



show gtpc

This chapter includes the **show gtpc** command output tables.

- [show gtpc counters ggsn-service](#), on page 1
- [show gtpc full](#), on page 4
- [show gtpc summary callid](#), on page 10
- [show gtpc statistics custom1](#), on page 12
- [show gtpc statistics custom2](#), on page 13
- [show gtpc statistics verbose](#), on page 13

show gtpc counters ggsn-service

Table 1: show gtpc counters ggsn-service Command Output Descriptions

| Field | Description |
|---------------------------|--|
| APN Name | The name of the APN that the subscriber is currently accessing. |
| Callid | The call identification number that uniquely identifies the subscriber. |
| IMSI | The subscriber's International Mobile Subscriber Identity. |
| NSAPI | The subscriber's Network Service Access Point Identifier. |
| Updates PDP Context | |
| Update PDP Context RX | The total number of Update PDP Context Request messages received from the SGSN(s). |
| Accepted | The total number of Update PDP Context Response messages transmitted to the SGSN(s) containing a cause value of 128 (80H, Request accepted). |
| Denied | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s). |
| Update PDP Context Denied | |

| Field | Description |
|----------------------------------|---|
| System Failure | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 204 (CCH, System failure). |
| Invalid Message Format | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format). |
| Semantic Error in TFT | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 215 (D7H, Semantic error in the TFT operation). |
| Syntactic Error in TFT | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 216 (D8H, Syntactic error in the TFT operation). |
| Semantic Error in Packet Filter | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 217 (D9H, Semantic error in packet filter(s)). |
| Mandatory IE Incorrect: | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect). |
| Mandatory IE Missing | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing). |
| Syntactic Error in Packet Filter | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 218 (DAH, Syntactic error in packet filter(s)). |
| Optional IE Incorrect | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect). |
| Updates PDP Context Sent | |
| Update PDP Context RX | The total number of Update PDP Context Request messages transmitted to the SGSN(s). |
| Accepted | The total number of Update PDP Context Response messages received from the SGSN(s) containing a cause value of 128 (80H, Request accepted). |
| Denied | The total number of "reject" Update PDP Context Response messages received from the SGSN(s). |
| Update Sent Reasons | |

| Field | Description |
|----------------------------------|--|
| IP Address Updated | The total number of Update PDP Context Request messages transmitted to the SGSN(s) because of a change in the IP address of the PDP context. |
| QoS Updated | The total number of Update PDP Context Request messages transmitted to the SGSN(s) because of a change in the quality of service (QoS) level for the PDP context. |
| Misc. Reasons | The total number of Update PDP Context Request messages transmitted to the SGSN(s) for other reasons. |
| Update PDP Context Deny Received | |
| System Failure | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 204 (CCH, System failure). |
| Non-existent | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format). |
| Unsupported Service | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 215 (D7H, Semantic error in the TFT operation). |
| Invalid Message Format | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 216 (D8H, Syntactic error in the TFT operation). |
| Semantic Error in TFT | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 217 (D9H, Semantic error in packet filter(s)). |
| Syntactic Error in TFT | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect). |
| Semantic Error in Packet Filter | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing). |
| Mandatory IE Incorrect | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 218 (DAH, Syntactic error in packet filter(s)). |
| Mandatory IE Missing | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect). |
| Syntactic Error in Packet Filter | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 204 (CCH, System failure). |

| Field | Description |
|-----------------------|--|
| Optional IE Incorrect | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format). |
| GTPU Receive | |
| Total Packets | The total number of GTPU packets received. |
| Total Bytes | The total number of GTPU bytes received. |
| GTPU Send | |
| Total Packets | The total number of GTPU packets transmitted. |
| Total Bytes | The total number of GTPU bytes transmitted. |

show gtpc full

Table 2: show gtpc full Command Output Descriptions

| Field | Description |
|------------------------|---|
| APN Name | The name of the APN that the subscriber is currently accessing. |
| Callid | The call identification number that uniquely identifies the subscriber. |
| User Name | The user name associated with this session. |
| User Address | Is the address of the user's PDP context in dotted decimal notation. |
| Session Type | Specifies the type of session for MBMS service. Possible values are: <ul style="list-style-type: none"> • MBMS UE • MBMS Multicast Bearer |
| Mcast Address | Displays the IP address of Broadcast Multicast service center. |
| Update MBMS Context RX | Total number of update messages received for MBMS context. |
| Accepted | Total number of update messages received and accepted for MBMS context |
| Denied | Total number of update messages received and denied for MBMS context |
| Discarded | Total number of update messages discarded for MBMS context |

| Field | Description |
|---------------------------|---|
| IMEI(SV) | Indicates the International Mobile Equipment Identity (and Software Version) (IMEI(SV)) of subscriber's mobile equipment. |
| IMSI | The subscriber's International Mobile Subscriber Identity. |
| NSAPI | The subscriber's Network Service Access Point Identifier. |
| GGSN Service | Specifies the name of a configured GGSN service that can be from 1 to 63 alpha and/or numeric characters and is case sensitive. |
| SGSN Address | Specifies the IP address for the SGSN. |
| MBMS Session Start | This group specifies the statistics of messages for MBMS session start. |
| MBMS Session Start TX | Total number of messages sent for MBMS session start. |
| Accepted | Total number of messages accepted for MBMS session start. |
| Denied | Total number of messages denied for MBMS session start. |
| MBMS Session Start Denied | This group specifies the statistics of reasons for denial of MBMS session. |
| No Resources | Total number of MBMS session start messages denied due to non-availability of resources. |
| No Memory | Total number of MBMS session start messages denied due to non-availability of memory. |
| System Failure | Total number of MBMS session start messages denied due to system failure. |
| Non-existent | Total number of MBMS session start messages denied due to non-existence of MBMS context. |
| Invalid Message Format | Total number of MBMS session start messages denied due to invalid message format. |
| Mandatory IE Incorrect | Total number of MBMS session start messages denied as mandatory information element was incorrect. |
| Mandatory IE Missing | Total number of MBMS session start messages denied as mandatory information element was missing. |
| Bearer Ctxt Superseded | Total number of MBMS session start messages denied as bearer context get superseded by information in message. |
| MBMS Session Stop | This group specifies the statistics of messages for MBMS session stop. |
| MBMS Session Stop TX | Total number of messages sent for MBMS session stop. |
| Accepted | Total number of messages accepted for MBMS session stop. |

