

Bulkstats to Print Summarized PGW Roaming Data Rate

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Feature Summary and Revision History

Summary Data

Applicable Product(s) or Functional Area	P-GW
Applicable Platform(s)	• ASR 5500 • VPC-DI
Feature Default	Enabled - Always-on
Related Changes in This Release	Not Applicable
Related Documentation	• *P-GW Administration Guide* • *Statistics and Counters Reference*

Revision History

Revision Details	Release
First Introduced	2024.02.0

Feature Description

The bulkstats support is enhanced to print summarized subscriber data-rate for users based on the PLMN type (home, roaming, visiting).

In the existing **show subscribers pgw-only data-rate** command, the following plmn-type filters are added to enable the service providers to retrieve the subscriber data-rate based on the PLMN type:

- show subscribers pgw-only data-rate plmn-type home
- show subscribers pgw-only data-rate plmn-type roaming
- show subscribers pgw-only data-rate plmn-type visiting

This helps to find out the total number of roaming subscribers in a network and assist with a convenient billing process for the roaming subscribers.

Monitoring and Troubleshooting

This section provides information on how to monitor and troubleshoot using show commands and bulk statistics available in support of this feature.

Show Commands and/or Outputs

This section provides information regarding show commands and their outputs for this feature

show sub pgw-only data-rate

Use this command to view the combined PGW subscribers' data rate.

Field	Description
Peak rate from user(bps)	The peak data rate in bits per second is obtained for data that are sent from the subscriber to the network during the last sampling period. The sampling period is 30 seconds.
Peak rate to user(bps)	The peak data rate in bits per second is obtained for data that are received from the network by the subscriber during the last sampling period. The sampling period is 30 seconds.
ave rate from user(bps)	The average data rate in bits per second that is obtained for data that are sent from the subscriber to the network during the last sampling period. The sampling period is 30 seconds.
ave rate to user(bps)	The average data rate in bits per second is obtained for data that are received from the network by the subscriber during the last sampling period. The sampling period is 30 seconds.
sust rate from user(bps)	The mean data rate in bits per second is obtained for data that is sent from the subscriber to the network during the last three sampling periods. The sampling period is 30 seconds.
sust rate to user(bps)	The mean data rate in bits per second is obtained for data that are received from the network by the subscriber during the last three sampling periods. The sampling period is 30 seconds.

Peak rate from user(pps)	The speed that packets are received from the user in packets per second. The sampling period is 30 seconds.
peak rate to user(pps)	The speed at which the packets are sent to the user in packets per second. The sampling period is 30 seconds.
ave rate from user(pps)	The average speed at which the packets are received from the user in packets per second. The sampling period is 30 seconds.
ave rate to user(pps)	The average speed that packets are being sent to the user in packets per second. The sampling period is 30 seconds.
sust rate from user(pps)	The sustained speed at which the packets are received from the user in packets per second. The sampling period is 30 seconds.
sust rate to user(pps)	The sustained speed at which the packets are sent to the user in packets per second. The sampling period is 30 seconds.

Using the following show commands you can view similar P-GW roaming data rate details for the PLMN types such as home, roaming, and visiting:

- **show subscribers pgw-only data-rate plmn-type** *home*: Displays P-GW home subscribers' data rate.
- **show subscribers pgw-only data-rate plmn-type** *roaming*: Displays P-GW roaming subscribers' data rate.
- **show subscribers pgw-only data-rate plmn-type** *visiting*: Displays P-GW visiting subscribers' data rate.

Bulk Statistics

This feature supports the following bulk statistics.

PGW Schema

The following bulk statistics are added to the PGW schema:

Variables	Description
Bulk Statistic Variables in the pgw-only data-rate	
pgw-subs-total	Displays the total number of the subscriber count.
pgw-data-active	Displays the total number of active subscribers.
pgw-data-dormant	Displays the total number of dormant subscribers.
pgw-data-fromuseravg-bps	Displays the average data rate from user in bits per second.
pgw-data-touseravg-bps	Displays the average data rate to user in bits per second.

