

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.

Field	Description
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 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: • "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: • "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. • 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.
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	
Parse error	The number of DHCPOFFER messages discarded by the system due to parsing errors in the OFFER message such as: • "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: • "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 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.
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:	

Field	Description
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.
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.

Field	Description
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 DHCPOFFER messages discarded by the system due to parsing errors in the OFFER message such as: • "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)	

Field	Description
Parse error	The number of DHCPACK messages discarded by the system due to parsing errors in the OFFER message such as: • "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: • (P) - DHCP Proxy • (R) - DHCP Relay • (S) - DHCP Server • (u) - unknown call
Lease State	The lease state for the DHCP service.

Field	Description
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: • 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.
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.

Field	Description
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: • 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.
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.
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.

Field	Description
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.
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.

Field	Description
DISCOVER retrasmitted 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.
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.

Field	Description
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.
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: • "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.

Field	Description
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:	
Parse error	The number of DHCPACK messages discarded by the system due to parsing errors in the OFFER message such as: • "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 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.
DHCP DISCOVER Discard Reasons:	
Parse error	The number of DHCPDISCOVER messages discarded by the system due to parsing errors in the OFFER message such as: • "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 DHCREQUEST messages discarded by the system due to parsing errors in the OFFER message such as: • "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: • "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: • 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 dhcpv6 statistics

Field	Description
Session Stats	
Total Current	The total number of active sessions on the system that received DHCPv6-assigne addresses.

Field	Description
DHCP Proxy	The total number of active sessions that are assigned IP addresses using the D Proxy method.
DHCP Server	The total number of active sessions that are assigned IP addresses using the D Server.
DHCP PD	The total number of active sessions that are assigned IP addresses using the D Prefix Delegation.
Radius/SMF PD	The total number of active sessions for Radius/ SMF Prefix Delegation.
Local PD	The total number of active sessions in local Prefix Delegation.
Total Setup	The cumulative total number of sessions facilitated by the system that receiv DHCPv6-assigned IP addresses.
DHCP Proxy	The cumulative total number of sessions facilitated by the system that were a IP addresses using the DHCPv6 Proxy method.
DHCP Server	The cumulative total number of sessions facilitated by the system that were a IP addresses using the DHCP Server.
DHCP PD	The cumulative total number of sessions facilitated by the system that were a IP addresses using the DHCPv6 Prefix Delegation.
Radius/SMF PD	The cumulative total number of sessions facilitated by the system that were a for Radius/ SMF Prefix Delegation.
Local PD	The cumulative total number of sessions facilitated by the system that were a in local Prefix Delegation.
Total Released	The total number of IP addresses that have been returned to the DHCPv6 ser
Session Release Reasons: (dhcp-proxy)	
Admin Releases	The number of DHCPv6 Proxy-assigned IP addresses released due to admin intervention.
Bearer Call Terminated	The number of DHCPv6 Proxy-assigned IP addresses released due to sessio termination.
Lease Exp Policy	The number of DHCPv6 Proxy-assigned IP addresses released due to the ex of the address lease policy.
No Address Available	The number of DHCPv6 Proxy-assigned IP addresses that are not available.
IP Address mismatch	The number of DHCPv6 Proxy-assigned IP addresses released due to the off an invalid IP address.
Unspecified Failure	The number of DHCPv6 Proxy-assigned IP addresses that are failed due to uns reasons.
Not on Link Status	The number of DHCPv6 Proxy-assigned IP addresses that shows not on link

Field	Description
Other Reasons	The number of DHCPv6 Proxy-assigned IP addresses released due to reasons o than those listed here.
Session Release Reasons: (dhcp-prefix-delegation)	
PDNs Released	The number of DHCPv6 Prefix Delegation addresses that were PDNs released du the session.
UE Initiated Release	The number of DHCPv6 Prefix Delegation addresses that were UE initiated rele in the session.
Lease Exp Policy	The number of DHCPv6 Prefix Delegation IP addresses released due to the expira of the address lease policy.
Other Reasons	The number of DHCPv6 Prefix Delegation IP addresses released due to reasons o than those listed here.

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.
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:	

Field	Description
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.
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.

Field	Description
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.
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: • "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)	

Field	Description
Parse error	The number of DHCPACK messages discarded by the system due to parsing errors in the OFFER message such as: • "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 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.