LCS-Priority	Unsigned32	
250 4	LCS-QoS	Grouped	
250 5	Horizontal-Accuracy	Unsigned32	
250 6	Vertical-Accuracy	Unsigned32	
250 7	Vertical-Requested	Enumerated	
250 8	Velocity-Requested	Enumerated	
250 9	Response-Time	Enumerated	
251 0	Supported-GAD-Shapes	Unsigned32	
251 1	LCS-Codeword	UTF8String	
251 2	LCS-Privacy-Check	Enumerated	
251 3	Accuracy-Fulfilment-Indicator	Enumerated	
251 4	Age-Of-Location-Estimate	Unsigned32	
251 5	Velocity-Estimate	OctetString	
251 6	EUTRAN-Positioning-Data	OctetString	
251 7	ECGI	OctetString	
251 8	Location-Event	Enumerated	
251 9	Pseudonym-Indicator	Enumerated	
252 0	LCS-Service-Type-ID	Unsigned32	
252 1	LCS-Privacy-Check-Non-Session	Grouped	
252 2	LCS-Privacy-Check-Session	Grouped	



252 3	LCS-QoS-Class	Enumerated
252 4	GERAN-Positioning-Info	Grouped
252 5	GERAN-Positioning-Data	OctetString
252 6	GERAN-GANSS-Positioning-Data	OctetString
252 7	UTRAN-Positioning-Info	Grouped
252 8	UTRAN-Positioning-Data	OctetString
252 9	UTRAN-GANSS-Positioning-Data	OctetString
253 0	LRR-Flags	Unsigned32
253 1	LCS-Reference-Number	OctetString
253 2	Deferred-Location-Type	Unsigned32
253 3	Area-Event-Info	Grouped
253 4	Area-Definition	Grouped
253 5	Area	Grouped
253 6	Area-Type	Unsigned32
253 7	Area-Identification	Grouped
253 8	Occurrence-Info	Enumerated
253 9	Interval-Time	Unsigned32
254 0	Periodic-LDR-Information	Grouped
254 1	Reporting-Amount	Unsigned32
254 2	Reporting-Interval	Unsigned32
254 3	Reporting-PLMN-List	Grouped
254 4	PLMN-ID-List	Grouped
254 5	PLR-Flags	Unsigned32
254 6	PLA-Flags	Unsigned32
254 7	Deferred-MT-LR-Data	Grouped
254 8	Termination-Cause	Unsigned32
254 9	LRA-Flags	Unsigned32
255 0	Periodic-Location-Support-Indicator	Enumerated
255 1	Prioritized-List-Indicator	Enumerated
255 2	ESMLC-Cell-Info	Grouped
255 3	Cell-Portion-ID	Unsigned32
255 4	1xRTT-RCID	OctetString
255 5	Delayed-Location-Reporting-Data	Grouped

255 6	Civic-Address	UTF8String	
255 7	Barometric-Pressure	Unsigned32	
255 8	UTRAN-Additional-Positioning-Data	OctetString	
255 9	Motion-Event-Info	Grouped	
256 0	Linear-Distance	Unsigned32	
256 1	Maximum-Interval	Unsigned32	
256 2	Sampling-Interval	Unsigned32	
256 3	Reporting-Duration	Unsigned32	
256 4	Reporting-Location-Requirements	Unsigned32	
256 5	Additional-Area	Grouped	
256 6	AMF-Instance-Id	UTF8String	
Note: The AVP codes from 2567 to 2599 are reserved for TS 29.172.			
260 0	reserved	-	32.299 [5]
260 1	IMS-Application-Reference-Identifier	UTF8String	
260 2	Low-Priority-Indicator	Enumerated	
260 3	IP-Realm-Default-Indicator	Enumerated	
260 4	Local-GW-Inserted-Indicator	Enumerated	
260 5	Transcoder-Inserted-Indicator	Enumerated	
260 6	PDP-Address-Prefix-Length	Unsigned32	
Note: The AVP codes from 2607 to 2699 are reserved for TS 32.299.			
270 0	Reserved	-	32.299 [5]
270 1	Transit-IOI-List	UTF8String	
270 2	Status-AS-Code	Enumerated	
270 3	NNI-Information	Grouped	
270 4	NNI-Type	Enumerated	
270 5	Neighbour-Node-Address	Address	
270 6	Relationship-Mode	Enumerated	
270 7	Session-Direction	Enumerated	
270 8	From-Address	UTF8String	
270 9	Access-Transfer-Information	Grouped	
271 0	Access-Transfer-Type	Enumerated	
271 1	Related-IMS-Charging-Identifier	UTF8String	
271 2	Related-IMS-Charging-Identifier-Node	Address	
271 3	IMS-Visited-Network-Identifier	UTF8String	

271 4	TWAN-User-Location-Info	Grouped	
271 5	Reserved	-	
271 6	BSSID	UTF8String	
271 7	TAD-Identifier	Enumerated	
Note: The AVP codes from 2718 to 2799 are reserved for TS 32.299.			
280 0	Reserved	-	29.212 [19]
280 1	ADC-Revalidation-Time	Time	
280 2	TDF-Application-Instance-Identifier	OctetString	
280 3	HeNB-BBF-FQDN	UTF8String	
280 4	HeNB-Local-IP-Address	Address	
280 5	UE-Local-IP-Address	Address	
280 6	UDP-Source-Port	Unsigned32	
280 7	CS-Service-Qos-Request-Identifier	OctetString	
280 8	CS-Service-QoS-Request-Operation	Enumerated	
280 9	Mute-Notification	Enumerated	
281 0	Monitoring-Time	Time	
281 1	AN-GW-Status	Enumerated	
281 2	User-Location-Info-Time	Grouped	
281 3	CS-Service-Resource-Report	Time	
281 4	CS-Service-Resource-Failure-Cause	Enumerated	
281 5	CS-Service-Resource-Result-Operation	Enumerated	
281 6	Default-QoS-Information	Grouped	
281 7	Default-QoS-Name	UTF8String	
281 8	Conditional-APN-Aggregate-Max-Bitrate	Grouped	
281 9	RAN-NAS-Release-Cause	OctetString	
282 0	Presence-Reporting-Area-Elements-List	OctetString	
282 1	Presence-Reporting-Area-Identifier	OctetString	
282 2	Presence-Reporting-Area-Information	Grouped	
282 3	Presence-Reporting-Area-Status	Unsigned32	
282 4	NetLoc-Access-Support	Unsigned32	
282 5	Fixed-User-Location-Info	Grouped	
282 6	PCSCF-Restoration-Indication	Unsigned32	
282 7	IP-CAN-Session-Charging-Scope	Enumerated	
282 8	Monitoring-Flags	Unsigned32	

2829	Default-Access	Enumerated		
2830	NBIFOM-Mode	Enumerated		
2831	NBIFOM-Support	Enumerated		
2832	RAN-Rule-Support	Unsigned32		
2833	Access-Availability-Change-Reason	Unsigned32		
2834	Routing-Rule-Failure-Code	Unsigned32		
2835	Routing-Rule-Report	Grouped		
2836	Traffic-Steering-Policy-Identifier-DL	OctetString		
2837	Traffic-Steering-Policy-Identifier-UL	OctetString		
2838	Request-Type	Unsigned32		
2839	Execution-Time	Time		
2840	Conditional-Policy-Information	Grouped		
2841	Resource-Release-Notification	Enumerated		
2842	Removal-Of-Access	Enumerated		
2843	TCP-Source-Port	Unsigned32		
2844	Default-Bearer-Indication	Enumerated		
2845	PRA-Install	Grouped		
2846	PRA-Remove	Grouped		
2847	3GPP-PS-Data-Off-Status	Enumerated		
2848	Extended-APN-AMBR-DL	Unsigned32		
2849	Extended-APN-AMBR-UL	Unsigned32		
2850	Extended-GBR-DL	Unsigned32		
2851	Extended-GBR-UL	Unsigned32		
2852	Max-PLR-DL	Unsigned32		
2853	Max-PLR-UL	Unsigned32		
2854	UE-Status	Unsigned32		
Note: The AVP codes from 2855 to 2899 are reserved for TS 29.212.				
2900	reserved	-		29.219 [26]
2901	Policy-Counter-Identifier	Grouped		
2902	Policy-Counter-Status	UTF8String		
2903	Policy-Counter-Status-Report	Grouped		
2904	SL-Request-Type	Enumerated		
2905	Pending-Policy-Counter-Information	Grouped		
2906	Pending-Policy-Counter-Change-Time	Time		

2907	SN-Request-Type	Unsigned32	
Note: The AVP codes from 2908 to 2999 are reserved for TS 29.219.			
3000	reserved	-	29.368 [27]
3001	Device-Action	Grouped	
3002	Device-Notification	Grouped	
3003	Trigger-Data	Grouped	
3004	Payload	OctetString	
3005	Action-Type	Enumerated	
3006	Priority-Indication	Enumerated	
3007	Reference-Number	Unsigned32	
3008	Request-Status	Enumerated	
3009	Delivery-Outcome	Enumerated	
3010	Application-Port-Identifier	Unsigned32	
3011	Old-Reference-Number	Unsigned32	
3012	Feature-Supported-In-Final-Target	Unsigned32	
Note: The AVP codes from 3013 to 3099 are reserved for TS 29.368.			
3100	IP-SM-GW-Number	OctetString	29.336 [28]
3101	IP-SM-GW-Name	DiameterIdentity	
3102	User-Identifier	Grouped	
3103	Service-ID	Enumerated	
3104	SCS-Identity	OctetString	
3105	Service-Parameters	Grouped	
3106	T4-Parameters	Grouped	
3107	Service-Data	Grouped	
3108	T4-Data	Grouped	
3109	HSS-Cause	Unsigned32	
3110	SIR-Flags	Unsigned32	
3111	External-Identifier	UTF8String	
3112	IP-SM-GW-Realm	DiameterIdentity	
3113	AESE-Communication-Pattern	Grouped	
3114	Communication-Pattern-Set	Grouped	
3115	Periodic-Communication-Indicator	Unsigned32	
3116	Communication-Duration-Time	Unsigned32	
3117	Periodic-Time	Unsigned32	

