

show asngw-service

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show asngw-service all

Table 1: show asngw-service all Command Output Descriptions

Field	Description
Service name	The ASN GW service name.
Context	The context in which the service is configured.
Bind	The bind status.
Max Subscribers	The maximum number of subscribers.
IP address	IP address of ASN GW server where this service is located.
UDP Port	The UDP port number.
Service Status	Status of this service.

Field	Description
Authentication	The authentication mode. Possible modes are: • None • User (Single EAP) • Device (Single EAP) • Device-User (Double EAP) • Device-User (Single EAP)
Policy msid-dhcp-chaddr-mismatch	The status of the policy to handle the calls with mismatched DHCP Client Hardware (MAC) Address (CHADDR) and MSID of the ASN-GW session.
Policy ms-unexpected-network-reentry	The status of the policy to handle the unexpected network re-entry of an MS.
Policy asngw-initiated-reauth	The status of the policy to handle the ASN GW initiated reauthorization trigger.
Policy non-anchor-mode	The status of the policy to handle the ASN GW to accept the session in non-anchor mode.
Newcall Policy	Specify that the new call policy enabled or disabled to handle new calls. Possible values are: • NONE • REJECT
Policy Overload	Specify that the session overload policy enabled or disabled to handle new calls. Possible values are: • DROP • REJECT
Mobile IP FA context	The name of the context where MIP FA service is configured.
Maximum number of retransmissions	The maximum number of retransmissions.
Retransmission timeout	The retransmission timeout duration.
Setup timeout	The session setup timeout duration.
Active-relay timeout	The timeout duration for active relay of R4 or R6 messages.
Handover anchor data-path termination timeout	The timeout duration in seconds to keep the data path registration with previous anchored BS after completion of handover.

Field	Description
Handover anchor data-path pre-registration termination timeout	The timeout duration in seconds to keep the data path pre-registration termination information with anchored BS after completion of handover.
Handover non-anchor data-path termination timeout	The timeout duration in seconds to keep the data path registration with non-anchored BS after completion of handover.
Handover non-anchor data-path pre-registration termination timeout	The timeout duration in seconds to keep the data path pre-registration termination information with non-anchored BS after completion of handover.
Handover max number of data-path pre-registrations	The maximum number of data paths created during pre-registration for a handover.
Idle-mode entry timeout	The timeout duration in seconds for a session to enter the idle mode from active mode.
Idle-mode exit timeout	The timeout duration in seconds for a session to reenter the active mode from idle mode.
Idle-mode timeout	The total timeout duration in seconds.
Policy transaction-id-validation	The status of the policy to validate the transaction id.
Policy zero-function-type	The status of the policy to allow the zero function type of call.
Transaction Id. Seed	The transaction identifier seed.
Peer ASNGW addresses	The IP addresses of trusted ASN GW peers for handover.
BS Monitor Config	The status of BS monitoring support. Possible values are: • Enabled • Disabled
Interval	The configured amount of time in seconds between two ICMP ping message to an ASN BS.
Timeout	The number of seconds to wait for response from the ASN BS before re-sending the ICMP ping message.
Number of retries	The number of retries to sent ICMP ping messages to an ASN BS before the ASN BS is declared as dead/unreachable.
MTU size	The maximum transmission unit size configured in bytes.
Total BSs	The total number of BSs monitored.
Active BSs	The number of active BSs.
Alive BSs	The number of active and alive BSs.

Field	Description
ICMP Monitored BSs	The number of BSs which are monitored through ICMP ping messages.
Inactive BSs	The number of inactive BSs.
No Calls BSs	The total number of BSs which have no active calls or in idle mode.
Going Down BSs	The total number of BSs which are going down or terminating sessions.
BS	The IP address of BSs.
Status	The status of listed BSs.
Maximum Number of Secondary IP Hosts	The maximum number of secondary hosts connected behind a primary WiMAX CPE under multiple IP host support.
Ran Peer Map Name	The name of the RAN Peer Map this service is using to reconcile base station MAC address received in R6 protocol messages to the actual IPv4 address of the base station.

show asngw-service session all

Table 2: show asngw-service session all Command Output Descriptions

Field	Description
vv	Displays service and session state information. This column provides a code consisting of two characters. From left-to-right, the first character represents the **Call Type** that the subscriber is using. The possible call types are: • **A**: Anchor • **N**: Non-Anchor From left-to-right, the second character represents the **DP Status**. The possible data path status are: • **A**: Active • **I**: Idle
CALLID	The subscriber's call identification number.
MSID	The subscriber's Mobile Station Identification number.
NAI	The subscriber's Network Access Identifier.

Field	Description
Home Address	The IP address assigned to the subscriber's mobile node for the duration of the session.
Total Non-Anchor ASNGW Sessions	The total number of ASN GW sessions in non-anchor mode.
Total Anchor ASNGW Sessions	The total number of ASN GW sessions in anchor mode.
Total Active ASNGW Sessions	The total number of active ASN GW sessions including anchor and non-anchor mode.
Total Idle ASNGW Sessions	The total number of idle ASN GW sessions including anchor and non-anchor mode.
Total ASNGW Sessions	The total number of ASN GW sessions on chassis including all modes.

show asngw-service session counters

Table 3: show asngw-service session counters Command Output Descriptions

Field	Description
Username	The subscriber's user name.
Callid	The subscriber's call identification number.
MSID	The subscriber's Mobile Station Identification number.
Session Type	The type of session. Possible type of sessions are: • Anchor • Non-Anchor
Initial Network Entry Events	
MS Pre-Attach	Displays the MS pre-attach event statistics.
Attempted	The total number of attempts made for an event.
Success	The total number of successful attempts made for an event.
Failures	The total number of failed attempts made for an event.
Authentications	Displays the authentication event statistics.
EAP	The total number of authentication/re-authentication attempts failed due to EAP.
Misc. Reason	The total number of authentication/re-authentication attempts failed due to miscellaneous reasons.

