

CUPS UP - Option 34(CSS Data) 출력이 모니터 프로토콜/가입자에 표시되지 않음

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소개

이 문서에서는 CUPS(Control and User Plane Separation) UP(User Plane)에서 옵션 34 CSS(Call Search Spaces) Data의 모니터 프로토콜/가입자 동작에 대해 설명하며, 여기서 동작은 레거시 비 CUPS 시스템에서 변경됩니다.

문제

레거시 비CUPS에서 Cisco PGW(Packet Data Network Gateway)는 모니터 프로토콜/가입자에 대해 옵션 34(CSS Data)가 활성화된 경우 ECS(Enhanced Charging Service) 모듈과 주고받는 패킷이 인쇄됩니다.

MONITOR GLOBAL PROTOCOLS:

```
11 - SNMP 21 - L2TP (Admin only)
12 - RADIUS Authentication (Admin only) 22 - L2TPMGR (Admin only)
13 - RADIUS Accounting (Admin only) 23 - L2TP Data (Admin only)
14 - All (R-P Interface) (Admin only) 24 - GTPC (Admin only)
15 - Mobile IPv4 (Admin only) 25 - TACACS (Admin only)
16 - AllMGR (Admin only) 26 - GTPU (Admin only)
17 - PPP (Admin only) 27 - GTPP (Admin only)
18 - All (Admin only) 28 - DHCP (Admin only)
19 - User L3 (Admin only) 29 - CDR (Admin only)
20 - USERTCP STACK (Admin only) 30 - DHCPV6 (Admin only)
31 - RADIUS COA (Admin only) 51 - SCTP (Admin only)
32 - MIP Tunnel (Admin only) 52 - M3UA (Admin only)
33 - L3 Tunnel (Admin only) 53 - SCCP (Admin only)
> 34 - CSS Data (Admin only) 54 - TCAP (Admin only)
35 - CSS Signaling (Admin only) 55 - MAP (Admin only)
```

레거시 비CUPS PGW의 샘플 출력은 다음과 같습니다.

Sunday May 02 2021

<<<

CSS Uplink Output PDU to ACS- slot:2 cpu:17 inst:4369

192.168.0.177 > 192.168.3.1: icmp: echo request (DF) (ttl 64, id 45402, len 84)

Sunday May 02 2021

CONTROL 11:22:22:165 Eventid:77202

Rule matched : DEFAULT for uplink packet of subscriber MSID : 593440538564309

Sunday May 02 2021

```

INBOUND>>>> 11:22:22:165 Eventid:77001(9)
CSS Uplink Input PDU from ACS- slot:3 cpu:34 inst:8738
192.168.0.177 > 192.168.3.1: icmp: echo request (DF) (ttl 64, id 45402, len 84)
CUPS UP 34 , .

```

```

Wednesday May 12 2021
***CONTROL*** 03:46:03:656 Eventid:77203
Rule matched : DEFAULT for uplink packet of subscriber CallID : 0x3e02061

```

```

( , (VPP) ) CUPS UP . 34 . 19 (User L3) ECS SGi
. 26 (GTPU) 19 (User L3)

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.
GTPU 26 . 19 , TCP MSS SGi . 19 NO GTPU 2 . sessmgr
GTPU .sessmgr VPP GTPU ., L3 ECS 2 19 .CUPS CUPS
CUPS .:

```

```

Wednesday May 12 2021
INBOUND>>>> 03:46:03:652 Eventid:142004(3)
GTPU Rx PDU, from fe80:192:168:1::3:2152 to fe80:10:200:1::100:2152 (92) TOS:0
TEID: 0x0000200E, Message type: GTP_TPDU_MSG (0xFF)
Sequence Number:: NA
GTP HEADER FOLLOWS:
Version number: 1
Protocol type: 1 (GTP C/U)
Message Type: 0xFF (GTP_TPDU_MSG)
Message Length: 0x0054 (84)
Tunnel ID: 0x0000200E
GTP HEADER ENDS.
Payload protocol: IPv4
PROTOCOL PAYLOAD FOLLOWS:
192.168.1.1 > 192.168.205.1: icmp: echo request (DF) (ttl 64, id 1521, len 84)
PROTOCOL PAYLOAD ENDS.