311 8	Scheduled-Communication-Time	Grouped
311 9	Stationary-Indication	Unsigned32
312 0	AESE-Communication-Pattern-Config-Status	Grouped
312 1	AESE-Error-Report	Grouped
312 2	Monitoring-Event-Configuration	Grouped
312 3	Monitoring-Event-Report	Grouped
312 4	SCEF-Reference-ID	Unsigned32
312 5	SCEF-ID	DiameterIdentity
312 6	SCEF-Reference-ID-for-Deletion	Unsigned32
312 7	Monitoring-Type	Unsigned32
312 8	Maximum-Number-of-Reports	Unsigned32
312 9	UE-Reachability-Configuration	Grouped
313 0	Monitoring-Duration	Time
313 1	Maximum-Detection-Time	Unsigned32
313 2	Reachability-Type	Unsigned32
313 3	Maximum-Latency	Unsigned32
313 4	Maximum-Response-Time	Unsigned32
313 5	Location-Information-Configuration	Grouped
313 6	MONTE-Location-Type	Unsigned32
313 7	Accuracy	Unsigned32
313 8	Association-Type	Unsigned32
313 9	Roaming-Information	Unsigned32
314 0	Reachability-Information	Unsigned32
314 1	IMEI-Change	Unsigned32
314 2	Monitoring-Event-Config-Status	Grouped
314 3	Supported-Service	Grouped
314 4	Supported-Monitoring-Event	Unsigned64
314 5	CIR-Flags	Unsigned32
314 6	Service-Result	Grouped
314 7	Service-Result-Code	Unsigned32
314 8	Reference-ID-Validity-Time	Time
314 9	Event-handling	Unsigned32
315 0	NIDD-Authorization-Request	Grouped

315	1	NIDD-Authorization-Response	Grouped
315	2	Service-Report	Grouped
315	3	Node-Type	Unsigned32
315	4	S6t-HSS-Cause	Unsigned32
315	5	Enhanced-Coverage-Restriction	Grouped
315	6	Enhanced-Coverage-Restriction-Data	Grouped
315	7	Restricted-PLMN-List	Grouped
315	8	Allowed-PLMN-List	Grouped
315	9	Requested-Validity-Time	Time
316	0	Granted-Validity-Time	Time
316	1	NIDD-Authorization-Update	Grouped
316	2	Loss-Of-Connectivity-Reason	Unsigned32
316	3	Group-Reporting-Guard-Timer	Unsigned32
316	4	CIA-Flags	Unsigned32
316	5	Group-Report	Grouped
316	6	Group-Report-Item	Grouped
316	7	RIR-Flags	Unsigned32
316	8	Type-Of-External-Identifier	Unsigned32
316	9	APN-Validity-Time	Grouped
317	0	Suggested-Network-Configuration	Grouped
317	1	Monitoring-Event-Report-Status	Grouped
317	2	PLMN-ID-Requested	Enumerated
317	3	AdditionalIdentifiers	Grouped
317	4	NIR-Flags	Unsigned32
317	5	Reporting-Time-Stamp	Time
317	6	Group-User-Identifier	Grouped
317	7	NIA-Flags	Unsigned32
317	8	MTC-Provider-Info	Grouped
317	9	MTC-Provider-ID	UTF8String
318	0	PDN-Connectivity-Status-Configuration	Grouped
318	1	PDN-Connectivity-Status-Report	Grouped
318	2	PDN-Connectivity-Status-Type	Unsigned32
318	3	Traffic-Profile	Unsigned32

318 4	Updated-Network-Configuration	Grouped	
318 5	Battery-Indicator	Unsigned32	
318 6	SCEF-Reference-ID-Ext	Unsigned64	
318 7	SCEF-Reference-ID-for-Deletion-Ext	Unsigned64	
318 8	Exclude-Identifiers	Grouped	
318 9	Include-Identifiers	Grouped	
Note: The AVP codes from 3190 to 3199 are reserved for TS 29.336.			
320 0	SM-Delivery-Outcome-T4	Enumerated	29.337 [29]
320 1	Absent-Subscriber-Diagnostic-T4	Enumerated	
320 2	Trigger-Action	Unsigned32	
320 3	MTC-Error-Diagnostic	Unsigned32	
Note: The AVP codes from 3204 to 3299 are reserved for TS 29.337.			
330 0	SC-Address	OctetString	29.338 [30]
330 1	SM-RP-UI	OctetString	
330 2	TFR-Flags	Unsigned32	
330 3	SM-Delivery- Failure-Cause	Grouped	
330 4	SM-Enumerated-Delivery-Failure-Cause	Enumerated	
330 5	SM-Diagnostic-Info	OctetString	
330 6	SM-Delivery-Timer	Unsigned32	
330 7	SM-Delivery-Start-Time	Time	
330 8	SM-RP-MTI	Enumerated	
330 9	SM-RP-SMEA	OctetString	
331 0	SRR-Flags	Unsigned32	
331 1	SM-Delivery-Not-Intended	Enumerated	
331 2	MWD-Status	Unsigned32	
331 3	MME-Absent-User-Subscriber-Diagnostic-SM	Unsigned32	
331 4	MSC-Absent-User-Subscriber-Diagnostic-SM	Unsigned32	
331 5	SGSN-Absent-User-Subscriber-Diagnostic SM	Unsigned32	
331 6	SM-Delivery-Outcome	Grouped	
331 7	MME-SM-Delivery-Outcome	Grouped	
331 8	MSC-SM-Delivery-Outcome	Grouped	
331 9	SGSN-SM-Delivery-Outcome	Grouped	
332 0	IP-SM-GW-SM-Delivery-Outcome	Grouped	
332 1	SM-Delivery-Cause	Enumerated	



332 2	Absent-User-Diagnostic-SM	Unsigned32		
332 3	RDR-Flags	Unsigned32		
332 4	SMSMI-Correlation-ID	Unsigned32		
332 5	HSS-ID	UTF8String		
332 6	Originating-SIP-URI	UTF8String		
332 7	Destination-SIP-URI	UTF8String		
332 8	OFR-Flags	Unsigned32		
332 9	Maximum-UE-Availability-Time	Time		
333 0	Maximum-Retransmission-Time	Time		
333 1	Requested-Retransmission-Time	Time		
333 2	SMS-GMSC-Address	OctetString		
333 3	SMS-GMSC-Alert-Event	Unsigned32		
333 4	SMSF-3GPP-Absent-User-Diagnostic-SM	Unsigned32		
333 5	SMSF-Non-3GPP-Absent-User-Diagnostic-SM	Unsigned32		
333 6	SMSF-3GPP-SM-Delivery-Outcome	Grouped		
333 7	SMSF-Non-3GPP-SM-Delivery-Outcome	Grouped		
333 8	SMSF-3GPP-Number	OctetString		
333 9	SMSF-Non-3GPP-Number	OctetString		
334 0	SMSF-3GPP-Name	DiameterIdentity		
334 1	SMSF-Non-3GPP-Name	DiameterIdentity		
334 2	SMSF-3GPP-Realm	DiameterIdentity		
334 3	SMSF-Non-3GPP-Realm	DiameterIdentity		
334 4	SMSF-3GPP-Address	Grouped		
334 5	SMSF-Non-3GPP-Address	Grouped		
334 6	SMSF-3GPP-SBI-Support-Indicator	Enumerated		
334 7	SMSF-Non-3GPP-SBI-Support-Indicator	Enumerated		
334 8	IP-SM-GW-SBI-Support-Indicator	Enumerated		
Note: The AVP codes from 3349 to 3399 are reserved for TS 29.338.				
340 0	reserved	-		32.299 [5]
340 1	Reason-Header	UTF8String		
340 2	Instance-Id	UTF8String		
340 3	Route-Header-Received	UTF8String		
340 4	Route-Header-Transmitted	UTF8String		
340 5	SM-Device-Trigger-Information	Grouped		

340 6	MTC-IWF-Address	Address
340 7	SM-Device-Trigger-Indicator	Enumerated
340 8	SM-Sequence-Number	Unsigned32
340 9	SMS-Result	Unsigned32
341 0	VCS-Information	Grouped
341 1	Basic-Service-Code	Grouped
341 2	Bearer-Capability	OctetString
341 3	Teleservice	OctetString
341 4	ISUP-Location-Number	OctetString
341 5	Forwarding-Pending	Enumerated
341 6	ISUP-Release-Cause	Unsigned32
341 7	MSC-Address	OctetString
341 8	Network-Call-Reference-Number	OctetString
341 9	Start-of-Charging	Time
342 0	VLR-Number	OctetString
342 1	CN-Operator-Selection-Entity	Enumerated
342 2	ISUP-Cause-Diagnostics	OctetString
342 3	ISUP-Cause-Location	Unsigned32
342 4	ISUP-Cause-Value	Unsigned32
342 5	EPDG-Address	Address
342 6	Announcing-UE-HPLMN-Identifier	UTF8String
342 7	Announcing-UE-VPLMN-Identifier	UTF8String
342 8	Coverage-Status	Enumerated
342 9	Layer-2-Group-ID	OctetString
343 0	Monitored-PLMN-Identifier	UTF8String
343 1	Monitoring-UE-HPLMN-Identifier	UTF8String
343 2	Monitoring-UE-Identifier	UTF8String
343 3	Monitoring-UE-VPLMN-Identifier	UTF8String
343 4	ProSe-PC3-Control-Protocol-Cause	Integer32
343 5	ProSe-PC3-EPC-Control-Protocol-Cause	Integer32
343 6	Requested-PLMN-Identifier	UTF8String
343 7	Requestor-PLMN-Identifier	UTF8String
343 8	Role-Of-ProSe-Function	Enumerated