Field	Description
MS Attach	Displays the MS attach event statistics.
DP Registrations	Displays the data path registration event statistics.
Re-Authentications	Displays the re-authentication event statistics.
Handover Events	
Intra ASN-GW Handovers	Displays the intra-ASN GW (inter BS) handover event statistics.
Inter ASN-GW Handovers	Displays the inter-ASN GW handover event statistics.
DP De-Registrations	Displays the data path de-registration event statistics.
Idle Mode entry events	Displays the idle mode entry event statistics.
Idle Mode exit events	Displays the idle mode exit event statistics.
Paging initiation events	Displays the paging initiation event statistics.
Total R6/R4 Control Messages	Displays the statistics of total R4 and R6 control messages.
Sent	Total number of R4/R6 control messages sent.
Retransmissions Sent	Total number of R4/R6 control messages retransmitted.
Received	The total number of R4/R6 control messages received.
Accepted	The total number of R4/R6 control messages received and accepted.
Relayed	The total number of R4/R6 control messages received and relayed.
Denied	The total number of R4/R6 control messages received and denied.
Discarded	The total number of R4/R6 control messages received and discarded.
Badly Formed	The total number of badly formed R4/R6 control messages messages.
Decode Error	The total number of decode errors found in the R4/R6 control messages.
Unspecified Error	The total number of unspecified errors found in the R4/R6 control messages.
Missing Mandatory TLV	The total number of R4/R6 control messages received with missing mandatory TLVs.
TLV Value Invalid	The total number of R4/R6 control messages received with invalid TLV value.

Field	Description
Unknown TLV	The total number of R4/R6 control messages received with unknown TLV value.
Duplicate TLV Found	The total number of R4/R6 control messages received with duplicate TLV value.
No Session Found	The total number of R4/R6 control messages received without session information.
Transaction Id. Error	The total number of R4/R6 control messages received with error in transaction id.
Key Change Success	The total number of R4/R6 control messages received with successful Key Change request.
Key Change Failure	The total number of R4/R6 control messages with failed Key Change request.
MS Initiated Re-Auth	The total number of R4/R6 control messages received with for MS initiated re-authentication.
BS Initiated Re-Auth	The total number of R4/R6 control messages received with for BS initiated re-authentication.
Total R4/R6 Data messages:	Displays the statistics of total R4 and R6 data messages.
GRE Receive:	
Packets Received	The total number of packets received by the system through GRE tunnel.
Bytes Received	The total number of bytes received by the system through GRE tunnel.
Protocol Type Error	The total number of encapsulated packets received through GRE tunnel with protocol type errors.
GRE Key Absent	Total number of GRE tunneled key absent errors received through GRE tunnel.
GRE Checksum Error	Total number of checksum errors that occurred in GRE tunnels received by this system.
Invalid Packet Length	Total number of encapsulated packets received with invalid packet lengths through GRE tunnel.
No Session found	Total number of errors that occurred due to no session being present in received tunnels.
Unspecified Error	Total number of data messages received with errors which are not specified in this table.
GRE Send:	

Field	Description
Packets Sent	The total number of packets sent by the system through GRE tunnel.
Bytes Sent	The total number of bytes sent by the system through GRE tunnel.
Send Error	The total number of errors that occurred while sending replies through GRE tunnel.
Unspecified Error	Total number of data messages sent with errors which are not specified in this table through GRE tunnel.
Total Non-Anchor ASNGW Sessions	The total number of ASN GW sessions in non-anchor mode.
Total Anchor ASNGW Sessions	The total number of ASN GW sessions in anchor mode.
Total ASNGW Sessions	The total number of ASN GW sessions including anchor and non-anchor mode.

show asngw-service session counters verbose

Table 4: show asngw-service session counters verbose Command Output Descriptions

Field	Description
Username	The subscriber's user name.
Callid	The subscriber's call identification number.
MSID	The subscriber's Mobile Station Identification number.
Session Type	The type of session. Possible type of sessions are: • Anchor • Non-Anchor
Message Groups	
R6 MS Pre-Attachment Request messages	Groups the statistics of the MS pre-attachment request messages on R6 interface.
R6 MS Pre-Attachment Response messages	Groups the statistics of the MS pre-attachment response messages on R6 interface.
R6 MS Pre-Attachment Ack messages	Groups the statistics of the MS pre-attachment ACK messages on R6 interface.
R6 Network Exit MS State Change Request messages	Groups the statistics of the MS state change request messages on network exit R6 interface.

Field	Description
R4 Network Exit MS State Change Request messages	Groups the statistics of the MS state change request messages on network exit R4 interface.
R6 Network Exit MS State Change Response messages	Groups the statistics of the MS state change response messages on network exit R6 interface.
R4 Network Exit MS State Change Response messages	Groups the statistics of the MS state change response messages on network exit R4 interface.
R6 Context Request messages	Groups the statistics of the context request messages on R6 interface.
R4 Context Request messages	Groups the statistics of the context request messages on R4 interface.
R6 Context Report messages	Groups the statistics of the context report messages on R6 interface.
R4 Context Report messages	Groups the statistics of the context report messages on R4 interface.
R6 Context Ack messages	Groups the statistics of the context ACK messages on R6 interface.
R4 Context Ack messages	Groups the statistics of the context ACK messages on R4 interface.
R6 Authentication Relay EAP Transfer messages	Groups the statistics of the EAP authentication relay transfer messages on R6 interface.
R4 Authentication Relay EAP Transfer messages	Groups the statistics of the EAP authentication relay transfer messages on R4 interface.
R6 Authentication Relay EAP Start messages	Groups the statistics of the EAP authentication relay start messages on R6 interface.
R4 Authentication Relay EAP Start messages	Groups the statistics of the EAP authentication relay start messages on R4 interface.
R6 MS Attachment Request messages	Groups the statistics of the MS attachment request messages on R6 interface.
R6 MS Attachment Response messages	Groups the statistics of the MS attachment response messages on R6 interface.
R6 MS Attachment Ack messages	Groups the statistics of the MS attachment ACK messages on R6 interface.
R6 Data-Path Pre-Registration Request messages	Groups the statistics of the data path pre-registration request messages on R6 interface.
R4 Data-Path Pre-Registration Request messages	Groups the statistics of the data path pre-registration request messages on R4 interface.

Field	Description
R6 Data-Path Pre-Registration Response messages	Groups the statistics of the data path pre-registration response messages on R6 interface.
R4 Data-Path Pre-Registration Response messages	Groups the statistics of the data path pre-registration response messages on R4 interface.
R6 Data-Path Pre-Registration Ack messages	Groups the statistics of the data path pre-registration ACK messages on R6 interface.
R4 Data-Path Pre-Registration Ack messages	Groups the statistics of the data path pre-registration ACK messages on R4 interface.
R6 Data-Path Registration Request messages	Groups the statistics of the data path registration request messages on R6 interface.
R4 Data-Path Registration Request messages	Groups the statistics of the data path registration request messages on R4 interface.
R6 Data-Path Registration Response messages	Groups the statistics of the data path registration response messages on R6 interface.
R4 Data-Path Registration Response messages	Groups the statistics of the data path registration response messages on R4 interface.
R6 Data-Path Registration Ack messages	Groups the statistics of the data path registration ACK messages on R6 interface.
R4 Data-Path Registration Ack messages	Groups the statistics of the data path registration ACK messages on R4 interface.
R6 Data-Path De-Registration Request messages	Groups the statistics of the data path de-registration request messages on R6 interface.
R4 Data-Path De-Registration Request messages	Groups the statistics of the data path de-registration request messages on R4 interface.
R6 Data-Path De-Registration Response messages	Groups the statistics of the data path de-registration response messages on R6 interface.
R4 Data-Path De-Registration Response messages	Groups the statistics of the data path de-registration response messages on R4 interface.
R6 Data-Path De-Registration Ack messages	Groups the statistics of the data path de-registration ACK messages on R6 interface.
R4 Data-Path De-Registration Ack messages	Groups the statistics of the data path de-registration ACK messages on R4 interface.
R6 Key Change Directive messages	Groups the statistics of the key change directive messages on R6 interface.
R4 Key Change Directive messages	Groups the statistics of the key change directive messages on R4 interface.