| Field | Description |
|-------------------------------------|--|
| Denied | Total number of messages denied for MBMS session stop. |
| Charging ID | Contains an identifier used for correlating charging records and events. |
| Charging Characteristics Statistics | <p>Hot - The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "1", representing "hot" billing.</p> <p>Normal - The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "8", representing "normal" billing.</p> <p>Prepaid - The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "4", representing "prepaid" billing.</p> <p>Flat - The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "2", representing "flat-rate" billing.</p> |
| User Location Info Type | Indicates the type of User Location Information, Cell Global Identification (CGI) or Service Area Identity (SAI) of where the user currently is registered or available. |
| User Location Info | Indicates the information of User location, CGI or SAI. |
| MS TimeZone | The Time Zone MS is sending in the CPC/UPC message. |
| Daylight Saving Time | The number of hours the MS TimeZone is adjusted for Daylight Savings Time |
| CAMEL Charging Info | Indicates whether or not CAMEL charging information was received. |
| Length | The length of the CAMELInformationPDP IE |
| Payload Compression | Indicates whether payload compression is allowed or prohibited. |
| Transitions to Presv. Mode | <p>Indicates total number sessions in transitions state for preservation mode.</p> <p>Note: This is a customer specific counter and dependent of customer specific license only.</p> |
| Transitions to LORC state | <p>Indicates total number sessions in transitions state for overcharging protection support mode.</p> <p>This counter is applicable when GGSN is enabled for overcharging protection for subscriber due to loss of radio coverage and SGSN notifies Update PDP Contexts for QOS change with GTP-C extension for LORC.</p> |

| Field | Description |
|---------------------------------|--|
| GTP-U Tunnel Establishment | <p>Indicates if the particular session is using direct tunnel or not. Possible values are:</p> <ul style="list-style-type: none"> • Normal • Pending • Direct-Tunnel <p>Status "Pending" means that GGSN is switching from direct-tunnel to two tunnels for the particular session. "Normal" status indicates that particular context is not using Direct Tunnel.</p> |
| Updates PDP Context | |
| Update PDP Context RX | The total number of Update PDP Context Request messages received from the SGSN(s). |
| Accepted | The total number of Update PDP Context Response messages transmitted to the SGSN(s) containing a cause value of 128 (80H, Request accepted). |
| Denied | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s). |
| Update PDP Context Denied | |
| System Failure | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 204 (CCH, System failure). |
| Invalid Message Format | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format). |
| Semantic Error in TFT | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 215 (D7H, Semantic error in the TFT operation). |
| Syntactic Error in TFT | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 216 (D8H, Syntactic error in the TFT operation). |
| Semantic Error in Packet Filter | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 217 (D9H, Semantic error in packet filter(s)). |
| Mandatory IE Incorrect: | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect). |

| Field | Description |
|----------------------------------|--|
| Mandatory IE Missing | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing). |
| Syntactic Error in Packet Filter | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 218 (DAH, Syntactic error in packet filter(s)). |
| Optional IE Incorrect | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect). |
| Updates PDP Context Sent | |
| Update PDP Context TX | The total number of Update PDP Context Request messages transmitted to the SGSN(s). |
| Accepted | The total number of Update PDP Context Response messages received from the SGSN(s) containing a cause value of 128 (80H, Request accepted). |
| Denied | The total number of "reject" Update PDP Context Response messages received from the SGSN(s). |
| Update PDP Context Deny Received | |
| System Failure | The total number of "reject" Update PDP Context Response messages received with a cause code of 204 (CCH, System failure). |
| Non-existent | The total number of "reject" Update PDP Context Response messages received with a cause code of 192 (C0H, Non-existent). |
| Invalid Message Format | The total number of "reject" Update PDP Context Response messages received with a cause code of 193 (C1H, Invalid message format). |
| Semantic Error in TFT | The total number of "reject" Update PDP Context Response messages received with a cause code of 215 (D7H, Semantic error in the TFT operation). |
| Syntactic Error in TFT | The total number of "reject" Update PDP Context Response messages received with a cause code of 216 (D8H, Syntactic error in the TFT operation). |
| Semantic Error in Packet Filter | The total number of "reject" Update PDP Context Response messages received with a cause code of 217 (D9H, Semantic error in packet filter(s)). |
| Mandatory IE Incorrect: | The total number of "reject" Update PDP Context Response messages received with a cause code of 201 (C9H, Mandatory IE incorrect). |

| Field | Description |
|----------------------------------|---|
| Mandatory IE Missing | The total number of "reject" Update PDP Context Response messages received with a cause code of 202 (CAH, Mandatory IE missing). |
| Syntactic Error in Packet Filter | The total number of "reject" Update PDP Context Response messages received with a cause code of 218 (DAH, Syntactic error in packet filter(s)). |
| Optional IE Incorrect | The total number of "reject" Update PDP Context Response messages received with a cause code of 203 (CBH, Optional IE incorrect). |
| GTPU Receive | |
| Total Packets | The total number of GTP User (GTPU) packets received. |
| Traffic Class | |
| Conversational | The number of GTPU packets received tagged with a traffic class of Conversational. |
| Streaming | The number of GTPU packets received tagged with a traffic class of Streaming. |
| Interactive 1 | The number of GTPU packets received tagged with a traffic class of Interactive and a priority of 1. |
| Interactive 2 | The number of GTPU packets received tagged with a traffic class of Interactive and a priority of 2. |
| Interactive 3 | The number of GTPU packets received tagged with a traffic class of Interactive and a priority of 3, |
| Background | The number of GTPU packets received tagged with a traffic class of Background. |
| GTPU Send | |
| Total Packets | The total number of GTP User (GTPU) packets transmitted. |
| Traffic Class | |
| Conversational | The number of GTPU packets transmitted tagged with a traffic class of Conversational. |
| Streaming | The number of GTPU packets transmitted tagged with a traffic class of Streaming. |
| Interactive 1 | The number of GTPU packets transmitted tagged with a traffic class of Interactive and a priority of 1. |
| Interactive 2 | The number of GTPU packets transmitted tagged with a traffic class of Interactive and a priority of 2. |

| Field | Description |
|---------------|--|
| Interactive 3 | The number of GTPU packets transmitted tagged with a traffic class of Interactive and a priority of 3, |
| Background | The number of GTPU packets transmitted tagged with a traffic class of Background. |

show gtpc summary callid

Table 3: show gtpc summary callid Command Output Descriptions

| Field | Description |
|-----------------------|---|
| GTP Summary | Displays a brief status for GTP. |
| Update PDP Context RX | Displays the total number of Update PDP Context Request messages received. |
| Accepted | Displays the number of Update PDP Context Request messages received that were accepted. |
| Denied | Displays the number of Update PDP Context Request messages received that were denied. |
| Update PDP Context TX | Displays the total number of Update PDP Context Request messages transmitted. |
| Accepted | Displays the number of Update PDP Context Request messages received that were transmitted. |
| Denied | Displays the number of Update PDP Context Request messages received that were transmitted. |
| IP Address Updates | Displays the number of times the IP address was updated. |
| QoS Updates | Displays the number of times the quality of service (QoS) level was changed. |
| Misc. Updates | Displays the number of updates experienced. |
| Qos negotiation | |
| CPC Qos Accepted | The number of times QoS parameters received in Create PDP Context (CPC) Request messages were accepted. |
| CPC Qos Downgrade | The number of times QoS parameters received in Create PDP Context (CPC) Request messages were downgraded. |
| UPC Qos Accepted | The number of times QoS parameters received in Update PDP Context (UPC) Request messages were accepted. |

