

show epdg-service statistics

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show epdg-service statistics

The output of this command is enhanced to display the following fields.

Table 1: show epdg-service statistics Command Output Descriptions

Field	Description
show epdg-service statistics-All ePDG services	
show epdg-service statistics handoff-disc-reasons	Displays the statistics corresponding to LTE to Wi-Fi HO Disconnect reasons for all services.
clear epdg-service statistics handoff-disc-reasons	Removes the statistics corresponding to LTE to Wi-Fi HO Disconnect reasons for all services.
show epdg-service statistics-for Specific ePDG Services	
show epdg-service statistics name <epdg1> handoff-disc-reasons	Displays the statistics corresponding to LTE to Wi-Fi HO Disconnect reasons for specific services.
clear epdg-service statistics name <epdg1> handoff-disc-reasons	Removes the statistics corresponding to LTE to Wi-Fi HO Disconnect reasons for specific services.
show bulkstats variables epdg-handoff-disc	Displays the bulkstats corresponding to LTE to Wi-Fi HO disconnect reasons.

show epdg-service statistics suppress-ir-handover

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

show epdg-service statistics suppress-ir-handover

The output of this command includes the following fields:

Fields/Counters	Description
Attempts: 1	Total number of ePDG sessions for which international roaming handoff attempted on international roaming HO suppression supported ePDG.
Success: 1	Total number of ePDG sessions for which international roaming handoff attempts succeeded on international roaming HO suppression supported ePDG.
Failures: 0	Total number of ePDG sessions for which international roaming handoff attempts failed on international roaming HO suppression supported ePDG.
Active: 1	Total number of current active ePDG sessions for which international roaming handoff attempts succeeded on international roaming HO suppression supported ePDG.

show epdg-service statistics interworking-5g

The **show epdg-service statistics interworking-5g** command displays output of Interworking 5G statistics at system-level. The **show epdg-service name** *epdg-service-name* **statistics interworking-5g** command displays output of Interworking 5G statistics for a particular ePDG-service. The **interworking-5g** option is available only with ePDG 5G license.

Table 2: show epdg-service statistics interworking-5g Command Output Descriptions

Field	Description
5G Sessions – Counter for sessions from N1 mode capable UEs	
Attempts	The number of times that ePDG receives a call with N1_mode_capable (PDUSession) from UE.
Setup	The number of times that ePDG receives a call with N1_mode_capable (PDUSession) from UE and that call succeeds.

Field	Description
Failures	The number of times that ePDG receives a call with N1_mode_capable (PDUSession) from UE and that call fails due to some failure reason.
P-GW/SMF selection type – Based on the 5G capability flags and related CLI, the PDN request is forwarded to P-GW or SMF+PGW-IWK	
SMF preferred	The number of times that SMF is chosen for this call, but IWK flag is not set.
SMF only	The number of times that ePDG selects SMF for this call, IWK flag is set, and PDU Session ID is forwarded to SMF.
DNS provided SMF	The number of times that SMF is selected from DNS responses.
Locally configured SMF	The number of times that SMF is selected from the local ePDG configuration.
AAA provided SMF IP	The number of times that ePDG selects SMF from the AAA server provided IP attribute.
P-GW only	The number of times P-GW is selected.
DNS provided P-GW	The number of times that P-GW is selected from DNS responses.
Locally configured P-GW	The number of times that P-GW is selected from the local ePDG configuration.
AAA provided P-GW IP	The number of times that P-GW is selected from the AAA server provided IP attribute.
P-GW or SMF not available reasons - Provide counters on how many times the SMF or P-GW selection is failed due to P-GW or SMF is not locally configured.	
No P-GW configured locally	The number of times that P-GW selection failed due to missing configuration.
No SMF configured locally	The number of times that SMF+PGW-IWK selection failed due to missing configuration.
SMF Fallback Support Statistics for GTP nodes – Fallback-related counters for SMF provided by AAA, DNS, and local configuration. In general, an attempt for second SMF or P-GW after the first SMF or P-GW is failed is considered as fallback.	
SMF Fallback Attempted	The number of times that fallback is attempted when SMF is preferred. Increments after it fails to connect to the first SMF and attempts the second SMF. This includes SMFs provided by AAA, DNS, and the local configuration.
SMF Fallback Success	The number of times that a session connected to SMF is selected through the fallback algorithm.
SMF Fallback Failure	The number of times that a session, which is unable to connect to SMF is selected through a fallback algorithm.
Alternate SMF not found	The number of failed attempts to SMF and there is no alternate SMF available to attempt and connect to a session.

