



show dhcp

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show dhcp call-id

Table 1: show dhcp call-id Command Output Descriptions

| Field | Description |
|-------------------------|--|
| Session Counters | |
| Total Current | The total number of currently active sessions on the system that received DHCP-assigned IP addresses. |
| DHCP Proxy | The total number of currently active sessions that were assigned IP addresses using the DHCP Proxy method. |
| DHCP Messages | |
| DISCOVER TX | The number of DHCPDISCOVER messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER retransmitted | The number of DHCPDISCOVER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER relayed | The number of DHCPDISCOVER messages relayed by the system to the mobile as part of the DHCP Relay method. |

| Field | Description |
|--|---|
| OFFER RX | The number of DHCPOFFER messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| OFFER Discarded | The number of DHCPOFFER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method. |
| OFFER relayed | The number of DHCPOFFER messages relayed by the system to the mobile as part of the DHCP Relay method. |
| REQUEST TX | The number of DHCPREQUEST messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| REQUEST retransmitted | The number of DHCPREQUEST messages re-sent by the system to the DHCP server as part of the DHCP Proxy method. |
| REQUEST relayed | The number of DHCPREQUEST messages relayed by the system to the mobile as part of the DHCP Relay method. |
| ACK RX | The number of DHCPACK messages received from the DHCP server as part of the DHCP Proxy method. |
| ACK for INFORM | The number of acknowledgements received for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| ACK relayed | The number of DHCPACK messages relayed by the system to the mobile as part of the DHCP Relay method. |
| NAK RX | The number of DHCPNAK messages received from the DHCP server as part of the DHCP Proxy method. |
| NAK for INFORM | The number of number of negative acknowledgements for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| NAK relayed | The number of DHCPNAK messages relayed by the system to the mobile as part of the DHCP Relay method. |
| DECLINE relayed | The number of DHCPDECLINE messages relayed by the system to the DHCP server as part of the DHCP Relay method. |
| RELEASE relayed | The number of DHCPRELEASE messages relayed by the system to the DHCP server as part of the DHCP Relay method. |
| INFORM relayed | The number of DHCPINFORM messages relayed by the system to the DHCP server on behalf of the mobile as part of the DHCP Relay method. |
| DHCP OFFER Discard Reasons: (dhcp-proxy) | |

| Field | Description |
|--|---|
| Parse error | The number of DHCPOFFER messages discarded by the system due to parsing errors in the OFFER message such as: <ul style="list-style-type: none"> • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message" |
| Lease less than min | The number of DHCPOFFER messages discarded by the system due to the offered lease time being less than the minimum acceptable value configured on the system. |
| Lease greater than max | The number of DHCPOFFER messages discarded by the system due to the offered lease time being greater than the maximum acceptable value configured on the system. |
| IP Validation failed | The number of DHCPOFFER messages discarded by the system due to a failure with the validation of the IP address. This occurs because the IP address returned by DHCP Server is not present in the static pool in the destination context. |
| XID mismatch: | The number of DHCPOFFER messages discarded by the system due to an XID mismatch. |
| DHCP ACK Discard Reasons: (dhcp-proxy) | |
| Parse error | The number of DHCPACK messages discarded by the system due to parsing errors in the OFFER message such as: <ul style="list-style-type: none"> • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message" |
| XID mismatch: | The number of DHCPACK messages discarded by the system due to an XID mismatch. |
| DHCP DECLINE Reasons: (dhcp-proxy) | |
| IP mismatch | The number of DHCP DECLINE messages sent by the system due to a mismatch in the IP address returned in the OFFER and the IP address returned in ACK. A DECLINE message is sent for the IP address sent in the OFFER. |
| IP Lease Renewals | The number of address lease renewal requests successfully processed. |
| DHCP Call Type | Type of DHCP call. |

| Field | Description |
|----------------------|--|
| DHCP State | Status of DHCP call. <ul style="list-style-type: none"> • Bound : Call Established • Renewing: Call renewing after expiry of leased time. • Rebinding: Making call for same call id after expiry of |
| Lease time received | Time in seconds allotted for a specific call-Id. |
| Lease time remaining | Time in seconds available for a specific call-Id. |

show dhcp chaddr

Table 2: show dhcp chaddr Command Output Descriptions

| Field | Description |
|---|--|
| User Name | The user name associated with this session. |
| User Address | The IP address of the user's PDP context in dotted decimal notation. |
| DHCP Service | The DHCP service name. |
| Server Address | The server address. |
| DHCP Call Type | The DHCP call type. |
| DHCP State | The DHCP state. |
| Lease time received | The IP address lease time received. |
| Lease time remaining | The IP address lease time remaining. |
| Total DHCP sessions matching specified criteria | The total number of DHCP sessions matching specified criteria. |