| Field | Description |
|--------------------|---|
| UPC Qos Downgraded | The number of times QoS parameters received in Update PDP Context (UPC) Request messages were downgraded. |
| GTPU Receive | |
| Total Packets | The total number of GTP User (GTPU) packets received. |
| Traffic Class | |
| Conversational | The number of GTPU packets received tagged with a traffic class of Conversational. |
| Streaming | The number of GTPU packets received tagged with a traffic class of Streaming. |
| Interactive 1 | The number of GTPU packets received tagged with a traffic class of Interactive and a priority of 1. |
| Interactive 2 | The number of GTPU packets received tagged with a traffic class of Interactive and a priority of 2. |
| Interactive 3 | The number of GTPU packets received tagged with a traffic class of Interactive and a priority of 3, |
| Background | The number of GTPU packets received tagged with a traffic class of Background. |
| GTPU Send | |
| Total Packets | The total number of GTP User (GTPU) packets transmitted. |
| Traffic Class | |
| Conversational | The number of GTPU packets transmitted tagged with a traffic class of Conversational. |
| Streaming | The number of GTPU packets transmitted tagged with a traffic class of Streaming. |
| Interactive 1 | The number of GTPU packets transmitted tagged with a traffic class of Interactive and a priority of 1. |
| Interactive 2 | The number of GTPU packets transmitted tagged with a traffic class of Interactive and a priority of 2. |
| Interactive 3 | The number of GTPU packets transmitted tagged with a traffic class of Interactive and a priority of 3, |
| Background | The number of GTPU packets transmitted tagged with a traffic class of Background. |

show gtpc statistics custom1



Important These statistics are specific to Free-of-Charge service (FoCS) and Operator Determined Barring (ODB) support using private GTP-C extensions and enabled under customer-specific license. For more information on this support, contact your local representative.

Table 4: show gtpc statistics custom1 Command Output Descriptions

| Field | Description |
|--------------------------------------|---|
| Preservation Mode stats | Displays the statistics of GTP-C messages in preservation mode. |
| Sessions in preservation mode | Indicates total number sessions in preservation mode. |
| Transitions to preservation mode | Indicates total number sessions in transitions state from non-preservation mode to preservation mode. |
| Transitions to non-preservation mode | Indicates total number sessions in transitions state from preservation mode to non-preservation mode. |
| Free Of Charge Service stats | Displays the statistics of GTP-C messages for Free-of-Charge services. |
| Session stats | Indicates sessions statistics for FOCS and/or ODB enabled sessions. |
| FOCS | Indicates the total number of sessions Free-of-Charge services (FOCS) enabled status. |
| ODB | Indicates the total number of sessions with Operator Determined Barring enabled status. |
| Sessions release stats | Indicates the statistics for sessions, in preservation mode of using FOCS and/or ODB, released due to any reason |
| Other-reasons | Indicates the total number of sessions, in preservation mode of using FOCS and/or ODB, released due to reasons not specified in this table. |
| in-acl-disconnect-on-violation | Indicates the total number of sessions, in preservation mode of using FOCS and/or ODB, released due to ACL rule violation. |

show gtpc statistics custom2



Important These statistics are specific to private GTP-C extensions for overcharging protection on loss of radio coverage for a subscriber. For more information on this support, contact your local representative.

Table 5: show gtpc statistics custom2 Command Output Descriptions

| Field | Description |
|---------------------------|---|
| LORC Stats | This group indicates the status of loss of radio coverage extensions in GTP-C messages configured for overcharging protection. |
| Sessions in lorc state | Indicates the number of GGSN session are in LORC state and subscriber is in out of radio coverage area. This counter is applicable when GGSN is enabled for overcharging protection for subscriber due to loss of radio coverage and SGSN notifies Update PDP Contexts for QOS change with GTP-C extension for LORC. |
| Transitions to lorc state | Indicates total number sessions in transitions state for overcharging protection support mode. This counter is applicable when GGSN is enabled for overcharging protection for subscriber due to loss of radio coverage and SGSN notifies Update PDP Contexts for QOS change with GTP-C extension for LORC. |

show gtpc statistics verbose

Table 6: show gtpc statistics verbose Command Output Descriptions

| Field | Description |
|---------------------|--|
| Session Stats | |
| Total Current | The total number of PDP contexts currently being facilitated by the system. |
| S6b Assume Positive | The number of S6b assumed positive subscriber count being facilitated by the system. |
| IPv4 | The number of IPv4 PDP contexts currently being facilitated by the system. |
| PPP | The number of PPP PDP contexts currently being facilitated by the system. |

| Field | Description |
|-------------------|--|
| IPv4 Emergency | The number of non-emergency IPv4 calls. |
| Auth IMSI | The number of authorized IMSIs by SGSN (i.e. valid subscription). |
| UnAuth IMSI | The number of authentic IMSIs but NOT verified by SGSN. |
| Only IMEI | The IMSIs that have not been provided by the SGSN and the session is based on IMEI. |
| IPv6 | The number of IPv6 PDP contexts currently being facilitated by the system. |
| Network Initiated | The number of PDP contexts currently being facilitated by the system that were activated using the NRPA procedure. |
| IPv6 Emergency | The number of non-emergency IPv6 calls. |
| Auth IMSI | The number of authorized IMSIs by SGSN (i.e. valid subscription). |
| UnAuth IMSI | The number of authentic IMSIs but NOT verified by SGSN. |
| Only IMEI | The IMSIs that have not been provided by the SGSN and the session is based on IMEI. |
| IPv4v6 | The number of IPv4v6 PDP contexts currently being facilitated by the system. |
| MBMS UE | Total number of MBMS UE context connected. |
| MBMS Mcast Bearer | Total number of MBMS multicast bearer context connected. |
| MBMS Bcast Bearer | Total number of MBMS broadcast bearer context connected. |
| Total Setup | The total number of PDP contexts that have been facilitated by the system since it was either powered up or since the statistics were last cleared -whichever is latest. |
| IPv4 | The total number of IPv4 PDP contexts that have been facilitated by the system. |
| PPP | The total number of PPP PDP contexts that have been facilitated by the system. |
| IPv4 Emergency | The total number of non-emergency IPv4 calls. |
| Auth IMSI | The number of authorized IMSIs by SGSN (i.e. valid subscription). |
| UnAuth IMSI | The number of authentic IMSIs but NOT verified by SGSN. |
| Only IMEI | The IMSIs that have not been provided by the SGSN and the session is based on IMEI. |

