



show rp

This chapter describes the output of the **show rp** command.

- [show rp, on page 1](#)
- [show rp full username, on page 5](#)
- [show rp statistics pdsn-service, on page 10](#)

show rp

Table 1: show rp Command Output Descriptions

| Field | Description |
|-----------------------------------|--|
| RP Summary | |
| RP Sessions In Progress | Indicates the total number of sessions being facilitated. |
| Registration Request/Reply | |
| Renew RRQ Accepted | Indicates the total number of registration request renewals accepted. |
| Discarded | Indicates the total number of registration requests that have been discarded. |
| Intra PDSN Active H/O RRQ Accept | The number of intra PDSN handoffs accepted for the session when it was active. |
| Intra PDSN Dormant H/O RRQ Accept | The number of intra PDSN handoffs accepted for the session when it was dormant. Note: Sessions facilitated through PDSN Closed R-P services are always displayed as "Active" due to the fact that PDSN Closed R-P services do not receive dormancy information from the PCF. |
| Inter PDSN Handoff RRQ Accepted | Indicates the total number of registration requests for inter-PDSN handoffs that have been accepted. |
| Reply Send Error | Indicates the total number of registration replies for which errors were experienced during transmission. |

| Field | Description |
|--|--|
| Registration Update/Ack | |
| Initial Update Transmitted | Indicates the total number of registration updates that have been transmitted. |
| Update Retransmitted | Indicates the total number of registration updates that have been re-transmitted. |
| Denied | Indicates the total number of registration updates that have been denied by the PCF. |
| Not Acknowledged | Indicates the total number of registration updates and/or acknowledgements that have not been acknowledged by the PCF. |
| Reg Ack Received | Indicates the total number of registration acknowledgements that have been discarded. |
| Reg Ack Discarded | Indicates the total number of registration acknowledgements that have been received. |
| Update Send Error | Indicates the total number of registration updates for which errors were experienced during transmission. |
| Registration Update Send Reason | |
| Lifetime Expiry | Indicates the total number of registration updates that were sent due to the expiration of a lifetime timer during a subscriber session. |
| Upper Layer Initiated | Indicates the total number of registration updates that were initiated by upper processing layers. |
| Other Reasons | Indicates the total number of registration updates that were sent due to reasons other than those listed here. |
| Handoff Release | Indicates the total number of registration updates that were sent due to handoff releases. |
| Session Manager Died | Indicates the total number of registration updates that were sent due to the termination of Session Manager tasks. NOTE: If any data is reported for this field, there may be an issue with either the software or hardware. If you continue to experience problems, refer to the System Administration and Administration Reference for information on troubleshooting the problem. |
| Registration Update Denied | |
| Reason Unspecified | Indicates the total number of denied registration updates that were sent with a reply code of 80H (Registration Denied - reason unspecified). |

| Field | Description |
|----------------------------|--|
| Admin Prohibited | Indicates the total number of denied registration updates that were sent with a reply code of 81H (Registration Denied - administratively prohibited). |
| PDSN Failed Authentication | Indicates the total number of denied registration updates that were sent with a reply code of 83H (Registration Denied - mobile node failed authentication). |
| Identification Mismatch | Indicates the total number of denied registration updates that were sent with a reply code of 85H (Registration Denied - identification mismatch). |
| Poorly Formed Update | Indicates the total number of denied registration updates that were sent with a reply code of 86H (Registration Denied - poorly formed request). |
| Session Update/Ack | |
| Initial Update Transmitted | Indicates the total number of session updates that have been transmitted. |
| Update Retransmitted | Indicates the total number of session updates that have been re-transmitted. |
| Denied | Indicates the total number of session updates that have been denied by the PCF. |
| Not Acknowledged | Indicates the total number of session updates that have not been acknowledged by the PCF. |
| Sess Update Ack Received | Indicates the total number of session acknowledgements that have been received. |
| Sess Update Ack Discarded | Indicates the total number of session acknowledgements that have been discarded. |
| Sess Update Send Error | Indicates the total number of session updates for which errors were experienced during transmission. |
| Session Update Send Reason | |
| Always On | Session Update message was sent to the PCF to notify the PCF that the subscriber has the Always On feature. |
| QoS Info | This is a session update statistic that is not supported at this time. |
| QoS Update Reason | |
| TFT Violation | Indicates that a TFT violation is the reason for QoS update. |
| Traffic Violation | Indicates that a traffic violation is the reason for the QoS update. |