343 9	Usage-Information-Report-Sequence-Number	Integer32	
344 0	ProSe-3rd-Party-Application-ID	UTF8String	
344 1	ProSe-Direct-Communication-Transmission-Data-Container	Grouped	
344 2	ProSe-Direct-Discovery-Model	Enumerated	
344 3	ProSe-Event-Type	Enumerated	
344 4	ProSe-Function-IP-Address	Address	
344 5	ProSe-Functionality	Enumerated	
344 6	ProSe-Group-IP-Multicast-Addresses	Address	
344 7	ProSe-Information	Grouped	
344 8	ProSe-Range-Class	Enumerated	
344 9	ProSe-Reason-For-Cancellation	Enumerated	
345 0	ProSe-Request-Timestamp	Time	
345 1	ProSe-Role-Of-UE	Enumerated	
345 2	ProSe-Source-IP-Address	Address	
345 3	ProSe-UE-ID	OctetString	
345 4	Proximity-Alert-Indication	Enumerated	
345 5	Proximity-Alert-Timestamp	Time	
345 6	Proximity-Cancellation-Timestamp	Time	
345 7	ProSe-Function-PLMN-Identifier	UTF8String	
345 8	Application-Specific-Data	OctetString	
345 9	Coverage-Info	Grouped	
346 0	Location-Info	Grouped	
346 1	ProSe-Direct-Communication-Reception-Data-Container	Grouped	
346 2	Radio-Frequency	OctetString	
346 3	Radio-Parameter-Set-Info	Grouped	
346 4	Radio-Parameter-Set-Values	OctetString	
346 5	Radio-Resources-Indicator	Integer32	
346 6	Time-First-Reception	Time	
346 7	Time-First-Transmission	Time	
346 8	Transmitter-Info	Grouped	
Note: The AVP codes from 3469 to 3499 are reserved for TS 32.299.			
350 0	BMSC-Address	Address	29.468 [31]
350 1	BMSC-Port	Unsigned32	
350 2	MBMS-Bearer-Event	Unsigned32	

350 3	MBMS-Bearer-Event-Notification	Grouped	
350 4	MBMS-Bearer-Request	Grouped	
350 5	MBMS-Bearer-Response	Grouped	
350 6	MBMS-Bearer-Result	Unsigned32	
350 7	MBMS-Start-Time	Time	
350 8	Radio-Frequency	Unsigned32	
350 9	TMGI-Allocation-Request	Grouped	
351 0	TMGI-Allocation-Response	Grouped	
351 1	TMGI-Allocation-Result	Unsigned32	
351 2	TMGI-Deallocation-Request	Grouped	
351 3	TMGI-Deallocation-Response	Grouped	
351 4	TMGI-Deallocation-Result	Unsigned32	
351 5	TMGI-Expiry	Grouped	
351 6	TMGI-Number	Unsigned32	
351 7	MB2U-Security	Unsigned32	
351 8	Local-M1-Information	Grouped	
351 9	Local-MB2-U-Information	Grouped	
352 0	MBMS-eNB-IP-Multicast-Address	Address	
352 1	MBMS-eNB-IPv6-Multicast-Address	Address	
352 2	MBMS-GW-SSM-IP-Address	Address	
352 3	MBMS-GW-SSM-IPv6-Address	Address	
352 4	Common-Tunnel-Endpoint-Identifier	OctetString	
352 5	FEC-Request	OctetString	
352 6	ROHC-Request	Grouped	
352 7	ROHC-Full-Header-Periodicity	Float32	
352 8	ROHC-Profile	Unsigned32	
352 9	Userplane-Protocol-Result	Grouped	
353 0	ROHC-Result	Unsigned32	
353 1	FEC-Result	Unsigned32	
353 2	ROHC-Max-CID	Unsigned32	
353 3	MBMS-Bearer-Event-Diagnostic-Info	Unsigned32	
Note: The AVP codes from 3534 to 3599 are reserved for TS 29.468.			
360 0	Origin-App-Layer-User-Id	UTF8String	29.343 [32]
360 1	Target-App-Layer-User-Id	UTF8String	

360 2	ProSe-Function-ID	OctetString	
360 3	ProSe-Request-Type	Unsigned32	
360 4	PDUID	OctetString	
360 5	Application-Data	UTF8String	
360 6	Allowed-Suffixes-Number	Unsigned32	
360 7	Monitor-Target	Grouped	
360 8	ProSe-Code-Suffix-Mask	Grouped	
360 9	Suffix-Code	OctetString	
361 0	Suffix-Mask	OctetString	
361 1	Banned-User-Target	Grouped	
361 2	Metadata-Indicator	Unsigned32	
Note: The AVP codes from 3613 to 3699 are reserved for TS 29.343.			
370 1	ProSe-Subscription-Data	Grouped	29.344 [33]
370 2	ProSe-Permission	Unsigned32	
370 3	ProSe-Allowed-PLMN	Grouped	
370 4	ProSe-Direct-Allowed	Unsigned32	
370 5	UPR-Flags	Unsigned32	
370 6	PNR-Flags	Unsigned32	
370 7	ProSe-Initial-Location-Information	Grouped	
370 8	Authorized-Discovery-Range	Unsigned32	
Note: The AVP codes from 3709 to 3799 are reserved for TS 29.344.			
380 0	Reserved		29.345 [34]
380 1	App-Layer-User-Id	UTF8String	
380 2	Assistance-info	Grouped	
380 3	Assistance-Info-Validity-Timer	Unsigned32	
380 4	Discovery-Type	Unsigned32	
380 5	Filter-Id	OctetString	
380 6	MAC-Address	UTF8String	
380 7	Match-Report	Grouped	
380 8	Operating-Channel	Unsigned32	
380 9	P2P-Features	Unsigned32	
381 0	ProSe-App-Code	UTF8String	
381 1	ProSe-App-Id	UTF8String	
381 2	ProSe-App-Mask	UTF8String	

381 3	ProSe-Discovery-Filter	Grouped
381 4	PRR-Flags	Unsigned32
381 5	ProSe-Validity-Timer	Unsigned32
381 6	Requesting-EPUID	UTF8String
381 7	Targeted-EPUID	UTF8String
381 8	Time-Window	Unsigned32
381 9	WiFi-P2P-Assistance-Info	Grouped
382 0	WLAN-Assistance-Info	Grouped
382 1	WLAN-Link-Layer-Id	OctetString
382 2	WLAN-Link-Layer-Id-List	Grouped
382 3	Location-Update-Trigger	Grouped
382 4	Location-Update-Event-Type	Unsigned32
382 5	Change-Of-Area-Type	Grouped
382 6	Location-Update-Event-Trigger	Unsigned32
382 7	Report-Cardinality	Enumerated
382 8	Minimum-Interval-Time	Unsigned32
382 9	Periodic-Location-Type	Grouped
383 0	Location-Report-Interval-Time	Unsigned32
383 1	Total-Number-Of-Reports	Unsigned32
383 2	Validity-Time-Announce	Unsigned32
383 3	Validity-Time-Monitor	Unsigned32
383 4	Validity-Time-Communication	Unsigned32
383 5	ProSe-App-Code-Info	Grouped
383 6	MIC	OctetString
383 7	UTC-based-Counter	Unsigned32
383 8	ProSe-Match-Refresh-Timer	Unsigned32
383 9	ProSe-Metadata-Index-Mask	OctetString
384 0	App-Identifier	Grouped
384 1	OS-ID	OctetString
384 2	OS-App-ID	UTF8String
384 3	Requesting-RPAUID	UTF8String
384 4	Target-RPAUID	UTF8String
384 5	Target-PDUID	OctetString

384 6	ProSe-Restricted-Code	OctetString		
384 7	ProSe-Restricted-Code-Suffix-Range	OctetString		
384 8	Beginning-Suffix	OctetString		
384 9	Ending-Suffix	OctetString		
385 0	Discovery-Entry-ID	Unsigned32		
385 1	Match-Timestamp	Time		
385 2	PMR-Flags	Unsigned32		
385 3	ProSe-Application-Metadata	UTF8String		
385 4	Discovery-Auth-Request	Grouped		
385 5	Discovery-Auth-Response	Grouped		
385 6	Match-Request	Grouped		
385 7	Match-Report-Info	Grouped		
385 8	Banned-RPAUID	UTF8String		
385 9	Banned-PDUID	OctetString		
386 0	Code-Receiving-Security-Material	Grouped		
386 1	Code-Sending-Security-Material	Grouped		
386 2	DUSK	OctetString		
386 3	DUIK	OctetString		
386 4	DUCK	OctetString		
386 5	MIC-Check-indicator	Unsigned32		
386 6	Encrypted-Bitmask	OctetString		
386 7	ProSe-App-Code-Suffix-Range	OctetString		
386 8	PC5-tech	OctetString		
Note: The AVP codes from 3869 to 3899 are reserved for TS 29.345.				
390 0	Reserved			32,299 [5]
390 1	Enhanced-Diagnostics	Grouped		
390 2	Inter-UE-Transfer	Enumerated		
390 3	TWAG-Address	Address		
390 4	Announcement-Information	Grouped		
390 5	Announcement-Identifier	Unsigned32		
390 6	Announcement-Order	Unsigned32		
390 7	Variable-Part	Grouped		
390 8	Variable-Part-Order	Unsigned32		
390 9	Variable-Part-Type	Unsigned32		

391 0	Variable-Part-Value	UTF8String
391 1	Time-Indicator	Unsigned32
391 2	Quota-Indicator	Enumerated
391 3	Play-Alternative	Enumerated
391 4	Language	UTF8String
391 5	Privacy-Indicator	Enumerated
391 6	Called-Identity	UTF8String
391 7	Called-Identity-Change	Grouped
391 8	UWAN-User-Location-Info	Grouped
391 9	Monitoring-Event-Configuration-Activity	Integer32
392 0	Monitoring-Event-Report-Data	Grouped
392 1	Monitoring-Event-Information	Grouped
392 2	Monitoring-Event-Functionality	Integer32
392 3	Monitoring-Event-Report-Number	Unsigned32
392 4	Cellular-Network-Information	OctetString
392 5	Related-Change-Condition-Information	Grouped
392 6	Related-Trigger	Grouped
392 7	CPDT-Information	Grouped
392 8	NIDD-Submission	Grouped
392 9	Serving-Node-Identity	DiameterIdentity
393 0	CP-CIoT-EPS-Optimisation-Indicator	Enumerated
393 1	SGi-PtP-Tunnelling-Method	Enumerated
393 2	UNI-PDU-CP-Only-Flag	Enumerated
393 3	APN-Rate-Control	Grouped
393 4	APN-Rate-Control-Downlink	Grouped
393 5	APN-Rate-Control-Uplink	Grouped
393 6	Additional-Exception-Reports	Enumerated
393 7	Rate-Control-Max-Message-Size	Unsigned32
393 8	Rate-Control-Max-Rate	Unsigned32
393 9	Rate-Control-Time-Unit	Unsigned32
394 0	SCS-AS-Address	Grouped
394 1	SCS-Address	Address
394 2	SCS-Realm	DiameterIdentity

Note: The AVP codes from 3943 to 3999 are reserved for TS 32.299.