| Field | Description |
|----------------------------|---|
| IPv6 | The total number of IPv6 PDP contexts that have been facilitated by the system. |
| SGSN Initiated | The total number of SGSN-initiated PDP contexts that have been facilitated by the system |
| IPv6 Emergency | The number of non-emergency IPv6 calls. |
| Auth IMSI | The number of authorized IMSIs by SGSN (i.e. valid subscription). |
| UnAuth IMSI | The number of authentic IMSIs but NOT verified by SGSN. |
| Only IMEI | The IMSIs that have not been provided by the SGSN and the session is based on IMEI. |
| IPv4v6 | The number of IPv4v6 PDP contexts currently being facilitated by the system. |
| Network Initiated | The number of IPv4v6 PDP contexts currently being facilitated by the system that were activated using the NRPA procedure. |
| MBMS UE | Total number of MBMS UE context connected. |
| MBMS Mcast Bearer | Total number of MBMS multicast bearer context connected. |
| MBMS Bcast Bearer | Total number of MBMS broadcast bearer context connected. |
| Total Released | The total number of PDP contexts that have been released by the system. |
| Dynamic Address Allocation | |
| IPv4 Attempt | The total number of IPv4 sessions attempted with dynamic PDP address allocation. |
| Successful | The total number of IPv4 sessions successfully established with dynamic PDP address allocation. |
| IPv6 Attempt | The total number of IPv6 sessions attempted with dynamic PDP address allocation. |
| Successful | The total number of IPv6 sessions successfully established with dynamic PDP address allocation. |
| IP Authentication | |
| CHAP Auth Attempt | The total number PDP contexts that attempted CHAP authentication. |
| Successful | The total number PDP contexts that were successfully authenticated using CHAP. |

| Field | Description |
|-------------------------|--|
| Failure | The total number PDP contexts that failed authentication attempting to use CHAP. |
| PAP Auth Attempt | The total number PDP contexts that attempted PAP authentication. |
| Successful | The total number PDP contexts that were successfully authenticated using PAP. |
| Failure | The total number PDP contexts that failed authentication attempting to use PAP. |
| No Auth Requests | The total number PDP contexts that did not have authentication enabled. |
| Session Release Reasons | |
| SGSN Initiated | The total number of PDP contexts that have been released due to the receipt of a Delete PDP Context message from the SGSN(s). |
| Secondary Teardown | The total number of PDP contexts that have been released due to the termination of a secondary context (for example, a teardown flag was set in Delete PDP Context message received or a teardown happened due to the context replacement case). |
| Session Mgr. Died | The total number of PDP contexts that have been released due to the termination of the Session Manager task that was facilitating the contexts. |
| Admin Releases | The total number of PDP contexts that have been released due by the system administrator (for example, issuing the clear subscriber command, or stopping the GGSN service). |
| APN Removed | The total number of PDP contexts that have been released due to the removal of the APN configuration from the system. |
| Call Aborted | The total number of PDP contexts that have been released due to miscellaneous reasons such as the removal of a source or destination context on the system, etc. |
| Idle Timeout | The total number of PDP contexts that have been released due to the expiration of the idle timeout period as configured in the APN configuration mode. |
| Absolute Timeout | The total number of PDP contexts that have been released due to the expiration of the absolute timeout period as configured in the APN configuration mode. |
| Source Addr Violation | The total number of PDP contexts that have been released due to the detection of a source violation. |
| Flow Addition Failure | The total number of PDP contexts that have been released due to the system's failure to add a flow. |

| Field | Description |
|--------------------------|---|
| DHCP Renewal Failure | The total number of PDP contexts that have been released due to a DHCP lease renewal failure. |
| Long Duration Timeout | The total number of PDP contexts that have been released due to the expiration of the long duration timeout period. |
| Error Indication | The total number of PDP contexts that have been released due to an error indication. |
| Context replacement | The total number of PDP contexts that have been released due to a context replacement. |
| Other Reasons | The total number of PDP contexts that have been released due to other reasons. |
| Purged via Audit | The total number requests that were purged during Session Manager recovery. If the GTPCMgr did not get an audit request for a particular session, then it is released by GTPCMgr. |
| Update Handoff Reject | The total number of PDP contexts that have been released due to the receipt of a reject message during an update handoff. |
| LP Fallback Timeout | The total number of IP CAN sessions that have been released due to local policy timeout. |
| Total Path Failures | The total number of PDP contexts that have been released due to SGSN path failures detected by the system. |
| SGSN Restart | |
| Create PDP Req | The total number of PDP contexts that have been released due to path failures detected after sending a Create PDP Context Request message. |
| Update PDP Req | The total number of PDP contexts that have been released due to path failures detected after sending a Update PDP Context Request message. |
| Echo Response | The total number of PDP contexts that have been released due to path failures detected after sending an Echo Response message. |
| Timeout | |
| GTPC Echo Timeout | |
| GTPU Echo Timeout | |
| GGSN Req Timeout | |
| Path Management Messages | |
| Echo Request RX | The total number of Echo Requests received from SGSN(s). |

| Field | Description |
|------------------------------|---|
| Echo Response TX | The total number of Echo Responses sent to SGSN(s) in response to Echo Requests. |
| Echo Request TX | The total number of Echo Requests sent to the SGSN(s). |
| Echo Response RX | The total number of Echo Responses received from SGSN(s) in response to Echo Requests. |
| GTP-U Echo Request RX | The total number of GTPU Echo Requests received from SGSN(s). |
| GTP-U Echo Response TX | The total number of GTPU Echo Responses sent to SGSN(s) in response to GTPU Echo Requests. |
| GTP-U Echo Request TX | The total number of GTPU Echo Requests sent to the SGSN(s). |
| GTP-U Echo Response RX | The total number of GTPU Echo Responses received from SGSN(s) in response to GTPU Echo Requests. |
| Version Not Supported | |
| RX | The total number of Version Not Supported messages received. |
| TX | The total number of Version Not Supported messages transmitted. |
| Supported Ext. Headers Notif | |
| RX | The total number of supported extension headers notifications received. |
| TX | The total number of supported extension headers notifications transmitted. |
| Tunnel Management Messages | |
| Total CPC Req | The total number of Create PDP Context Request messages received. This is the sum of GTPC v0 and GTP v1 messages. |
| CPC Req(V1) | The total number of Create PDP Context Request messages received that used GTPC version 1. |
| CPC Req(V0) | The total number of Create PDP Context Request messages received that used GTPC version 0. |
| Primary CPC Req | The total number of Activate Primary PDP Context Request received. |
| Secondary CPC Req | The total number of Activate Secondary PDP Context Request received |
| Initial CPC Req | The total number of non-retransmitted Create PDP Context Requests for the primary PDP context. |