| Field | Description |
|------------------------------|---|
| Traffic Policing | Indicates that a traffic policing action is the reason for the QoS update |
| Operator Triggered | Indicates that an operator triggered the QoS update. |
| Session Update Denied | |
| Reason Unspecified | Indicates the total number of session updates denied with a code of 80H (Session Denied - reason unspecified). |
| Insufficient Resources | Indicates the total number of session updates denied with a status code of 82H (Session Denied - insufficient resources). |
| Admin Prohibited | Indicates the total number of denied session updates denied with a status code of 81H (Session Denied - administratively prohibited). |
| Parameter not updated | Indicates the total number of session updates denied with a status code of 82H (Session Denied - insufficient resources). |
| PDSN Failed Authentication | Indicates the total number of denied session updates denied with a status code of 83H (Session Denied - mobile node failed authentication). |
| Identification Mismatch | Indicates the total number of denied session updates denied with a status code of 85H (Session Denied - identification mismatch). |
| Poorly Formed Update | Indicates the total number of denied session updates denied with a status code of 86H (Session Denied - poorly formed request). |
| Data | |
| GRE Packets Received | Indicates the total number of Generic Routing Encapsulation (GRE) packets received. |
| GRE Bytes Received | Indicates the total number of Generic Routing Encapsulation (GRE) bytes received. |
| GRE Packets Sent | Indicates the total number of Generic Routing Encapsulation (GRE) packets transmitted. |
| GRE Bytes Sent | Indicates the total number of Generic Routing Encapsulation (GRE) bytes transmitted. |
| GRE Packets Sent in SDB Form | This indicates the total Packets sent with the Short Data Burst indication in the A10 data stream from the PDSN to the PCF. |
| GRE Bytes Sent in SDB Form | This indicates the total Bytes sent with the Short Data Burst indication in the A10 data stream from the PDSN to the PCF. |
| GRE Segmentation | |

| Field | Description |
|---|--|
| Total Packets Received with segmentation indication | Indicates the total number of Generic Routing Encapsulation (GRE) packets received with segmentation indication. |
| Total Packets Sent with segmentation indication | Indicates the total number of Generic Routing Encapsulation (GRE) packets sent with segmentation indication. |
| Total successful reassembly | Indicates the total number of Generic Routing Encapsulation (GRE) packets that were successfully reassembled. |
| Total packets processed without proper reassembly | Indicates the total number of Generic Routing Encapsulation (GRE) packets that were processed without proper reassembly. |

show rp full username

Table 2: show rp full username Command Output Descriptions

| Field | Description |
|--------------------|---|
| Username | The subscriber's username. |
| Callid | The subscriber's call identification (callid) number. |
| Msid | The subscriber's mobile station identification (MSID) number. |
| MN Sess Ref ID | The reference identification (Ref ID) number received from the mobile node. |
| GRE Key | The Generic Routing Encapsulation (GRE) key used with the subscribers session. |
| PCF Address | The IP address of the Packet Control Function (PCF) facilitating the subscriber's session. |
| PDSN Address | The IP address of the R-P interface on the Packet Data Service Node's that is facilitating the subscriber's session. |
| Lifetime | The maximum time that the session A10 connection can exist before it becomes expired. This value is assigned by the PDSN. |
| Remaining Lifetime | Remaining RP lifetime for the session. |
| SPI | The particular Security Parameter Index (SPI) that associates the PDSN and the PCF facilitating the session. |
| Service Option | RP service option for the session. |
| Flow Control State | Displays the Flow Control State for the session. |
| Prev System Id | System ID of the previous PCF for the session. |
| Current System Id | System ID of the current PCF for the session. |

| Field | Description |
|-----------------------------------|--|
| Prev Network Id | Network ID of the previous PCF for the session. |
| Current Network Id | Network ID of the current PCF for the session. |
| Prev Packet Zone Id | Packet zone ID of the previous PCF for the session. |
| Current Packet Zone Id | Packet zone ID of the current PCF for the session. |
| BSID | Base transceiver Station ID (Base Station ID) of the current PCF |
| A 10 Connection | |
| GRE Receive | |
| Total Packets Rcvd | The total number of packets received for the A10 connection. |
| Total Bytes Rcvd: | The total number of bytes received for the A10 connection. |
| GRE Send | |
| Total Packets Sent | The total number of packets sent for the A10 connection. |
| Total Bytes Sent: | The total number of bytes sent for the A10 connection. |
| Data Over Signaling Packets: | The total number of Data Over Signaling packets sent for the A10 connection. |
| Data Over Signaling Bytes: | The total number of Data Over Signaling bytes sent for the A10 connection. |
| Registration Request/Reply | |
| Renew RRQ Accepted | The total number of registration request renewals accepted. |
| Discarded | The total number of registration requests replies that have been discarded. |
| Intra PDSN Active H/O RRQ Accept | The number of intra PDSN handoffs accepted for the session when it was active. |
| Intra PDSN Dormant H/O RRQ Accept | The number of intra PDSN handoffs accepted for the session when it was dormant. Note: Sessions facilitated through PDSN Closed R-P services are always displayed as "Active" due to the fact that PDSN Closed R-P services do not receive dormancy information from the PCF. |
| Inter PDSN Handoff RRQ Accepted | The total number of registration requests for inter-PDSN handoffs that have been accepted. |
| Reply Send Error | The total number of registration replies for which errors were experienced during transmission. |
| Registration Update/Ack | |