400 0	Aggregated-Congestion-Info	Grouped	29.217 [35]
400 1	Aggregated-RUCI-Report	Grouped	
400 2	Congestion-Level-Definition	Grouped	
400 3	Congestion-Level-Range	Unsigned32	
400 4	Congestion-Level-Set-Id	Unsigned32	
400 5	Congestion-Level-Value	Unsigned32	
400 6	Congestion-Location-Id	Grouped	
400 7	Conditional-Restriction	Unsigned32	
400 8	eNodeB-Id	OctetString	
400 9	IMSI-List	OctetString	
401 0	RCAF-Id	DiameterIdentity	
401 1	Reporting-Restriction	Unsigned32	
401 2	RUCI-Action	Unsigned32	
401 3	Extended-eNodeB-ID	OctetString	
Note: The AVP codes from 4014 to 4099 are reserved for TS 29.217.			
410 1	Network-Congestion-Area-Report	Grouped	29.153 [37]
410 2	Ns-Request-Type	Unsigned32	
Note: The AVP codes from 4103 to 4199 are reserved for TS 29.153.			
420 1	Network-Area-Info-List	OctetString	29.154 [38]
420 2	Reference-Id	OctetString	
420 3	Transfer-Request-Type	Unsigned32	
420 4	Time-Window	Grouped	
420 5	Transfer-End-Time	Time	
420 6	Transfer-Start-Time	Time	
420 7	Transfer-Policy	Grouped	
420 8	Transfer-Policy-Id	Unsigned32	
420 9	Number-Of-UEs	Unsigned32	
421 0	Access-Network-Reports	Grouped	
421 1	Event-Configuration	Grouped	
421 2	Event-Configuration-State	Unsigned32	
421 3	Event-Configuration-Status	Grouped	
421 4	Event-Reporting-Results	Unsigned32	
421 5	Event-Reports	Grouped	
421 6	Extended-SCEF-Reference-ID	Unsigned64	
Note: The AVP codes from 4217 to 4299 are reserved for TS 29.154.			

430	Communication-Failure-Information	Grouped	29.128 [36]
0			
430	Cause-Type	Unsigned32	
430	S1AP-Cause	Unsigned32	
2			
430	RANAP-Cause	Unsigned32	
3			
430	GMM-Cause	Unsigned32	
4			
430	SM-Cause	Unsigned32	
5			
430	Number-of-UE-Per-Location-Configuration	Grouped	
6			
430	Number-of-UE-Per-Location-Report	Grouped	
7			
430	UE-Count	Unsigned32	
8			
430	BSSGP-Cause	Unsigned32	
9			
431	Serving-PLMN-Rate-Control	Grouped	
0			
431	Uplink-Rate-Limit	Unsigned32	
1			
431	Downlink-Rate-Limit	Unsigned32	
2			
431	Extended-PCO	OctetString	
3			
431	Connection-Action	Unsigned32	
4			
431	Non-IP-Data	OctetString	
5			
431	SCEF-Wait-Time	Time	
6			
431	CMR-Flags	Unsigned32	
7			
431	RRC-Cause-Counter	Grouped	
8			
431	Counter-Value	Unsigned32	
9			
432	RRC-Counter-Timestamp	Time	
0			
432	TDA-Flags	Unsigned32	
1			
432	Idle-Status-Indication	Grouped	
2			
432	Idle-Status-Timestamp	Time	
3			
432	Active-Time	Unsigned32	
4			
432	Reachability-Cause	Unsigned32	
5			
432	APN-Rate-Control-Status	Grouped	
6			
432	Uplink-Number-Of-Packets-Allowed	Unsigned32	
7			
432	Number-Of-Additional-Exception-Reports	Unsigned32	
8			
432	Downlink-Number-Of-Packets-Allowed	Unsigned32	
9			
433	APN-Rate-Control-Status-Validity-Time	Unsigned64	
0			
Note: The AVP codes from 4331 to 4399 are reserved for TS 29.128.			
440	Charging-Per-IP-CAN-Session-Indicator	Enumerated	32.299 [5]
0			
440	Access-Network-Info-Change	Enumerated	
1			

440 2	Discoveree-UE-HPLMN-Identifier	UTF8String	
440 3	Discoveree-UE-VPLMN-Identifier	UTF8String	
440 4	Discoverer-UE-HPLMN-Identifier	UTF8String	
440 5	Discoverer-UE-VPLMN-Identifier	UTF8String	
440 6	3GPP-PS-Data-Off-Status	Enumerated	
440 7	Unused-Quota-Timer	Unsigned32	
440 8	Announcing-PLMN-ID	UTF8String	
440 9	ProSe-UE-to-Network-Relay-UE-ID	OctetString	
441 0	ProSe-Target-Layer-2-ID	OctetString	
441 1	Relay-IP-address	Address	
441 2	Target-IP-Address	Address	
441 3	FE-Identifier-List	UTF8String	
Note: The AVP codes from 4414 to 4499 are reserved for TS 32.299			
450 0	MCPTT-ID	UTF8String	29.283 [39]
450 1	Data-Identification	Grouped	
450 2	Data-Identification-Prefix	Unsigned32	
450 3	Data-Identification-Flags	Unsigned64	
450 4	DPR-Flags	Unsigned32	
450 5	DPA-Flags	Unsigned32	
450 6	DUR-Flags	Unsigned32	
450 7	DUA-Flags	Unsigned32	
450 8	NDR-Flags	Unsigned32	
450 9	NDA-Flags	Unsigned32	
451 0	User-Data-Id	Unsigned32	
451 1	MC-Service-User-Profile-Data	Grouped	
451 2	Sequence-Number	Unsigned32	
451 3	MCVideo-ID	UTF8String	
451 4	MC-Data-ID	UTF8String	
Note: The AVP codes from 4515 to 4599 are reserved for TS 29.283.			
460 0	V2X-PC5-Allowed-PLMN	Grouped	29.388 [40]
460 1	V2X-Update-Flags	Unsigned32	
460 2	V2X-Notify-Flags	Unsigned32	
460 3	PLMN-Allowed-PC5-RATs	Grouped	
460 4	PC5-RAT-Type	Enumerated	
Note: The AVP codes from 4605 to 4799 are reserved for TS 29.388.			

4700	V2X-Authorization-Data	Grouped	29.389 [41]
4701	V2X-Permission-in-VPLMN	Unsigned32	
4702	V2X-Application-Server	Grouped	
Note: The AVP codes from 4703 to 4799 are reserved for TS and TS 29.389.			
			29.561 [42]
Note: The AVP codes from 4800 to 4999 are reserved for TS and TS 29.561.			

## 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	<i>Deprecated value</i>	
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.		
2421	DIAMETER_QOS_FLOW_DELETION_INDICATION	29.561 [42]
Note: The Experimental Result Codes from 2422 to 2440 are reserved for the TS 29.561.		

### 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.		
4121	DIAMETER_ERROR_OUT_OF_RESOURCES	29.061 [13]
Note: The Experimental Result Codes from 4122 to 4140 are reserved for the TS 29.061.		
4141	DIAMETER_PCC_BEARER_EVENT	29.212 [19]
4142	DIAMETER_BEARER_EVENT	
4143	DIAMETER_AN_GW_FAILED	
4144	DIAMETER_PENDING_TRANSACTION	
4145	DIAMETER_UE_STATUS_SUSPEND	
Note: The Experimental Result Codes from 4146 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]
4182	DIAMETER_ERROR_CAMEL_SUBSCRIPTION_PRESENT	
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.		
4241	DIAMETER_ERROR_NO_AVAILABLE_POLICY_COUNTERS	29.219 [26]
Note: The Experimental Result Codes from 4242 to 4260 are reserved for the TS 29.219.		
4261	REQUESTED_SERVICE_TEMPORARILY_NOT_AUTHORIZED	29.214 [18]
Note: The Experimental Result Codes from 4262 to 4280 are reserved for the TS 29.214.		

