

# Probleemoplossing 4G ASR KPI-afbraak als gevolg van een toename in onbekend omgekeerde reden voor verbinding met kleine gebruikers

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## Inleiding

Dit document beschrijft hoe u het probleem kunt oplossen dat zich voordoet wanneer 4G Attach Success Rate (ASR) Key Performance Indicator (KPI) wordt aangetast wanneer de ongekende **mme-hss-user-disconnect** reden is toegenomen.

## Voorwaarden

### Vereisten

Cisco raadt kennis van de volgende onderwerpen aan:

- Hardware kennis van 5000/5500
- StarOS

### Gebruikte componenten

Dit document is niet beperkt tot specifieke software- en hardware-versies.

De informatie in dit document is gebaseerd op de apparaten in een specifieke laboratoriumomgeving.

Alle apparaten die in dit document worden beschreven, hadden een opgeschoonde (standaard)configuratie. Als uw netwerk levend is, zorg er dan voor dat u de mogelijke impact van

om het even welke opdracht begrijpt.

## Afkortingen

ASR	Bevestiging succes
KPI	Key Performance Indicator
lucht	Verificatieinformatieaanvraag
AIA	Verificatieinformatieantwoord
KER	Aanvraag tot uitwisseling van capaciteit
CEA	Antwoorden op capaciteit-uitwisseling
MEVROUW	Mobiliteitsbeheerentiteit
HSS	Home Subscriber Server
DPC	Kaart voor gegevensverwerking
RFC	Verzoek om opmerkingen
AVP	Kenmerk-waardepapier

## Probleem

De dienstverlener rapporteerde de 4G ASR-afbraak in één ME en de ontkoppelde reden "mme-hss-user-onbekend" werd verhoogd.

De "mme-hss-user-known (375)" disconnect reden beschrijft het totale aantal sessies dat wordt losgekoppeld omdat de MME HSS-gebruiker onbekend is.

Eén defect dat is opgenomen, meldde dat HSS de Verificatie als resultaat-code DIAMETER\_MISSING\_AVP (5005) in AIA-bericht heeft afgewezen.

MME kreeg constant "DIAMETER\_MISSING\_AVP (5005)" van HSS en dit is hoe de mislukte AIA boodschap eruit ziet:

```
INBOUND>>>>> From diamproxy:52 oxy_conn_mgmt.c:3406 (Callid 4c0ea07a) 08:42:11:109
Eventid:81991(5)
Diameter message from 10.5.40.X:6000 to 10.0.231.Y:49417
Base Header Information:
  Version:          0x01          (1)
  Message Length:  0x000110      (272)
  Command Flags:   0x40          (64)  PXY
  Command Code:    0x00013e      (318) Authentication-Information-Answer
  Application ID:  0x01000023     (16777251)  3GPP-S6a
  Hop2Hop-ID:     0xad40545      (2914256197)
  End2End-ID:     0x2cafadd5     (749710805)
AVP Information:
  [M] Session-Id
    Code:          0x00000107     (263) Session-Id
    Flags:         0x40          (64)  [M]
    Length:        0x000069      (105)
    Data: 0004-
diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNET;1276027002;2496613;5c204e8b-16502
  [M] Auth-Session-State
    Code:          0x00000115     (277) Auth-Session-State
    Flags:         0x40          (64)  [M]
    Length:        0x00000c      (12)
    Data: NO_STATE_MAINTAINED (1)
  [M] Origin-Host
```

```

Code:      0x00000108 (264) Origin-Host
Flags:     0x40      (64) [M]
Length:    0x000033  (51)
Data: hss101.epc.mnc0XY.mcc404.3gppnetwork.org
[M] Origin-Realm
Code:      0x00000128 (296) Origin-Realm
Flags:     0x40      (64) [M]
Length:    0x000029  (41)
Data: epc.mnc0XY.mcc404.3gppnetwork.org
[M] Result-Code
Code:      0x0000010c (268) Result-Code
Flags:     0x40      (64) [M]
Length:    0x00000c  (12)
Data: DIAMETER_MISSING_AVP (5005) >> DIAMETER_MISSING_AVP(5005)received from HSS
[M] Failed-AVP
Code:      0x00000117 (279) Failed-AVP
Flags:     0x40      (64) [M]
Length:    0x000018  (24)
  [V] [M] Visited-PLMN-Id
    Code:    0x0000057f (1407) Visited-PLMN-Id
    Flags:   0xc0      (192) [V] [M]
    Length:  0x00000d  (13)
    Vendor-Id: 0x000028af (10415) 3GPP
    Data: 0x00

```

## Problemen oplossen

Deze sectie verschaft informatie die u kunt gebruiken om problemen op te lossen met het probleem van de afbraak van ASR KPI door een toename in de onduidelijke reden voor de verbroken verbinding tussen gebruiker en gebruiker.