Field	Description
R6 Key Change Ack messages	Groups the statistics of the key change ACK messages on R6 interface.
R4 Key Change Ack messages	Groups the statistics of the key change ACK messages on R4 interface.
R6 Key Change Confirm messages	Groups the statistics of the key change confirm messages on R6 interface.
R4 Key Change Confirm messages	Groups the statistics of the key change confirm messages on R4 interface.
R6 Cmac Key Count Update Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count update messages on R6 interface.
R4 Cmac Key Count Update Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count update messages on R4 interface.
R6 Cmac Key Count Ack Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count ACK messages on R6 interface.
R4 Cmac Key Count Ack Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count ACK messages on R46 interface.
R6 Handoff Request Msg	Groups the statistics of the hand-off request messages on R6 interface.
R4 Handoff Request Msg	Groups the statistics of the hand-off request messages on R4 interface.
R6 Handoff Response Msg	Groups the statistics of the hand-off response messages on R6 interface.
R4 Handoff Response Msg	Groups the statistics of the hand-off response messages on R4 interface.
R6 Handoff Ack Msg	Groups the statistics of the hand-off ACK messages on R6 interface.
R4 Handoff Ack Msg	Groups the statistics of the hand-off ACK messages on R4 interface.
R6 Handoff Confirm Msg	Groups the statistics of the hand-off confirm messages on R6 interface.
R4 Handoff Confirm Msg	Groups the statistics of the hand-off confirm messages on R4 interface.
R6 Handoff Complete Msg	Groups the statistics of the hand-off complete messages on R6 interface.
R4 Handoff Complete Msg	Groups the statistics of the hand-off complete messages on R4 interface.

Field	Description
R4 IM Entry State Change Req Msg	Groups the statistics of the idle mode entry state change request messages on R4 interface.
R4 IM Entry State Change Rsp Msg	Groups the statistics of the idle mode entry state change response messages on R4 interface.
R4 IM Entry State Change Ack Msg	Groups the statistics of the idle mode entry state change ACK messages on R4 interface.
R4 Anchor PC Indication Msg	Groups the statistics of anchor paging controller (PC) indication messages on R4 interface.
R4 Anchor PC Ack Msg	Groups the statistics of anchor paging controller (PC) ACK messages on R4 interface.
R4 IM Exit State Change Req Msg	Groups the statistics of the idle mode exit state change request messages on R4 interface.
R4 IM Exit State Change Rsp Msg	Groups the statistics of the idle mode exit state change response messages on R4 interface.
R4 Initiate Paging Req Msg	Groups the statistics of the initiated paging request messages on R4 interface.
R4 Initiate Paging Rsp Msg	Groups the statistics of the initiated paging response messages on R4 interface.
R4 Delete MS Entry Req Msg	Groups the statistics of the request messages to delete the MS entry request on R4 interface.
R4 Delete MS Entry Rsp Msg	Groups the statistics of the messages sent in response of delete message for the MS entry request on R4 interface.
R6 Unknown messages	Groups the statistics of the unknown type of request messages on R6 interface.
R4 Unknown messages	Groups the statistics of the unknown type of request messages on R4 interface.
Message Statistics	
Total Sent	The total number of this type of message sent on specific interface.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Retransmissions Sent	The total number of this type of message re-transmitted on specific interface.
Total Received	The total number of this type of message received on specific interface.

Field	Description
Total Accepted	The total number of this type of message accepted on specific interface.
Total Relayed	The total number of this type of message relayed on specific interface.
Total Denied	The total number of this type of message denied on specific interface.
Total Discarded	The total number of this type of message discarded on specific interface.
Badly Formed	The total number of badly formed this type of message on specific interface.
Decode Error	The total number of this type of message on specific interface with decode error.
Unspecified Error	The total number of this type of message on specific interface with unspecified error.
Missing Mandatory TLV	The total number of this type of message on specific interface with missing mandatory TLVs.
TLV Value Invalid	The total number of this type of message on specific interface with invalid TLV value.
Unknown TLV	The total number of this type of message on specific interface with unknown TLVs.
Duplicate TLV Found	The total number of this type of message on specific interface with duplicate TLVs.
No session Found	The total number of this type of message on specific interface without any session information.
Transaction Id. Error	The total number of this type of message on specific interface. with transaction id error.
Key Change Success	The total number of successful Key Change Confirmation messages.
Key Change Failure	The total number of Key Change Confirmation messages failed.
Out Of Order Packet	The total number of authentication relay EAP transfer/start messages on R6 interface with out-of-order packets.
MS Initiated Re-Auth	The total number of authentication relay EAP start messages on specific interface with MS initiated reauthorization.
BS Initiated Re-Auth	The total number of authentication relay EAP start messages on specific interface with BS initiated reauthorization.

Field	Description
ASNGW Initiated Re-Auth	Total number of the re-authentications initiated from the ASN GW.
Data messages	
GRE R6 Receive	The total number of data message received with through GRE tunnel on R6 interface.
GRE R4 Receive	The total number of data message received through GRE tunnel on R4 interface.
Packets Received	The total number of data packets received/sent through GRE tunnel on R4/R6 interface.
Bytes Received	The total number of data bytes received/sent through GRE tunnel on R4/R6 interface.
Protocol Type Error	The total number of data message received/sent with protocol type error through GRE tunnel on R4/R6 interface.
GRE Key Absent	The total number of data message received/sent without GRE key through GRE tunnel on R4/R6 interface.
GRE Checksum Error	The total number of data message received/sent with checksum error through GRE tunnel on R4/R6 interface.
Invalid Packet Length	The total number of data message received/sent with invalid packet length through GRE tunnel on R4/R6 interface.
No Session found	The total number of data message received/sent without any session information through GRE tunnel on R4/R6 interface.
Unspecified Error	The total number of data message received/sent with unknown error through GRE tunnel on R4/R6 interface.
GRE R6 Send	The total number of data message sent through GRE tunnel on R6 interface.
GRE R4 Send	The total number of data message sent through GRE tunnel on R4 interface.
Packets Sent	The total number of data packets sent through GRE tunnel on R4/R6 interface.
Send Error	The total number of data message sent with error through GRE tunnel on R4/R6 interface.
Bytes Sent	The total number of data bytes sent through GRE tunnel on R4/R6 interface.