show dhcp dhcp-service

Table 3: show dhcp dhcp-service Command Output Descriptions

| Field | Description |
|-------------------------|--|
| Session Counters | |
| Total Current | The total number of currently active PDP contexts on the system that received DHCP-assigned IP addresses as facilitated by the specified criteria. |

| Field | Description |
|------------------------|---|
| DHCP Proxy | The total number of PDP contexts that were assigned IP addresses using the DHCP Proxy method. |
| DHCP Relay Agent | The total number of PDP contexts that were assigned IP addresses using the DHCP Relay method. |
| DHCP Messages | |
| DISCOVER TX | The number of DHCPDISCOVER messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER retransmitted | The number of DHCPDISCOVER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER relayed | The number of DHCPDISCOVER messages relayed by the system to the mobile as part of the DHCP Relay method. |
| OFFER RX | The number of DHCPOFFER messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| OFFER Discarded | The number of DHCPOFFER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method. |
| OFFER relayed | The number of DHCPOFFER messages relayed by the system to the mobile as part of the DHCP Relay method. |
| REQUEST TX | The number of DHCPREQUEST messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| REQUEST retransmitted | The number of DHCPREQUEST messages re-sent by the system to the DHCP server as part of the DHCP Proxy method. |
| REQUEST relayed | The number of DHCPREQUEST messages relayed by the system to the mobile as part of the DHCP Relay method. |
| ACK RX | The number of DHCPACK messages received from the DHCP server as part of the DHCP Proxy method. |
| ACK for INFORM | The number of acknowledgements received for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| ACK relayed | The number of DHCPACK messages relayed by the system to the mobile as part of the DHCP Relay method. |
| NAK RX | The number of DHCPNAK messages received from the DHCP server as part of the DHCP Proxy method. |
| NAK for INFORM | The number of negative acknowledgements for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method. |

| Field | Description |
|---|---|
| NAK relayed | The number of DHCPNAK messages relayed by the system to the mobile as part of the DHCP Relay method. |
| DECLINE relayed | The number of DHCPDECLINE messages relayed by the system to the DHCP server as part of the DHCP Relay method. |
| RELEASE relayed | The number of DHCPRELEASE messages relayed by the system to the DHCP server as part of the DHCP Relay method. |
| INFORM relayed | The number of DHCPINFORM messages relayed by the system to the DHCP server on behalf of the mobile as part of the DHCP Relay method. |
| DHCP OFFER Discard Reasons | |
| Parse error | The number of DHCPOFFER messages discarded by the system due to parsing errors in the OFFER message such as: <ul style="list-style-type: none"> • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message" |
| Lease less than min | The number of DHCPOFFER messages discarded by the system due to the offered lease time being less than the minimum acceptable value configured on the system. |
| Lease greater than max | The number of DHCPOFFER messages discarded by the system due to the offered lease time being greater than the maximum acceptable value configured on the system. |
| IP Validation failed | The number of DHCPOFFER messages discarded by the system due to a failure with the validation of the IP address. This occurs because the IP address returned by DHCP Server is not present in the static pool in the destination context. |
| DHCP ACK Discard Reasons: (dhcp-proxy) | |
| Parse error | The number of DHCPACK messages discarded by the system due to parsing errors in the OFFER message such as: <ul style="list-style-type: none"> • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message" |
| DHCP DECLINE Reasons: (dhcp-proxy) | |

| Field | Description |
|-------------------|---|
| IP mismatch | The number of DHCPDECLINE messages sent by the system due to a mismatch in the IP address returned in the OFFER and the IP address returned in ACK. A DECLINE message is sent for the IP address sent in the OFFER. |
| IP Lease Renewals | The number of address lease renewal requests successfully processed. |

show dhcp msid

Table 4: show dhcp msid Command Output Descriptions

| Field | Description |
|---|--|
| User Name | The user name associated with this session. |
| User Address | IP address of the user's PDP context in dotted decimal notation. |
| DHCP Service | The DHCP service name. |
| Server Address | The server address. |
| DHCP Chaddr of MS | The Client Hardware (MAC) Address (CHADDR) of MS. |
| DHCP Call Type | The DHCP call type. |
| DHCP State | The DHCP state. |
| Lease time received | The IP address lease time received. |
| Lease time remaining | The IP address lease time remaining. |
| Total DHCP sessions matching specified criteria | The total number of DHCP sessions matching specified criteria. |

