



Additional Keywords Added to the show subscribers and clear subscribers Commands

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Feature Information

Summary Data

Status	Modified Functionality
Introduced-In Release	21.2
Modified-In Release(s)	Not Applicable
Applicable Product(s)	P-GW
Applicable Platform(s)	ASR 5500
Default Setting	Enabled
Related CDETS ID(s)	CSCvc75438
Related Changes in This Release	Not Applicable
Related Documentation	<i>ECS Administration Guide</i> <i>P-GW Administration Guide</i> <i>Command Line Interface Reference</i>

Revision History



Important

Revision history details are not provided for features introduced before Release 21.2.

Revision Details	Release	Release Date
New in this release.	21.2	April 27, 2017

Feature Description

After simultaneous Inter-Chassis Session Recovery (ICSR) switchovers, a number of subscribers are losing the assigned dynamic charging rules. To track these issues, additional filters or keywords are added to the **show subscribers** and **clear subscribers** commands. These filters display the impacted subscribers, reduce the impact during switchovers, provide accurate charging, and minimize the detection and recovery time.

Command Changes

This section provides information regarding show commands and/or their outputs in support of this enhancement.



Note If the subscribers' call is up with multiple bearers and if any of the bearers match the specified criteria (without-dynamic-rule or without-override-control), the output is displayed.

show subscribers rulename

The above CLI command is enhanced to include the **rulename** keyword, which refers to the charging rule name. The available rule name options are: predefined, static, and dynamic rules.

An output similar to the **show subscribers without-dynamic-rule** command is displayed, that is, specific to the defined rule name.

show subscribers without-dynamic-rule

The above CLI command is enhanced to include the **without-dynamic-rule** keyword. A sample output for this command is provided as follows:

```
show subscribers without-dynamic-rule
+-----Access (S) - pdsn-simple-ip (M) - pdsn-mobile-ip (H) - ha-mobile-ip
|      Type: (P) - ggsn-pdp-type-ppp (h) - ha-ipsec (N) - lns-l2tp
|            (I) - ggsn-pdp-type-ipv4 (G) - IPSP
|            (V) - ggsn-pdp-type-ipv6 (C) - cscf-sip
|            (z) - ggsn-pdp-type-ipv4v6 (A) - X2GW
|            (R) - sgw-gtp-ipv4 (O) - sgw-gtp-ipv6 (Q) - sgw-gtp-ipv4-ipv6
|            (W) - pgw-gtp-ipv4 (Y) - pgw-gtp-ipv6 (Z) - pgw-gtp-ipv4-ipv6
|            (@) - saegw-gtp-ipv4 (#) - saegw-gtp-ipv6 ($) - saegw-gtp-ipv4-ipv6
|            (&) - samog-ip (^) - cgw-gtp-ipv6 (*) - cgw-gtp-ipv4-ipv6
|            (p) - sgsn-pdp-type-ppp (s) - sgsn (4) - sgsn-pdp-type-ip
|            (6) - sgsn-pdp-type-ipv6 (2) - sgsn-pdp-type-ipv4-ipv6
|            (L) - pdif-simple-ip (K) - pdif-mobile-ip (o) - femto-ip
|            (F) - standalone-fa
|            (e) - ggsn-mbms-ue (U) - pdg-ipsec-ipv4
|            (E) - ha-mobile-ipv6 (T) - pdg-ssl (v) - pdg-ipsec-ipv6
|            (f) - hnbgw-hnb (g) - hnbgw-iu (x) - sl-mme
```

```

|
|           (X) - HSGW           (k) - PCC
|           (m) - henbgw-henb   (n) - ePDG           (t) - henbgw-ue
|           (D) - bng-simple-ip  (q) - wsg-simple-ip  (r) - samog-pmip
|           (u) - Unknown        (l) - pgw-pmip       (3) - GILAN
|           (+) - samog-eogre    (%) - eMBMS-ipv4    (!) - eMBMS-ipv6
|
|+----Access (X) - CDMA 1xRTT    (E) - GPRS GERAN    (I) - IP
|   Tech:    (D) - CDMA EV-DO    (U) - WCDMA UTRAN   (W) - Wireless LAN
|           (A) - CDMA EV-DO REVA (G) - GPRS Other    (M) - WiMax
|           (C) - CDMA Other      (N) - GAN           (O) - Femto IPsec
|           (P) - PDIF            (S) - HSPA          (L) - eHRPD
|           (T) - eUTRAN          (B) - PPPoE         (F) - FEMTO UTRAN
|
|           (Q) - WSG            (.) - Other/Unknown
|
|+----Call   (C) - Connected      (c) - Connecting
|   State:   (d) - Disconnecting  (u) - Unknown
|           (r) - CSCF-Registering (R) - CSCF-Registered
|           (U) - CSCF-Unregistered
|
|+----Access (A) - Attached        (N) - Not Attached
|   CSCF     (.) - Not Applicable
|   Status:
|
|+----Link   (A) - Online/Active    (D) - Dormant/Idle
|   Status:
|
|+----Network (I) - IP              (M) - Mobile-IP      (L) - L2TP
|   Type:     (P) - Proxy-Mobile-IP  (i) - IP-in-IP      (G) - GRE
|           (V) - IPv6-in-IPv4      (S) - IPSEC          (C) - GTP
|           (A) - R4 (IP-GRE)        (T) - IPv6           (u) - Unknown
|           (W) - PMIPv6 (IPv4)      (Y) - PMIPv6 (IPv4+IPv6) (R) - IPv4+IPv6
|           (v) - PMIPv6 (IPv6)      (/) - GTPv1 (For SAMOG) (+) - GTPv2 (For SAMOG)
|
|vvvvvvv CALLID   MSID             USERNAME                IP
|TIME-IDLE
|-----|
|ZTCNAR 004c9963 404005123456789 9890098900@cisco.com 6001::3:0:0:4c99:6301,22.22.0.3
|00h00m29s
|ZTCNAR 004c9963 404005123456789 9890098900@cisco.com 6001::3:0:0:4c99:6301,22.22.0.3
|00h00m29s
|ZTCNAR 004c9963 404005123456789 9890098900@cisco.com 6001::3:0:0:4c99:6301,22.22.0.3
|00h00m29s
|
|Total subscribers matching specified criteria: 3

