



## CHAPTER **B**

# Supported AVPs in DCCA Messages

The following sections of this appendix list the vendor-specific attribute value pairs (AVPs) supported by the Cisco GGSN in Diameter Credit Control Application (DCCA) Credit-Control-Request (CCR) and Credit-Control-Answer (CCA) messages:

- [Supported AVPs in CCRs, page B-1](#)
- [Supported AVPs in CCAs, page B-5](#)

## Supported AVPs in CCRs

Table B-1 lists the AVPs supported by the Cisco GGSN in DCCA CCRs.

**Table B-1** List of AVPs supported in CCR Messages

AVP Name	AVP Code / Vendor ID	Value	Comment
Session-ID	263	String, Format: “ <i>origin-host;0;charging id</i> ”	
Origin-Host	264	DiameterIdentifier	Configured value.
Origin-Realm	296	DiameterIdentifier	Configured value.
Destination-Realm	283	DiameterIdentifier	Configured value in CCR(Initial). For subsequent CCRs, the Origin-Realm received in the last CCA is used as the Destination-Realm.
Destination-Host	293	DiameterIdentifier	Not sent in the first CCR message. The Origin-Host in the CCA is used as Destination-Host in the next CCR message.
Auth-Application-Id	258	4	Value for DCCA.
CC-Request-Type	416	1 = Initial 2 = Update 3 = Final 4 = Event	Value 4 (Event) is not supported.
CC-Request-Number	415	Monotonically increasing number	A value of “0” is used for CCR(Initial).

Table B-1 List of AVPs supported in CCR Messages (continued)

AVP Name	AVP Code / Vendor ID	Value	Comment
Service-Context-Identifier	461	Cisco_3gpp_Gy Gy DCCA implementation	For VF_CLCI specific implementation, version1.clci.ipc@vodafone.com is used.
Framed-IP-Address	8	IP address allocated for the user	
Called-Station-Id	30	APN name (string)	
User-Name	1	User name (string)	
Event-Timestamp	55	Time when quota is requested	
Subscription-Id	443	Grouped AVP	A grouped AVP consisting of the Subscription-Id-Type and Subscription-Id-Data AVPs. With Cisco GGSN Release 10.2, the option of including the International Mobile Subscriber Identity (IMSI) AVP is supported by using the <b>gprs dcca avp imsi grouped</b> global configuration command.
Subscription-Id-Type	450	End_User-E164 (0)	
Subscription-Id-Data	444	Mobile station ISDN (MSISDN) (string)	
Termination-Cause	295	Integer value (as per RFC 3588)	Sent only in the CCR(Final) message.
Requested-Service-Unit	437	No value. An empty AVP will be present. Grouped AVP.	Sent only in the CCR(Initial) message.
Multiple-Services-Indicator	455	MULTIPLE_SERVICE_S_SUPPORTED (1)	Sent only in the CCR(Initial) message.
Multiple-Services-Credit-Control	456	Grouped AVP	There can be multiple instances of this attribute, one for each category.
Origin-State-Id	278	DCCA (4)	
3GPP-CG-Address	4 / 10415	Active charging gateway address	0.0.0.0 is used if there is no active charging gateway.
3GPP-Charging-Id	2 / 10415	Charging ID of the primary packet data protocol (PDP) context	Because quota management is performed for a PDP session (not for each PDP context), the charging ID of the primary PDP context is used. However, if the primary PDP context is deleted before secondary PDP contexts, subsequent CCR messages use the charging ID of the first secondary PDP context.
3GPP-Charging-Characteristics	13 / 10415	Charging characteristic received from a serving GPRS support node (SGSN)	An SGSN always sends this value for service-aware PDP context activations. This value must be sent to a Diameter server.

