

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: • 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: • 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.