```

show subscribers without-override-control-rule

The above CLI command is enhanced to include the **without-override-control-rule** keyword.

An output similar to the **show subscribers without-dynamic-rule** command is displayed, that is, without the override control rule.

show subscribers apn rulename

The above CLI command is enhanced to include the **rulename** *<rule_name>* keyword, which refers to the charging rule name. The available rule name options are: predefined, static, and dynamic rules.

An output similar to the **show subscribers without-dynamic-rule** command is displayed, that is, specific to the defined rule name and APN.

show subscribers apn without-dynamic-rule

The above CLI command is enhanced to include the **without-dynamic-rule** keyword.

An output similar to the **show subscribers without-dynamic-rule** command is displayed, that is, specific to the APN.

show subscribers apn without-override-control-rule

The above CLI command is enhanced to include the **without-override-control-rule** keyword.

An output similar to the **show subscribers without-dynamic-rule** command is displayed for the specified APN, which does not have the override control rule configured.

show subscribers summary rulename

The above CLI command is enhanced to include the **rulename** keyword, which refers to the charging rule name. The available rule name options are: predefined, static, and dynamic rules.

An output similar to the **show subscribers summary without-dynamic-rule** command is displayed, that is, specific to the defined rule name.

show subscribers summary without-dynamic-rule

The above CLI command is enhanced to include the **without-dynamic-rule** keyword. A sample output for this command is provided as follows:

```
show subscribers summary without-dynamic-rule
Total Subscribers:          1
Active:                     1           Dormant:          0
LAPI Devices:              0
pdsn-simple-ipv4:          0           pdsn-simple-ipv6:    0
pdsn-mobile-ip:           0           ha-mobile-ipv6:      0
hsgw-ipv6:                 0           hsgw-ipv4:           0
hsgw-ipv4-ipv6:           0           pgw-pmip-ipv6:       0
pgw-pmip-ipv4:            0           pgw-pmip-ipv4-ipv6: 0
pgw-gtp-ipv6:             0           pgw-gtp-ipv4:        0
pgw-gtp-ipv4-ipv6:        3           sgw-gtp-ipv6:        0
sgw-gtp-ipv4:             0           sgw-gtp-ipv4-ipv6:  0
sgw-pmip-ipv6:            0           sgw-pmip-ipv4:       0
sgw-pmip-ipv4-ipv6:        0           pgw-gtps2b-ipv4:     0
pgw-gtps2b-ipv6:          0           pgw-gtps2b-ipv4-ipv6: 0
pgw-gtps2a-ipv4:          0           pgw-gtps2a-ipv6:     0
pgw-gtps2a-ipv4-ipv6:     0
mme:                       0           mme-embms:           0
henbgw-ue:                 0           henbgw-henb:         0
x2gw-enb:                  0
ipsg-rad-snoop:            0           ipsg-rad-server:     0
ha-mobile-ip:              0           ggsn-pdp-type-ppp:   0
ggsn-pdp-type-ipv4:        0           lns-l2tp:             0
ggsn-pdp-type-ipv6:        0           ggsn-pdp-type-ipv4v6: 0
ggsn-mbms-ue-type-ipv4:    0
pdif-simple-ipv4:          0
```

```

pdif-simple-ipv6:          0          pdif-mobile-ip:          0
wsg-simple-ipv4:          0          wsg-simple-ipv6:        0
pdg-simple-ipv4:          0          ttg-ipv4:                0
pdg-simple-ipv6:          0          ttg-ipv6:                0
femto-ip:                 0