**Table B-1** List of AVPs supported in CCR Messages (continued)

AVP Name	AVP Code / Vendor ID	Value	Comment
3GPP-GPRS-QoS-Negotiated-Profile	5 / 10415	Negotiated quality of service (QoS) profile	The QoS profile of the primary PDP context is sent. However, if a primary PDP context is deleted before the secondary PDP contexts, then subsequent CCR messages contain the negotiated QoS of the first secondary PDP context.
3GPP-GGSN-Address	847 / 10415	GGSN IP address	
3GPP-IMSI	1 / 10415	International Mobile Subscriber Identity (IMSI) of the user	
3GPP-PDP-Type	3 / 10415	Type of PDP context (IPv4)	Only IPv4 PDP type is supported.
3GPP-Selection-Mode	12 / 10415	Selection mode received from SGSN	
3GPP-SGSN-Address	1228 / 10415	Address of the signaling SGSN	
3GPP-IMSI-MCC-MNC	8 / 10415	Mobile Country Code (MCC) and Mobile network Code (MNC) extracted from the IMSI	
3GPP-GGSN-MCC-MNC	9 / 10415	MCC and MNC of the GGSN	
3GPP-NSAPI	10 / 10415	Network Service Access Point Identifier (NSAPI) of the PDP context	The NSAPI of the primary PDP context is sent. However, if the primary PDP context is deleted before the secondary PDP contexts, the NSAPI of the first secondary PDP context is used.
3GPP-Session-Stop-Indicator	11 / 10415	“FF”	Only present in the CCR(Final) message.
Context-Type	1247 / 10415	PRIMARY (0)	For secondary PDPs contexts, no CCR is sent. therefore, the Context-Type AVP is sent only in CCR(Initial).
User-Location-Information	267 / 12645	Cell Global Identification (CGI) is used as geographic location type. Only the Routing Area Identify (RAI) is available from an SGSN, and this is sent. L2TP access concentrator (LAC) and CI fields are sent as FF.	MCC-MNC extracted from RAI is sent. Supported only for VF-CLCI specific implementation.

**Table B-1** List of AVPs supported in CCR Messages (continued)

AVP Name	AVP Code / Vendor ID	Value	Comment
Radio-Access-Technology	260 / 12645	Radio-Access-Technology (RAT) is an enumerated type indicating: UTRAN (1), GERAN (2), and WLAN (3).	Sent only in CCR. Supported only for VF-CLCI specific implementation.
User-Equipment-Info	458	Grouped AVP	Allows the credit-control client to indicate the identity and capability of the terminal the subscriber is using for the connection to network.  Contains User-Equipment-Info-Type and User-Equipment-Info-Value AVPs.
PS-Information	874	Grouped AVP	Allows the transmission of additional packet switched (PS) service specific information elements.
3GPP-MS-TimeZone	23	Indicates the offset between universal time and local time in steps of 15 minutes of where the MS currently resides.	

# Supported AVPs in CCAs

Table B-2 lists the AVPs supported by the Cisco GGSN in DCCA CCAs.

**Table B-2** List of AVPs supported in CCA Messages

AVP Name	AVP Code / Vendor ID	Value	Comment
Session-ID	263	String, Format: "origin-host;0;charging id"	
Origin-Host	264	DiameterIdentifier	The address of the DCCA server.
Origin-Realm	296	DiameterIdentifier	The realm of the DCCA server.
Result-Code	268	Integer value (as per RFC 3588 and RFC 4006)	
Auth-Application-Id	258	4	The value for DCCA.
CC-Request-Type	416	1 = Initial 2 = Update 3 = Final 4 = Event	Value 4 (Event) is not supported.
CC-Request-Number	415	Same as the one sent in corresponding CCR message	
CC-Session-Failover	418	FAILOVER_NOT_SUPPORTED (0), FAILOVER_SUPPORTED (1)	
Credit-Control-Failure-Handling	427	TERMINATE (0), CONTINUE (1), RETRY_AND_TERMINATE (2)	
Multiple-Services-Credit-Control	456	Grouped AVP	Contains the granted quota. There can be multiple instances of this attribute, one for each category.
Validity Time	448	The amount of time the quota is valid	A value of "0" is considered invalid.
Failed-AVP	279	Grouped AVP. Contains the list of attributes causing the failure condition.	Optionally present if the Result-Code is not SUCCESS. There can be multiple instances of this AVP.
Origin-State-Id	278	DCCA(4)	
Rulebase-Id	262 / 12645	Billing Plan Id (string)	Supported only for VF_CLCI specific implementations.

