

Separation of 2G, 3G, and 4G Bulkstatistics

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Feature Summary and Revision History

Summary Data

Applicable Product(s) or Functional Area	• GGSN • P-GW • SAEGW
Applicable Platform(s)	All
Feature Default	Disabled - Configuration Required
Related Changes in This Release	Not Applicable
Related Documentation	• *Command Line Interface Reference* • *GGSN Administration Guide* • *P-GW Administration Guide* • *SAEGW Administration Guide*

Revision History

Revision Details	Release
First introduced.	21.5

Feature Description

Important In this release, this feature is not fully qualified and is available only for testing purpose. For more information, please contact your Cisco Account representative.

This feature separates bulkstats by RAT type (2G, 3G, and 4G). This helps KPI monitoring and reporting per RAT type. Per APN per RAT type statistics is integrated with the existing stats-profile implementation. A new CLI command **rat-type** is added to the **stats-profile** configuration mode to configure the RAT-types in stats-profile.

Configuring RAT types in Stats Profile

A new CLI command **rat-type** has been added to the **stats-profile** configuration mode. This CLI command integrates per APN per RAT type statistics with the existing stats-profile implementation. To gather RAT level statistics, you must configure RAT type under the stats-profile for which RAT level statistics are required. Once that is done, associate stats-profile in APN for which APN per RAT level statistics is required. Only after this association, the stats are collected. Per APN per RAT level statistics are lost if stats-profile association is removed from APN and/or rat type option is removed from stats-profile.

To enable per APN per RAT types statistics collection, execute the following command:

```
configure
    stats-profile <stats_profile_name>
       [no] rat-type { [geran | utran | eutran]* }
       end
```

NOTES:

- **no:** Disables statistics collection based on RAT type.
- **stats-profile:** Configures statistics profile to collect packet drop counters and/or ARP level statistics.
- **rat-type:** Configures collection of RAT level statistics.
- **geran:** Configures collection of statistics for RAT Type GERAN.
- **utran:** Configures collection of statistics for RAT Type UTRAN.
- **eutran:** Configures collection of statistics for RAT Type EUTRAN.

Sample Configuration

Sample configuration to enable stats collection based on rat type:

```
config
   stats-profile stats-info
      rat-type eutran utran
      rat-type utran geran
      end
```

Sample configuration to disable stats collection based on rat type:

```
config
   stats-profile stats-info
      no rat-type eutran utran
      end
```

Monitoring and Troubleshooting

This section provides information on the show commands available to support the 2G/3G/4G bulkstat separation.

Show Commands and Outputs

This section provides information regarding show commands and their outputs in support of the feature.

show apn statistics all

The output of the above command is modified to display the following new field depending on whether the CLI command is enabled or disabled:

- Data Statistics:
  - RAT Type statistics for uplink and downlink bytes:
    - GERAN
      - Uplnk DataBytes
      - Dnlnk DataBytes
    - UTRAN
      - Uplnk DataBytes
      - Dnlnk DataBytes
    - EUTRAN
      - Uplnk DataBytes
      - Dnlnk DataBytes
- IP address allocation statistics
  - RAT Type statistics for dynamic address allocation for PDN types IPv4, IPv6, IPv4v6:
    - GERAN Dynamic address allocated:
      - IPv4
      - IPv6
      - IPv4v6
    - UTRAN Dynamic address allocated:

- IPv4
- IPv6
- IPv4v6

show gtpc statistics

The output of the above command is modified to display the following new fields. These fields do not have any dependency on stats-profile configuration. The gtpc stats will increase irrespective of the stats profile configured with rat type.

- Total CPC Req GERAN
- Total CPC Req UTRAN

show stats profile all

The output of the above command is modified to display the following new field depending on whether the CLI is enabled or disabled:

- rat-type geran utran eutran

Bulk Statistics

The following bulk statistics are added in the APN schema to support the 2G, 3G, 4G bulkstats separation feature:

Bulk Statistics	Description
att-pdp-ctxt-geran	Indicates the total number of CPC requests received per APN for a call with a RAT type of GERAN.
att-pdp-ctxt-utran	Indicates the total number of CPC requests received per APN for a call with a RAT type of UTRAN.
dyn-ipv4-success-geran	Indicates the total number of IPv4 contexts requesting dynamically assigned IP addresses that were successfully setup for a GERAN RAT type.
dyn-ipv4-success-utran	Indicates the total number of IPv4 contexts requesting dynamically assigned IP addresses that were successfully setup for a UTRAN RAT type.
dyn-ipv6-success-geran	Indicates the total number of IPv6 contexts requesting dynamically assigned IP addresses that were successfully setup for a GERAN RAT type.
dyn-ipv6-success-utran	Indicates the total number of IPv6 contexts requesting dynamically assigned IP addresses that were successfully setup for a UTRAN RAT type.

Bulk Statistics	Description
dyn-ipv4v6-success-geran	Indicates the total number of IPv4v6 contexts requesting dynamically assigned IP addresses that were successfully setup for a GERAN RAT type.
dyn-ipv4v6-success-utran	Indicates the total number of IPv4v6 contexts requesting dynamically assigned IP addresses that were successfully setup for a UTRAN RAT type.
uplnk-bytes-geran	Indicates the total number of bytes sent from the APN for a GERAN RAT type towards the Internet/PDN on the Gi interface.
dnlnk-bytes-geran	Indicates the total number of bytes received for a GERAN RAT type on the Gi interface for the APN.
uplnk-bytes-utran	Indicates the total number of bytes sent from the APN for a UTRAN RAT type towards the Internet/PDN on the Gi interface.
dnlnk-bytes-utran	Indicates the total number of bytes received for a UTRAN RAT type on the Gi interface for the APN.
uplnk-bytes-eutran	Indicates the total number of bytes sent from the APN for a EUTRAN RAT type towards the Internet/PDN on the Gi interface.
dnlnk-bytes-eutran	Indicates the total number of bytes received for a EUTRAN RAT type on the Gi interface for the APN.