```

```

Wednesday May 12 2021
INBOUND>>>> 03:46:03:652 Eventid:51000(0)
IPv4 Rx PDU
192.168.1.1 > 192.168.205.1: icmp: echo request (DF) (ttl 64, id 1521, len 84)

```

```

Wednesday May 12 2021
***CONTROL*** 03:46:03:656 Eventid:77203
Rule matched : DEFAULT for uplink packet of subscriber CallID : 0x3e02061

```

```

Wednesday May 12 2021
<<<
IPv4 Tx PDU
192.168.205.1 > 192.168.1.1: icmp: echo reply (DF) (ttl 64, id 11245, len 84)

```

Wednesday May 12 2021
CONTROL 03:46:03:658 Eventid:77203
Rule matched : DEFAULT for downlink packet of subscriber CallID : 0x3e02061

Wednesday May 12 2021
<<<
IPv4 Tx PDU
192.168.205.1 > 192.168.1.1: icmp: echo reply (DF) (ttl 64, id 11245, len 84)
CUPS:

Sunday May 02 2021
INBOUND>>>> 11:22:22:165 Eventid:142004(3)
GTPU Rx PDU, from 192.168.1.4:2152 to 192.168.10.1:2152 (92) TOS:0
TEID: 0x800CA001, Message type: GTP_TPDU_MSG (0xFF)
Sequence Number:: NA
GTP HEADER FOLLOWS:
Version number: 1
Protocol type: 1 (GTP C/U)
Message Type: 0xFF (GTP_TPDU_MSG)
Message Length: 0x0054 (84)
Tunnel ID: 0x800CA001
GTP HEADER ENDS.
Payload protocol: IPv4
PROTOCOL PAYLOAD FOLLOWS:
192.168.0.177 > 192.168.3.1: icmp: echo request (DF) (ttl 64, id 45402, len 84)
PROTOCOL PAYLOAD ENDS.

Sunday May 02 2021
INBOUND>>>> 11:22:22:165 Eventid:51000(0)
IPv4 Rx PDU
192.168.0.177 > 192.168.3.1: icmp: echo request (DF) (ttl 64, id 45402, len 84)

Sunday May 02 2021
<<<
CSS Uplink Output PDU to ACS- slot:2 cpu:17 inst:4369
192.168.0.177 > 192.168.3.1: icmp: echo request (DF) (ttl 64, id 45402, len 84)

Sunday May 02 2021
CONTROL 11:22:22:165 Eventid:77202
Rule matched : DEFAULT for uplink packet of subscriber MSID : 593440538564309

Sunday May 02 2021
INBOUND>>>> 11:22:22:165 Eventid:77001(9)
CSS Uplink Input PDU from ACS- slot:3 cpu:34 inst:8738
192.168.0.177 > 192.168.3.1: icmp: echo request (DF) (ttl 64, id 45402, len 84)

Sunday May 02 2021
<<<
IPv4 Tx PDU
192.168.3.1 > 192.168.0.177: icmp: echo reply (ttl 64, id 56260, len 84)

Sunday May 02 2021
<<<
CSS Downlink Output PDU to ACS- slot:2 cpu:17 inst:4369
192.168.3.1 > 192.168.0.177: icmp: echo reply (ttl 64, id 56260, len 84)

Sunday May 02 2021
CONTROL 11:22:22:166 Eventid:77202
Rule matched : DEFAULT for downlink packet of subscriber MSID : 593440538564309

Sunday May 02 2021
INBOUND>>>> 11:22:22:166 Eventid:77003(9)
CSS Downlink Input PDU from ACS- slot:3 cpu:34 inst:8738
192.168.3.1 > 192.168.0.177: icmp: echo reply (ttl 64, id 56260, len 84)

Sunday May 02 2021

<<<

GTPU Tx PDU, from 192.168.10.1:2152 to 192.168.1.4:2152 (92) TOS:0

TEID: 0x60010896, Message type: GTP_TPDU_MSG (0xFF)

Sequence Number:: NA

GTP HEADER FOLLOWS:

Version number: 1

Protocol type: 1 (GTP C/U)

Message Type: 0xFF (GTP_TPDU_MSG)

Message Length: 0x0054 (84)

Tunnel ID: 0x60010896

GTP HEADER ENDS.

Payload protocol: IPv4

PROTOCOL PAYLOAD FOLLOWS:

192.168.3.1 > 192.168.0.177: icmp: echo reply (ttl 63, id 56260, len 84)

PROTOCOL PAYLOAD ENDS.