### 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	
5012	DIAMETER_ERROR_SERVING_NODE_FEATURE_UNSUPPORTED	
Note: The Experimental Result Codes from 5013 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], 29.214 [18]
5062	FILTER_RESTRICTIONS	
5063	REQUESTED_SERVICE_NOT_AUTHORIZED	
5064	DUPLICATED_AF_SESSION	
5065	IP-CAN_SESSION_NOT_AVAILABLE	
5066	UNAUTHORIZED_NON_EMERGENCY_SESSION	
5067	UNAUTHORIZED_SPONSORED_DATA_CONNECTIVITY	
5068	TEMPORARY_NETWORK_FAILURE	
Note: The Experimental Result Codes from 5069 to 5080 are reserved for TS 29.209, TS 29.211 and TS 29.214.		
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	
5144	DIAMETER_ERROR_TRAFFIC_MAPPING_INFO_REJECTED	
5145	DIAMETER_QOS_RULE_EVENT	
5146	reserved	
5147	DIAMETER_ERROR_CONFLICTING_REQUEST	
5148	DIAMETER_ADC_RULE_EVENT	
5149	DIAMETER_ERROR_NBIFOM_NOT_AUTHORIZED	

Note: The Experimental Result Codes from 5150 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	
5453	DIAMETER_ERROR_LATE_OVERLAPPING_REQUEST	
5454	DIAMETER_ERROR_TIMED_OUT_REQUEST	
5455	DIAMETER_ERROR_TRUSTED_NON_3GPP_ACCESS_NOT_ALLOWED	
Note: The Experimental Result Codes from 5455 to 5469 are reserved for the TS 29.273.		
5470	DIAMETER_ERROR_SUBSESSION	29.215 [22]
5471	DIAMETER_ERROR_ONGOING_SESSION_ESTABLISHMENT	
Note: The Experimental Result Codes from 5472 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.		
5510	DIAMETER_ERROR_UNAUTHORIZED_REQUESTING_ENTITY	29.336 [28]
5511	DIAMETER_ERROR_UNAUTHORIZED_SERVICE	
5512	DIAMETER_ERROR_REQUESTED_RANGE_IS_NOT_ALLOWED	
5513	DIAMETER_ERROR_CONFIGURATION_EVENT_STORAGE_NOT_SUCCESSFUL	
5514	DIAMETER_ERROR_CONFIGURATION_EVENT_NON_EXISTANT	
5515	DIAMETER_ERROR_SCEF_REFERENCE_ID_UNKNOWN	
5516	DIAMETER_ERROR_UNAUTHORIZED_MTC_PROVIDER	
Note: The Experimental Result Codes from 5517 to 5529 are reserved for the TS 29.336.		
5530	DIAMETER_ERROR_INVALID_SME_ADDRESS	29.337 [29]
5531	DIAMETER_ERROR_SC_CONGESTION	
5532	DIAMETER_ERROR_SM_PROTOCOL	
5533	DIAMETER_ERROR_TRIGGER_REPLACE_FAILURE	
5534	DIAMETER_ERROR_TRIGGER_RECALL_FAILURE	
5535	DIAMETER_ERROR_ORIGINAL_MESSAGE_NOT_PENDING	
Note: The Experimental Result Codes from 5536 to 5549 are reserved for the TS 29.337.		
5550	DIAMETER_ERROR_ABSENT_USER	29.338 [30]
5551	DIAMETER_ERROR_USER_BUSY_FOR_MT_SMS	
5552	DIAMETER_ERROR_FACILITY_NOT_SUPPORTED	
5553	DIAMETER_ERROR_ILLEGAL_USER	
5554	DIAMETER_ERROR_ILLEGAL_EQUIPMENT	
5555	DIAMETER_ERROR_SM_DELIVERY_FAILURE	
5556	DIAMETER_ERROR_SERVICE_NOT_SUBSCRIBED	
5557	DIAMETER_ERROR_SERVICE_BARRED	
5558	DIAMETER_ERROR_MWD_LIST_FULL	
Note: The Experimental Result Codes from 5559 to 5569 are reserved for the TS 29.338.		
5570	DIAMETER_ERROR_UNKNOWN_POLICY_COUNTERS	29.219 [26]
Note: The Experimental Result Codes from 5571 to 5589 are reserved for the TS 29.219.		
5590	DIAMETER_ERROR_ORIGIN_ALUID_UNKNOWN	29.343 [32]
5591	DIAMETER_ERROR_TARGET_ALUID_UNKNOWN	
5592	DIAMETER_ERROR_PFIID_UNKNOWN	
5593	DIAMETER_ERROR_APP_REGISTER_REJECT	



5594	DIAMETER_ERROR_PROSE_MAP_REQUEST_DISALLOWED	
5595	DIAMETER_ERROR_MAP_REQUEST_REJECT	
5596	DIAMETER_ERROR_REQUESTING_RPAUID_UNKNOWN	
5597	DIAMETER_ERROR_UNKNOWN_OR_INVALID_TARGET_SET	
5598	DIAMETER_ERROR_MISSING_APPLICATION_DATA	
5599	DIAMETER_ERROR_AUTHORIZATION_REJECT	
5600	DIAMETER_ERROR_DISCOVERY_NOT_PERMITTED	
5601	DIAMETER_ERROR_TARGET_RPAUID_UNKNOWN	
5602	DIAMETER_ERROR_INVALID_APPLICATION_DATA	
Note: The Experimental Result Codes from 5603 to 5609 are reserved for the TS 29.343.		
5610	DIAMETER_ERROR_UNKNOWN_PROSE_SUBSCRIPTION	29.344 [33]
5611	DIAMETER_ERROR_PROSE_NOT_ALLOWED	
5612	DIAMETER_ERROR_UE_LOCATION_UNKNOWN	
Note: The Experimental Result Codes from 5613 to 5629 are reserved for the TS 29.344.		
5630	DIAMETER_ERROR_NO_ASSOCIATED_DISCOVERY_FILTER	29.345 [34]
5631	DIAMETER_ERROR_ANNOUNCING_UNAUTHORIZED_IN_PLMN	
5632	DIAMETER_ERROR_INVALID_APPLICATION_CODE	
5633	DIAMETER_ERROR_PROXIMITY_UNAUTHORIZED	
5634	DIAMETER_ERROR_PROXIMITY_REJECTED	
5635	DIAMETER_ERROR_NO_PROXIMITY_REQUEST	
5636	DIAMETER_ERROR_UNAUTHORIZED_SERVICE_IN_THIS_PLMN	
5637	DIAMETER_ERROR_PROXIMITY_CANCELLED	
5638	DIAMETER_ERROR_INVALID_TARGET_PDUID	
5639	DIAMETER_ERROR_INVALID_TARGET_RPAUID	
5640	DIAMETER_ERROR_NO_ASSOCIATED_RESTRICTED_CODE	
5641	DIAMETER_ERROR_INVALID_DISCOVERY_TYPE	
Note: The Experimental Result Codes from 5642 to 5649 are reserved for the TS 29.345.		
5650	DIAMETER_ERROR_REQUESTED_LOCATION_NOT_SERVED	29.128 [36]
5651	DIAMETER_ERROR_INVALID_EPS_BEARER	
5652	DIAMETER_ERROR_NIDD_CONFIGURATION_NOT_AVAILABLE	
5653	DIAMETER_ERROR_USER_TEMPORARILY_UNREACHABLE	
Note: The Experimental Result Codes from 5654 to 5669 are reserved for the TS 29.128.		
5670	DIAMETER_ERROR_UNKNOWN_DATA	29.283 [39]
5671	DIAMETER_ERROR_REQUIRED_KEY_NOT_PROVIDED	
Note: The Experimental Result Codes from 5672 to 5689 are reserved for the TS 29.128.		
5690	DIAMETER_ERROR_UNKNOWN_V2X_SUBSCRIPTION	29.388 [40]
5691	DIAMETER_ERROR_V2X_NOT_ALLOWED	
Note: The Experimental Result Codes from 5692 to 5709 are reserved for the TS 29.388.		

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# 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.

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## 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.

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## 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.

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## 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.

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## 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

Date	TSG #	TSG Doc.	CR	Rev	Category	Subject/Comment	New
2004-06	CN#24	NP-040292				Version 2.0.0 presented for information and approval	6.0.0
2004-09	CN#25	NP-040401	001			Correction of Charging application reference	6.1.0
2004-09	CN#25	NP-040401	002			Correction of the Application-Id code	6.1.0
2004-09	CN#25	NP-040401	003			Removal of User Data Request Type AVP	6.1.0
2004-09	CN#25	NP-040412	004	1		Re-numbering of 3GPP specific AVP codes.	6.1.0
2004-12	CN#26	NP-040579	006			Inclusion of missing Cx AVPs	6.2.0
2004-12	CN#26	NP-040580	007	1		Reservation of command code 310	6.2.0
2004-12	CN#26	NP-040579	009	1		Addition of Gmb interface	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	6.2.0
2004-12	CN#26	NP-040579	011			Gq interface allocations	6.2.0
2004-12	CN#26	NP-040579	012			Addition of Gx interface	6.2.0
2005-03	CN#27	NP-050047	040	1		WLAN Diameter AVP and result codes	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	6.4.0
		CP-050196	0051	1		Addition of Maximum-Number-Accesses AVP	
2005-09	CT#29	CP-050440	0052	1		Private identities on the Cx	6.5.0
		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	7.0.0
2005-12	CT#30	CP-050624	0058			Addition of GBA-Type AVP	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	7.2.0
		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	7.3.0
2006-09	CT#33	CP-060417	0077	3		New AVP Code	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	7.5.0
		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	7.6.0
		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	7.7.0
		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	7.8.0
2007-12	CT#38	CP-070743	0104		AVP code reservation for 32.299 in Rel-7	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	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	8.1.0
		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	8.2.0
2008-09	CT#41	CP-080456	0119		Emergency Public User Identity Removal	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	
2008-12	CT#42	CP-080691	0127	2	Diameter Protocol Codes Assignments for S6a/S6d/S13	8.4.0
2008-12	CT#42	CP-080691	0128	1	Diameter code assignments for 3GPP TS 29.273	8.4.0
2009-03	CT#43	CP-090044	0130	1	Update for ReadyForSM	8.5.0
2009-03	CT#43	CP-090044	0131	1	Handling LCS Subscription Data	8.5.0
2009-03	CT#43	CP-090026	0132		Update for Restoration	8.5.0
2009-03	CT#43	CP-090024	0133		Applds for Gxx and S9	8.5.0
2009-03	CT#43	CP-090033	0134	2	Appld and command code for Zpn	8.5.0
2009-03	CT#43	CP-090024	0137	1	AVP codes for S9 protocol	8.5.0
2009-03	CT#43	CP-090024	0138	1	Diameter AVP Code allocation	8.5.0
2009-03	CT#43	CP-090024	0140	1	Location of Permanent Failure result code range for the S9 application	8.5.0