| Field | Description |
|-----------------------|--|
| Retransmitted | The total number of re-transmitted Create PDP Context Request messages received for either the primary or secondary PDP contexts. |
| Total Accepted | The total number of Create PDP Context Response messages transmitted containing a cause value of 128 (80H, Request accepted). |
| Total Denied | The total number of "reject" Create PDP Context Response messages transmitted. |
| Total Discarded | The total number of Create PDP Context Request messages received from the SGSN(s) that were discarded. |
| Update PDP Context RX | The total number of Update PDP Context Request messages received from the SGSN(s). |
| Accepted | The total number of Update PDP Context Response messages transmitted to the SGSN(s) containing a cause value of 128 (80H, Request accepted). |
| Denied | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s). |
| Update PDP Context TX | The total number of Update PDP Context Request messages transmitted to the SGSN(s). |
| Accepted | The total number of Update PDP Context Response messages received from the SGSN(s) containing a cause value of 128 (80H, Request accepted). |
| Denied | The total number of "reject" Update PDP Context Response messages received from the SGSN(s). |
| Delete PDP Context RX | The total number of Delete PDP Context Request messages received from the SGSN(s). |
| Accepted | The total number of Delete PDP Context Response messages transmitted containing a cause value of 128 (80H, Request accepted). |
| Denied | The total number of "reject" Delete PDP Context Response messages transmitted. |
| Discarded | The total number of Delete PDP Context Request messages received from the SGSN(s) that were discarded |
| Delete PDP Context TX | The total number of Delete PDP Context Request messages transmitted to the SGSN(s). |
| Accepted | The total number of Delete PDP Context Response messages received from the SGSN(s) containing a cause value of 128 (80H, Request accepted). |

| Field | Description |
|---|--|
| Denied | The total number of "reject" Delete PDP Context Response messages received from the SGSN(s). |
| Error Indication RX | The total number of error indication messages received from the SGSN(s). |
| Error Indication TX | The total number of error indication messages transmitted to the SGSN(s). |
| PDU Notification | The total number of PDU notifications sent by GGSN as a part of the NRPA procedure. |
| Accepted | The total number of accepted PDU notifications sent by GGSN as a part of the NRPA procedure. |
| Denied | The total number of rejected PDU notifications sent by GGSN as a part of the NRPA procedure. |
| PDU Notificatn Reject | The total number of PDU Notification Rejects that were received. |
| Accepted | The total number of PDU Notification Rejects that were received and accepted. |
| Denied | The total number of PDU Notification Rejects that were received and rejected. |
| Discarded | The total number of PDU Notification Rejects that were received and discarded. |
| GTP-U Tunnel Establishment with RNC | |
| Direct Tunnels Established | Indicates the number of times direct tunnels established between GGSN and RNC as instructed by SGSN in Update PDP Context Request. |
| Direct Tunnels torn down by SGSNs | Indicates the total number of times direct tunnels between GGSN and RNC are removed as instructed by SGSN in Update PDP Context Request. |
| Direct Tunnels that received Error Indication | Indicates the total number of Direct Tunnels that have received GTP Error Indication from RNC. This statistic counts GTP Error Indication only once per Direct Tunnel. |
| Update PDP Tx Reasons | |
| QoS Change | The number of Update PDP Context Request messages were sent when the GGSN requested the QoS Profile information to the SGSN. |
| Providing PDP address | The providing PDP address that is sent to the SGSN. |
| Direct Tunnel Flags update | Indicates the number of Update PDP Context Requests going out of GGSN towards SGSN with direct tunnel flags IE. |

| Field | Description |
|-------------------------------|--|
| Update PDP Context Rx Reasons | |
| SGSN Handoff | The total number SGSN handoffs that have been completed for which PDP context updated. |
| SGSN Group Handoff | The total number handoffs between SGSN groups that have been completed for which PDP context updated. |
| Create PDP Context Denied | |
| No Resources | The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 199 (C7H, No resources available). NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - No Resource Reasons of this table. |
| No Memory | The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 212 (D4H, No memory is available). NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - No Memory of this table. |
| All Dyn Addr Occupied | The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 211 (D3H, All dynamic PDP addresses are occupied). NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - Dynamic Address Occupied of this table. |
| User Auth Failed | The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 201 (D1H, User authentication failed). NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - Auth Failure Reasons section of this table. |
| Unknown/Missing APN | The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 219 (DBH, Missing or unknown APN). |
| System Failure | The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 204 (CCH, System failure). NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - System Failure Reasons section of this table. |

| Field | Description |
|----------------------------------|--|
| Unknown PDP Addr/Type | <p>The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 220 (DCH, Unknown PDP address or PDP type).</p> <p>NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - Unknown PDP Addr or Type section of this table.</p> |
| Unsupported Version | <p>The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 198 (C6H, version not supported).</p> |
| Semantic Error in TFT | <p>The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 215 (D7H, Semantic error in the TFT operation).</p> |
| Syntactic Error in TFT | <p>The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 216 (D8H, Syntactic error in the TFT operation).</p> |
| Semantic Error in Packet Filter | <p>The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 217 (D9H, Semantic error in packet filter(s)).</p> |
| Mandatory IE Incorrect | <p>The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect).</p> <p>NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - Mandatory IE Incorrect section of this table.</p> |
| Mandatory IE Missing | <p>The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing).</p> |
| Syntactic Error in Packet Filter | <p>The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 218 (DAH, Syntactic error in packet filter(s)).</p> |
| Optional IE Incorrect | <p>The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect).</p> <p>NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - Optional IE Incorrect section of this table.</p> |

| Field | Description |
|---|--|
| Invalid Message Format | The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format). |
| Context Not Found | The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 210 (D2H, Context not found). |
| Service not Supported | The total number of "reject" Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 200 (C8H, Service not supported). |
| APN restriction Incompatibility | |
| No APN Subscription | Indicates that the GGSN has denied the user access to an APN because a subscription is required, but the subscriber does not have the necessary subscription. |
| Create PDP Denied - No Resource Reasons | |
| PLMN Policy Reject | The PLMN policy configured for the GGSN service processing the request is configured to reject the SGSN's requests. |
| New Call Policy Reject | The system is configured with a newcall policy to reject new sessions. |
| APN/Svc Capacity | The APN being accessed is currently facilitating the maximum number of PDP contexts specified in its configuration (refer to the max-contexts command in the APN configuration mode). |
| Input-Q Exceeded | The queue size between demux-mgr and session managers has been exceeded due to pending requests. |
| No Session Manager | No Session Manager task is available to process the request. |
| Session Manager Dead | The Session Manager Task assigned to the PDP context was terminated. |
| Secondary For PPP | A secondary request for PPP was received. |
| Other Reasons | Other reasons not listed here. |
| Session Mgr Retried | Multiple Session Manager Tasks were unable to accept the request. |
| Session Mgr Not Ready | The Session Manager Task assigned to the PDP context was not ready to accept the request. |
| Session Setup Timeout | The total number of Create PDP Context (CPC) reject due to session setup timeout |
| Charging Svc Auth Fail | Authorization with the charging service failed. |
| APN Reject Policy | |