| Field | Description |
|--|--|
| Initial Update Transmitted | The total number of registration updates that have been transmitted. |
| Update Retransmitted | The total number of registration updates that have been re-transmitted. |
| Denied | The total number of registration updates that have been denied by the PCF. |
| Not Acknowledged | The total number of registration updates and/or acknowledgements that have not been acknowledged by the PCF. |
| Reg Ack Received | The total number of registration acknowledgements that have been received. |
| Reg Ack Discarded | The total number of registration acknowledgements that have been received. |
| Update Send Error | The total number of registration updates for which errors were experienced during transmission. |
| Registration Update Send Reason | |
| Lifetime Expiry | The total number of registration updates that were sent due to the expiration of a lifetime timer during a subscriber session. |
| Upper Layer Initiated | The total number of registration updates that were initiated by upper processing layers. |
| Other Reasons | The total number of registration updates that were sent due to reasons other than those listed here. |
| Handoff Release | The total number of registration updates that were sent due to handoff releases. |
| Session Manager Exited | The total number of registration updates that were sent due to the termination of Session Manager tasks. NOTE: If any data is reported for this field, there may be an issue with either the software or hardware. If you continue to experience problems, refer to the System Administration and Administration Reference for information on troubleshooting the problem. |
| Registration Update Denied | |
| Reason Unspecified | The total number of denied registration updates that were sent with a reply code of 80H (Registration Denied - reason unspecified). |
| Admin Prohibited | The total number of denied registration updates that were sent with a reply code of 81H (Registration Denied - administratively prohibited). |

| Field | Description |
|----------------------------|--|
| PDSN Failed Authentication | The total number of denied registration updates that were sent with a reply code of 83H (Registration Denied - mobile node failed authentication). |
| Identification Mismatch | The total number of denied registration updates that were sent with a reply code of 85H (Registration Denied - identification mismatch). |
| Poorly Formed Update | The total number of denied registration updates that were sent with a reply code of 86H (Registration Denied - poorly formed request). |
| Session Update/Ack | |
| Initial Update Transmitted | Indicates the total number of session updates that have been transmitted. |
| Update Retransmitted | Indicates the total number of session updates that have been re-transmitted. |
| Denied | Indicates the total number of session updates that have been denied by the PCF. |
| Not Acknowledged | Indicates the total number of session updates that have not been acknowledged by the PCF. |
| Sess Update Ack Received | Indicates the total number of session acknowledgements that have been received. |
| Sess Update Ack Discarded | Indicates the total number of session acknowledgements that have been discarded. |
| Sess Update Send Error | Indicates the total number of session updates for which errors were experienced during transmission. |
| Session Update Send Reason | |
| Always On | Session Update message was sent to the PCF to notify the PCF that the subscriber has the Always On feature. |
| QoS Info | This is a session update statistic that is not supported at this time. |
| QoS Update Reason | |
| TFT Violation | Indicates that a TFT violation is the reason for QoS update. |
| Traffic Violation | Indicates that a traffic violation is the reason for the QoS update. |
| Traffic Policing | Indicates that a traffic policing action is the reason for the QoS update |
| Operator Triggered | Indicates that an operator triggered the QoS update. |

| Field | Description |
|----------------------------|---|
| Session Update Denied | |
| Reason Unspecified | Indicates the total number of session updates denied with a code of 80H (Session Denied - reason unspecified). |
| Insufficient Resources | Indicates the total number of session updates denied with a status code of 82H (Session Denied - insufficient resources). |
| Admin Prohibited | Indicates the total number of denied session updates denied with a status code of 81H (Session Denied - administratively prohibited). |
| Parameter not updated | Indicates the total number of session updates denied with a status code of 82H (Session Denied - insufficient resources). |
| PDSN Failed Authentication | Indicates the total number of denied session updates denied with a status code of 83H (Session Denied - mobile node failed authentication). |
| Identification Mismatch | Indicates the total number of denied session updates denied with a status code of 85H (Session Denied - identification mismatch). |
| Poorly Formed Update | Indicates the total number of denied session updates denied with a status code of 86H (Session Denied - poorly formed request). |
| Profile ID Not Supported | Indicates that the profile ID is not supported. |
| Handoff in Progress | Indicates that a handoff is in progress. |
| GRE Receive | |
| Total Packets Received | The total number of Generic Routing Encapsulation (GRE) packets received. |
| Protocol Type Error | The total GRE packets received with an unsupported protocol field in the header. |
| Total Bytes Received | The total number of Generic Routing Encapsulation (GRE) bytes received. |
| GRE Key Absent | The number of GRE packets received without a GRE key in the header. |
| GRE Checksum Error | GRE packets received that had a checksum error. |
| Invalid Packet Length | GRE packets received with invalid packet length. |
| GRE Send | |
| Total Packets Sent | The total number of Generic Routing Encapsulation (GRE) packets transmitted. |