2009-03	CT#43	CP-090024	014 1		AVPs for TS 29.273	8.5.0				
2009-03	CT#43	CP-090024	014 2	1	Error code allocation for authentication failure	8.5.0				
2009-06	CT#44	CP-090299 CP-090299 CP-090299 CP-090299 CP-090299	012 9	4	Update of the AVP Codes	8.6.0				
			014 3		AVP code reservation for TS 32.299					
			014 5		Diameter Command Codes for S6a/S6d/S13/S13'					
			014 6		Removal of Requesting Node Type from AIR					
			014 7		S6b Application ID					
2009-09	CT#45	CP-090530 CP-090530 CP-090531 CP-090531	014 9		Allocation of Experimental-Result-Codes for S9 protocol	8.7.0				
			015 2		AVP code allocation for TS 29.212					
			015 0		Update of the AVP type for the User-Id					
			015 3		Trace Depth per session					
2009-09	CT#45	CP-090557	014 8		AVP code range for charging	9.0.0				
2009-12	CT#46	CP-090800 CP-091032  CP-090797	015 4	1	ICS-Flag	9.1.0				
			015 6		From GMLC-Address to GMLC-Number					
			016 0		Session-Priority AVP					
			016 3	2	Introduction of SLh application related AVPs and Experimental Result codes					
			016 6		Missing AVP error codes					
2010-03	CT#47	CP-100031 CP-100034 CP-100046 CP-100036 CP-100046 CP-100048 CP-100040 CP-100236 CP-100033 CP-100046 CP-100175	015 8	1	Wildcarded Public Identity	9.2.0				
			016 8	1	Correction on AVP code allocation reservation for TS 32.299 in Rel-9					
			016 9	1	AVP code allocation for 29.172					
			017 2		GPL_U support in TS 29.109					
			017 3		Error codes in 29.172 for SLg					
			017 4	1	AVPs in 29.272 for TADS support					
			017 5		Error codes in 29.272 for Unknown MME					
			017 6	4	EPS Subscriber State and Location Information Request					
			018 0		One time notification AVP allocation					
			018 1		Addition of the LCS-QoS-Class attribute value					
			018 2		Introduction of the LCS-Capabilities-Sets AVP in SLh interface					
			2010-06	CT#48	CP-100263  CP-100287 CP-100277		018 8	1	AVP Codes for PCC	9.3.0
							018 3		EPS state and location retrieval	
018 6		SGmb Application ID								
019 0	1	New APVs in S6a protocol								
2010-09	CT#49	CP-100463 CP-100464	019 7	1	Addition of Diameter codes and identifiers for the SLg and SLh interfaces	9.4.0				
			019 6		AVP Codes Allocation for PCC					
2010-09	CT#49	CP-100465 CP-100466	019 3	1	SIPTO Permission Indicator	10.0.0				
			019 8	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	10.1.0
		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	10.2.0
		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	
2011-06	CT#52	CP-110349	0219	2	Handling of RTR for Emergency Registration	10.3.0
		CP-110347	0231	1	Add AVPs from QSPEC cleanup	
		CP-110359	0226		MIPv4 security parameters on the STa and S6b interfaces	
		CP-110380	0216		MDT user consent	
		CP-110370	0223		AVP Code Allocation for Pre-paging	
		CP-110375	0227	1	PUR-Flags AVP	
2011-09	CT#53	CP-110559	0236	1	AVP code alignment with 29.212	10.4.0
		CP-110555	0239	1	AVP code alignment with 32.299	
		CP-110554	0244	1	AVP code alignment with 29.214	
		CP-110552	0249		Experimental Result Code Alignment with 29.061	
		CP-110555	0252		Failure code and AVP code alignment with 29.212	
		CP-110722	0257	2	Privileged sender	
2011-09	CT#53	CP-110584	0234	1	Add vSRVCC updates to the Diameter AVP code table	11.0.0
		CP-110579	0240		AVP code alignment with 32.299	
		CP-110555	0253		AVP code reservation for 29.212	
2011-12	CT#54	CP-110812	0258	1	SWx Restoration AVPs	11.1.0
		CP-110812	0259		Sy and Sd Application IDs	
		CP-110775	0262		New AVP codes for MBMS IP unicast encapsulation	
		CP-110775	0265		New AVP codes for MBMS IP multicast encapsulation	
		CP-110786	0271	1	MME-Realm AVP code allocation	
		CP-110811	0277		Equivalent PLMN CSG Subscription Request	
		CP-110781	0281	1	Restoration of Wildcarded-IMPU AVP	
2012-03	CT#55	CP-120025	0286	1	Codes Allocation for AVPs on Initial Attach	11.2.0
		CP-120038	0288		New AVP codes for Absolute Time of MBMS Data Transfer over SGmb	
		CP-120038	0291	1	Allocating Diameter AVP codes for TS 29.219 and TS 29.212	
2012-06	CT#56	CP-120240	0287	5	Codes Allocation for AVPs on NPLI	11.3.0
		CP-120238	0294	1	Adding new Diameter AVPs to Diameter table to support Trusted WLAN Access feature	
		CP-120225	0296	1	Trust Relationship Indication	

		CP-120251	0297	1	Corrections to reference titles	
		CP-120251	0298	1	Diameter Code Allocation for TS 29.219	
		CP-120247	0300	-	Network Name AVP codes	
		CP-120219	0304	-	Duplicated AVP names	
2012-09	CT#57	CP-120481	0289	3	PS additional number allocation	11.4.0
		CP-120473	0293	4	SMS in MME/SGSN	
		CP-120461	0299	2	AAA Failure Recovery AVP codes	
		CP-120474	0305	-	Transport Access Type AVP for BBAI	
		CP-120480	0307	1	Local Time Zone	
		CP-120472	0308	-	Allocating Application Identifier and command code for Tsp interface	
		CP-120472	0309	-	Application Identifier, Command Codes and AVP range for S6m interface	
		CP-120667	0312	1	GMLC-Name	
			0313	1	Reference list correction to align with the corrected TS 29.212 title	
2012-12	CT#58	CP-120731	0315	2	T4 device triggering via IMS	11.5.0
		CP-120731	0318	1	Codes and Identifier Allocation for T4 Specification	
		CP-120731	0324	-	AVP Code Allocation for 29.336	
		CP-120731	0329	-	Diameter AVP code value allocation in TS 29.368	
		CP-120732	0319	2	Application Identifier, Command Codes and AVP codes for SGd, S6c	
		CP-120716	0324	1	AVP name modification in TS 32.299	
		CP-120742	0325	-	UE Time Zone AVP	
		CP-120741	0328	1	Use of Flag instead of Enumerated AVPs	
		CP-120741	332	-	Use of Flag instead of Enumerated AVPs	
		CP-120743	330	-	PSI direct routing with restoration procedures	
		CP-120743	333	-	EPS LocationInformation Support	
2013-03	CT#59	CP-130026	0334	1	Diameter error code for TS 29.219	11.6.0
		CP-130026	0336	-	MDT parameters	
2013-03	CT#59	CP-130156	0337	1	New AVPs for Lgd interface	12.0.0
		CP-130030	0341	-	Validity Time of Short Message	
2013-06	CT#60	CP-130288	0362	1	Add new DER-S6b-flag AVP	12.1.0
		CP-130298	0360	-	Failure Result Codes Allocation for TS 29.219	
		CP-130292	0358	-	Diameter AVP codes for new TS 32.299 AVPs	
		CP-130279	0354	1	Definition of SS Status for Call Barring	
		CP-130380	0363	-	New SGs-MME-Identity AVP	
		CP-130291	0348	2	New AVPs for deferred MT-LR and periodic MO-LR TFTP procedures over Lgd interface	
		CP-130297	0347	1	Application Port Identifier	
		CP-130374	0345	1	MTRR on Sh	
		CP-130295	0344	-	Restoration Priority during SGW and PGW restoration procedures	
		CP-130378	0349	1	SIPTO permission for Local Network enhancements	