De verzamelde "mon sub" wordt getraceerd en vergeleken met het succes- en mislukkingsscenario. AVP wordt ondersteund door functies in de AIR van MME naar HSS server ontbreekt.

Succesvolle LUCHT- en AIA-berichten worden opgenomen van het **mon-subspoor**. Dit is het AIR bericht dat van MME naar HSS wordt verzonden:

Monday December 24 2018

<<<<OUTBOUND From diamproxy:49 diamproxy\_rlf.c:553 (Callid 62adced4) 08:42:39:580

Eventid:81990(5)

Diameter message from 10.0.231.Y:48273 to 10.5.40.X:6000

Base Header Information:

```

Version:      0x01      (1)
Message Length: 0x0001c4  (452)
Command Flags: 0xc0      (192) REQ PXY
Command Code:  0x00013e  (318) Authentication-Information-Request
Application ID: 0x01000023(16777251) 3GPP-S6a
Hop2Hop-ID:   0xadbfd12a (2914906410)
End2End-ID:   0x60bd9382 (1623036802)

```

AVP Information:

[M]Session-Id

```

Code:      0x00000107 (263) Session-Id
Flags:     0x40      (64) [M]
Length:    0x000069  (105)
Data: 0001-

```

diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNET;1655557844;4204805;5c204ea7-30502

[M]Auth-Session-State

```

Code:      0x00000115 (277) Auth-Session-State
Flags:     0x40      (64) [M]

```

Length: 0x00000c (12)  
Data: NO\_STATE\_MAINTAINED (1)

[M]Origin-Host  
Code: 0x00000108 (264) Origin-Host  
Flags: 0x40 (64) [M]  
Length: 0x00004f (79)  
Data: 0001-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNCOXY.MCC404.3GPPNETWORK.ORG

[M]Origin-Realm  
Code: 0x00000128 (296) Origin-Realm  
Flags: 0x40 (64) [M]  
Length: 0x00002d (45)  
Data: MME.epc.mnc0XY.mcc404.3gppnetwork.org

[M]Destination-Realm  
Code: 0x0000011b (283) Destination-Realm  
Flags: 0x40 (64) [M]  
Length: 0x000029 (41)  
Data: epc.mnc0XY.mcc404.3gppnetwork.org

[M]User-Name  
Code: 0x00000001 (1) User-Name  
Flags: 0x40 (64) [M]  
Length: 0x000017 (23)  
Data: 404XY0000011111

[V]Supported-Features  
Code: 0x00000274 (628) Supported-Features  
Flags: 0x80 (128) [V]  
Length: 0x000038 (56)  
Vendor-Id: 0x000028af (10415) 3GPP

[M]Vendor-Id  
Code: 0x0000010a (266) Vendor-Id  
Flags: 0x40 (64) [M]  
Length: 0x00000c (12)  
Data: 10415

[V]Feature-List-ID  
Code: 0x00000275 (629) Feature-List-ID  
Flags: 0x80 (128) [V]  
Length: 0x000010 (16)  
Vendor-Id: 0x000028af (10415) 3GPP  
Data: 1

[V]Feature-List  
Code: 0x00000276 (630) Feature-List  
Flags: 0x80 (128) [V]  
Length: 0x000010 (16)  
Vendor-Id: 0x000028af (10415) 3GPP  
Data: 469763591

[V] [M]Requested-EUTRAN-Authentication-Info  
Code: 0x00000580 (1408) Requested-EUTRAN-Authentication-Info  
Flags: 0xc0 (192) [V] [M]  
Length: 0x00002c (44)  
Vendor-Id: 0x000028af (10415) 3GPP

