



show s4sgsn

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Table 1: show s4-sgsn statistics all Command Output Descriptions

| Field | Description |
|-------------------------------|---|
| SGW Relocations: | |
| 3G Intra SGSN RAU | Total number of Intra-SGSN RAUs involving SGW relocation for 3G. |
| 2G Intra SGSN RAU | Total number of Intra-SGSN RAUs involving SGW relocation for 2G. |
| 3G Inter SGSN RAU (S16) | Total number of Inter-SGSN RAUs on the S16 interface involving SGW relocation in 3G. |
| 2G Inter SGSN RAU (S16) | Total number of Inter-SGSN RAUs involving SGW relocation on the S16 interface for 2G. |
| 3G MME-SGSN RAU (S3) | The total number of MME-SGSN RAUs on the S3 interface involving SGW relocation in 3G. |
| 2G MME-SGSN RAU (S3) | The total number of MME SGSN RAUs on the S3 interface involving SGW relocation in 2G. |
| Intra SGSN 2G to 3G RAU | Total number of intra-SGSN 2G to 3G RAUs involving SGW relocation. |
| Intra SGSN 3G to 2G RAU | Total number of Intra SGSN 3G to 2G RAUs involving SGW relocation. |
| 3G Intra SGSN SRNS Relocation | Total number of intra SGSN SRNS relocations involving SGW relocation in 3G. |

| Field | Description |
|---|--|
| 3G Inter SGSN SRNS Relocation (S16) | Total number of inter SGSN SRNS relocations across the S16 interface involving SGW relocation in 3G. |
| MME-SGSN SRNS Relocation (S3) | Total number of MME to SGSN SRNS relocations across the S3 interface involving SGW relocation. |
| ISR Deactivations: | |
| 3G Intra RAU with SGW Relocation | Total number of ISR deactivations that occurred due to SGW relocation during an intra RAU in 3G. |
| 3G NW Initiated Detach | Total number of ISR deactivations that occurred during the SGSN initiated detach procedure. |
| 3G MR IDT Expiry | Total number of ISR deactivations that occurred if the user was implicitly detached due to a mobile reachability timer expiry. |
| 3G MS Initiated Detach | Total number of ISR deactivations that occurred during the MS initiated detach procedure. |
| 3G Cancel Location from HSS/HLR | Total number of ISR deactivations that occurred when a Cancel-Location request was received from the HLR/HSS. |
| 3G SRNS Abort | Total number of ISR deactivations that occurred during the SRNS abort procedure. |
| 3G Local Admin Detach | Total number ISR deactivations that occurred when an operator executed the clear subscribers all local-purge command. |
| 3G SGW Change During SRNS | Total number of ISR deactivations that occurred when the SGW changes during SRNS. |
| 2G Intra RAU with SGW Relocation | Total number of ISR deactivations that occurred due to SGW relocation during an intra RAU in 2G. |
| 2G Implicit Detach | Total number of ISR deactivations that occurred due to an implicit detach in 2G. |
| Detach Notification from MME to 2G | Total number of ISR deactivations that occurred due to a detach notification message being received from MME in 2G. |
| S3 Interface Selection Statistics: | |
| 3G S3 Selections from Standard Mapping | Total number of times that the MME address was selected based on the standard mapping (MSB bit of LAC is set) in 3G. |
| 3G S3 Selections from Custom Mapping | Total number of times that the MME address was selected based on the custom-based mapping (using GUTI DB) in 3G. |
| 2G S3 Selections from Standard Mapping | Total number of times that the MME address was selected based on the standard mapping (MSB bit of LAC is set) in 2G. |