Field	Description
Local SMF resolution	Fallback related counters for SMF by local configuration. These counters are not incremented if the first SMF is selected from the local configuration despite trying to connect to the DNS/AAA provided SMF.
SMF Fallback Attempted	The number of times that fallback is attempted when SMF is preferred. Increments after it fails to connect to the first SMF and attempts the second SMF. This includes SMFs provided by AAA, DNS, and local configuration.
SMF Fallback Success	The number of times that a session connected to SMF is selected through the fallback algorithm.
SMF Fallback Failure	The number of times that a session, which is unable to connect to SMF is selected through the fallback algorithm.
Alternate SMF not found	The number of times that attempts to SMF fail and there is no alternate SMF available for a session to connect.
P-GW Fallback Support Stats for GTP nodes - Fallback related counters for P-GW provided by AAA, DNS, and local configuration. In general, an attempt considers as fallback, after failed to connect to the first SMF/P-GW.	
P-GW Fallback Attempted	The number of times that fallback is attempted when P-GW is preferred. Increments after it fails to connect to the first P-GW and attempts for the second P-GW. This includes P-GW provided by AAA, DNS, and local configuration.
P-GW Fallback Success	The number of times that a session connected to P-GW is selected through the fallback algorithm.
P-GW Fallback Failure	The number of times that a session, which is unable to connect to P-GW is selected through the fallback algorithm.
Alternate P-GW not found	The number of failed attempts to all P-GW, and there is no alternate P-GW available to attempt for a session to connect.
Local P-GW resolution	Fallback related counters for P-GW provided by local configuration. These counters do not get incremented if the first SMF selected from the local configuration gets connected, even after attempting the DNS/AAA provided SMF.
P-GW Fallback Attempted	The number of times that fallback is attempted when P-GW is preferred. Increments after it fails to connect to the first P-GW and attempts for the second P-GW. This includes P-GW provided by AAA, DNS, and local configuration.
P-GW Fallback Success	The number of times that a session connected to P-GW is selected through the fallback algorithm.
P-GW Fallback Failure	The number of times that a session fails to connect to P-GW and selected through the fallback algorithm.
Alternate P-GW not found	The number of failed attempts to all P-GW, and there is no alternate P-GW available to attempt for a session to connect.
DNS-related Failures	
DNS server not reachable	The number of times when no response from DNS.

Field	Description
No resource records	The number of times that the DNS server responded with no resource records.
No matching P-GW service params	The number of times that the DNS server responded with no P-GW in the resource records, when P-GW is the preferred gateway for the session.
No matching SMF service params	The number of times that the DNS server responded with no SMFs in the resource records, when SMF is the preferred gateway for the session.
DNS P-GW list exhausted	The number of failed attempts to connect to all the P-GW provided by DNS response, when P-GW is the preferred gateway for the session.
DNS SMF list exhausted	The number of failed attempts to connect to all the SMF provided by DNS response, when SMF is the preferred gateway for the session.
5G Sessions – Counter for sessions with access to 5G core not restricted and exceptions as specified in the Limitation section	
Acive	The total number of 5G Active sessions.
PDN-Type IPv4	The total number of 5G Active sessions of PDN type IPv4.
PDN-Type IPv6	The total number of 5G Active sessions of PDN type IPv6.
PDN-Type IPv4 v6	The total number of 5G Active sessions of PDN type Dual.

show epdg-service name

If the following commands are configured, the output of **show epdg-service name** *service name* CLI command displays the following parameters under ePDG-service:

- Service name:
  - **interworking-5g**: Displays enabled 5G interworking for the ePDG service.
  - **pgw-selection select pgw**: Displays the enabled P-GW for 4G-only-UE and 5GS indicator.
  - **pgw-selection select pgw no-5gs-interworking**: Displays the enabled P-GW selection for 5Gs interworking.
  - **pgw-selection select pgw smf-not-configured**: Displays the enabled P-GW selection. ePDG ignores SMF, even if the SMF IP/FQDN is configured in DNS/local ePDG config.

The following is a sample output:

```
Service name: epdg1
Context: pdif
Bind: Done
Max Sessions : 100000
IP address: 111.111.11.2 UDP Port : 500
Crypto-template: boston
Reporting Action:
Event Record: Enabled
Service State: Started Service Id: 6
```

```
EGTP service : egtp-epdg-egress-v4
MAG service : n/a
MAG context : n/a
PLMN Id: MCC:242 , MNC:002
Setup Timeout (sec) : 60
dns-pgw context: pdif
dns-pgw selection : weight,topology
fqdn: n/a
pgw-selection agent-info error-handling: terminate
pgw-selection select PGW: 4G Only UE, No 5GS Interworking, SMF Not Configured
Custom SWm-SWu Error Mapping: Disabled
Custom S2b-SWu Error Mapping: Disabled
3GPP SWu Private Notify Error Types: Disabled
Preferred PGW selection mechanism: AAA/DNS
vendor-specific-attr dns-server-req: APCO
vendor-specific-attr pcscf-server-req: Private Extension
Username MAC Address Stripping : Disabled
QCI QOS Mapping Table : epdg_mapping
Username MAC Address Validate : Enabled Failure-handling : Continue
Newcall Policy : None
Duplicate precedence in TFT - Allowed
IP Fragment-Chain Timeout : 5 sec and Max OOO Fragment : 45
EBI :
Allowed Range 10 to 13
Username MAC Address Delimiter - colon-or-NAI-Label
Subscriber Map : map1
AAA Send Framed-MTU Size : Disabled
Data Buffering : Enabled
PDN-type IPv6 Path-MTU : Enabled
GTPC Overload Control Profile : None
GTPC Load Control Profile: None
LTE Emergency Profile: emergency
Timeout Idle : Disabled
Suppress International Roamer Handover : Disabled
5G Interworking : Enabled
```

show epdg-service name *name*

The output of this command includes the following fields to check whether IR suppress handover is enabled or disabled.

Fields/Counters	Description
Suppress International Roamer Handover	Specifies if the suppress international roamer HO is enabled or disabled.