| Field | Description |
|---|---|
| Total Bytes Sent | The total number of Generic Routing Encapsulation (GRE) bytes transmitted. |
| Total Packets Sent in SDB | The total Packets sent with the Short Data Burst indication in the A10 data stream from the PDSN to the PCF. |
| Total Bytes Sent in SDB | The total Bytes sent with the Short Data Burst indication in the A10 data stream from the PDSN to the PCF. |
| GRE Flow Control | |
| Total Packets Received with XOFF | The total number of packets received for this username while the flow control was set to XOFF. |
| Total Packets Received with XON | The total number of packets received for this username while the flow control was set to XON. |
| Total XON->XOFF Transactions | The total number of times the flow control indicator was changed from XON to XOFF for sessions involving this username. |
| Total Output Packets Dropped on XOFF | The total number of packets dropped after receiving an XOFF flow control command from the RAN. |
| Total Output Bytes Dropped on XOFF | The total number of bytes dropped after receiving an XOFF flow control command from the RAN. |
| Total RP sessions matching specified criteria | The total number of sessions that had the username specified on the command line. |

show rp statistics pdsn-service

Table 3: show rp statistics pdsn-service Command Output Descriptions

| Field | Description |
|------------------------|--|
| PDSN Service | Displays the name of the PDSN services for which the statistics were gathered. |
| Session Stats | |
| Total Sessions Current | Indicates the total number of sessions that are in progress. These could be either active, dormant, being set up, or being disconnected. |
| Total Setup | Indicates the total number of sessions that have been successfully set up since system started. |
| Total Released | Indicates the total number of sessions that have successfully been disconnected. |

| Field | Description |
|--------------------------------------|--|
| Total Rev-A Sessions Current | Indicates the total number of Rev-A sessions that are in progress. |
| Total Rev-A Setup | Indicates the total number of Rev-A sessions that have been successfully set up since system started. |
| Total Rev-A Released | Indicates the total number of Rev-A sessions that have successfully been disconnected. |
| Total Downgraded from Rev-A to Rev-0 | Indicates the total number of Rev-A sessions that have successfully been downgraded from Rev-A to Rev-0. |
| Session Releases | |
| De-registered | Indicates the total number of sessions that were disconnected through a normal de-registration process. |
| Lifetime Expiry | Indicates the total number of sessions that were disconnected due to the expiration of their lifetime timer. |
| PPP Layer Command | Indicates the number of sessions disconnected due to PPP initiating a tear-down. |
| PCF-Monitor Fail | The total number of sessions disconnected because the PCF monitor function detected that the PCF was down. |
| GRE Key Mismatch | The total number of sessions disconnected because the GRE key changed for a session. |
| Purged via Audit | The total number of sessions disconnected due to audit failures on session recovery. |
| Other Reasons | Indicates the number of sessions disconnected due to reasons other than those listed here. |
| Registration Request/Reply | |
| Total RRQ/Renew/Dereg RX | The total number of registration requests, renewals, and de-registrations received. |
| Total Accept | The total number of registration requests that have been accepted. |
| Total Denied | The total number of registration requests that have been rejected. |
| Total Discard | The total number of registration requests that have been discarded. |
| Init RRQ RX | The total number of initial registration requests that have been received. |
| Init RRQ Accept | The total number of initial registration requests received and accepted. |
| Init RRQ Denied | The total number of initial registration requests received and rejected. |

| Field | Description |
|-----------------------------|---|
| Init RRQ Discard | The total number of initial registration requests that have been received and discarded. |
| Init Setup/Start RRQ RX | The total number of initial setup or start registration requests that have been received. |
| Init Setup/Start RRQ Denied | The total number of initial start or setup registration requests that have been received and rejected. |
| Init Setup/Start RRQ Acc | The total number of initial start or setup registration requests that have been received and accepted. |
| Init Setup/Start RRQ Dis | The total number of initial start or setup registration requests that have been received and discarded. |
| Renew RRQ RX | The total number of registration request renewals received. |
| Renew RRQ Accept | The total number of registration request renewals received and accepted. |
| Renew RRQ Denied | The total number of registration request renewals received and rejected. |
| Renew RRQ Discard | The total number of registration request renewals received and discarded |
| Renew No Airlink RX | The total number of registration request renewals received due to "No airlink". |
| Renew No Airlink Accept | The total number of registration request renewals received due to "No airlink" and accepted. |
| Renew No Airlink Denied | The total number of registration request renewals received due to "No airlink" and denied. |
| Renew No Airlink Discard | The total number of registration request renewals received due to "No airlink" and discarded. |
| Renew Actv Start RX | The total number of RRQ renewals with an Active Start record received. |
| Renew Actv Start Accept | The total number of RRQ renewals with an Active Start record received and accepted. |
| Renew Actv Start Denied | The total number of RRQ renewals with an Active Start record received and denied. |
| Renew Actv Start Discard | The total number of RRQ renewals with an Active Start record received and discarded. |
| Renew Actv Stop RX | The total number of RRQ renewals with an Active Stop record received. |

