



# Additional Keywords Added to the show subscribers and clear subscribers Commands

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## Feature Information

### Summary Data

<b>Status</b>	Modified Functionality
<b>Introduced-In Release</b>	21.2
<b>Modified-In Release(s)</b>	Not Applicable
<b>Applicable Product(s)</b>	P-GW
<b>Applicable Platform(s)</b>	ASR 5500
<b>Default Setting</b>	Enabled
<b>Related CDETS ID(s)</b>	CSCvc75438
<b>Related Changes in This Release</b>	Not Applicable
<b>Related Documentation</b>	<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) - s1-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:                     0          sgsn-pdp-type-ppp:      0
sgsn-pdp-type-ipv4:      0          sgsn-pdp-type-ipv6:    0
sgsn-pdp-type-ipv4-ipv6: 0          type not determined:   0
sgsn-subs-type-gn:       0          sgsn-subs-type-s4:     0
sgsn-pdp-type-gn:        0          sgsn-pdp-type-s4:      0
cdma lx rtt sessions:    0          cdma evdo sessions:    0
cdma evdo rev-a sessions: 0          cdma lx rtt active:    0
cdma evdo active:        0          cdma evdo rev-a active: 0
hnbgw:                   0          hnbgw-iu:               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
```