[V] [M] Number-Of-Requested-Vectors  
Code: 0x00000582 (1410) Number-Of-Requested-Vectors  
Flags: 0xc0 (192) [V] [M]  
Length: 0x000010 (16)  
Vendor-Id: 0x000028af (10415) 3GPP  
Data: 1

[V] [M] Immediate-Response-Preferred  
Code: 0x00000584 (1412) Immediate-Response-Preferred  
Flags: 0xc0 (192) [V] [M]  
Length: 0x000010 (16)  
Vendor-Id: 0x000028af (10415) 3GPP  
Data: 1

[V] [M]Visited-PLMN-Id  
Code: 0x0000057f (1407) Visited-PLMN-Id  
Flags: 0xc0 (192) [V] [M]

Length: 0x00000f (15)  
Vendor-Id: 0x000028af (10415) 3GPP  
Data: 0x04f4YX

## Het AIA-bericht dat van HSS naar MME wordt verzonden is:

INBOUND>>>> From diamproxy:49 oxy\_conn\_mgmt.c:3406 (Callid 62adced4) 08:42:39:601  
Eventid:81991(5)

Diameter message from 10.5.40.X:6000 to 10.0.231.Y:48273

### Base Header Information:

Version: 0x01 (1)  
Message Length: 0x000198 (408)  
Command Flags: 0x40 (64) PXY  
Command Code: 0x00013e (318) Authentication-Information-Answer  
Application ID: 0x01000023(16777251) 3GPP-S6a  
Hop2Hop-ID: 0xadbf12a (2914906410)  
End2End-ID: 0x60bd9382 (1623036802)

### AVP Information:

#### [M]Session-Id

Code: 0x00000107 (263) Session-Id  
Flags: 0x40 (64) [M]  
Length: 0x000069 (105)  
Data: 0001-

diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNET;1655557844;4204805;5c204ea7-30502

#### [M]Auth-Session-State

Code: 0x00000115 (277) Auth-Session-State  
Flags: 0x40 (64) [M]  
Length: 0x00000c (12)  
Data: NO\_STATE\_MAINTAINED (1)

#### [M]Origin-Realm

Code: 0x00000128 (296) Origin-Realm  
Flags: 0x40 (64) [M]  
Length: 0x000029 (41)  
Data: epc.mnc0XY.mcc404.3gppnetwork.org

#### [M]Origin-Host

Code: 0x00000108 (264) Origin-Host  
Flags: 0x40 (64) [M]  
Length: 0x000033 (51)  
Data: hss304.epc.mnc0XY.mcc404.3gppnetwork.org

#### [V] [M]Authentication-Info

Code: 0x00000585 (1413) Authentication-Info  
Flags: 0xc0 (192) [V] [M]  
Length: 0x0000a0 (160)  
Vendor-Id: 0x000028af (10415) 3GPP

#### [V] [M] EUTRAN-Vector

Code: 0x00000586 (1414) EUTRAN-Vector  
Flags: 0xc0 (192) [V] [M]  
Length: 0x000094 (148)  
Vendor-Id: 0x000028af (10415) 3GPP

#### [V] [M] Item-Number

Code: 0x0000058b (1419) Item-Number  
Flags: 0xc0 (192) [V] [M]  
Length: 0x000010 (16)  
Vendor-Id: 0x000028af (10415) 3GPP  
Data: 1

#### [V] [M] RAND

Code: 0x000005a7 (1447) RAND  
Flags: 0xc0 (192) [V] [M]  
Length: 0x00001c (28)  
Vendor-Id: 0x000028af (10415) 3GPP  
Data: 0xc8d8ecce3d684b36ee5aa7aaadaf2658

#### [V] [M] XRES

Code: 0x000005a8 (1448) XRES

```

Flags:      0xc0      (192) [V] [M]
Length:     0x000014  (20)
Vendor-Id:  0x000028af (10415) 3GPP
Data: 0x7a74729d5a811ac9
[V] [M] AUTN
Code:      0x000005a9 (1449) AUTN
Flags:     0xc0      (192) [V] [M]
Length:    0x00001c  (28)
Vendor-Id: 0x000028af (10415) 3GPP
Data: 0xddc5adb739e6800088e9c8135c3099d4
[V] [M] KASME
Code:      0x000005aa (1450) KASME
Flags:     0xc0      (192) [V] [M]
Length:    0x00002c  (44)
Vendor-Id: 0x000028af (10415) 3GPP
Data: 0xbf4c4f11f05d9c8c1e39d1066c6cdb92080760e40d0273b015cffffd4a20325fc
[M]Result-Code
Code:      0x0000010c (268) Result-Code
Flags:     0x40      (64) [M]
Length:    0x00000c  (12)
Data: DIAMETER_SUCCESS (2001)

```

De mislukte LUCHT en AIA berichten worden opgenomen van de **mon sub spoorlijn**.