| Field | Description |
|---|--|
| Renew Actv Stop Accept | The total number of RRQ renewals with an Active Stop record received and accepted. |
| Renew Actv Stop Denied | The total number of RRQ renewals with an Active Stop record received and denied. |
| Renew Actv Stop Discard | The total number of RRQ renewals with an Active Stop record received and discarded. |
| Dereg Active Stop Accept | The total number of de-registration requests with an active stop that were accepted. |
| Dereg RRQ RX | The total number of de-registration requests that have been received. |
| Dereg RRQ Accept | The total number of de-registration requests received and accepted. |
| Dereg RRQ Denied | The total number of de-registration requests received and rejected |
| Dereg RRQ Discard | The total number of de-registration requests received and discarded. |
| Dereg No Active Stop RX | The total number of de-registration requests with a No Active Stop record received. |
| Dereg No Active Stop Accp | The total number of de-registration requests with a No Active Stop record received and accepted. |
| Dereg No Active Stop Denied | The total number of de-registration requests with a No Active Stop record received and denied |
| Dereg No Active Stop Disc | The total number of de-registration requests with a No Active Stop record received and discarded. |
| Dereg Active Stop RX | The total number of de-registration request with an Active Stop record received. |
| Dereg Active Stop Accp | The total number of de-registration request with an Active Stop record received and accepted. |
| Reply Send Error | The total number of registration replies for which errors were experienced during transmission. |
| Airlink Seq Num Invalid | The total number of replies sent when an invalid airlink sequence number is received in RRQ. |
| Intra PDSN Active ANID Handoff RRQ RX | The total number of intra PDSN handoff RRQs with active Access Network IDentifier (ANID) received. |
| Intra PDSN Active ANID Handoff RRQ Accepted | The total number of intra PDSN handoff RRQs with active ANID received and accepted. |

| Field | Description |
|--|--|
| Intra PDSN Active ANID Handoff RRQ Denied | The total number of intra PDSN handoff RRQs with active ANID received and denied. |
| Intra PDSN Active ANID Handoff RRQ Discarded | The total number of intra PDSN handoff RRQs with active ANID received and discarded. |
| Intra PDSN Dormant ANID Handoff RRQ RX | The total number of intra PDSN handoff RRQs with dormant ANID received. Note: Sessions facilitated through PDSN Closed R-P services are always displayed as "Active" due to the fact that PDSN Closed R-P services do not receive dormancy information from the PCF. |
| Intra PDSN Dormant ANID Handoff RRQ Accepted | The total number of intra PDSN handoff RRQs with dormant ANID received and accepted. Note: Sessions facilitated through PDSN Closed R-P services are always displayed as "Active" due to the fact that PDSN Closed R-P services do not receive dormancy information from the PCF. |
| Intra PDSN Dormant ANID Handoff RRQ Denied | The total number of intra PDSN handoff RRQs with dormant ANID received and denied. Note: Sessions facilitated through PDSN Closed R-P services are always displayed as "Active" due to the fact that PDSN Closed R-P services do not receive dormancy information from the PCF. |
| Intra PDSN Dormant ANID Handoff RRQ Discarded | The total number of intra PDSN handoff RRQs with dormant ANID received and discarded. Note: Sessions facilitated through PDSN Closed R-P services are always displayed as "Active" due to the fact that PDSN Closed R-P services do not receive dormancy information from the PCF. |
| Inter PDSN Active MEI ANID Handoff RRQ RX | The total number of inter PDSN handoff RRQs with active Mobility Event Indicator (MEI) and ANID received. |
| Inter PDSN Active MEI ANID Handoff RRQ Accepted | The total number of inter PDSN handoff RRQs with active MEI and ANID received and accepted. |
| Inter PDSN Active MEI ANID Handoff RRQ Denied | The total number of inter PDSN handoff RRQs with active MEI and ANID received and denied. |
| Inter PDSN Active MEI ANID Handoff RRQ Discarded | The total number of inter PDSN handoff RRQs with active MEI and ANID received and discarded. |
| Intra PDSN Active Handoff RRQ Accepted | Indicates the total number of registration requests received for active sessions going through an intra-PDSN handoff. |