show asngw-service session full

Table 5: show asngw-service session full Command Output Descriptions

Field	Description
Username	The subscriber's user name.
Callid	The subscriber's call identification number.
Pseudoname	The subscriber's pseudo name. It provides the pseudo user name for a WIMAX session if TTLS authentication is used for the call.
MSID	The subscriber's Mobile Station Identification number.
Home Address	The IP address assigned to the subscriber's mobile node for the duration of the session.
ASNGW Service Address	IP address of system where ASN GW service is running.
Session Type	The type of session. Possible type of sessions are: • Anchor • Non-Anchor
DP Status	The status of data path. Possible data path status are: • Active • Idle
Authenticator Address	IP address of the authenticator ASN GW.
Anchor Address	IP address of the anchor ASN GW where subscriber is attached.
Data Path Status	Identifies if the call can carry data over the R6/R4 interface. Idle: the ASN GW is attached to PCLR and is not capable of sending traffic to BS over R6/R4. Active: the IP-GRE tunnels between the ASN GW and the BS are setup and ready to transfer data from the IP network side.
PCLR Address	IP address of PC-LR currently attached to this ASN GW.
CMAC Key Count	Total number of Cipher-based Message Authentication Code (CMAC) key count.
EAP MSK Lifetime	Total lifetime configured for EAP Master Session Key in seconds.
Remaining MSK Lifetime	Remaining lifetime available for EAP Master Session Key in seconds.

Field	Description
Number of Re-authentication	Total number of re-authentications happened for a WiMAX subscriber.
Authentication Mode	The authentication mode. Possible modes are: • None • User (Single EAP) • Device (Single EAP) • Device-User (Double EAP) • Device-User (Single EAP)
EAP-Methods	Specifies the EAP authentication method. Possible methods are: • EAP-Pre-shared Key (EAP-PSK) • EAP-Transport Layer Security (EAP-TLS) • EAP-Tunneled Transport Layer Security (EAP-TTLS) • EAP-Authentication and Key Agreement (EAP-AKA)
DHCP ChAddr of MS	Client Hardware (MAC) Address (CHADDR) of MS.
Service Flow Information	
SFID	The service flow identifier.
Direction	Direction of the service flow.
SDFID	The service data flow identifier.
PDFID	The packet data flow identifier.
Profile ID	The profile id applicable for service flow.
Peer (*) Address	Specifies the IP address of the trusted peer for handover.
Peer Type	Specifies the type of peer for handover. Possible types are: • BS • ASN GW
BSID	Specifies the ASN base station Id.
GRE Key	The Generic Routing Encapsulation (GRE) key.
Tunnel Endpoint	The IP address of GRE tunnel endpoint.
Total Service flows(unidirectional)	Total number of service flows in both direction.
Total Non-Anchor ASNGW Sessions	The total number of ASN GW sessions in non-anchor mode.

Field	Description
Total Anchor ASNGW Sessions	The total number of ASN GW sessions in anchor mode.
Total Active ASNGW Sessions	The total number of active ASN GW sessions.
Total Idle ASNGW Sessions	The total number of ASN GW sessions in idle mode.
Total ASNGW Sessions	The total number of ASN GW sessions including anchor and non-anchor mode.

show asngw-service session counters function-type data-path

Table 6: show asngw-service session counters function-type data-path Command Output Descriptions

Field	Description
Username	The subscriber's user name.
CALLID	The subscriber's call identification number.
MSID	The subscriber's Mobile Station Identification number.
Data-Path Registration Request Messages:	
Total Sent	The total number of Data-Path Registration Request messages sent.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of Data-Path Registration Request messages received.
Total Denied	The total number of Data-Path Registration Request messages denied.
Total Discarded	The total number of Data-Path Registration Request messages discarded.
Badly Formed	The total number of badly formed Data-Path Registration Request messages.
Decode Error	The total number of decode errors in the Data-Path Registration Request messages sent.
Unspecified Error	The total number of unspecified errors in the Data-Path Registration Request messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Data-Path Registration Request messages sent.

Field	Description
TLV Value Invalid	The total number of Data-Path Registration Request messages sent with invalid TLV value.
Unknown TLV	The total number of Data-Path Registration Request messages sent with unknown TLV.
Duplicate TLV Found	The total number of Data-Path Registration Request messages sent with duplicate TLV.
No Session Found	The total number of Data-Path Registration Request messages sent without session information.
Data-Path Registration Response Messages:	
Total Sent	The total number of Data-Path Registration Response messages sent.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of Data-Path Registration Response messages received.
Total Denied	The total number of Data-Path Registration Response messages denied.
Total Discarded	The total number of Data-Path Registration Response messages discarded.
Badly Formed	The total number of badly formed Data-Path Registration Response messages.
Decode Error	The total number of decode errors in the Data-Path Registration Response messages sent.
Unspecified Error	The total number of unspecified errors in the Data-Path Registration Response messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Data-Path Registration Response messages sent.
TLV Value Invalid	The total number of Data-Path Registration Response messages sent with invalid TLV value.
Unknown TLV	The total number of Data-Path Registration Response messages sent with unknown TLV.
Duplicate TLV Found	The total number of Data-Path Registration Response messages sent with duplicate TLV.
No Session Found	The total number of Data-Path Registration Response messages sent without session information.

Field	Description
Data-Path Registration Ack Messages:	
Total Sent	The total number of Data-Path Registration Request Ack messages sent.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of Data-Path Registration Request Ack messages received.
Total Denied	The total number of Data-Path Registration Request Ack messages denied.
Total Discarded	The total number of Data-Path Registration Request Ack messages discarded.
Badly Formed	The total number of badly formed Data-Path Registration Request Ack messages.
Decode Error	The total number of decode errors in the Data-Path Registration Request Ack messages sent.
Unspecified Error	The total number of unspecified errors in the Data-Path Registration Request Ack messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Data-Path Registration Request Ack messages sent.
TLV Value Invalid	The total number of Data-Path Registration Request Ack messages sent with invalid TLV value.
Unknown TLV	The total number of Data-Path Registration Request Ack messages sent with unknown TLV.
Duplicate TLV Found	The total number of Data-Path Registration Request Ack messages sent with duplicate TLV.
No Session Found	The total number of Data-Path Registration Request Ack messages sent without session found.
Data-Path De-Registration Request Messages:	
Total Sent	The total number of Data-Path De-Registration Request messages sent.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of Data-Path De-Registration Request messages received.