Het bericht van de LUCHT dat van MME naar HSS wordt verzonden is:

```

<<<<OUTBOUND From diamproxy:52 diamproxy_rlf.c:553 (Callid 4c0ea07a) 08:42:11:089
Eventid:81990(5)

```

```

Diameter message from 10.0.231.Y:49417 to 10.5.40.X:6000

```

```

Base Header Information:

```

```

Version:      0x01      (1)
Message Length: 0x000150  (336)
Command Flags: 0xc0      (192) REQ PXY
Command Code:  0x00013e  (318) Authentication-Information-Request
Application ID: 0x01000023 (16777251) 3GPP-S6a
Hop2Hop-ID:    0xad40545 (2914256197)
End2End-ID:    0x2cafadd5 (749710805)

```

```

AVP Information:

```

```

[M] Session-Id

```

```

Code:      0x00000107 (263) Session-Id
Flags:     0x40      (64) [M]
Length:    0x000069  (105)
Data: 0004-

```

```

diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNET;1276027002;2496613;5c204e8b-16502

```

```

[M] Auth-Session-State

```

```

Code:      0x00000115 (277) Auth-Session-State
Flags:     0x40      (64) [M]
Length:    0x00000c  (12)
Data: NO_STATE_MAINTAINED (1)

```

```

[M] Origin-Host

```

```

Code:      0x00000108 (264) Origin-Host
Flags:     0x40      (64) [M]
Length:    0x00004f  (79)
Data: 0004-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG

```

```

[M] Origin-Realm

```

```

Code:      0x00000128 (296) Origin-Realm
Flags:     0x40      (64) [M]
Length:    0x00002d  (45)
Data: MME.epc.mnc0XY.mcc404.3gppnetwork.org

```

```

[M] Destination-Realm

```

Code: 0x0000011b (283) Destination-Realm  
Flags: 0x40 (64) [M]  
Length: 0x000029 (41)  
Data: epc.mnc0XY.mcc404.3gppnetwork.org

[M] User-Name

Code: 0x00000001 (1) User-Name  
Flags: 0x40 (64) [M]  
Length: 0x000017 (23)  
Data: 404XY0000022222

Het AIA-bericht dat van HSS naar MME wordt verzonden is:

INBOUND>>>> From diamproxy:52 oxy\_conn\_mgmt.c:3406 (Callid 4c0ea07a) 08:42:11:109  
Eventid:81991(5)

Diameter message from 10.5.40.X:6000 to 10.0.231.Y:49417

Base Header Information:

Version: 0x01 (1)  
Message Length: 0x000110 (272)  
Command Flags: 0x40 (64) PXY  
Command Code: 0x00013e (318) Authentication-Information-Answer  
Application ID: 0x01000023 (16777251) 3GPP-S6a  
Hop2Hop-ID: 0xad40545 (2914256197)  
End2End-ID: 0x2cafadd5 (749710805)

AVP Information:

[M] Session-Id

Code: 0x00000107 (263) Session-Id  
Flags: 0x40 (64) [M]  
Length: 0x000069 (105)  
Data: 0004-

**diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNET;1276027002;2496613;5c204e8b-16502**

[M] Auth-Session-State

Code: 0x00000115 (277) Auth-Session-State  
Flags: 0x40 (64) [M]  
Length: 0x00000c (12)  
Data: NO\_STATE\_MAINTAINED (1)

[M] Origin-Host

Code: 0x00000108 (264) Origin-Host  
Flags: 0x40 (64) [M]  
Length: 0x000033 (51)  
Data: hss101.epc.mnc0XY.mcc404.3gppnetwork.org

[M] Origin-Realm

Code: 0x00000128 (296) Origin-Realm  
Flags: 0x40 (64) [M]  
Length: 0x000029 (41)  
Data: epc.mnc0XY.mcc404.3gppnetwork.org