show dhcp full msid

Table 5: show dhcp full msid Command Output Descriptions

| Field | Description |
|----------------|--|
| User Name | The user name associated with this session. |
| User Address | IP address of the user's PDP context in dotted decimal notation. |
| DHCP Service | The DHCP service name. |
| Server Address | The server address. |

| Field | Description |
|------------------------|---|
| DHCP Call Type | The DHCP call type. |
| DHCP State | The DHCP status. |
| Lease time received | Time allotted in seconds. |
| Lease time remaining | Time available in seconds. |
| DHCP Messages: | |
| DISCOVER TX | The number of DHCPDISCOVER messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER retransmitted | The number of DHCPDISCOVER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER RX | The number of DHCPDISCOVER messages received by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER retried RX | The number of retried DHCPDISCOVER messages received by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER relayed | The number of DHCPDISCOVER messages relayed by the system to the mobile as part of the DHCP Relay method. |
| OFFER RX | The number of DHCPOFFER messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| OFFER Discarded | The number of DHCPOFFER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method. |
| OFFER TX | The number of DHCPREQUEST messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| OFFER relayed | The number of DHCPOFFER messages relayed by the system to the mobile as part of the DHCP Relay method. |
| REQUEST TX | The number of DHCPREQUEST messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| REQUEST retransmitted | The number of DHCPREQUEST messages re-sent by the system to the DHCP server as part of the DHCP Proxy method. |
| REQUEST RX | The number of DHCPREQUEST messages received by the system as part of the DHCP Proxy method. |
| REQUEST renewal RX | The number of DHCPREQUEST renewal messages received by the system as part of the DHCP Proxy method. |
| REQUEST relayed | The number of DHCPREQUEST messages relayed by the system to the mobile as part of the DHCP Relay method. |

| Field | Description |
|---|--|
| ACK RX | The number of DHCPACK messages received from the DHCP server as part of the DHCP Proxy method. |
| ACK for INFORM | The number of acknowledgements received for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| ACK TX | The number of DHCPACK messages send to the DHCP server as part of the DHCP Proxy method. |
| ACK Renewing TX | The number of DHCPACK messages renewed from the DHCP server as part of the DHCP Proxy method. |
| ACK relayed | The number of DHCPACK messages relayed by the system to the mobile as part of the DHCP Relay method. |
| NAK RX | The number of DHCPNAK messages received from the DHCP server as part of the DHCP Proxy method. |
| NAK for INFORM | The number of number of negative acknowledgements for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| NAK TX | The number of DHCPNAK messages sent to the DHCP server as part of the DHCP Proxy method. |
| NAK relayed | The number of DHCPNAK messages relayed by the system to the mobile as part of the DHCP Relay method. |
| DECLINE relayed | The number of DHCPDECLINE messages relayed by the system to the DHCP server as part of the DHCP Relay method. |
| RELEASE relayed | The number of DHCPRELEASE messages relayed by the system to the DHCP server as part of the DHCP Relay method. |
| INFORM relayed | The number of DHCPINFORM messages relayed by the system to the DHCP server on behalf of the mobile as part of the DHCP Relay method. |
| DHCP OFFER Discard Reasons: (dhcp-proxy) | |
| Parse error | The number of DHCPPOFFER messages discarded by the system due to parsing errors in the OFFER message such as: <ul style="list-style-type: none"> • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message" |

| Field | Description |
|---|---|
| Lease less than min | The number of DHCPOFFER messages discarded by the system due to the offered lease time being less than the minimum acceptable value configured on the system. |
| Lease greater than max | The number of DHCPOFFER messages discarded by the system due to the offered lease time being greater than the maximum acceptable value configured on the system. |
| IP Validation failed | The number of DHCPOFFER messages discarded by the system due to a failure with the validation of the IP address. This occurs because the IP address returned by DHCP Server is not present in the static pool in the destination context. |
| DHCP ACK Discard Reasons: (dhcp-proxy) | |
| Parse error | The number of DHCPACK messages discarded by the system due to parsing errors in the OFFER message such as: <ul style="list-style-type: none"> • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message" |
| DHCP DECLINE Reasons: (dhcp-proxy) | |
| IP mismatch | The number of DHCP DECLINE messages sent by the system due to a mismatch in the IP address returned in the OFFER and the IP address returned in ACK. A DECLINE message is sent for the IP address sent in the OFFER. |
| IP Lease Renewals | The number of address lease renewal requests successfully processed. |
| Session Counters: | |
| Total Current | The total number of currently active sessions on the system that received DHCP-assigned IP addresses. |
| DHCP Proxy | The total number of sessions that were assigned IP addresses using the DHCP Proxy method. |
| DHCP Relay Agent | The total number of sessions that were assigned IP addresses using the DHCP Relay method. |
| DHCP Server | The DHCP server's IP address. |
| Total DHCP sessions matching specified criteria | The total number of DHCP sessions matching the specified criteria. |