2013-09	CT#61	CP-130454	0364	2	New MBMS flag for eMBMS restoration	12.2.0	
		CP-130461	0366	-	AVP code reservation for TS 32.299 Rel-12		
		CP-130460	0368	-	Allocation of Diameter codes and identifiers for 29.212 and 29.215		
2013-09				-	Vendor-specific command code for Trigger-Establishment-Request/Answer corrected	12.2.1	
2013-12	CT#62	CP-130624	0369	-	New AVP for optimized LCS procedure for combined MME/SGSN	12.3.0	
		CP-130631	0370	1	Adding E-SMLC provided Cell info and Cell Portion		
		CP-130800	0371	-	New AVPs for SMS for IMS UE without MSISDN in TS 29.338		
		CP-130600	0376	1	Allocation of Diameter codes for 32.299		
		CP-130605	0378	-	Allocation of Diameter codes for 29.212		
		CP-130639	0380	-	SGSN CAMEL Subscription Indication		
2014-03	CT#63	CP-140180	0381	2	Protocol enhancements for the support of device replace procedure	12.4.0	
		CP-140035	0384	-	New AVP for the support of combined MME/SGSN		
		CP-140023	0383	1	Definition of WLAN-related AVPs		
2014-06	CT#64	CP-140211	0385	1	Protocol enhancements to indicate support of device recall and replace by SMS-SC	12.5.0	
		CP-140251	0402	1	AVP allocation for Error handling, MTC error diagnostic		
		CP-140257	0391	1	SS-Status AVP Definition		
		CP-140252	0392	-	Definition of AVPs for Network Location in TWLAN		
		CP-140236	0399	-	TWAN-BSSID AVP re-naming		
		CP-140247	0397	-	New AVPs for Trusted WLAN access		
		CP-140231	0390	1	Adding Codes for 29.214		
2014-09	CT#65	CP-140515	0403	1	T-GRUU restoration	12.6.0	
		CP-140517	0404	1	MB2-C codes		
		CP-140505	0405	1	New AVPs for Trusted WLAN access		
		CP-140506	0406	1	P-CSCF Restoration indication		
		CP-140516	0407	2	Closing TS 29.234 and reused AVP in TS 29.273		
		CP-140513	0408	-	Identification of the HSS		
							Editorial: WLAN-offloadability AVP codes added as in CR C4-141648.
2014-12	CT#66	CP-140785	0409	1	New AVP for MBMS restoration	12.7.0	
			0430	-	New Diagnostic-Info AVP for MBMS restoration		
			0410	1	WLCP key for WLCP signalling protection		
			0411	-	Reset-ID		
			0416	1	Code definitions for 32.299		
			0428	-	Removal of I-WLAN AVPs		
			0429	1	Reference correction		
			0433	-	Code allocation for 29.212		
			0418	-	MDT PLMN List		
			0422	1	Codes Allocation for PC2 Protocol		

			042 3	4		Codes Allocation for PC4a Protoco	
			043 1	3		Allocation of values for Application ID, Command codes, AVP codes and Experimental-Result codes used in the TS 29.345	
			043 4	1		Command Code and Error Code for ProSe Initial Location Information Retrieval	
			042 5	-		Corrections of the type of some AVPs	
			042 6	1		OFR-Flags AVP code	
			042 7	1		P-CSCF Restoration mechanism new error	
2015-03	CT#67	CP- 150015	044 7	-		Renaming of Location-Type AVP	12.8.0
			043 7	1		Location reporting in emergency 1xSRVCC	
			043 5	-		AVP codes for GCSE MB2-C	
			044 2	1		New AVPs and range of transient failure result codes in TS 29.214	
			043 8	1		Allocation of code for Authorized-Discovery-Range AVP (TS 29.344)	
			044 0	2		Location Update Trigger	
			044 1	1		AVP codes allocation for Validity related AVPs for TS 29.345	
			044 3	-		Allocation of codes for the Integrity Checks. Aspect AVPs	
2015-03	CT#67	CP- 150039	043 9	1		Diameter Application Identifier for Np protocol	13.0.0
2015-06	CT#68	CP- 150257	045 0	1		AVP code allocation for Match Refresh Timer AVP in TS 29.345	13.1.0
		CP- 150247	045 7	-		Wrong CR implementation of CR 0416r1	
		CP- 150249	045 9	1		AVP code allocation for 32.299	
		CP- 150263	045 2	1		AVP codes for Access Restriction Data per PLMN	
		CP- 150372	046 1	-		IP-SM-GW-Realm	
2015-09	CT#69	CP- 150454	046 2	-		Subscription data for extended buffering at the SGW	13.2.0
		CP- 150442	046 3	-		Overlapping transaction over S6b	
		CP- 150453	046 4	2		Addition of IMSI Group Id AVP definition	
		CP- 150449	046 5	3		Addition of CP parameter AVP definition	
		CP- 150431	047 0	1		AVP codes for TS 29.212	
		CP- 150456	047 1	3		AVP definiton for S6t	
2015-12	CT#70	CP- 150761	047 3	-		Addition of MBMS-Cell-List AVP	13.3.0
		CP- 150778	047 4	-		S6t Application ID and Command Codes	
		CP- 150778	047 4	1		Bitmask to inform the SCEF of the Monitoring capabilities	
		CP- 150778	049 0	1		AVP codes for MONTE T6a/b interface	
		CP- 150778	049 1	1		Correction to SCEF-Reference-ID and SCEF-Reference-ID-For-Deletion data types	
		CP- 150778	049 4	2		Definition of AVP for deletion of all Monitoring events assigned to a subscriber (UE)	
		CP- 150778	050 1	1		Definition of AVP SCEF-ID	
		CP- 150778	050 2	2		Service result per Event configuration	
		CP- 150770	047 5	1		Emergency PDN connection over untrusted WLAN access	
		CP- 150776	047 6	-		EPC-MT-LR and PS-MT-LR procedure for UEs transiently not reachable due to power saving	
		CP- 150776	049 7	1		Mobile Terminating SMS handling for extended Idle mode DRX	

		CP-150776	0498	1	Mobile Terminating SMS handling for extended Idle mode DRX – Additional Option	
		CP-150777	0477	3	Commands and codes for Np protocol	
		CP-150772	0479	1	Definition of ProSe-Metadata-Index-Mask	
		CP-150772	0489	-	Addition of AVPs and result-codes	
		CP-150772	0500	-	Addition of AVP used in match report procedure for eProSe-Ext-CT	
		CP-150754	0481	1	Allowed WAF and/or WWSF Identities	
		CP-150773	0482	-	Add the default access type to 3GPP specific AVP	
		CP-150781	0484	1	AVP code allocation for "UE Usage Type"	
		CP-150755	0486	-	Metadata in Match-Report	
		CP-150755	0488	-	New Group AVP for ProSe direct discovery procedures	
		CP-150771	0492	1	Definition of AVP for AESE-CT	
		CP-150771	0496	1	Command codes and AVP range for TS 29.154 and TS 29.153	
		CP-150776	0495	1	AVP codes for Indoor Positioning support in SLg/Lgd	
2016-03	CT#71	CP-160041	0503	-	Application ID for St	13.4.0
		CP-160041	0506	1	Correction on TS numbers	
		CP-160041	0510	-	AVPs for the Rx Diameter application	
		CP-160041	0514	2	AVP code reservation for 32.299	
		CP-160041	0518	1	Codes for 29.212	
		CP-160029	0505	3	New AVP assignment for MONTE	
		CP-160029	0509	-	Change of type of Monitoring-Duration AVP to represent an absolute time	
		CP-160035	0507	-	Remove the default access AVP	
		CP-160035	0508	-	Specific AVP codes for NBIFOM	
		CP-160030	0511	-	Alert procedure from MME/SGSN to SMS-GMSC for MT SMS to UE using eDRX	
		CP-160037	0512	-	ePDG retrieval of WLAN Location Information	
		CP-160033	0513	2	Definition of AVP Authorization of NIDD	
		CP-160033	0520	2	New PDN-Type for Cellular IoT	
		CP-160036	0517	1	Monitoring update and Reporting of update result	
		CP-160036	0519	3	Allocation of new Diameter Application ID and commands code for PC2 protocol	
2016-03	CT#71	CP-160018	0515	1	AVP code reservation for 32.299	14.0.0
2016-06	CT#72	CP-160236	0526	1	Command Codes for 29.212	14.1.0
2016-06	CT#72	CP-160236	0543	-	AVP code range 3900-3999	14.1.0
2016-06	CT#72	CP-160236	0557	1	New AVPs in TS 29.214	14.1.0
2016-06	CT#72	CP-160236	0565	-	AVP codes for 29.212	14.1.0
2016-06	CT#72	CP-160232	0528	2	AVP Codes for 29.343	14.1.0
2016-06	CT#72	CP-160232	0533	3	Addition of new AVPs for ProSe direct discovery security and open ProSe direct discovery with application-controlled extension	14.1.0
2016-06	CT#72	CP-160232	0540	-	Reserved Experimental Result Codes for TS 29.343	14.1.0
2016-06	CT#72	CP-160232	0549	-	Assignment of application ID and command code for PC2 reference point	14.1.0

2016-06	CT#72	CP-160228	0531	-		IANA Command Code Registration	14.1.0
2016-06	CT#72	CP-160228	0541	1		CloT new commands and Diameter error	14.1.0
2016-06	CT#72	CP-160228	0550	-		NIDD authorisation update	14.1.0
2016-06	CT#72	CP-160228	0560	3		Serving PLMN Rate Control	14.1.0
2016-06	CT#72	CP-160228	0563	-		New AVP for APN Rate Control	14.1.0
2016-06	CT#72	CP-160233	0537	1		Renaming of Validity-Time AVP	14.1.0
2016-06	CT#72	CP-160233	0562	1		New AVPs allocated for 29.153 and 29.154	14.1.0
2016-06	CT#72	CP-160225	0545	3		SCEF Realm	14.1.0
2016-06	CT#72	CP-160225	0548	-		Cleanup up on MONTE AVP's	14.1.0
2016-06	CT#72	CP-160227	0546	-		IANA assigned application Id and command code values	14.1.0
2016-06	CT#72	CP-160227	0547	2		Allocation of AVP codes and Experimental Result codes for Diameter Data Management application	14.1.0
2016-06	CT#72	CP-160231	0553	1		3GPP specific AVP for NBIFOM	14.1.0
2016-06	CT#72	CP-160222	0555	1		Shared Subscription data update	14.1.0
2016-09	CT#73	CP-160424	0570	1		Missing AVP codes and Experimental-Result codes for T6a	14.2.0
2016-09	CT#73	CP-160424	0574	1		Allocate of AVP Handling of Exception Reports in the Core Network	14.2.0
2016-09	CT#73	CP-160419	0572	1		AVP codes for 32.299	14.2.0
2016-09	CT#73	CP-160419	0576	1		AVP code for 29.214	14.2.0
2016-09	CT#73	CP-160419	0578	1		AVP code for 29.212	14.2.0
2016-09	CT#73	CP-160436	0568	1		STa and SWm extensions for IMEI check	14.2.0
2016-12	CT#74	CP-160650	0582	-		AVP code alignment with 29.272	14.3.0
2016-12	CT#74	CP-160679	0579	1		AVPs for Handover of Emergency PDN Connections	14.3.0
2016-12	CT#74	CP-160678	0583	1		New Diameter Application Code, AVP and Result Code for V2X	14.3.0
2016-12	CT#74	CP-160653	0585	1		Renaming of Emergency-Indication AVP	14.3.0
2016-12	CT#74	CP-160670	0586	2		New AVPs for TS 29.214	14.3.0
2016-12	CT#74	CP-160660	0590	-		S6t-HSS-Cause	14.3.0
2016-12	CT#74	CP-160669	0591	-		AVP codes for 29.468	14.3.0
2017-03	CT#75	CP-170039	0592	1		Enhanced Coverage	14.4.0
2017-03	CT#75	CP-170039	0593	1		Inter-RAT PDN-Continuity	14.4.0
2017-03	CT#75	CP-170039	0595	1		NIDD Authorization revocation	14.4.0
2017-03	CT#75	CP-170036	0594	1		Loss Of Connectivity Reason	14.4.0
2017-03	CT#75	CP-170036	0602	1		Subscription parameters for eDRX	14.4.0
2017-03	CT#75	CP-170036	0607	1		Support of long and short Macro eNodeB IDs	14.4.0
2017-03	CT#75	CP-170025	0597	-		AVP codes for 32.299	14.4.0
2017-03	CT#75	CP-170043	0598	1		New AVP for UE-PC5-AMBR	14.4.0
2017-03	CT#75	CP-170043	0603	1		Correct Diameter Result Code Allocated for V2X	14.4.0
2017-03	CT#75	CP-170049	0601	1		AVPs for ERP in 29.273	14.4.0
2017-03	CT#75	CP-170052	0605	-		Update of the name of MCPTT-User-Profile-Data AVP	14.4.0