| Field | Description |
|---|---|
| ICSR State Invalid | Indicates that the Create PDP request was denied because the interchassis session recovery state is invalid. |
| DHCP IP Address Not Present | DHCP-assigned IP addresses were not available for assignment to the PDP Context. |
| Radius IP Validation Failed | RADIUS IP validation failed. |
| S6B IP Validation Failed | |
| Congestion Policy Applied | The system entered a state resulting in the invocation of a GGSN service "reject" congestion policy. |
| Exceeded secondary-pdp-context limit per-subscriber | |
| GTP-v0 IP address allocation/validation failed | IP address allocation or validation failed. |
| Mediation Delay GTP Response Accounting Start failed: | The number of call setup failures due to Accounting Start failures with delay GTP response feature enabled. |
| Create PDP Denied - Auth Failure Reasons | |
| Authentication Failed | The total number of requests rejected due to incorrect username/password. |
| AAA Auth Req Failed | The total number of requests rejected due to authentication failure requests. |
| APN selection-mode mismatch | The total number of requests rejected due to a conflicting configuration of the Selection Mode in the Create PDP Context request and the APN. |
| Non-Existent Virtual APN | The request is rejected due to an invalid APN. |
| Reject Foreign Subscriber | |
| IMS Authorization Fail | |
| Create PDP Denied - No Memory | |
| No More AAA Sessions | The total number of requests rejected due to the system not having AAA session handles available. |
| Misc. Reasons | The total number of requests rejected due to the system not being able to allocate the memory required for processing the request. |
| Create PDP Denied - Unknown PDP Addr or Type | |
| Invalid IP Address | The total number of requests rejected due to the receipt of an invalid IP address (i.e. 0.0.0.0) from the SGSN. |
| Conflict IP Address | The total number of requests rejected due to a conflict between the IP addresses provided by the MS and RADIUS servers. |

| Field | Description |
|--|--|
| Static Address Not Present | The total number of requests rejected due to the MS not having a static address when the system is configured with an IP address allocation method of static. |
| Static Address Not Allowed | The total number of requests rejected due to the system's IP address allocation method being configured for static, but the Create PDP Context Request message requests dynamic allocation. |
| Static IP Validation Failed | The total number of requests rejected due to the validation failure of the static IP address offered by the MS. |
| Local Pool Static Address Not Allowed | The total number of requests rejected due to the MS offering a static IP address that is not configured in a pool on the system. |
| DHCP IP Validation Failed | The total number of requests rejected due to the validation failure of the IP address allocated by DHCP. |
| DHCP Relay Static Address Not Allowed | The total number of requests rejected due to the IP address being present in the call but the system not being configured to accept statically assigned addresses for DHCP relay. |
| DHCP Proxy Static Address Not Allowed | The total number of requests rejected due to the IP address being present in the call but the system not being configured to accept statically assigned addresses for DHCP proxy. |
| DHCP Local Pool Static Address Not Allowed | The total number of requests rejected due to the IP address being present in the call but the system not being configured to accept statically assigned addresses for DHCP local pool. |
| DHCP Client Static Address Not Allowed | The total number of requests rejected due to the IP address being present in the call but the system not being configured to accept statically assigned addresses for DHCP client. |
| PDP Type Mismatch or Unknown PDP Type | The total number of requests rejected due to an unknown PDP type or a PDP type that does not match with the one configured for the APN using the pdp-type command. |
| Create PDP Denied - Dynamic Address Occupied | |
| DHCP No IP Address Alloc | The total number of requests rejected due to a failure in DHCP IP address allocation. |
| DHCP Timer Notification | The total number of requests rejected due to an expiration of the system's DHCP timer prior to the receipt of a reply from the DHCP server resulting in a failure to allocate an IP address. |
| Local IP Validation Failed | The total number of requests rejected due to an IP address validation failure. |
| Local IP Pool All Address Occupied | The total number of requests that are occupied due to an IP address is occupied. |
| Create PDP Denied - System Failure Reasons | |

| Field | Description |
|--|---|
| Misc. Reasons | The total number of requests rejected due to miscellaneous reasons. |
| Create PDP Denied - Mandatory IE Incorrect | |
| NSAPI | The total number of requests rejected due to an invalid NSAPI. |
| Create PDP Denied - Optional IE Incorrect | |
| Private Extention | The total number of requests rejected due to incorrect optional information elements in the request such as private extensions. |
| Create PDP Discard Reasons | |
| No Session | The total number of requests discarded due to no session being found for the secondary context request. |
| No Memory | The total number of requests discarded due to no memory being available on the system to allocate for the request. |
| Malformed Message | The total number of requests discarded due to the request being poorly formed. |
| Invalid Ctrl TEID | The total number of requests discarded due to an invalid control TEID in the request. |
| Internal Bounce Error | The total number of requests discarded due to a bounce in an internal system message. |
| Misc. Reasons | The total number of requests discarded due to miscellaneous reasons. |
| Version Not Supported | The total number of requests discarded due to the request using an unsupported version. |
| Congestion Policy Applied | The system entered a state resulting in the invocation of a GGSN service "drop" congestion policy. |
| ICSR State Invalid | Indicates that the Create PDP request was denied because the interchassis session recovery state is invalid. |
| Update PDP Context Denied | |
| No Resources | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 199 (C7H, No resources available). |
| No Memory | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 212 (D4H, No memory is available). |

| Field | Description |
|----------------------------------|---|
| System Failure | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 204 (CCH, System failure). |
| Non-existent | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 192 (C0H, Non-existent). |
| Unsupported Service | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 200 (C8H, Service not supported). |
| Invalid Message Format | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format). |
| Semantic Error in TFT | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 215 (D7H, Semantic error in the TFT operation). |
| Syntactic Error in TFT | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 216 (D8H, Syntactic error in the TFT operation). |
| Semantic Error in Packet Filter | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 217 (D9H, Semantic error in packet filter(s)). |
| Mandatory IE Incorrect | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect). |
| Mandatory IE Missing | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing). |
| Syntactic Error in Packet Filter | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 218 (DAH, Syntactic error in packet filter(s)). |
| Optional IE Incorrect | The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect). |
| Update PDP Context Deny Received | |
| No Resources | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 199 (C7H, No resources available). |