show dhcp status

Table 6: show dhcp status Command Output Descriptions

| Field | Description |
|------------------------|--|
| DHCP Type | Indicates the type of DHCP service active. Possible types are: <ul style="list-style-type: none"> • (P) - DHCP Proxy • (R) - DHCP Relay • (S) - DHCP Server • (u) - unknown call |
| Lease State | The lease state for the DHCP service. |
| DHCP Service | The name of the DHCP service. |
| DHCP Server | The IP address of DHCP server. |
| Status | Indicates the status of the DHCP server. Possible status are: <ul style="list-style-type: none"> • Up • Active |
| Current Leased Address | The total number of DHCP Relay-assigned IP addresses currently leased to this service. |
| Total Leased Address | The total number of DHCP Relay-assigned IP addresses available for this service. |

show dhcp-service

Table 7: show dhcp-service name Command Output Descriptions

| Field | Description |
|------------------|---|
| Service name | The DHCP service name. |
| Context | The context name. |
| Bind | Indicates the bind status. |
| Local IP Address | The IP address of DHCP server. |
| Next Hop Address | Indicates the nexthop-forwarding address configured in DHCP service for MPLS traffic. |

| Field | Description |
|-------------------------------|--|
| DHCP Subnet mask used | Indicates the host mask. |
| MPLS-label | Indicates the MPLS labels configured in DHCP service for MPLS traffic. |
| Service Status | Indicates the service status, whether started or not. |
| Retransmission Timeout | The retransmission timeout period that must pass with no response before the system re-attempts to communicate with the DHCP server, in milliseconds. |
| Max Retransmissions | The maximum number of times that the system attempts to communicate with unresponsive DHCP server before it is considered a failure. |
| Lease Time | The lease time, in seconds. |
| Minimum Lease Duration | The minimum allowable lease duration accepted in responses from DHCP servers, in seconds. |
| Maximum Lease Duration | The maximum allowable lease duration accepted in responses from DHCP servers, in seconds. |
| DHCP Dead Time | The DHCP deadtime, in seconds, indicating the time period that the system waits prior to re-communicating with a DHCP server that was previously marked as down. |
| DHCP Dead consecutive Failure | The number of consecutive failures for the to be declared dead. |
| DHCP T1 Threshold Timer | The DHCP T1 threshold timer indicating the percentage of the allocated IP address lease time at which the DHCP call-line state is changed to "RENEWING". |
| DHCP T2 Threshold Timer | The DHCP T2 threshold timer indicating the percentage of the allocated IP address lease time at which the DHCP call-line state is changed to "REBINDING". |
| DHCP Client Identifier | Indicates the behavior relating to inclusion of client identifier DHCP option in DHCP messages. Possible values are: <ul style="list-style-type: none"> • msisdn • none. |
| DHCP Algorithm | The algorithm used to select DHCP servers with which to communicate when multiple servers are configured. |
| DHCP Servers configured | The IP address and priority information of the DHCP servers configured. |

| Field | Description |
|----------------------------|--|
| VRF Name | Indicates the name of the virtual routing and forwarding context instance associated with this DHCP service. Note: For DHCP over MPLS feature to work in StarOS 9.0 onward VRF context must be associated in DHCP service. Without this association the DHCP service using MPLS labels will not be started. |
| Input | Indicates the MPLS labels configured in DHCP service for inward MPLS traffic. Note: For DHCP over MPLS feature to work in StarOS 9.0 onward VRF context must be associated in DHCP service. Without this association the DHCP service using MPLS labels will not be started. |
| Output | Indicates the MPLS labels configured in DHCP service for outward MPLS traffic. |
| DHCP server rapid-commit | Indicates if the rapid commit option is enabled/disabled for DHCP server. |
| DHCP client rapid-commit | Indicates if the rapid commit option is enabled/disabled for DHCP clients. |
| DHCP server check msg size | Indicates if the checking of message size is enabled/disabled for DHCP messages sent from server to client. |
| DHCP relay agent option | Indicates if the DHCP relay agent option is enabled/disabled. |
| DHCP chaddr validation | Indicates the behavior of the client hardware address (chaddr) validation in DHCP messages. |