2017-03	CT#75	CP-170045	0606	-		Support of MCVideo and MCDData Services	14.4.0
2017-06	CT#76	CP-171029	0600	4		New AVP for Group Based MONTE Event Configuration via HSS	14.5.0
2017-06	CT#76	CP-171017	0609	-		New AVPs in 29.272 for MBSFN MDT	14.5.0
2017-06	CT#76	CP-171026	0610	-		AVP codes for 29.212	14.5.0
2017-06	CT#76	CP-171026	0611	-		AVP codes for 29.214	14.5.0
2017-06	CT#76	CP-171030	0612	1		AVP code allocation for 29.172 for Location Services for CioT	14.5.0
2017-06	CT#76	CP-171030	0613	-		Addition of APN-Validity-Time AVP	14.5.0
2017-06	CT#76	CP-171026	0615	-		AVP codes for 32.299	14.5.0
2017-09	CT#77	CP-172018	0616	1		Reliable Data Service Success cause	14.6.0
2017-09	CT#77	CP-172018	0617	1		Reliable Data Service	14.6.0
2017-09	CT#77	CP-172026	0618	1		Enhancements for NAPS	15.0.0
2017-12	CT#78	CP-173011	0625	-		AVP codes for TS 29.219, TS 29.212 and TS 29.214	15.1.0
2017-12	CT#78	CP-173033	0619	1		Suggested Network Configuration Request	15.1.0
2017-12	CT#78	CP-173028	0620	-		Monitoring Event Report Status	15.1.0
2017-12	CT#78	CP-173028	0626	-		AVP code for PLMN-ID-Requested in S6t	15.1.0
2017-12	CT#78	CP-173032	0627	-		New AVP for PC5-tech for WLAN based ProSe Direct Discovery	15.1.0
2018-03	CT#79	CP-180021	0628	1		Service Gap Time AVP	15.2.0
2018-03	CT#79	CP-180020	0629	1		AVP codes for 32.299	15.2.0
2018-03	CT#79	CP-180025	0630	-		IMSI-Group-Id retrieval	15.2.0
2018-06	CT#80	CP-181120	0631	1		Supported-Services and Supported-Monitoring-Events	15.3.0
2018-06	CT#80	CP-181120	0632	1		New AVPs in TS 29.212 for eVoLP	15.3.0
2018-06	CT#80	CP-181120	0633	1		Reserve Diameter codes for TS 29.561	15.3.0
2018-06	CT#80	CP-181120	0635	-		Application ID for Diameter Nta	15.3.0
2018-06	CT#80	CP-181120	0636	1		AVP codes for TS 29.154	15.3.0
2018-06	CT#80	CP-181120	0637	1		New AVP for subscription for Aerial UE in 3GPP system	15.3.0
2018-06	CT#80	CP-181120	0639	1		AVP codes for 32.299	15.3.0
2018-06	CT#80	CP-181124	0640	1		Subscription data for ciphering keys	15.3.0
2018-06	CT#80	CP-181127	0634	-		AVP code for NIR-Flags	15.3.0
2018-09	CT#81	CP-182080	0642	-		AVP code for TS 29.214	15.4.0
2018-09	CT#81	CP-182073	0643	-		AVP codes for TS 29.468	15.4.0
2018-09	CT#81	CP-182073	0644	-		Update tables due to N6	15.4.0
2018-09	CT#81	CP-182073	0645	1		Change of value type of Maximum Packet Loss Rate	15.4.0
2018-09	CT#81	CP-182073	0646	1		Subscribed PTW length	15.4.0
2018-09	CT#81	CP-182073	0647	1		Policy Update when UE suspends	15.4.0
2018-09	CT#81	CP-182073	0648	1		Command Codes for Nta Diameter Application	15.4.0
2018-09	CT#81	CP-182084	0649	-		Core Network Restrictions	15.4.0
2018-09	CT#81	CP-182071	0651	-		DSR-Flag for eDRX-Cycle-Length	15.4.0

2018-12	CT#82	CP-183092	0653	1		Interworking-5GS-Indicator AVP definition	15.5.0
2018-12	CT#82	CP-183095	0652	1		Monitoring event report	15.5.0
2018-12	CT#82	CP-183102	0654	-		Wrong AVP type in Access-Restriction-Data	15.5.0
2018-12	CT#82	CP-183102	0655	-		NIDD group authorization	15.5.0
2019-03	CT#83	CP-190036	0656	1		New AVP for MB2	15.6.0
2019-03	CT#83	CP-190036	0657	1		RTR-Flags	15.6.0
2019-03	CT#83	CP-190037	0658	1		Handling of multiple external IDs for the same UE	15.6.0
2019-09	CT#85	CP-192125	0662	-		Add P-CSCF subscription info to Restoration information	16.0.0
2019-09	CT#85	CP-192122	0661	1		Event type PDN Connectivity Status	16.0.0
2019-09	CT#85	CP-192122	0664	-		Ethernet PDN Type AVP	16.0.0
2019-09	CT#85	CP-192121	0663	1		Communication pattern enhancement	16.0.0
2019-12	CT#86	CP-193035	0669	1		UE Status Suspend	16.1.0
2019-12	CT#86	CP-103038	0666	1		New Error Code for TS 29.336	16.1.0
2019-12	CT#86	CP-103038	0671	-		Subscribed ARPI AVP	16.1.0
2019-12	CT#86	CP-103038	0672	-		Network Parameter Configuration Reporting AVP	16.1.0
2019-12	CT#86	CP-103038	0673	2		New AVP defined in TS 29.214 for Callee-Information	16.1.0
2019-12	CT#86	CP-193040	0667	-		S-CSCF restoration after registration timer expiry	16.1.0
2019-12	CT#86	CP-193052	0665	1		Battery Indication for Communication pattern enhancement	16.1.0
2020-03	CT#87e	CP-200041	0676	1		AVP codes for 32.299	16.2.0
2020-03	CT#87e	CP-200041	0678	-		New AVPs in TS 29.214	16.2.0
2020-03	CT#87e	CP-200027	0677	3		Addition of AVP code for IAB-Node-Information AVP	16.2.0
2020-03	CT#87e	CP-200036	0679	-		Subscription data for NR V2X	16.2.0
2020-03	CT#87e	CP-200050	0680	-		Reachability Cause	16.2.0
2020-06	CT#88e	CP-201016	0685	-		SMSF Address	16.3.0
2020-06	CT#88e	CP-201049	0681	-		Authorized PLMNs and RATs for V2X	16.3.0
2020-06	CT#88e	CP-201049	0682	-		Subscribed PC5 QoS Parameters for NR V2X	16.3.0
2020-09	CT#89e	CP-202094	0687	1		AVP Codes for TS 29.214	16.4.0
2020-12	CT#90e	CP-203032	0688	-		Extended Reference ID	16.5.0
2021-03	CT#90e	CP-210057	0689	-		Default APN for Ethernet PDN types	16.6.0
2021-09	CT#93e	CP-212073	0690	1	F	APN Rate Control Status	16.7.0
2021-09	CT#93e	CP-212037	0691	1	B	New AVP Exclude-Identifiers	17.0.0
2021-12	CT#94e	CP-213128	0692	1	F	AVP code for TS 29.468	17.1.0
2021-12	CT#94e	CP-213110	0694	1	B	New AVP Include-Identifiers	17.1.0
2022-03	CT#95e	CP-220052	0697	2	B	Adding new Alternate-Digest AVPs	17.2.0
2022-03	CT#95e	CP-220054	0695	-	B	Failed P-CSCF AVPs	17.2.0
2022-12	CT#98e	CP-223038	0702	-	F	Experimental Result Codes for TS 29.273	18.0.0
2023-06	CT#100	CP-231039	0703	-	B	Add SBI support indicator AVPs for S6c	18.1.0

2023-09	CT#101	CP-232035	0705	1	F	Add AMF-Instance-Id AVP	18.2.0
2023-09	CT#101	CP-232055	0706	-	B	AVP for MPS for WLAN	18.2.0
2024-03	CT#103	CP-240290	0707	-	B	Diameter Application Identifier for Sc protocol	18.3.0

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# History

<b>Document history</b>		
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