| Field | Description |
|---|---|
| Intra PDSN Dormant Handoff RRQ Accepted | Indicates the total number of registration requests received for dormant sessions going through an intra-PDSN handoff. Note: Sessions facilitated through PDSN Closed R-P services are always displayed as "Active" due to the fact that PDSN Closed R-P services do not receive dormancy information from the PCF. |
| Inter PDSN Handoff RRQ Accepted | Indicates the total number of registration requests received for sessions going through an inter-PDSN handoff. |
| Reply Send Error | Indicates the total number of registration replies for which errors were experienced during transmission. |
| Registration Request Denied | |
| Unspecified Reason | Indicates the total number of registration requests that were denied using reply code of 80H (Registration Denied - reason unspecified) |
| Admin Prohibited | Indicates the total number of registration requests that were denied using reply code of 81H (Registration Denied - administratively prohibited). |
| Insufficient Resources | Indicates the total number of registration requests that were denied using reply code of 82H (Registration Denied - insufficient resources). |
| PCF Failed Auth | Indicates the total number of registration requests that were denied using reply code of 83H (Registration Denied - mobile node failed authentication). |
| Identification Mismatch | Indicates the total number of registration requests that were denied using reply code of 85H (Registration Denied - identification mismatch). |
| Poorly Formed Request | Indicates the total number of registration requests that were denied using reply code of 86H (Registration Denied - poorly formed request). |
| Unknown PDSN Address | Indicates the total number of registration requests that were denied using reply code of 88H (Registration Denied - unknown PDSN address) |
| Reverse Tunnel Unavail | Indicates the total number of registration requests that were denied using reply code of 89H (Registration Denied - requested reverse tunnel unavailable). |
| Reverse Tunnel Required | Indicates the total number of registration requests that were denied using reply code of 8AH (Registration Denied - reverse tunnel is mandatory and "T"-bit not set). |
| Unrecognized Vendor Id | Indicates the total number of registration requests that were denied using reply code of 8DH (Registration Denied - unsupported vendor ID or unable to interpret data in the CVSE). |

| Field | Description |
|---|--|
| Session Already Closed | Renew and RRQ denied due to the session not present in the PDSN Dereq. Error code 0x8e. |
| RRQ Denied - Insufficient Resource Reasons | |
| No Session Manager | Indicates the total number of registration requests that were denied due to the lack of available Session Manager tasks. This may occur when the system is booting up in the event that a Session Manager task terminated unexpectedly. |
| No Memory | Indicates the total number of registration requests that were denied due to insufficient memory. |
| Session Managers Retried | Indicates that the system unsuccessfully attempted to try multiple Session Manager tasks to establish a session. |
| Input-Q Exceeded | Indicates that the queue in which incoming calls are kept prior to being processed exceeded its capacity. |
| Policy Rejected | The Registration Request was denied because the policy was rejected. |
| Session Manager Rejected | The Registration Request was rejected by the Session Manager. |
| A11 Manager Rejected | The Registration Request was rejected by the A11 Manager. |
| RRQ Denied - Poorly Formed Request Reasons | |
| Session Already Dormant | The number of RRQs that had Active Stop for a session that was already dormant. Note: Sessions facilitated through PDSN Closed R-P services are always displayed as "Active" due to the fact that PDSN Closed R-P services do not receive dormancy information from the PCF. |
| Already Active | The number of RRQs that had Active Start for a session that was already active. |
| Airlink Setup Absent | The number of RRQs denied due to an absent connection-setup record in the initial RRQ. |
| Mismatched CoA/Src addr | The number of RPs denied due to a mismatch in the care-of-address field and the request source address. |
| Other Reasons | The number of RRQs denied due to other reasons for a badly formed RRQ. |
| RRQ Denied - Overload/Congestion Control | |
| Admin Prohibited (reject) | RRQs denied with error code 0x81h due to congestion control mechanism. |
| Unknown PDSN (redirect) | RRQs denied with error code 0x88 due to congestion control mechanism. |

| Field | Description |
|---|--|
| Registration Request Discard Reasons | |
| No Session Manager | Indicates the total number of registration requests that were discarded due to the lack of available Session Manager tasks. This may occur when the system is booting up in the event that a Session Manager task terminated unexpectedly. |
| No Memory | Indicates the total number of registration requests that were discarded due to insufficient memory. |
| Malformed | Indicates the total number of registration requests that were discarded due to being poorly formed. |
| Auth Failure | Indicates the total number of registration requests that were discarded due to the mobile node failing authentication. |
| Session Manager Dead | Indicates the total number of registration requests that were discarded due to the termination of Session Manager tasks. NOTE: If any data is reported for this field, there may be an issue with either the software or hardware. If you continue to experience problems, refer to the System Administration and Administration Reference for information on troubleshooting the problem. |
| Admin Prohibited | Indicates the total number of registration requests that were discarded due to being administratively prohibited. |
| Session Manager NotReady | Indicates the total number of registration requests that were discarded due to a Session Manager task not being ready. This may occur when the system is booting up in the event that a Session Manager task terminated unexpectedly. |
| Unknown PDSN | Indicates the total number of registration requests that were discarded due to the request specifying an unknown PDSN address. |
| Internal Bounce Error | Indicates that an internal communication message between an A11 Manager task and a Session Manager task bounced was not successfully sent. |
| Input-Q Exceeded | Indicates that the queue in which incoming calls are kept prior to being processed exceeded its capacity. |
| Max Sessions Reached | Indicates the total number of registration requests that were discarded due to the PDSN service reaching its configured maximum number of subscribers or the exceeding of the system's session capacity license. |
| Invalid Pkt Len | Indicates the total number of registration requests that were discarded due to having an invalid packet length. |
| GRE Key Changed | RRQs discarded due to GRE key change in RRQ message. |