show dhcp statistics

Table 8: show dhcp statistics Command Output Descriptions

| Field | Description |
|----------------------|--|
| Session Stats | |
| Total Current | The total number of currently active sessions on the system that received DHCP-assigned IP addresses. |
| DHCP Proxy | The total number of currently active sessions that were assigned IP addresses using the DHCP Proxy method. |
| DHCP Relay Agent | The total number of currently active sessions that were assigned IP addresses using the DHCP Relay method. |

| Field | Description |
|--|---|
| DHCP Server | The total number of currently active sessions that were assigned IP addresses using the DHCP Server. |
| Total Setup | The cumulative total number of sessions facilitated by the system that received DHCP-assigned IP addresses. |
| DHCP Proxy | The cumulative total number of sessions facilitated by the system that were assigned IP addresses using the DHCP Proxy method. |
| DHCP Relay Agent | The cumulative total number of sessions facilitated by the system that were assigned IP addresses using the DHCP Relay method. |
| DHCP Server | The cumulative total number of sessions facilitated by the system that were assigned IP addresses using the DHCP Server. |
| Total Released | The total number of IP addresses that have been returned to the DHCP server(s). |
| Session Release Reasons: (dhcp-proxy) | |
| Admin Releases | The number of DHCP Proxy-assigned IP addresses released due to administrative intervention. |
| Bearer Call Terminated | The number of DHCP Proxy-assigned IP addresses released due to session termination. |
| Lease Exp Policy | The number of DHCP Proxy-assigned IP addresses released due to the expiration of the address lease policy. |
| Lease Renew Failure | The number of DHCP Proxy-assigned IP addresses released due to a failure experienced during lease renewal. |
| IP Address mismatch | The number of DHCP Proxy-assigned IP addresses released due to the offering of an invalid IP address. |
| Lease time mismatch | The number of DHCP Proxy-assigned IP addresses released due to the offering of an unacceptable lease time. |
| Chaddr mismatch | The number of DHCP Proxy-assigned IP addresses released due to the mis-match in client hardware address (MAC) or unknown/invalid client hardware address. |
| Client-identifier mis-match | The number of DHCP Proxy-assigned IP addresses released due to the mis-match in client id or unknown/invalid client id. |
| Other Reasons | The number of DHCP Proxy-assigned IP addresses released due to reasons other than those listed here. |
| Session Release Reasons: (dhcp-relay) | |
| Admin Releases | The number of DHCP Relay-assigned IP addresses released due to administrative intervention. |

| Field | Description |
|---|---|
| Bearer Call Terminated | The number of DHCP Relay-assigned IP addresses released due to session termination. |
| Lease Timed-out | The number of DHCP Relay-assigned IP addresses released due to the expiration of the address lease. |
| Other Reasons | The number of DHCP Relay-assigned IP addresses released due to reasons other than those listed here. |
| Session Release Reasons: (dhcp-local-server) | |
| Admin Releases | The number of DHCP local-server-assigned IP addresses released due to administrative intervention. |
| Bearer Call Terminated | The number of DHCP local-server-assigned IP addresses released due to session termination. |
| Lease Timed-out | The number of DHCP local-server-assigned IP addresses released due to the expiration of the address lease. |
| Other Reasons | The number of DHCP local-server-assigned IP addresses released due to reasons other than those listed here. |
| DHCP Messages | |
| DISCOVER TX | The number of DHCPDISCOVER messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER retransmitted | The number of DHCPDISCOVER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER RX | The number of DHCPDISCOVER messages received by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER retried RX | The number of retried DHCPDISCOVER messages received by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER relayed | The number of DHCPDISCOVER messages relayed by the system to the mobile as part of the DHCP Relay method. |
| DISCOVER retransmitted relayed | The number of retransmitted DHCPDISCOVER messages relayed by the system to the mobile as part of the DHCP Relay |
| OFFER RX | The number of DHCPOFFER messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| OFFER Discarded | The number of DHCPOFFER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method. |
| OFFER relayed | The number of DHCPOFFER messages relayed by the system to the mobile as part of the DHCP Relay method. |

