



# 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 CETS 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) - IPSEG
|            (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.

**show subscribers apn without-dynamic-rule**

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-gtpps2b-ipv4:        0
pgw-gtpps2b-ipv6:          0          pgw-gtpps2b-ipv4-ipv6:   0
pgw-gtpps2a-ipv4:          0          pgw-gtpps2a-ipv6:        0
pgw-gtpps2a-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-ipv6:	0	epdg-gtp-ipv4:	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
```