| Field | Description |
|----------------------------------|--|
| No Memory | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 212 (D4H, No memory is available). |
| System Failure | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 204 (CCH, System failure). |
| Non-existent | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 192 (C0H, Non-existent). |
| Unsupported Service | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 200 (C8H, Service not supported). |
| Invalid Message Format | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format). |
| Semantic Error in TFT | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 215 (D7H, Semantic error in the TFT operation). |
| Syntactic Error in TFT | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 216 (D8H, Syntactic error in the TFT operation). |
| Semantic Error in Packet Filter | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 217 (D9H, Semantic error in packet filter(s)). |
| Mandatory IE Incorrect | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect). |
| Mandatory IE Missing | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing). |
| Syntactic Error in Packet Filter | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 218 (DAH, Syntactic error in packet filter(s)). |
| Optional IE Incorrect | The total number of "reject" Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect). |
| Delete PDP Context Denied | |

| Field | Description |
|------------------------------------|---|
| Mandatory IE Incorrect | The total number of "reject" Delete PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect). |
| Mandatory IE Missing | The total number of "reject" Delete PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing). |
| Optional IE Incorrect | The total number of "reject" Delete PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect). |
| Invalid Message Format | The total number of "reject" Delete PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format). |
| Non-existent | The total number of "reject" Delete PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 192 (C0H, Non-existent). |
| Delete PDP Context Discard Reasons | |
| No Memory | The total number of "reject" Delete PDP Context Response messages received from the SGSN and discarded due to no memory being available to process the request. |
| Pacing Queue Exceeded | The total number of "reject" Delete PDP Context Response messages received from the SGSN and discarded due to there being too many requests pending in the Session Manager Task's Pacing Queue. |
| Recovery Session Fail | The total number of "reject" Delete PDP Context Response messages received from the SGSN and discarded due to the recovery of a demux-manager resulting in its inability to queue the request for processing. |
| ICSR State Invalid | Indicates that the delete PDP request was denied because the interchassis session recovery state is invalid. |
| Delete PDP Context Deny Received | |
| Mandatory IE Incorrect | The total number of "reject" Delete PDP Context Response messages received from the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect). |
| Mandatory IE Missing | The total number of "reject" Delete PDP Context Response messages received from the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing). |
| Optional IE Incorrect | The total number of "reject" Delete PDP Context Response messages received from the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect). |

| Field | Description |
|---|--|
| Invalid Message Format | The total number of "reject" Delete PDP Context Response messages received from the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format). |
| Non-existent | The total number of "reject" Delete PDP Context Response messages received from the SGSN(s) sent with a cause code of 192 (C0H, Non-existent). |
| Location Management Messages | |
| Send Routeing Info | The total number of Send Routeing Info Request messages sent by the GGSN to the SGSN(s). |
| Accepted | The total number of Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were accepted. |
| Denied | The total number of Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were denied. |
| Failure Report | The total number of Failure Report messages sent by the GGSN to the SGSN(s). |
| Accepted | The total number of Failure Report messages sent by the GGSN to the SGSN(s) that were accepted. |
| Denied | The total number of Failure Report messages sent by the GGSN to the SGSN(s) that were denied. |
| Note MS GPRS Present | The total number of Note to MS GPRS Present Request messages sent by the GGSN to the SGSN(s). |
| Accepted | The total number of Note to MS GPRS Present Request messages sent by the GGSN to the SGSN(s) that were accepted. |
| Denied | The total number of Note to MS GPRS Present Request messages sent by the GGSN to the SGSN(s) that were denied. |
| Discarded | The total number of Note to MS GPRS Present Request messages sent by the GGSN to the SGSN(s) that were discarded. |
| Send Routing Information Request Failure Causes | |
| No Resources Available | The total number of Note to Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were denied with a cause code of 199 (C7H, No resources available). |
| Service Not Supported | The total number of Note to Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were denied with a cause code of 200 (C8H, Service not supported). |
| System Failure | The total number of Note to Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were denied with a cause code of 204 (CCH, System failure). |

| Field | Description |
|--|--|
| Mandatory IE Incorrect | The total number of Note to Send Routing Info Request messages sent by the GGSN to the SGSN(s) that were denied with a cause code of 201 (C9H, Mandatory IE incorrect). |
| Mandatory IE Missing | The total number of Note to Send Routing Info Request messages sent by the GGSN to the SGSN(s) that were denied with a cause code of 202 (CAH, Mandatory IE missing). |
| Optional IE Incorrect | The total number of Note to Send Routing Info Request messages sent by the GGSN to the SGSN(s) that were denied with a cause code of 203 (CBH, Optional IE incorrect). |
| Invalid Message Format | The total number of Note to Send Routing Info Request messages sent by the GGSN to the SGSN(s) that were denied with a cause code of 193 (C1H, Invalid message format). |
| No Proxy Found | The total number of Note to Send Routing Info Request messages sent by the GGSN to the SGSN(s) that were denied because no proxy MAP configuration was located for the NRPA procedure. |
| Proxy Not Reachable | The total number of Note to Send Routing Info Request messages sent by the GGSN to the SGSN(s) that were denied because the configured MAP proxy is unreachable (i.e. not responding to SRI requests). |
| Send Routing Information Failure MAP Causes | |
| Subscriber Absent | The total number of Send Routing Info Request responses received with a failure MAP cause of subscriber absent. |
| System Failure | The total number of Send Routing Info Request responses received with a failure MAP cause of system failure. |
| Data Missing | The total number of Send Routing Info Request responses received with a failure MAP cause of data missing. |
| Unexpected Data | The total number of Send Routing Info Request responses received with a failure MAP cause of unexpected data. |
| Unknown Subscriber | The total number of Send Routing Info Request responses received with a failure MAP cause of unknown subscriber. |
| Facility Not Supported | The total number of Send Routing Info Request responses received with a failure MAP cause of facility not supported. |
| Unauthorized Network | The total number of Send Routing Info Request responses received with a failure MAP cause of unauthorized network. |
| Call Barred | |
| Note MS GPRS Present Request Failure Causes: | |
| Mandatory IE Incorrect | |