| Field | Description |
|--------------------------|---|
| REQUEST TX | The number of DHCPREQUEST messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| REQUEST retransmitted | The number of DHCPREQUEST messages re-sent by the system to the DHCP server as part of the DHCP Proxy method. |
| REQUEST relayed | The number of DHCPREQUEST messages relayed by the system to the mobile as part of the DHCP Relay method. |
| REQUEST renewing relayed | The number of DHCPREQUEST renewal messages relayed by the system to the mobile as part of the DHCP Relay method. |
| ACK RX | The number of DHCPACK messages received from the DHCP server as part of the DHCP Proxy method. |
| ACK for INFORM | The number of acknowledgements received for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| ACK Renewing RX | The number of DHCPACK renewal messages received from the DHCP server as part of the DHCP Proxy method. |
| ACK TX | The number of DHCPACK messages sent to the DHCP server as part of the DHCP Proxy method. |
| ACK Renewing TX | The number of DHCPACK renewal messages sent to the DHCP server as part of the DHCP Proxy method |
| ACK relayed | The number of DHCPACK messages relayed by the system to the mobile as part of the DHCP Relay method. |
| ACK renewing relayed | The number of DHCPACK renewal messages relayed by the system to the mobile as part of the DHCP Relay method. |
| NAK RX | The number of DHCPNAK messages received from the DHCP server as part of the DHCP Proxy method. |
| NAK for INFORM | The number of number of negative acknowledgements for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| NAK TX | The number of DHCPNAK messages sent to the DHCP server as part of the DHCP Proxy method. |
| NAK relayed | The number of DHCPNAK messages relayed by the system to the mobile as part of the DHCP Relay method. |
| DECLINE TX | The number of DHCPDECLINE messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| DECLINE RX | The number of DHCPDECLINE messages received from the DHCP server as part of the DHCP Proxy method. |

| Field | Description |
|------------------------------------|---|
| DECLINE relayed | The number of DHCPDECLINE messages relayed by the system to the DHCP server as part of the DHCP Relay method. |
| RELEASE TX | The number of DHCPRELEASE messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| RELEASE RX | The number of DHCPRELEASE messages received from the DHCP server as part of the DHCP Proxy method. |
| RELEASE relayed | The number of DHCPRELEASE messages relayed by the system to the DHCP server as part of the DHCP Relay method. |
| RELEASE for relay call | The number of DHCPRELEASE messages relayed by the system to the DHCP server as part of the DHCP Relay method. |
| INFORM TX | The number of DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| INFORM retransmitted | The number of DHCPINFORM messages re-sent by the system to the DHCP server as part of the DHCP Proxy method. |
| INFORM RX | The number of DHCPINFORM messages received from the DHCP server as part of the DHCP Proxy method. |
| INFORM relayed | The number of DHCPINFORM messages relayed by the system to the DHCP server on behalf of the mobile as part of the DHCP Relay method. |
| DHCP OFFER Discard Reasons: | |
| Parse error | The number of DHCPOFFER messages discarded by the system due to parsing errors in the OFFER message such as: <ul style="list-style-type: none"> • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message" |
| Lease less than min | The number of DHCPOFFER messages discarded by the system due to the offered lease time being less than the minimum acceptable value configured on the system. |
| Lease greater than max | The number of DHCPOFFER messages discarded by the system due to the offered lease time being greater than the maximum acceptable value configured on the system. |
| IP Validation failed | The number of DHCPOFFER messages discarded by the system due to a failure with the validation of the IP address. This occurs because the IP address returned by DHCP Server is not present in the static pool in the destination context. |

| Field | Description |
|---|---|
| XID mismatch: | The number of DHCP OFFER messages discarded by the system due to an XID mismatch. |
| DHCP ACK Discard Reasons: | |
| Parse error | The number of DHCP ACK messages discarded by the system due to parsing errors in the OFFER message such as: <ul style="list-style-type: none"> • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message" |
| XID mismatch: | The number of DHCP ACK messages discarded by the system due to an XID mismatch. |
| DHCP DECLINE Reasons: (dhcp-proxy) | |
| IP mismatch | The number of DHCP DECLINE messages sent by the system due to a mismatch in the IP address returned in the OFFER and the IP address returned in ACK. A DECLINE message is sent for the IP address sent in the OFFER. |
| DHCP DISCOVER Discard Reasons: | |
| Parse error | The number of DHCP DISCOVER messages discarded by the system due to parsing errors in the OFFER message such as: <ul style="list-style-type: none"> • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message" |
| DHCP REQUEST Discard Reasons: | |
| Parse error | The number of DHCP REQUEST messages discarded by the system due to parsing errors in the OFFER message such as: <ul style="list-style-type: none"> • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message" |
| DHCP RELEASE Discard Reasons: | |