| Field | Description |
|---|---|
| 2G S3 Selections from Custom Mapping | Total number of times that the MME address was selected based on the custom-based mapping (using GUTI DB) in 2G. |
| Procedure Abort Statistics: | |
| 3G Intra SRNS Abort Due to Total CSR Failure | Total number of intra SGSN SRNS relocations aborted if the intra SGSN SRNS relocation initiated an SGW relocation and the new SGW did not respond to the Create Session Request. |
| 3G New SGSN SRNS Abort Due to Total CSR Failure | Total number of new SGSN SRNS relocations aborted if the new SGSN SRNS relocation initiated an SGW relocation and the new SGW did not respond to the Create Session Request. |
| PDP Deletion Statistics: | |
| DBR from new SGW during Intra SRNS | Indicates the total number of PDPs removed upon receiving a DBR from a new SGW during Intra SRNS relocation. This scenario can occur if a DBR is initiated from a new SGW before a Modify is received at its end. |
| GTPU Statistics: | |
| Total Packets Rcvd | The sum total of the Total Packets from SGW and IDFT packets from SGW counter values. |
| Total Packets from SGW | The total number of downlink packets received from the SGW (excluding indirect data forwarded packets). |
| Pkts queued | The total number of downlink packets queued by the S4-SGSN. |
| Pkts forward from queue | The total number of downlink packets queued, and successfully forwarded by the S4-SGSN. |
| Pkts dropped | The total number of downlink queued packets dropped by the S4-SGSN without forwarding due to various reasons. This total equals the sum of the following statistics: <ul style="list-style-type: none"> • Queue Full • Sess Dealloc Started • Paging Failure • Iu Release • BVC Reset / Block Rcvd |
| Queue Full | Total number of packets dropped due to the queue being full. |
| Sess Dealloc Started | Total number of packets dropped because the PDP session for which the data is queued is being de-allocated. |
| Paging Failure | Total number of packets dropped because of a paging failure. |
| Traffic Policing | Total number of packets dropped because of downlink traffic policing. |

| Field | Description |
|--------------------------|--|
| BVC Reset/Block Rcvd | Total number of packets dropped in a 2G S4-SGSN when a BVC Reset / Block is received. |
| Total Bytes Rcvd | The sum total of the Total Bytes from SGW and IDFT bytes from SGW counter values. |
| Total Bytes from SGW | The total number of downlink bytes received from the SGW (excluding indirect data forwarded bytes). |
| Bytes queued | The total number of downlink bytes queued by the S4-SGSN. |
| Bytes forward from queue | The total number of downlink bytes queued and successfully forwarded by the S4-SGSN. |
| Bytes dropped | The total number of downlink queued bytes dropped by the S4-SGSN without forwarding due to various reasons. This total is the sum of the values for the following statistics: <ul style="list-style-type: none"> • Queue Full • Sess Dealloc Started • Paging Failure • Traffic Policing • Iu release • BVC Reset / Block Rcvd) |
| Queue Full | Total number of bytes dropped due to queue being full. |
| Sess Dealloc Started | Number of bytes dropped because the PDP session for which the data is queued is being deallocated. |
| Paging Failure | Total number of bytes dropped because of paging failure. |
| Traffic Policing | Total number of bytes dropped because of downlink traffic policing. |
| BVC Reset/Block Rcvd | Total number of bytes dropped in 2G S4-SGSN when a BVC Reset / Block is received. |
| IDFT Statistics: | |
| IDFT packets to SGW | Total number of old SGSN connected mode handovers when indirect data forwarding is enabled at the old SGSN to retransmit the queued downlink packets from RNC to eNodeB. During this scenario, the RNC sends the queued downlink packets to SGSN and SGSN sends it through IDFT to the SGW and SGW forwards it to eNodeB. This statistics denotes the number of packets sent through SGSN by RNC to SGW for indirect data forwarding |

| Field | Description |
|--|--|
| IDFT packets from SGW | Total number of new SGSN connected mode handovers when indirect data forwarding is enabled at the new SGSN to retransmit the queued downlink packets from eNodeB to RNC. During this scenario, the eNodeB sends the queued downlink packets to SGW through an IDFT setup by MME and SGW sends it through IDFT to the SGSN and SGSN forwards it to RNC. This stat denotes the number of packets sent through SGSN by SGW to RNC for indirect data forwarding. |
| IDFT bytes to SGW | This counter is incremented during old SGSN SRNS relocation when indirect data forwarding is enabled at the old SGSN to retransmit the queued downlink packets from RNC to eNodeB. During this scenario, the RNC sends the queued downlink packets to SGSN and SGSN sends it through IDFT to the SGW and SGW forwards it to eNodeB. This stat denotes the number of bytes sent through SGSN by RNC to SGW for indirect data forwarding |
| IDFT bytes from SGW | The total number of new SGSN connected mode handovers when indirect data forwarding is enabled at the new SGSN to retransmit the queued downlink packets from eNodeB to RNC. During this scenario, the eNodeB sends the queued downlink packets to SGW through an IDFT setup by MME and SGW sends it through IDFT to the SGSN and SGSN forwards it to RNC. This stat denotes the number of bytes sent through SGSN by SGW to RNC for indirect data forwarding. |
| S4 Overcharge Protection Statistics | |
| 3G Release Access Bearer with ARRL bit set | Indicates the total number of Release Access Bearer messages sent within UMTS with ARRL bit set. |
| 2G Release Access Bearer with ARRL bit set | Indicates the total number of Release Access Bearer messages sent within GPRS with ARRL bit set. |