| Field | Description |
|--|--|
| Overload/Congestion | RRQs discarded due to congestion control mechanism. |
| Dropped During Handoff | RRQs dropped during handoff. |
| Misc Reasons | Indicates the number of registration requests that were discarded due to reasons other than those listed here. |
| Registration Update/Ack | |
| Reg Update Transmitted | Indicates the total number of registration updates that were transmitted. |
| Accepted | Indicates the total number of registration updates that were accepted by the PCF. |
| Denied | Indicates the total number of registration updates that were denied. |
| Not Acknowledged | Indicates the total number of registration updates that were not acknowledged. |
| Initial Update TX | Indicates the total number of initial registration updates that were transmitted. |
| Update Re-TX | Indicates the total number of registration updates that were re-transmitted. |
| Reg Ack Received | Indicates the total number of registration acknowledgements that were received. |
| Reg Ack Discard | Indicates the total number of registration acknowledgements that were discarded. |
| Update Send Error | Indicates the total number of registration updates for which errors were experienced during transmission. |
| Registration Update Send Reason | |
| Lifetime Expiry | Indicates the total number of registration updates that were sent due to the expiration of a lifetime timer during a subscriber session. |
| Other Reasons | Indicates the total number of registration updates that were sent due to reasons other than those listed here. |
| Upper Layer Initiated | Indicates the total number of registration updates that were initiated by upper processing layers. |
| Handoff Release | Indicates the number of registration updates that were sent due to handoff releases. |
| Session Manager Exited | Indicates the number of registration updates that were sent due to the termination of a Session Manager task. |

| Field | Description |
|---|--|
| Registration Update Denied | |
| Reason Unspecified | Indicates the total number of denied registration updates that were sent with a reply code of 80H (Registration Denied - reason unspecified). |
| Admin Prohibited | Indicates the total number of denied registration updates that were sent with a reply code of 81H (Registration Denied - administratively prohibited). |
| PDSN Failed Auth | Indicates the total number of denied registration updates that were sent with a reply code of 83H (Registration Denied - mobile node failed authentication). |
| Identification Mismatch | Indicates the total number of denied registration updates that were sent with a reply code of 85H (Registration Denied - identification mismatch). |
| Poorly Formed Update | Indicates the total number of denied registration updates that were sent with a reply code of 86H (Registration Denied - poorly formed request). |
| Registration Ack Discard Reasons | |
| Session Absent | Indicates the total number of registration acknowledgements that were discarded due to the session having been already ended because the acknowledgement was late. |
| No Memory | Indicates the total number of registration acknowledgements that were discarded due to insufficient memory. |
| Malformed | Indicates the total number of registration acknowledgements that were discarded due to being poorly formed. |
| Auth Failure | Indicates the total number of registration acknowledgements that were discarded due to the mobile node failing authentication. |
| Internal Bounce Error | Indicates that an internal communication message between an A11 Manager task and a Session Manager task bounced (was not successfully sent). |
| Input-Q Exceeded | Indicates the number of times that the queue in which incoming calls are kept prior to being processed exceeded its capacity. |
| Mismatched Id | Indicates the total number of discarded registration acknowledgements due to reply code 85H (Registration Denied - identification mismatch). |
| Invalid Pkt Len | Indicates the total number of registration acknowledgements that were discarded due to having an invalid packet length. |
| Misc Reasons | Indicates the number of registration acknowledgements that were discarded due to reasons other than those listed here. |

| Field | Description |
|------------------------------------|---|
| Session Update/Ack | |
| Sess Update Transmitted | This is a session update statistic that is not supported at this time. |
| Accepted | This is a session update statistic that is not supported at this time. |
| Denied | This is a session update statistic that is not supported at this time. |
| Not Acknowledged | This is a session update statistic that is not supported at this time. |
| Initial Update TX | This is a session update statistic that is not supported at this time. |
| Update Retransmitted | This is a session update statistic that is not supported at this time. |
| Sess Ack Received | This is a session update statistic that is not supported at this time. |
| Sess Ack Discarded | This is a session update statistic that is not supported at this time. |
| Sess Update Send Error | This is a session update statistic that is not supported at this time. |
| Session Update Send Reason | |
| Always On | Session Update message was sent to the PCF to notify the PCF that the subscriber has the Always On feature. |
| QoS Info | This is a session update statistic that is not supported at this time. |
| Session Update Denied | |
| Reason Unspecified | This is a session update statistic that is not supported at this time. |
| Insufficient Resources | This is a session update statistic that is not supported at this time. |
| Admin Prohibited | This is a session update statistic that is not supported at this time. |
| Parameter not updated | This is a session update statistic that is not supported at this time. |
| PDSN Failed Auth | This is a session update statistic that is not supported at this time. |
| Identification Mismatch | This is a session update statistic that is not supported at this time. |
| Poorly Formed Update | This is a session update statistic that is not supported at this time. |
| Session Update Ack Discard Reasons | |
| Session Absent | Indicates the total number of session acknowledgements that were discarded due to the session having been already ended because the acknowledgement was late. |
| No Memory | Indicates the total number of session acknowledgements that were discarded due to insufficient memory. |
| Malformed | Indicates the total number of session acknowledgements that were discarded due to being poorly formed. |