Field	Description
Total Denied	The total number of Data-Path De-Registration Request messages denied.
Total Discarded	The total number of Data-Path De-Registration Request messages discarded.
Badly Formed	The total number of badly formed Data-Path De-Registration Request messages.
Decode Error	The total number of decode errors in the Data-Path De-Registration Request messages sent.
Unspecified Error	The total number of unspecified errors in the Data-Path De-Registration Request messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Data-Path De-Registration Request messages sent.
TLV Value Invalid	The total number of Data-Path De-Registration Request messages sent with invalid TLV value.
Unknown TLV	The total number of Data-Path De-Registration Request messages sent with unknown TLV.
Duplicate TLV Found	The total number of Data-Path De-Registration Request messages sent with duplicate TLV.
No Session Found	The total number of Data-Path De-Registration Request messages sent without session information.
Data-Path De-Registration Response Messages:	
Total Sent	The total number of Data-Path De-Registration Response messages sent.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of Data-Path De-Registration Response messages received.
Total Denied	The total number of Data-Path De-Registration Response messages denied.
Total Discarded	The total number of Data-Path De-Registration Response messages discarded.
Badly Formed	The total number of badly formed Data-Path De-Registration Response messages.
Decode Error	The total number of decode errors in the Data-Path De-Registration Response messages sent.

Field	Description
Unspecified Error	The total number of unspecified errors in the Data-Path De-Registration Response messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Data-Path De-Registration Response messages sent.
TLV Value Invalid	The total number of Data-Path De-Registration Response messages sent with invalid TLV value.
Unknown TLV	The total number of Data-Path De-Registration Response messages sent with unknown TLV.
Duplicate TLV Found	The total number of Data-Path De-Registration Response messages sent with duplicate TLV.
No Session Found	The total number of Data-Path De-Registration Response messages sent without session information.
Total ASNGW Sessions	The total number of ASNGW messages.

show asngw-service session peer-address

Table 7: show asngw-service session peer-address Command Output Descriptions

Field	Description
vv	Displays service and session state information. This column provides a code consisting of two characters. From left-to-right, the first character represents the **Call Type** that the subscriber is using. The possible call types are: • **A**: Anchor • **N**: Non-Anchor From left-to-right, the second character represents the **DP Status**. The possible data path status are: • **A**: Active • **I**: Idle
CALLID	The subscriber's call identification number.
MSID	The subscriber's Mobile Station Identification number.
NAI	The subscriber's Network Access Identifier.
Home Address	The IP address assigned to the subscriber's mobile node for the duration of the session.

Field	Description
Total Non-Anchor ASNGW Sessions	The total number of ASN GW sessions in non-anchor mode.
Total Anchor ASNGW Sessions	The total number of ASN GW sessions in anchor mode.
Total Active ASNGW Sessions	The total number of active ASN GW sessions including anchor and non-anchor mode.
Total Idle ASNGW Sessions	The total number of idle ASN GW sessions including anchor and non-anchor mode.
Total ASNGW Sessions	The total number of ASN GW sessions on chassis including all modes.

show asngw-service session summary

Table 8: show asngw-service session summary Command Output Descriptions

Field	Description
Total Non-Anchor ASNGW Sessions	The total number of ASN GW sessions in non-anchor mode.
Total Anchor ASNGW Sessions	The total number of ASN GW sessions in anchor mode.
Total Active ASNGW Sessions	The total number of active ASN GW sessions including anchor and non-anchor mode.
Total Idle ASNGW Sessions	The total number of idle ASN GW sessions including anchor and non-anchor mode.
Total ASNGW Sessions	The total number of ASN GW sessions on chassis including all modes.

show asngw-service statistics

Table 9: show asngw-service statistics Command Output Descriptions

Field	Description
Initial Network Entry Events	
MS Pre-Attach	Displays the MS pre-attach event statistics.
Attempted	The number of attempts made for an event.
Success	The number of successful attempts made for an event.
Failures	The number of failed attempts made for an event.

Field	Description
Authentications	Displays the authentication event statistics.
EAP	The total number of authentication/re-authentication attempts failed due to EAP.
Misc. Reason	The total number of authentication/re-authentication attempts failed due to miscellaneous reasons.
MS Attach	Displays the MS attach event statistics.
Re-Authentications	Displays the re-authentication event statistics.
Handover Events	
Intra ASN-GW Handovers	Displays the intra-ASN GW (inter BS) handover event statistics.
Inter ASN-GW Handovers	Displays the inter-ASN GW handover event statistics.
DP Pre-registration	Displays the data path pre-registration event statistics.
DP Registration	Displays the data path registration event statistics.
DP De-Registration	Displays the data path de-registration event statistics.
Path Modifications	Displays the data path modification statistics.
Idle Mode entry events	Displays the idle mode entry event statistics.
Idle Mode exit events	Displays the idle mode exit event statistics.
Paging initiation events	Displays the paging initiation event statistics.
Total Disconnects	Displays the reason statistics for the disconnection of session.
MSK Lifetime Expiry	The total number of disconnects due to Master Session Key lifetime expiry.
Auth Failures	The total number of disconnects due to authentication failure.
Admin Drops	The total number of disconnects due to administrator intervention.
De-registrations	The total number of disconnects due to de-registration request initiation.
Other Reasons	The total number of disconnects due to unspecified reasons.
Total R6/R4 Control Messages	Displays the statistics of total R4 and R6 control messages.
Sent	Total number of R4/R6 control messages sent.
Retransmissions Sent	Total number of R4/R6 control messages retransmitted.
Send Failures	Total number of R4/R6 control messages sent and failed.
Received	Total number of R4/R6 control messages received.

Field	Description
Accepted	Total number of R4/R6 control messages received and accepted.
Relayed	Total number of R4/R6 control messages received and relayed.
Denied	Total number of R4/R6 control messages received and denied.
Discarded	Total number of R4/R6 control messages received and discarded.
Badly Formed	Total number of badly formed R4/R6 control messages.
Decode Error	Total number of decode errors found in the R4/R6 control messages.
Unspecified Error	Total number of unspecified errors found in the R4/R6 control messages.
Missing Mandatory TLV	Total number of R4/R6 control messages received with missing mandatory TLVs.
TLV Value Invalid	Total number of R4/R6 control messages received with invalid TLV value.
Unknown TLV	Total number of R4/R6 control messages received with unknown TLV value.
Duplicate TLV Found	Total number of R4/R6 control messages received with duplicate TLV value.
No Session Found	Total number of R4/R6 control messages received without session information.
No Resource Drops	Total number of R4/R6 control messages received without resource drops.
Admin Prohibited	Total number of R4/R6 control messages received with admin prohibited.
Transaction Id. Error	Total number of R4/R6 control messages received with error in transaction id.
Key Change Success	Total number of R4/R6 control messages received with successful Key Change request.
Key Change Failures	Total number of R4/R6 control messages with failed Key Change request.
MS Initiated Re-Auth	Total number of R4/R6 control messages received with for MS initiated re-authentication.
BS Initiated Re-Auth	Total number of R4/R6 control messages received with for BS initiated re-authentication.