[M] Result-Code

Code: 0x0000010c (268) Result-Code  
Flags: 0x40 (64) [M]  
Length: 0x00000c (12)

**Data: DIAMETER\_MISSING\_AVP (5005)**

**>>DIAMETER\_MISSING\_AVP(5005)received from**

**HSS**

[M] Failed-AVP

Code: 0x00000117 (279) Failed-AVP  
Flags: 0x40 (64) [M]  
Length: 0x000018 (24)

[V] [M] Visited-PLMN-Id

Code: 0x0000057f (1407) Visited-PLMN-Id  
Flags: 0xc0 (192) [V] [M]  
Length: 0x00000d (13)  
Vendor-Id: 0x000028af (10415) 3GPP  
Data: 0x00

Volgens de **mon sub**-subtrace wordt de fout "DIAMETER\_MISSING\_AVP (5005)" ontvangen voor 0004-diamanten, die alleen aan DPC-kaart 2 is gekoppeld.

```
[local]SGSN-MME-03# show diameter peers full endpoint DRA1 | grep -i -E "CPU|LOCAL HOST"
Monday December 24 11:34:47 IST 2018
Local Hostname: 0001-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG
CPU: 8/1 Task: diamproxy-49
Local Hostname: 0002-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG
CPU: 9/1 Task: diamproxy-50
Local Hostname: 0003-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG
CPU: 3/1 Task: diamproxy-51
Local Hostname: 0004-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG
CPU: 2/1 Task: diamproxy-52
Local Hostname: 0005-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG
CPU: 4/1 Task: diamproxy-53
Local Hostname: 0006-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG
CPU: 7/1 Task: diamproxy-54
Local Hostname: 0001-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG
CPU: 8/1 Task: diamproxy-49
Local Hostname: 0002-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG
CPU: 9/1 Task: diamproxy-50
Local Hostname: 0003-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG
CPU: 3/1 Task: diamproxy-51
Local Hostname: 0004-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG
CPU: 2/1 Task: diamproxy-52
Local Hostname: 0005-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG
CPU: 4/1 Task: diamproxy-53
Local Hostname: 0006-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG
CPU: 7/1 Task: diamproxy-54
```

[local]SGSN-MME-03#

Het lijkt erop dat "mme-hss-user-onbekend" reden om de verbinding te verbreken, wordt verhoogd voor die sessgr-instantie die alleen gekoppeld is aan DPC-kaart 2.

\*\*\*\*\* show task resources \*\*\*\*\*

cpu	facility	task	cputime	memory	files	sessions				
		instused	allc	usedalloc	used	allc	used	allc	S	status
2/1	sessmgr	749	3.07%	100%	355.0M	900.0M	173500	881	12000	I good
2/1	sessmgr	762	2.86%	100%	353.3M	900.0M	171500	881	12000	I good

<additional outputs suppressed>

**Disconnect reason for smgr-instance 749:**

```
[local]SGSN-MME-03# show session disconnect-reasons smgr-instance 749|grep -i hss-us
Monday December 24 13:45:17 IST 2018
mme-hss-user-unknown 788 8.97597
[local]SGSN-MME-03# show session disconnect-reasons smgr-instance 749|grep -i hss-us
Monday December 24 13:45:19 IST 2018
mme-hss-user-unknown 790 8.99158
```

**Disconnect reason for smgr-instance 762:**

```
[local]SGSN-MME-03# show session disconnect-reasons smgr-instance 762|grep -i hss-us
Monday December 24 13:45:26 IST 2018
mme-hss-user-unknown 743 8.16125
[local]SGSN-MME-03# show session disconnect-reasons smgr-instance 762|grep -i hss-us
Monday December 24 13:45:31 IST 2018
mme-hss-user-unknown 744 8.16147
[local]SGSN-MME-03# show session disconnect-reasons smgr-instance 762|grep -i hss-us
Monday December 24 13:45:32 IST 2018
mme-hss-user-unknown 749 8.20732
[local]SGSN-MME-03# show session disconnect-reasons smgr-instance 762|grep -i hss-us
Monday December 24 13:45:34 IST 2018
```



Bij nader onderzoek waren de ondersteunde verkoper-ID's "geen" voor de HSS-peer met DPC-kaart 2.

