

Risoluzione dei problemi di deterioramento degli indicatori KPI di ASR 4G a causa di un aumento del motivo di disconnessione sconosciuto all'utente

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Introduzione

In questo documento viene descritto come risolvere il problema che si verifica quando si verifica un calo degli indicatori di prestazioni chiave (KPI) ASR (4G Attach Success Rate) quando viene aumentato il motivo della disconnessione **mme-hss-user-known**.

Prerequisiti

Requisiti

Cisco raccomanda la conoscenza dei seguenti argomenti:

- Conoscenze hardware di 5000/5500
- StarOS

Componenti usati

Il documento può essere consultato per tutte le versioni software o hardware.

Le informazioni discusse in questo documento fanno riferimento a dispositivi usati in uno specifico ambiente di emulazione.

Su tutti i dispositivi menzionati nel documento la configurazione è stata ripristinata ai valori predefiniti. Se la rete è operativa, valutare attentamente eventuali conseguenze derivanti dall'uso

dei comandi.

Abbreviazioni

| | |
|------|--|
| ASR | Frequenza di collegamento riuscito |
| KPI | Indicatore prestazioni chiave |
| ARIA | Richiesta informazioni autenticazione |
| AIA | Risposta alle informazioni di autenticazione |
| CER | Richiesta di scambio funzionalità |
| CEA | Risposta a Capability Exchange |
| MME | Entità Mobility Management |
| HSS | Home Subscriber Server |
| DPC | Scheda per l'elaborazione dati |
| RFC | Richiesta di commenti |
| AVP | Coppia attributo-valore |

Problema

Il provider di servizi ha segnalato la degradazione di 4G ASR in un MME e il motivo di disconnessione 'mme-hss-user-known' è stato aumentato.

Il motivo di disconnessione "mme-hss-user-known(375)" descrive il numero totale di sessioni disconnesse perché l'utente MME HSS è sconosciuto.

Una traccia di errore acquisita ha segnalato che HSS stava rifiutando l'autenticazione come risultato del codice DIAMETER_MISSING_AVP (5005) nel messaggio AIA.

MME riceveva costantemente "DIAMETER_MISSING_AVP (5005)" da HSS ed ecco come appare il messaggio AIA di errore:

```
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:           0x0000107      (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:           0x0000115      (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

```

Risoluzione dei problemi

In questa sezione vengono fornite informazioni che è possibile utilizzare per risolvere il problema di deterioramento degli indicatori KPI ASR dovuto a un aumento del motivo di disconnessione mme-hss-user-known.

Il "mon sub" raccolto viene tracciato e confrontato con lo scenario di successo e di errore. Nell'AIR manca l'AVP delle funzionalità supportate dal MME al server HSS.

I messaggi AIR e AIA riusciti vengono acquisiti dalla **sottotraccia mon**. Questo è il messaggio AIR inviato da ME a HSS:

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:   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-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

Messaggio AIA inviato da HSS a MME:

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)

```

I messaggi AIR e AIA di errore vengono acquisiti dalla **sottotraccia mon.**

Il messaggio AIR inviato da ME a HSS è:

```

<<<<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

Messaggio AIA inviato da HSS a MME:

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

Come per la **sottotraccia mon**, viene ricevuto l'errore "DIAMETER_MISSING_AVP (5005)" per il

proxy 0004-diamante, associato solo alla scheda DPC 2.

```
[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#
```

Il motivo della disconnessione sembra essere ' mme-hss-user-known' aumentato per l'istanza di sessmgr associata solo alla scheda DPC 2.

```
***** show task resources *****
      task  cputime      memory      files      sessions
cpu facility  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
mme-hss-user-unknown 750 8.20659
```


Se si controlla ulteriormente, gli ID fornitore supportati per il peer HSS con scheda DPC 2 sono stati "nessuno".

```
[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

```

Soluzione

L'AVP "ID fornitore supportati" non sembra essere negoziato con la scheda DPC Card 2, quindi il guasto viene rilevato solo per quella scheda.

Come per la RFC 3588,

Supported-Vendor-Id AVP: utilizzato nei messaggi CER e CEA per informare il peer che il mittente supporta (un sottoinsieme di) le AVP specifiche del fornitore definite dal fornitore identificato nell'AVP.

AVP ID fornitore: in combinazione con AVP ID fornitore supportato, può essere utilizzato per sapere quali attributi specifici del fornitore possono essere inviati al peer.

Al fine di scambiare le capacità tra il diametro peer e il client, questo piano d'azione è suggerito al fornitore di servizi.

Il piano d'azione prevede la migrazione della scheda DPC 2 con la scheda DPC Card 10 in standby.

```

[local]SGSN-MME-03# card migrate from 2 to 10
Are you sure? [Yes|No]: yes

```

Il provider di servizi ha eseguito la migrazione della scheda DPC 2 con la scheda DPC in standby 10.

Dopo l'attività, gli ID dei fornitori supportati (10415) sembrano essere corretti per la scheda 10 con il rispettivo hss-peer e anche l'indicatore KPI ASR sembra essere corretto.

```

[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>

Gli ID dei fornitori supportati devono essere del valore '10415' quando viene stabilita una connessione peer con diametro tra MME e HSS per poter scambiare i messaggi di diametro operativo.