Field	Description
ASNGW Initiated Re-Auth	Total number of the re-authentications initiated from the ASN GW.
Total R4/R6 Data messages:	Displays the statistics of total R4 and R6 data messages.
GRE Receive:	
Total Packets Received	Total number of packets received by the system through GRE tunnel.
Total Bytes Received	Total number of bytes received by the system through GRE tunnel.
Protocol Type Error	Total number of encapsulated packets received through GRE tunnel with protocol type errors.
GRE Key Absent	Total number of GRE tunneled key absent errors received through GRE tunnel.
GRE Checksum Error	Total number of checksum errors that occurred in GRE tunnels received by this system.
Invalid Packet Length	Total number of encapsulated packets received with invalid packet lengths through GRE tunnel.
No Session found	Total number of errors that occurred due to no session being present in received tunnels.
Unspecified Error	Total number of data messages received with errors which are not specified in this table.
GRE Send:	
Total Packets Sent	Total number of packets sent by the system through GRE tunnel.
Total Bytes Sent	Total number of bytes sent by the system through GRE tunnel.
Send Error	Total number of errors that occurred while sending replies through GRE tunnel.
Unspecified Error	Total number of data messages sent with errors which are not specified in this table through GRE tunnel.
Total Sessions Connected	Historical count of the total number of ASNGW sessions setup on a per-service and a per-chassis basis.

show asngw-service statistics function-type ms-state-change

Table 10: show asngw-service statistics function-type ms-state-change Command Output Descriptions

Field	Description
Network Entry MS State Change Request Messages:	
Total Sent	The total number of Network Entry MS State Change Request messages sent.
Retransmissions Sent	The number of Network Entry MS State Change Request messages retransmitted.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of Network Entry MS State Change Request messages received.
Total Accepted	The total number of Network Entry MS State Change Request messages accepted.
Total Relayed	The total number of Network Entry MS State Change Request messages relayed.
Total Denied	The total number of Network Entry MS State Change Request messages denied.
Total Discarded	The total number of Network Entry MS State Change Request messages discarded.
Badly Formed	The total number of badly formed Network Entry MS State Change Request messages.
Decode Error	The total number of decode errors in the Network Entry MS State Change Request messages sent.
Unspecified Error	The total number of unspecified errors in the Network Entry MS State Change Request messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Network Entry MS State Change Request messages sent.
TLV Value Invalid	The total number of Network Entry MS State Change Request messages sent with invalid TLV value.
Unknown TLV	The total number of Network Entry MS State Change Request messages sent with unknown TLV.
Duplicate TLV Found	The total number of Network Entry MS State Change Request messages sent with duplicate TLV.

Field	Description
No Session Found	The total number of Network Entry MS State Change Request messages sent without session information.
No Resource Drops	Total number of R4/R6 control messages received without resource drops.
Admin Prohibited	Total number of R4/R6 control messages received with admin prohibited
Transaction Id. Error	Total number of R4/R6 control messages received with error in transaction id.
Congestion/Overloaded	Total number of R4/R6 control messages received with a congestion/overload error.
Messages:	
Sent	The total number of messages sent.
Total Received	The total number of messages received.
Total Denied	The total number of messages denied.
Total Discarded	The total number of messages discarded.
Badly Formed	The total number of badly formed messages.
Decode Error	The total number of decode errors in the messages sent.
Unspecified Error	The total number of unspecified errors in the messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the messages sent.
TLV Value Invalid	The total number of messages sent with invalid TLV value.
Unknown TLV	The total number of messages sent with unknown TLV.
Duplicate TLV Found	The total number of messages sent with duplicate TLV.
No Session Found	The total number of messages sent without session information.
Network Entry MS State Change Directive Messages:	
Total Sent	The total number of Network Entry MS State Change Directive messages sent.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of Network Entry MS State Change Directive messages received.

Field	Description
Total Denied	The total number of Network Entry MS State Change Directive messages denied.
Total Discarded	The total number of Network Entry MS State Change Directive messages discarded.
Badly Formed	The total number of badly formed Network Entry MS State Change Directive messages.
Decode Error	The total number of decode errors in the Network Entry MS State Change Directive messages sent.
Unspecified Error	The total number of unspecified errors in the Network Entry MS State Change Directive messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Network Entry MS State Change Directive messages sent.
TLV Value Invalid	The total number of Network Entry MS State Change Directive messages sent with invalid TLV value.
Unknown TLV	The total number of Network Entry MS State Change Directive messages sent with unknown TLV.
Duplicate TLV Found	The total number of Network Entry MS State Change Directive messages sent with duplicate TLV.
No Session Found	The total number of Network Entry MS State Change Directive Request messages sent without session information.
Network Entry MS State Change Ack Messages:	
Total Sent	The total number of Network Entry MS State Change Ack messages sent.
Total Received	The total number of Network Entry MS State Change Ack messages received.
Total Denied	The total number of Network Entry MS State Change Ack messages denied.
Total Discarded	The total number of Network Entry MS State Change Ack messages discarded.
Badly Formed	The total number of badly formed Network Entry MS State Change Ack messages.
Decode Error	The total number of decode errors in the Network Entry MS State Change Ack messages sent.
Unspecified Error	The total number of unspecified errors in the Network Entry MS State Change Ack messages sent.

Field	Description
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Network Entry MS State Change Ack messages sent.
TLV Value Invalid	The total number of Network Entry MS State Change Ack messages sent with invalid TLV value.
Unknown TLV	The total number of Network Entry MS State Change Ack messages sent with unknown TLV.
Duplicate TLV Found	The total number of Network Entry MS State Change Ack messages sent with duplicate TLV.
No Session Found	The total number of Network Entry MS State Change Ack messages sent without session information.

show asngw-service statistics function-type ms-state-change

Table 11: show asngw-service statistics function-type ms-state-change Command Output Descriptions 1

Field	Description
R6 MS Pre-Attachment Request messages	
Total Sent	The total number of R6 MS Pre-Attachment Request messages sent.
Retransmissions Sent	The number of R6 MS Pre-Attachment Request messages retransmitted.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of R6 MS Pre-Attachment Request messages received.
Total Accepted	The total number of R6 MS Pre-Attachment Request messages accepted.
Total Relayed	The total number of R6 MS Pre-Attachment Request messages relayed.
Total Denied	The total number of R6 MS Pre-Attachment Request messages denied.
Total Discarded	The total number of R6 MS Pre-Attachment Request messages discarded.
Badly Formed	The total number of badly formed R6 MS Pre-Attachment Request messages.

