5GIWK Active Sessions Count Support in ePDG

Feature Summary and Revison History

Summary Data

Applicable Product(s) or Functional Area	eDPG
Applicable Platform(s)	VPC-DI
Feature Default	Disabled - License Required
Related Changes in This Release	Not Applicable
Related Documentation	• *Command Line Interface Reference* • *ePDG Administration Guide* • *Statistics and Counters Reference*

Revision History

Revision Details	Release
ePDG is enhanced to support 5G Active sessions count through Bulkstats counters and show command output.	2024.02.0

Feature Description

ePDG enables mobile operators to provide secure access to the EPC (EvolvedPacket Core) and to interwork with 5G SA Core from an untrusted non-3GPP IP access network.

Since Interworking with 5G SA Core functionality requires purchase of an extra ePDG 5G Sessions license, the ePDG 5G Active Sessions Count feature supports new counters for the total number of Active 5G Sessions and number of Active 5G Sessions of PDN types IPv4, IPv6, and Dual (IPv4v6).

These counters are provided as part of the command **show epdg-service statistics** and **epdg-interworking-5g** schema.

This enhancement to the Bulkstats counters and show command output allow the mobile operators to track and monitor the current usage against the installed 5G license.

The **Core-Network-Restrictions** AVP received from the AAA server in the Diameter EAP Answer (DEA) message is used to determine whether a subscriber session is 5G or 4G.

When this Core-Network-Restrictions AVP does not restrict access to the 5G Core the session gets treated as 5G with the following exceptions:

- 5G Session License is not installed or 5G interworking functionality is not enabled.
- 5G Interworking feature is enabled, the custom **pgw-selection select pgw 4gonly-ue** CLI is configured, and UE is not N1 Mode Capable.
- 5G Interworking feature is enabled, the custom **pgw-selection select pgw no-5gs-interworking** CLI is configured, and **Interworking-5gs-indicator** AVP is "NOT SUBSCRIBED" for the subscriber.
- 5G Interworking feature is enabled and the custom **pgw-selection select pgw smf-not-configure**d CLI is configured.

> **Note** In the **show epdg-service statistics** CLI command there will not be any change in the existing cumulative (4G and 5G) Active Session counts. Upon successful Session Recovery, respective 5G Active Session counters get incremented based on the number of 5G sessions recovered successfully.

Relationships to Other Features

ePDG Interworking with SMF+P-GW-IWK Support: For Information Element and AVP Support, Custom CLIs, and 5G Interworking support details, refer the *ePDG Interworking with SMF+P-GW-IWK Support* chapter in the *ePDG Administration Guide.*

Configuring ePDG 5G Interworking Bulk Statistics

Use the following existing configuration command to configure the **epdg-interworking-5g** bulkstats schema at the system-level. This configuration is only available upon license and 5G interworking is enabled.

```
configure
    bulkstat mode
```

```
          [ no ] epdg-interworking-5g schema schema_name format <format_string> active-only
     format <format_string>
          end
```

Note   **epdg-interworking-5g schema schema_name format format_string active-only format <format_string>**

Allows ePDG to capture 5G interworking related bulk statistics.

no: Deletes bulkstats schema configuration for 5G interworking statistics.

Monitoring and Troubleshooting

This section provides information to monitor and troubleshoot this feature using show commands.

Show Command(s) and/or Outputs

This section provides information about the show commands and outputs for the 5GIWK Active Sessions Count feature.

show epdg-service statistics interworking-5g

The **show epdg-service statistics interworking-5g** command displays output of Interworking 5G statistics at system-level.

The **ePDG 5G Interworking statistics for all services** command displays output of Interworking 5G statistics for all ePDG-services. The interworking-5g option is available only with ePDG 5G license.

The following 5G session variables are newly added to the existing list of variables and counters of **show epdg-service statistics interworking-5g** command.

Note   For more information about the existing list of counters/variables, refer to the Monitoring and Troubleshooting section of the *ePDG Interworking with SMF+P-GW-IWK Support* chapter.

Table 1: show epdg-service statistics interworking-5g Command Output Descriptions

Field	Description
5G Sessions – Counter for sessions with access to 5G core not restricted and exceptions as specified in the Limitation section.	
Active	Total number of 5G Active Sessions.
PDN-Type IPv4	Total number of 5G Active Sessions of PDN type IPv4.
PDN-Type IPv6	Total number of 5G Active Sessions of PDN type IPv6.

Field	Description
PDN-Type IPv4v6	Total number of 5G Active Sessions of PDN type Dual.

clear epdg-service statistics interworking-5g

The **clear epdg-service statistics interworking-5g** command does not clear newly introduced statistics as part of this feature.

Bulk Statistics

This section provides information on the bulk statistics variables for the **epdg-interworking-5g** schema. This schema is available upon installing 5G license.

show bulkstats variables epdg-interworking-5g

Use this command to display the list of bulk statistics variables supported by **epdg-interworking-5g schema**.

The following 5G session bulkstats variables are newly added to the existing list of variables and counters of **show bulkstats variables epdg-interworking-5g** command.

> **Note** For more information about the existing list of counters/variables, refer to the Monitoring and Troubleshooting section of the *ePDG Interworking with SMF+P-GW-IWK Support* chapter.

Bulk Statistics Variables	Description
5G Sessions:	
iwk5g-pdn-active	The total number 5G active sessions.
iwk5g-pdn-ipv4-active	The total number of 5G active sessions of PDN type IPv4.
iwk5g-pdn-ipv6-active	The total number of 5G active sessions of PDN type IPv6.
iwk5g-pdn-ipv4v6-active	The total number of 5G Active sessions of PDN type Dual.