| Field | Description |
|-----------------------------------|--|
| Auth Failure | Indicates the total number of session acknowledgements that were discarded due to the mobile node failing authentication. |
| Internal Bounce Error | Indicates that an internal communication message between an A11 Manager task and a Session Manager task bounced (was not successfully sent). |
| Input-Q Exceeded | Indicates the number of times that the queue in which incoming calls are kept prior to being processed exceeded its capacity. |
| Mismatched Id | Indicates the total number of discarded session acknowledgements due to reply code 85H (Registration Denied - identification mismatch). |
| Invalid Packet Length | Indicates the total number of session acknowledgements that were discarded due to having an invalid packet length. |
| Misc Reasons | Indicates the number of session acknowledgements that were discarded due to reasons other than those listed here. |
| Security Violations | |
| Total Violations | Indicates the total number of security violations that occurred. |
| Bad SPI # | Indicates the total number of security violations that occurred due to the receipt of a Security Parameter Index (SPI) that was in the reserved range (0 through 255). |
| Bad Authenticator | Indicates the total number of security violations that occurred due to a mis-computed authentication field. |
| Unknown SPI # | Indicates the total number of security violations that occurred due to the receipt of a Security Parameter Index (SPI) that is not configured on the PDSN. |
| Missing MN-HA Auth Extension | Indicates the total number of security violations that occurred due to missing mobile node-home agent authentication extensions. |
| Missing Reg Update Auth Extension | Indicates the total number of security violations that occurred due to missing registration update authentication extensions |
| GRE Receive | |
| Total Packets Received | Indicates the total number of Generic Routing Encapsulation (GRE) packets received. |
| Protocol Type Error | Indicates the total number of GRE packets received with an unsupported protocol type field in the header. |
| Total Bytes Received | Indicates the total number of Generic Routing Encapsulation (GRE) bytes received. |

| Field | Description |
|---|---|
| GRE Key Absent | Indicates the total number of GRE packets received with no GRE key in the header. |
| GRE Checksum Error | Indicates the number of errors that occurred in GRE packets. |
| Invalid Packet Length | Indicates the total number of GRE packets received with invalid packet lengths. |
| No Session Found | Indicates the total number of GRE packets received for which no sessions can be found. |
| GRE Send | |
| Total Packets Sent | Indicates the total number of Generic Routing Encapsulation (GRE) packets transmitted. |
| Total Bytes Sent | Indicates the total number of Generic Routing Encapsulation (GRE) bytes transmitted. |
| GRE Packets Sent in SDB Form | This indicates the total Packets sent with the Short Data Burst indication in the A10 data stream from the PDSN to the PCF. |
| GRE Bytes Sent in SDB Form | This indicates the total Bytes sent with the Short Data Burst indication in the A10 data stream from the PDSN to the PCF. |
| GRE Flow Control | |
| Total Packets Received with XOFF | The total number of packets received for this username while the flow control was set to XOFF. |
| Total Packets Received with XON | The total number of packets received for this username while the flow control was set to XON. |
| Total XON->XOFF Transactions | The total number of times the flow control indicator was changed from XON to XOFF for sessions involving this username. |
| Total Output Packets Dropped on XOFF | The total number of packets dropped after receiving an XOFF flow control command from the RAN. |
| Total Output Bytes Dropped on XOFF | The total number of bytes dropped after receiving an XOFF flow control command from the RAN. |
| Total RP sessions matching specified criteria | The total number of sessions that had the username specified on the command line. |
| GRE Segmentation | |
| Total Packets Received with segmentation indication | Indicates the total number of Generic Routing Encapsulation (GRE) packets received with segmentation indication. |
| Total Packets Sent with segmentation indication | Indicates the total number of Generic Routing Encapsulation (GRE) packets sent with segmentation indication. |

| Field | Description |
|---|--|
| Total successful reassembly | Indicates the total number of Generic Routing Encapsulation (GRE) packets that were successfully reassembled. |
| Total packets processed without proper reassembly | Indicates the total number of Generic Routing Encapsulation (GRE) packets that were processed without proper reassembly. |