Field	Description
Decode Error	The total number of decode errors in the R6 MS Pre-Attachment Request messages sent.
Unspecified Error	The total number of unspecified errors in the R6 MS Pre-Attachment Request messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the R6 MS Pre-Attachment Request messages sent.
TLV Value Invalid	The total number of R6 MS Pre-Attachment Request messages sent with invalid TLV value.
Unknown TLV	The total number of R6 MS Pre-Attachment Request messages sent with unknown TLV.
Duplicate TLV Found	The total number of R6 MS Pre-Attachment Request messages sent with duplicate TLV.
No Session Found	The total number of R6 MS Pre-Attachment Request messages sent without session information.
No Resource Drops	Total number of R4/R6 control messages received without resource drops.
Admin Prohibited	Total number of R4/R6 control messages received with admin prohibited
Transaction Id. Error	Total number of R4/R6 control messages received with error in transaction id.
Congestion/Overloaded	Total number of R4/R6 control messages received congestion/overload error.
• R6 MS Pre-attachment Request Messages • R6 MS Pre-attachment Response Messages • R6 MS Pre-attachment Ack Messages • R6 MS Attachment Request Messages • R6 MS Attachment Response Messages • R6 MS Attachment Ack Messages • R6 Key Change Directive Messages • R4 Key Change Directive Messages • R6 Key Change Ack Messages • R4 Key Change Ack Messages • R6 Network Exit MS State Change Request Messages • R4 Network Exit MS State Change Request Messages • R6 Network Exit MS State Change Response Messages • R4 Network Exit MS State Change Response Messages	
Total Sent	The total number of messages sent.
Retransmissions Sent	The number of messages retransmitted.

Field	Description
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of messages received.
Total Accepted	The total number of messages accepted.
Total Relayed	The total number of messages relayed.
Total Denied	The total number of messages denied.
Total Discarded	The total number of messages discarded.
Badly Formed	The number of badly formed messages.
Decode Error	The number of decode errors in the messages sent.
Unspecified Error	The number of unspecified errors in the messages sent.
Missing Mandatory TLV	The number of missing mandatory TLVs in the messages sent.
TLV Value Invalid	The number of messages sent with invalid TLV value.
Unknown TLV	The number of messages sent with unknown TLV.
Duplicate TLV Found	The number of messages sent with duplicate TLV.
No Session Found	The number of messages sent without session information.
No Resource Drops	The number of R4/R6 control messages received without resource drops.
Admin Prohibited	The number of R4/R6 control messages received with admin prohibited
Transaction Id. Error	The number of R4/R6 control messages received with error in transaction id.

show asngw-service statistics verbose

Table 12: show asngw-service statistics verbose Command Output Descriptions

Field	Description
Message Groups	
R6 MS Pre-Attachment Request messages	Groups the statistics of the MS pre-attachment request messages on R6 interface.

Field	Description
R6 MS Pre-Attachment Response messages	Groups the statistics of the MS pre-attachment response messages on R6 interface.
R6 MS Pre-Attachment Ack messages	Groups the statistics of the MS pre-attachment ACK messages on R6 interface.
R6 Network Exit MS State Change Request messages	Groups the statistics of the MS state change request messages on network exit R6 interface.
R4 Network Exit MS State Change Request messages	Groups the statistics of the MS state change request messages on network exit R4 interface.
R6 Network Exit MS State Change Response messages	Groups the statistics of the MS state change response messages on network exit R6 interface.
R4 Network Exit MS State Change Response messages	Groups the statistics of the MS state change response messages on network exit R4 interface.
R6 Context Request messages	Groups the statistics of the context request messages on R6 interface.
R4 Context Request messages	Groups the statistics of the context request messages on R4 interface.
R6 Context Report messages	Groups the statistics of the context report messages on R6 interface.
R4 Context Report messages	Groups the statistics of the context report messages on R4 interface.
R6 Context Ack messages	Groups the statistics of the context ACK messages on R6 interface.
R4 Context Ack messages	Groups the statistics of the context ACK messages on R4 interface.
R6 Authentication Relay EAP Transfer messages	Groups the statistics of the EAP authentication relay transfer messages on R6 interface.
R4 Authentication Relay EAP Transfer messages	Groups the statistics of the EAP authentication relay transfer messages on R4 interface.
R6 Authentication Relay EAP Start messages	Groups the statistics of the EAP authentication relay start messages on R6 interface.
R4 Authentication Relay EAP Start messages	Groups the statistics of the EAP authentication relay start messages on R4 interface.
R6 MS Attachment Request messages	Groups the statistics of the MS attachment request messages on R6 interface.
R6 MS Attachment Response messages	Groups the statistics of the MS attachment response messages on R6 interface.

Field	Description
R6 MS Attachment Ack messages	Groups the statistics of the MS attachment ACK messages on R6 interface.
R6 Data-Path Pre-Registration Request messages	Groups the statistics of the data path pre-registration request messages on R6 interface.
R4 Data-Path Pre-Registration Request messages	Groups the statistics of the data path pre-registration request messages on R4 interface.
R6 Data-Path Pre-Registration Response messages	Groups the statistics of the data path pre-registration response messages on R6 interface.
R4 Data-Path Pre-Registration Response messages	Groups the statistics of the data path pre-registration response messages on R4 interface.
R6 Data-Path Pre-Registration Ack messages	Groups the statistics of the data path pre-registration ACK messages on R6 interface.
R4 Data-Path Pre-Registration Ack messages	Groups the statistics of the data path pre-registration ACK messages on R4 interface.
R6 Data-Path Registration Request messages	Groups the statistics of the data path registration request messages on R6 interface.
R4 Data-Path Registration Request messages	Groups the statistics of the data path registration request messages on R4 interface.
R6 Data-Path Registration Response messages	Groups the statistics of the data path registration response messages on R6 interface.
R4 Data-Path Registration Response messages	Groups the statistics of the data path registration response messages on R4 interface.
R6 Data-Path Registration Ack messages	Groups the statistics of the data path registration ACK messages on R6 interface.
R4 Data-Path Registration Ack messages	Groups the statistics of the data path registration ACK messages on R4 interface.
R6 Data-Path De-Registration Request messages	Groups the statistics of the data path de-registration request messages on R6 interface.
R4 Data-Path De-Registration Request messages	Groups the statistics of the data path de-registration request messages on R4 interface.
R6 Data-Path De-Registration Response messages	Groups the statistics of the data path de-registration response messages on R6 interface.
R4 Data-Path De-Registration Response messages	Groups the statistics of the data path de-registration response messages on R4 interface.
R6 Data-Path De-Registration Ack messages	Groups the statistics of the data path de-registration ACK messages on R6 interface.