| Field | Description |
|---|---|
| Parse error | The number of DHCPRELEASE messages discarded by the system due to parsing errors in the OFFER message such as: <ul style="list-style-type: none"> • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message" |
| Renewal Statistics: (dhcp-proxy) | |
| IP Lease Renewals | The number of address lease renewal requests successfully processed. |
| Failed IP Lease Renewals | The number of address lease renewal requests for which failures occurred. This is the sum of the following errors: <ul style="list-style-type: none"> • No reply from server • Server NAK • IP address mis-match • Lease mismatch |
| No reply from server | The number of address lease renewal requests made for which there was no reply from the DHCP server within the stipulated time. The time required to wait for the server's response is described in RFC 2131, section 4.4.5. |
| Server NAK | The number of address lease renewal requests for which a negative acknowledgement was received from the server. |
| IP address mis-match | The number of address lease renewal requests for which there was an IP address mis-match condition- the IP Addresses assigned to the client (in the first ACK) and the IP address returned in the successive ACK (in response to lease renewal DHCP REQUEST) did not match. |
| Lease mis-match | The number of address lease renewal requests for which there was a lease time mis-match condition- to be lease returned in the first ACK was within the limits of the DHCP Service Configuration parameters, but the lease returned in the ACK (in response to lease renewal DHCP REQUEST) did not match. |

show dhcp username

Table 9: show dhcp username Command Output Descriptions

| Field | Description |
|---|--|
| User Name | The user name associated with this session. |
| User Address | IP address of the user's PDP context in dotted decimal notation. |
| DHCP Service | The DHCP service name. |
| Server Address | The server address. |
| DHCP Call Type | The DHCP call type. |
| DHCP State | The DHCP state. |
| Lease time received | The IP address lease time received. |
| Lease time remaining | The IP address lease time remaining. |
| Total DHCP sessions matching specified criteria | The total number of DHCP sessions matching specified criteria. |

show dhcp full username

Table 10: show dhcp full username Command Output Descriptions

| Field | Description |
|---------------------|--|
| User Name | The user name associated with this session. |
| User Address | IP address of the user's PDP context in dotted decimal notation. |
| DHCP Service | The DHCP service name. |
| Server Address | The server address. |
| DHCP Chaddr of MS | The Client Hardware (MAC) Address (CHADDR) of MS. |
| Primary DNS Address | Specifies the primary Domain Name Server (DNS) IP address in IPv4 notation. NOTE: This is the DNS/NBNS value received from the DHCP server for the particular subscriber session sent to the subscriber in a GTP Create PDP Context Response message. If the DNS/NBNS value received from DHCP is not sent to the subscriber, nothing will be displayed. |

| Field | Description |
|------------------------|--|
| Secondary DNS Address | Specifies the secondary Domain Name Server (DNS) IP address in IPv4 notation. NOTE: This is the DNS/NBNS value received from the DHCP server for the particular subscriber session sent to the subscriber in a GTP Create PDP Context Response message. If the DNS/NBNS value received from DHCP is not sent to the subscriber, nothing will be displayed. |
| Primary NBNS Address | Specifies the primary NetBIOS Name Server (NBNS) IP address in IPv4 notation. NOTE: This is the DNS/NBNS value received from the DHCP server for the particular subscriber session sent to the subscriber in a GTP Create PDP Context Response message. If the DNS/NBNS value received from DHCP is not sent to the subscriber, nothing will be displayed. |
| Secondary NBNS Address | Specifies the secondary NetBIOS Name Server (NBNS) IP address in IPv4 notation. NOTE: This is the DNS/NBNS value received from the DHCP server for the particular subscriber session sent to the subscriber in a GTP Create PDP Context Response message. If the DNS/NBNS value received from DHCP is not sent to the subscriber, nothing will be displayed. |
| DHCP Call Type | The DHCP call type. |
| DHCP State | The DHCP state. |
| Lease time received | The IP address lease time received. |
| Lease time remaining | The IP address lease time remaining. |
| DHCP Messages: | |
| DISCOVER TX | The number of DHCPDISCOVER messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER retransmitted | The number of DHCPDISCOVER messages retransmitted by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER RX | The number of DHCPDISCOVER messages received by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER retried RX | The number of retried DHCPDISCOVER messages received by the system to the DHCP server as part of the DHCP Proxy method. |
| DISCOVER relayed | The number of DHCPDISCOVER messages relayed by the system to the DHCP server as part of the DHCP Proxy method. |
| OFFER RX | The number of DHCPOFFER messages received by the system to the DHCP server as part of the DHCP Proxy method. |