[local]SGSN-MME-03# show diameter peers full peer-host dra01.epc.mnc0XY.mcc404.3gppnetwork.org

-----  
Context: s6a Endpoint: HSS\_DRA01  
-----

Peer Hostname: dra01.epc.mnc0xy.mcc404.3gppnetwork.org  
Local Hostname: 0004-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG  
Peer Realm: epc.mnc0XY.mcc404.3gppnetwork.org  
Local Realm: MME.epc.mnc0XY.mcc404.3gppnetwork.org  
Peer Address: 10.5.40.X:6000  
State: OPEN [SCTP]  
CPU: 2/1 Task: sessmgr-4  
Messages Out/Queued: H0.L0/H0.L0  
**Supported Vendor IDs: None** >> **Supported Vendor IDs: none instead of 10415**  
Admin Status: Enable  
DPR Disconnect: N/A  
Peer Backoff Timer running:N/A

-----  
Peer Hostname: dra01.epc.mnc0xy.mcc404.3gppnetwork.org  
Local Hostname: 0004-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG  
Peer Realm: epc.mnc0XY.mcc404.3gppnetwork.org  
Local Realm: MME.epc.mnc0XY.mcc404.3gppnetwork.org  
Peer Address: 10.5.40.X:6000  
State: OPEN [SCTP]  
CPU: 2/2 Task: sessmgr-8  
Messages Out/Queued: H0.L0/H0.L0  
**Supported Vendor IDs: None** >> **Supported Vendor IDs: none instead of 10415**  
Admin Status: Enable  
DPR Disconnect: N/A  
Peer Backoff Timer running:N/A

-----  
Peer Hostname: dra01.epc.mnc0xy.mcc404.3gppnetwork.org  
Local Hostname: 0004-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG  
Peer Realm: epc.mnc0XY.mcc404.3gppnetwork.org  
Local Realm: MME.epc.mnc0XY.mcc404.3gppnetwork.org  
Peer Address: 10.5.40.X:6000  
State: OPEN [SCTP]  
CPU: 2/0 Task: sessmgr-15  
Messages Out/Queued: H0.L0/H0.L0  
**Supported Vendor IDs: None** >> **Supported Vendor IDs: none instead of 10415**  
Admin Status: Enable  
DPR Disconnect: N/A  
Peer Backoff Timer running:N/A

-----  
Peer Hostname: dra01.epc.mnc0xy.mcc404.3gppnetwork.org  
Local Hostname: 0004-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG  
Peer Realm: epc.mnc0XY.mcc404.3gppnetwork.org  
Local Realm: MME.epc.mnc0XY.mcc404.3gppnetwork.org  
Peer Address: 10.5.40.X:6000  
State: OPEN [SCTP]  
CPU: 2/0 Task: sessmgr-20  
Messages Out/Queued: H0.L0/H0.L0  
**Supported Vendor IDs: None** >> **Supported Vendor IDs: none instead of 10415**  
Admin Status: Enable  
DPR Disconnect: N/A

Peer Backoff Timer running:N/A

-----  
Peer Hostname: dra01.epc.mnc0xy.mcc404.3gppnetwork.org

Local Hostname: 0004-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG

Peer Realm: epc.mnc0XY.mcc404.3gppnetwork.org

Local Realm: MME.epc.mnc0XY.mcc404.3gppnetwork.org

Peer Address: 10.5.40.X:6000

State: OPEN [SCTP]

CPU: 2/1

Task: sessmgr-27

Messages Out/Queued: H0.L0/H0.L0

**Supported Vendor IDs: None**

**>> Supported Vendor IDs: none instead of**

**10415**

Admin Status: Enable

DPR Disconnect: N/A

Peer Backoff Timer running:N/A

## Oplossing

Het lijkt erop dat de AVP van de "Ondersteunde verkoper-ID's" niet met DPC Card 2 is onderhandeld en dat de storing alleen met die kaart wordt waargenomen.

Volgens de RFC 3588,

**Ondersteunde verkoper-ID AVP** - Dit wordt gebruikt in de CER- en CEA-berichten om de peer te informeren dat de verzender (een subset van) de verkoopspecifieke AVP's ondersteunt die door de verkoper zijn geïdentificeerd die in deze AVP is geïdentificeerd.