epdg-pmip-ipv6:          0          epdg-pmip-ipv4:        0
epdg-pmip-ipv4-ipv6:     0          epdg-gtp-ipv4:         0
epdg-gtp-ipv6:           0
epdg-gtp-ipv4-ipv6:     0          sgsn-pdp-type-ppp:     0
sgsn:                     0          sgsn-pdp-type-ipv6:    0
sgsn-pdp-type-ipv4:      0          type not determined:   0
sgsn-pdp-type-ipv4-ipv6: 0          sgsn-sub-type-s4:      0
sgsn-sub-type-gn:        0          sgsn-pdp-type-s4:      0
sgsn-pdp-type-gn:        0          cdma evdo sessions:    0
cdma lx rtt sessions:    0          cdma lx rtt active:    0
cdma evdo rev-a sessions: 0          cdma evdo rev-a active: 0
cdma evdo active:        0          hnbgw-iu:              0
hnbgw:                   0
bng-simple-ipv4:          0
pcc:                     0
in bytes dropped:         0          out bytes dropped:      0
in packet dropped:        0          out packet dropped:     0
in packet dropped zero mbr: 0          out packet dropped zero mbr: 0
in bytes dropped ovrchrgPtn: 0          out bytes dropped ovrchrgPtn: 0
in packet dropped ovrchrgPtn: 0          out packet dropped ovrchrgPtn: 0
ipv4 ttl exceeded:       0          ipv4 bad hdr:           0
ipv4 bad length trim:    0
ipv4 frag failure:        0          ipv4 frag sent:         0
ipv4 in-acl dropped:      0          ipv4 out-acl dropped:   0
ipv4 in-mcast pkt dropped: 0          ipv4 in-bcast pkt dropped: 0
ipv6 bad hdr:            0          ipv6 bad length trim:   0
ipv6 in-acl dropped:      0          ipv6 out-acl dropped:   0
ipv4 in-css-down dropped: 0          ipv4 out-css-down dropped: 0
ipv4 out xoff pkt dropped: 0          ipv6 out xoff pkt dropped: 0
ipv4 xoff bytes dropped:  0          ipv6 xoff bytes dropped: 0
ipv4 out no-flow dropped: 0
ipv4 early pdu rcvd:     0          ipv4 icmp packets dropped: 0
ipv6 input ehrpd-access drop: 0          ipv6 output ehrpd-access drop: 0
dormancy count:          0          handoff count:          0
pdsn fwd dynamic flows:  0          pdsn rev dynamic flows: 0
fwd static access-flows: 0          rev static access-flows: 0
pdsn fwd packet filters: 0          pdsn rev packet filters: 0
traffic flow templates:  0

```

show subscribers summary without-override-control-rule

The above CLI command is enhanced to include the **without-override-control-rule** keyword.

An output similar to the **show subscribers summary without-dynamic-rule** command is displayed, that is, without the override control rule.

clear subscribers apn rulename

The above CLI command is enhanced to include the **rulename** keyword, which refers to the charging rule name. The available rule name options are: predefined, static, and dynamic rules.

An output similar to the **clear subscribers apn without-dynamic-rule** or **clear subscribers apn without-dynamic-rule** command is displayed based on whether subscribers for a specific APN exist with the specified rule name.

clear subscribers apn without-dynamic-rule

The above CLI command is enhanced to include the **without-dynamic-rule** keyword. A sample output for this command is provided as follows:

```
clear subscribers apn cisco.com without-dynamic-rule
No subscribers match the specified criteria
```

clear subscribers apn without-override-control-rule

The above CLI command is enhanced to include the **without-override-control-rule** keyword.

A sample output for this command is provided as follows:

```
clear subscribers apn cisco.com without-override-control-rule
Number of subscribers cleared: 1
```