| Field | Description |
|-----------------------|---|
| OFFER Discarded | The number of DHCPOFFER messages discarded by the system to the DHCP server as part of the DHCP Proxy method. |
| OFFER TX | The number of DHCPOFFER messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| OFFER relayed | The number of DHCPOFFER messages relayed by the system to the DHCP server as part of the DHCP Proxy method. |
| REQUEST TX | The number of DHCPREQUEST messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| REQUEST retransmitted | The number of DHCPREQUEST messages re-sent by the system to the DHCP server as part of the DHCP Proxy method. |
| REQUEST RX | The number of DHCPREQUEST messages received by the system to the DHCP server as part of the DHCP Proxy method. |
| REQUEST renewal RX | The number of DHCPREQUEST renewal messages received by the system to the DHCP server as part of the DHCP Proxy method. |
| REQUEST relayed | The number of DHCPREQUEST messages relayed by the system to the DHCP server as part of the DHCP Proxy method. |
| ACK RX | The number of DHCPACK messages received from the DHCP server as part of the DHCP Proxy method. |
| ACK for INFORM | The number of acknowledgements received for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| ACK TX | The number of DHCPACK messages sent to the DHCP server as part of the DHCP Proxy method. |
| ACK Renewing TX | The number of DHCPACK renewal messages sent to the DHCP server as part of the DHCP Proxy method. |
| ACK relayed | The number of DHCPACK messages relayed by the system to the mobile as part of the DHCP Relay method. |
| NAK RX | The number of DHCPNAK messages received from the DHCP server as part of the DHCP Proxy method. |
| NAK for INFORM | The number of negative acknowledgements for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method. |
| NAK TX | The number of DHCPNAK messages sent to the DHCP server as part of the DHCP Proxy method. |
| NAK relayed | The number of DHCPNAK messages relayed by the system to the mobile as part of the DHCP Relay method. |

| Field | Description |
|---|---|
| DECLINE relayed | The number of DHCPDECLINE messages relayed by the system to the DHCP server as part of the DHCP Relay method. |
| RELEASE relayed | The number of DHCPRELEASE messages relayed by the system to the DHCP server as part of the DHCP Relay method. |
| INFORM relayed | The number of DHCPINFORM messages relayed by the system to the DHCP server on behalf of the mobile as part of the DHCP Relay method. |
| DHCP OFFER Discard Reasons: (dhcp-proxy) | |
| Parse error | The number of DHCPOFFER messages discarded by the system due to parsing errors in the OFFER message such as: <ul style="list-style-type: none"> • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message" |
| Lease less than min | The number of DHCPOFFER messages discarded by the system due to the offered lease time being less than the minimum acceptable value configured on the system. |
| Lease greater than max | The number of DHCPOFFER messages discarded by the system due to the offered lease time being greater than the maximum acceptable value configured on the system. |
| IP Validation failed | The number of DHCPOFFER messages discarded by the system due to a failure with the validation of the IP address. This occurs because the IP address returned by DHCP Server is not present in the static pool in the destination context. |
| DHCP ACK Discard Reasons: (dhcp-proxy) | |
| Parse error | The number of DHCPACK messages discarded by the system due to parsing errors in the OFFER message such as: <ul style="list-style-type: none"> • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message" |
| DHCP DECLINE Reasons: (dhcp-proxy) | |

| Field | Description |
|---|---|
| IP mismatch | The number of DHCPDECLINE messages sent by the system due to a mismatch in the IP address returned in the OFFER and the IP address returned in ACK. A DECLINE message is sent for the IP address sent in the OFFER. |
| IP Lease Renewals | The number of address lease renewal requests successfully processed. |
| Session Counters | |
| Total Current | The total number of currently active sessions on the system that received DHCP-assigned IP addresses. |
| DHCP Proxy | The total number of currently active sessions that were assigned IP addresses using the DHCP Proxy method. |
| DHCP Relay Agent | The total number of sessions that were assigned IP addresses using the DHCP Relay method. |
| DHCP Server | The DHCP server's IP address. |
| Total DHCP sessions matching specified criteria | The total number of DHCP sessions matching specified criteria. |