| Field | Description |
|---------------------------------|--|
| Mandatory IE Missing | |
| PDU Notification Failure Causes | |
| Unsupported Service | The total number of PDU Notification responses received with a failure cause code of 200 (C8H, Service not supported). |
| System Failure | The total number of PDU Notification responses received with a failure cause code of 204 (CCH, System failure). |
| MS GPRS Detached | The total number of PDU Notification responses received with a failure cause code of 195 (C3H, MS is GPRS Detached). |
| GPRS Cnxn Suspended | The total number of PDU Notification responses received with a failure cause code of 207 (CFH, GPRS connection suspended). |
| Mandatory IE Incorrect | The total number of PDU Notification responses received with a failure cause code of 201 (C9H, Mandatory IE incorrect). |
| Mandatory IE Missing | The total number of PDU Notification responses received with a failure cause code of 202 (CAH, Mandatory IE incorrect). |
| Optional IE Incorrect | The total number of PDU Notification responses received with a failure cause code of 203 (CBH, Optional IE incorrect). |
| Invalid Message Format | The total number of PDU Notification responses received with a failure cause code of 193 (C1H, Invalid message format). |
| Unknown IMSI | The total number of PDU Notification responses received with a failure cause code of 194 (C2H, IMSI not known). |
| Roaming Restriction | |
| No Resources | The total number of PDU Notification responses received with a failure cause code of 199 (C7H, No resources available). |
| PDU Notification Reject Causes | |
| MS Not GPRS Responding | The total number of PDU Notification responses received with a reject cause code of 196 (C4H, MS is not GPRS Responding). |
| MS Refuses | The total number of PDU Notification responses received with a reject cause code of 197 (C5H, MS Refuses). |
| Mandatory IE Incorrect | The total number of PDU Notification responses received with a reject cause code of 201 (C9H, Mandatory IE incorrect). |
| Mandatory IE Missing | The total number of PDU Notification responses received with a reject cause code of 202 (CAH, Mandatory IE incorrect). |
| Optional IE Incorrect | The total number of PDU Notification responses received with a reject cause code of 203 (CBH, Optional IE incorrect). |

| Field | Description |
|--|--|
| Invalid Message Format | The total number of PDU Notification responses received with a reject cause code of 193 (C1H, Invalid message format). |
| MS Info Change Reporting Messages: | |
| MS Info Chng Notif Req | |
| Accepted | |
| Denied | |
| Discarded | |
| MS Info Change Reporting Message Failure Causes: | |
| Invalid Message Format | |
| Unknown IMSI | |
| Mandatory IE Incorrect | |
| Mandatory IE Missing | |
| Optional IE Incorrect | |
| System Failure | |
| Qos QCI Stats | |
| QCI 1 | |
| CPC QoS Accepted | The number of QoS requests with QCI 1 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading. |
| CPC QoS Downgraded | The number of QoS requests with qci1 coming from CPC were downgraded. |
| UPC QoS Accepted | The number of QoS requests with qci1 coming from Update PDP Context (UPC) were accepted as it is without any downgrading. |
| UPC QoS Downgraded | The number of QoS requests with qci1 coming from UPC were downgraded. |
| QCI 2 | |
| CPC QoS Accepted | The number of QoS requests with qci 2 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading. |
| CPC QoS Downgraded | The number of QoS requests with qci2 coming from CPC were downgraded. |
| UPC QoS Accepted | The number of QoS requests with qci 2 coming from Update PDP Context (UPC) were accepted as it is without any downgrading. |

| Field | Description |
|--------------------|--|
| UPC QoS Downgraded | The number of QoS requests with qci 2 coming from UPC were downgraded. |
| QCI 3 | |
| CPC QoS Accepted | The number of QoS requests with qci 3 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading. |
| CPC QoS Downgraded | The number of QoS requests with qci 3 coming from CPC were downgraded. |
| UPC QoS Accepted | The number of QoS requests with qci 3 coming from Update PDP Context (UPC) were accepted as it is without any downgrading. |
| UPC QoS Downgraded | The number of QoS requests with qci 3 coming from UPC were downgraded. |
| QCI 4 | |
| CPC QoS Accepted | The number of QoS requests with qci 4 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading. |
| CPC QoS Downgraded | The number of QoS requests with qci 4 coming from CPC were downgraded. |
| UPC QoS Accepted | The number of QoS requests with qci 4 coming from Update PDP Context (UPC) were accepted as it is without any downgrading. |
| UPC QoS Downgraded | The number of QoS requests with qci 4 coming from UPC were downgraded. |
| QCI 5 | |
| CPC QoS Accepted | The number of QoS requests with qci 5 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading. |
| CPC QoS Downgraded | The number of QoS requests with qci 5 coming from CPC were downgraded. |
| UPC QoS Accepted | The number of QoS requests with qci 5 coming from Update PDP Context (UPC) were accepted as it is without any downgrading. |
| UPC QoS Downgraded | The number of QoS requests with qci 5 coming from UPC were downgraded. |
| QCI 6 | |
| CPC QoS Accepted | The number of QoS requests with qci 6 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading. |
| CPC QoS Downgraded | The number of QoS requests with qci 6 coming from CPC were downgraded. |

| Field | Description |
|--------------------|--|
| UPC QoS Accepted | The number of QoS requests with qci 6 coming from Update PDP Context (UPC) were accepted as it is without any downgrading. |
| UPC QoS Downgraded | The number of QoS requests with qci 6 coming from UPC were downgraded. |
| QCI 7 | |
| CPC QoS Accepted | The number of QoS requests with qci 7 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading. |
| CPC QoS Downgraded | The number of QoS requests with qci 7 coming from CPC were downgraded. |
| UPC QoS Accepted | The number of QoS requests with qci 7 coming from Update PDP Context (UPC) were accepted as it is without any downgrading. |
| UPC QoS Downgraded | The number of QoS requests with qci 7 coming from UPC were downgraded. |
| QCI 8 | |
| CPC QoS Accepted | The number of QoS requests with qci 8 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading. |
| CPC QoS Downgraded | The number of QoS requests with qci 8 coming from CPC were downgraded. |
| UPC QoS Accepted | The number of QoS requests with qci 8 coming from Update PDP Context (UPC) were accepted as it is without any downgrading. |
| UPC QoS Downgraded | The number of QoS requests with qci 8 coming from UPC were downgraded. |
| QCI 9 | |
| CPC QoS Accepted | The number of QoS requests with qci 9 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading. |
| CPC QoS Downgraded | The number of QoS requests with qci 9 coming from CPC were downgraded. |
| UPC QoS Accepted | The number of QoS requests with qci 9 coming from Update PDP Context (UPC) were accepted as it is without any downgrading. |
| UPC QoS Downgraded | The number of QoS requests with qci 9 coming from UPC were downgraded. |
| GTPC Receive | |
| Total Packets | The total number of GTPC packets received. |
| Total Bytes | The total number of GTPC bytes received. |

| Field | Description |
|--|---|
| GTPC Send | |
| Total Packets | The total number of GTPC packets transmitted. |
| Total Bytes | The total number of GTPC bytes transmitted. |
| GTPC Outgoing Throttling: | |
| Total Messages Rate Limited | |
| Total Messages Rate Limited No Delay | |
| Total Messages Queued | |
| Total Messages Aborted From Queue | |
| Total Messages Throttled | |
| Prioritized APN/ARP Statistics: | |
| CPC Req allowed under APN prioritization | |
| CPC Req allowed under ARP prioritization | |
| GTPC Incoming Throttling: | |
| Total Messages Rate Limited | |
| Total Messages Scheduled | |
| Total Messages Currently Queued | |
| Total Messages Dropped From Queue | |
| Total Messages Throttled | |