Variables	Description
pgw-data-fromuserpeak-bps	Displays the Peak data rate from user in bits per second.
pgw-data-touserpeak-bps	Displays the Peak data rate to user in bits per second.
pgw-data-fromusersust-bps	Displays the mean data rate from user in bits per second.
pgw-data-tousersust-bps	Displays the Sust data rate to user in bits per second
pgw-data-fromuserpeak-pps	Displays the peak data rate from user in packets per second.
pgw-data-touserpeak-pps	Displays the peak data rate to user in packets per second. **Type:** Gauge
pgw-data-fromuseravg-pps	Displays the average data rate from user in packets per second.
pgw-data-touseravg-pps	Displays the average data rate to user in packets per second.
pgw-data-fromusersust-pps	Displays the Sust data rate from user in packets per second.
pgw-data-tousersust-pps	Displays the Sust data rate to user in packets per second. **Type:** Gauge
Bulk Statistic Variables in the pgw-only data-rate with plmn-type home	
pgw-subs-total-home	Displays the total number of the home subscriber count.
pgw-data-active-home	Displays the total number of active home subscribers.
pgw-data-dormant-home	Displays the total number of dormant home subscribers.
pgw-data-fromuseravg-bps-home	Displays the average data rate from user in bits per second.
pgw-data-touseravg-bps -home	Displays the average data rate to user in bits per second.
pgw-data-fromuserpeak-bps-home	Displays the peak data rate from user in bits per second.

Variables	Description
pgw-data-touserpeak-bps-home	Displays the peak data rate to user in bits per second.
pgw-data-fromusersust-bps-home	Displays the mean data rate from user in bits per second.
pgw-data-tousersust-bps-home	Displays the sust data rate to user in bits per second
pgw-data-fromuserpeak-pps-home	Displays the peak data rate from user in packets per second.
pgw-data-touserpeak-pps-home	Displays the peak data rate to user in packets per second.
pgw-data-fromuseravg-pps-home	Displays the average data rate from user in packets per second.
pgw-data-touseravg-pps -home	Displays the average data rate to user in packets per second.
pgw-data-fromusersust-pps-home	Displays the sust data rate from user in packets per second. **Type:** Gauge
pgw-data-tousersust-pps-home	Displays the sust data rate to user in packets per second.
Bulk Statistic Variables in the pgw-only data-rate with plmn-type roaming	
pgw-subs-total-roaming	Displays the total number of the roaming subscriber count.
pgw-data-active-roaming	Displays the total number of active roaming subscribers.
pgw-data-dormant-roaming	Displays the total number of dormant roaming subscribers.
pgw-data-fromuseravg-bps-roaming	Displays the average data rate from user in bits per second. **Type:** Gauge
pgw-data-touseravg-bps-roaming	The average data rate to user in bits per second.
pgw-data-fromuserpeak-bps-roaming	The peak data rate from user in bits per second.
pgw-data-touserpeak-bps-roaming	The peak data rate to user in bits per second.

Variables	Description
pgw-data-fromusersust-bps-roaming	The mean data rate from user in bits per second.
pgw-data-tousersust-bps-roaming	The sust data rate to user in bits per second
pgw-data-fromuserpeak-pps-roaming	The peak data rate from user in packets per second.
pgw-data-touserpeak-pps-roaming	The peak data rate to user in packets per second.
pgw-data-fromuseravg-pps-roaming	The average data rate from user in packets per second.
pgw-data-touseravg-pps -roaming	The average data rate to user in packets per second.
pgw-data-fromusersust-pps-roaming	The sust data rate from user in packets per second.
pgw-data-tousersust-pps-roaming	The sust data rate to user in packets per second.
Bulk Statistic Variables in the pgw-only data-rate with plmn-type visiting	
pgw-subs-total-visiting	Displays the total number of the visiting subscriber count.
pgw-subs-total-visiting	Displays the total number of the visiting subscriber count.
pgw-data-dormant-visiting	Displays the total number of dormant visiting subscribers.
pgw-data-fromuseravg-bps-visiting	Displays the average data rate from user in bits per second.
pgw-data-touseravg-bps -visiting	The average data rate to user in bits per second.
pgw-data-fromuserpeak-bps-visiting	Displays the peak data rate from user in bits per second.
pgw-data-touserpeak-bps-visiting	Displays the peak data rate to user in bits per second.
pgw-data-fromusersust-bps-visiting	Displays the mean data rate from user in bits per second.
pgw-data-tousersust-bps-visiting	Displays the sustained data rate to user in bits per second.

Variables	Description
pgw-data-fromuserpeak-pps-visiting	Displays the peak data rate from user in packets per second.
pgw-data-touserpeak-pps-visiting	Displays the peak data rate to user in packets per second.
pgw-data-fromuseravg-pps-visiting	Displays the average data rate from user in packets per second.
pgw-data-touseravg-pps -visiting	Displays the average data rate to user in packets per second.
pgw-data-fromusersust-pps-visiting	Displays the sustained data rate from user in packets per second.
pgw-data-tousersust-pps-visiting	Displays the sust data rate to user in packets per second.