**Verkopers-ID AVP** - In combinatie met de ondersteunde verkoper-ID AVP kan deze gebruikt worden om te weten welke leverancierspecifieke kenmerken naar de peer worden verzonden.

Om de capaciteiten tussen doorsnede en cliënt uit te wisselen, wordt dit actieplan aan de dienstverlener voorgesteld.

Het actieplan is om DPC Card 2 te migreren met standby DPC Card 10.

```
[local]SGSN-MME-03# card migrate from 2 to 10
```

```
Are you sure? [Yes|No]: yes
```

De serviceprovider heeft DPC Card 2 migratie uitgevoerd met standby DPC-kaart 10.

Na de activiteit leken de ondersteunde verkoper-ID's (10415) geschikt voor kaart 10 met de respectieve hss-peer en de ASR KPI leek ook in orde.

```
[local]SGSN-MME-03# show diameter peers full peer-host dra01.epc.mnc0XY.mcc404.3gppnetwork.org
```

-----  
Context: s6a Endpoint: HSS\_DRA01  
-----

Peer Hostname: dra01.epc.mnc0xy.mcc404.3gppnetwork.org

Local Hostname: 0004-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG

Peer Realm: epc.mnc0XY.mcc404.3gppnetwork.org

Local Realm: MME.epc.mnc0XY.mcc404.3gppnetwork.org

Peer Address: 10.5.40.X:6000

State: OPEN [SCTP]

CPU: 10/1

Task: sessmgr-4

Messages Out/Queued: H0.L0/H0.L0

**Supported Vendor IDs: 10415**

**>> Supported Vendor IDs: 10415**

Admin Status: Enable

DPR Disconnect: N/A

Peer Backoff Timer running:N/A

-----  
Peer Hostname: dra01.epc.mnc0xy.mcc404.3gppnetwork.org

Local Hostname: 0004-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG

Peer Realm: epc.mnc0XY.mcc404.3gppnetwork.org  
Local Realm: MME.epc.mnc0XY.mcc404.3gppnetwork.org  
Peer Address: 10.5.40.X:6000  
State: OPEN [SCTP]  
CPU: 10/0 Task: sessmgr-15  
Messages Out/Queued: H0.L0/H0.L0

**Supported Vendor IDs: 10415**

**>> Supported Vendor IDs: 10415**

Admin Status: Enable  
DPR Disconnect: N/A  
Peer Backoff Timer running:N/A

-----  
Peer Hostname: dra01.epc.mnc0xy.mcc404.3gppnetwork.org

Local Hostname: 0004-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG  
Peer Realm: epc.mnc0XY.mcc404.3gppnetwork.org  
Local Realm: MME.epc.mnc0XY.mcc404.3gppnetwork.org  
Peer Address: 10.5.40.X:6000  
State: OPEN [SCTP]  
CPU: 10/1 Task: sessmgr-27  
Messages Out/Queued: H0.L0/H0.L0

**Supported Vendor IDs: 10415**

**>> Supported Vendor IDs: 10415**

Admin Status: Enable  
DPR Disconnect: N/A  
Peer Backoff Timer running:N/A

-----  
Peer Hostname: dra01.epc.mnc0xy.mcc404.3gppnetwork.org

Local Hostname: 0004-diamproxy.MMEC001.MMEGI32000.MME.EPC.MNC0XY.MCC404.3GPPNETWORK.ORG  
Peer Realm: epc.mnc0XY.mcc404.3gppnetwork.org  
Local Realm: MME.epc.mnc0XY.mcc404.3gppnetwork.org  
Peer Address: 10.5.40.X:6000  
State: OPEN [SCTP]  
CPU: 10/2 Task: sessmgr-29  
Messages Out/Queued: H0.L0/H0.L0

**Supported Vendor IDs: 10415**

**>> Supported Vendor IDs: 10415**

Admin Status: Enable  
DPR Disconnect: N/A  
Peer Backoff Timer running:N/A

<additional outputs suppressed>

De ondersteunde verkoper-ID's moeten een waarde van '10415' hebben wanneer de doorsnede-interieurverbinding tussen MME en HSS tot stand wordt gebracht om de operationele doorsnede-berichten te kunnen uitwisselen.