Field	Description
R4 Data-Path De-Registration Ack messages	Groups the statistics of the data path de-registration ACK messages on R4 interface.
R6 Key Change Directive messages	Groups the statistics of the key change directive messages on R6 interface.
R4 Key Change Directive messages	Groups the statistics of the key change directive messages on R4 interface.
R6 Key Change Ack messages	Groups the statistics of the key change ACK messages on R6 interface.
R4 Key Change Ack messages	Groups the statistics of the key change ACK messages on R4 interface.
R6 Key Change Confirm messages	Groups the statistics of the key change confirm messages on R6 interface.
R4 Key Change Confirm messages	Groups the statistics of the key change confirm messages on R4 interface.
R6 Cmac Key Count Update Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count update messages on R6 interface.
R4 Cmac Key Count Update Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count update messages on R4 interface.
R6 Cmac Key Count Ack Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count ACK messages on R6 interface.
R4 Cmac Key Count Ack Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count ACK messages on R46 interface.
R6 Handoff Request Msg	Groups the statistics of the hand-off request messages on R6 interface.
R4 Handoff Request Msg	Groups the statistics of the hand-off request messages on R4 interface.
R6 Handoff Response Msg	Groups the statistics of the hand-off response messages on R6 interface.
R4 Handoff Response Msg	Groups the statistics of the hand-off response messages on R4 interface.
R6 Handoff Ack Msg	Groups the statistics of the hand-off ACK messages on R6 interface.
R4 Handoff Ack Msg	Groups the statistics of the hand-off ACK messages on R4 interface.
R6 Handoff Confirm Msg	Groups the statistics of the hand-off confirm messages on R6 interface.

Field	Description
R4 Handoff Confirm Msg	Groups the statistics of the hand-off confirm messages on R4 interface.
R6 Handoff Complete Msg	Groups the statistics of the hand-off complete messages on R6 interface.
R4 Handoff Complete Msg	Groups the statistics of the hand-off complete messages on R4 interface.
R4 IM Entry State Change Req Msg	Groups the statistics of the idle mode entry state change request messages on R4 interface.
R4 IM Entry State Change Rsp Msg	Groups the statistics of the idle mode entry state change response messages on R4 interface.
R4 IM Entry State Change Ack Msg	Groups the statistics of the idle mode entry state change ACK messages on R4 interface.
R4 Anchor PC Indication Msg	Groups the statistics of anchor paging controller (PC) indication messages on R4 interface.
R4 Anchor PC Ack Msg	Groups the statistics of anchor paging controller (PC) ACK messages on R4 interface.
R4 IM Exit State Change Req Msg	Groups the statistics of the idle mode exit state change request messages on R4 interface.
R4 IM Exit State Change Rsp Msg	Groups the statistics of the idle mode exit state change response messages on R4 interface.
R4 Initiate Paging Req Msg	Groups the statistics of the initiated paging request messages on R4 interface.
R4 Initiate Paging Rsp Msg	Groups the statistics of the initiated paging response messages on R4 interface.
R4 Delete MS Entry Req Msg	Groups the statistics of the request messages to delete the MS entry request on R4 interface.
R4 Delete MS Entry Rsp Msg	Groups the statistics of the messages sent in response of delete message for the MS entry request on R4 interface.
R6 Unknown messages	Groups the statistics of the unknown type of request messages on R6 interface.
R4 Unknown messages	Groups the statistics of the unknown type of request messages on R4 interface.
Message Statistics	
Total Sent	The total number of this type of message sent on specific interface.

Field	Description
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Retransmissions Sent	The number of this type of message re-transmitted on specific interface.
Total Received	The total number of this type of message received on specific interface.
Total Accepted	The total number of this type of message accepted on specific interface.
Total Relayed	The total number of this type of message relayed on specific interface.
Total Denied	The total number of this type of message denied on specific interface.
Total Discarded	The total number of this type of message discarded on specific interface.
Badly Formed	The number of badly formed this type of message on specific interface.
Decode Error	The number of this type of message on specific interface with decode error.
Unspecified Error	The number of this type of message on specific interface with unspecified error.
Missing Mandatory TLV	The number of this type of message on specific interface with missing mandatory TLVs.
TLV Value Invalid	The number of this type of message unspecific interface with invalid TLV value.
Unknown TLV	The number of this type of message on specific interface with unknown TLVs.
Duplicate TLV Found	The number of this type of message on specific interface with duplicate TLVs.
No session Found	The number of this type of message on specific interface without any session information.
No Resource Drops	The number of this type of message received without resource drops.
Admin Prohibited	The number of this type of message received with admin prohibited

Field	Description
Transaction Id. Error	The number of this type of message on specific interface. with transaction id error.
Data messages	
GRE R6 Receive	The number of data message received with through GRE tunnel on R6 interface.
GRE R4 Receive	The number of data message received through GRE tunnel on R4 interface.
Packets Received	The number of data packets received/sent through GRE tunnel on R4/R6 interface.
Bytes Received	The number of data bytes received/sent through GRE tunnel on R4/R6 interface.
Protocol Type Error	The number of data message received/sent with protocol type error through GRE tunnel on R4/R6 interface.
GRE Key Absent	The number of data message received/sent without GRE key through GRE tunnel on R4/R6 interface.
GRE Checksum Error	The number of data message received/sent with checksum error through GRE tunnel on R4/R6 interface.
Invalid Packet Length	The number of data message received/sent with invalid packet length through GRE tunnel on R4/R6 interface.
No Session found	The number of data message received/sent without any session information through GRE tunnel on R4/R6 interface.
Unspecified Error	The number of data message received/sent with unknown error through GRE tunnel on R4/R6 interface.
GRE R6 Send	The number of data message sent through GRE tunnel on R6 interface.
GRE R4 Send	The number of data message sent through GRE tunnel on R4 interface.
Packets Sent	The number of data packets sent through GRE tunnel on R4/R6 interface.
Send Error	The number of data message sent with error through GRE tunnel on R4/R6 interface.
Bytes Sent	The number of data bytes sent through GRE tunnel on R4/R6 interface.
Unspecified Error	The number of data bytes sent with unspecified error on R4/R6 interface.

Field	Description
Total Sessions Connected	The total number of sessions connected on R4/R6 interface.