



show ims-authorization

This chapter describes the outputs of the **show ims-authorization** command.

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show ims-authorization policy-control statistics

Table 1: show ims-authorization policy-control statistics Command Output Descriptions

| Field | Description |
|---------------------------|--|
| DPCA Session Stats | |
| Total Current Sessions | The total number of DPCA session currently running on this system. |
| Total IMSA Adds | The total number of IP multimedia subsystem applications (IMSA) added to service. |
| Total DPCA Starts | The total number of Diameter Policy Control Applications (DPCAs) started. |
| Total Fallback Sessions | The total number of Diameter Policy Control Application (DPCA) sessions successfully fallback to PCRF after being with local-policy. |
| Total Secondary Create | The total number of secondary contexts created. Important This field is no longer available in 14.0 and later releases. |

| Field | Description |
|---------------------------|--|
| Total Secondary Terminate | The total number of secondary contexts deleted. Important This field is no longer available in 14.0 and later releases. |
| Total Session Updates | The total number of updates applied for session/s. Important This field is not available in 14.0 release. |
| Total Terminated | The total number of Diameter Policy Control Application sessions terminated. |
| DPCA Session Failovers | The total number of Diameter Policy Control Application sessions failed. |
| DPCA Message Stats | |
| Total messages Received | Total policy control messages received for IMS authorization policy control. |
| Total Messages Sent | Total messages sent to IMS authorization policy control server. |
| Total CCR | Total Credit Control Request (CCR) messages received. |
| Total CCA | Total Credit Control Answer (CCA) messages sent in response to CCRs. |
| CCR-Initial | Total number of initial CCR messages received. |
| CCA-Initial | Total number of initial CCA messages sent in response to initial CCR messages. |
| CCA-Initial Accept | Total number of initial CCA messages accepted in response to initial CCR messages. |
| CCA-Initial Reject | Total number of initial CCA messages rejected in response to initial CCR messages. |
| CCA-Initial Dropped | Total number of CCA-I messages which are dropped due to S-GW restoration, DPCA is off or not present or if the IMSA session is in preservation mode. |
| CCA-Initial Timeouts | Total number of initial CCA messages timed out in response to initial CCR messages. |
| CCR-Update | Total number of Credit Control Request (CCR) messages received after initial CCR for update. |
| CCA-Update | Total Credit Control Answer (CCA) messages sent in response to update CCRs. |
| CCA-Update Timeouts | Total Credit Control Answer (CCA) messages sent in response to update CCRs but timed out. |

| Field | Description |
|------------------------|--|
| CCA-Update Errors | Total number of errors in parsing the CCA-Update Message. |
| CCA-Update Dropped | Total number of CCA-U messages which are dropped due to S-GW restoration, DPCA is off or not present or if the IMSA session is in preservation mode. |
| CCR-Final | Total number of final CCR messages received to end application. |
| CCA-Final | Total number of final CCA messages sent in response to final CCR messages to end session/s. |
| CCA-Final Timeouts | Total number of final CCA messages sent in response to final CCR messages to end session/s but timed out. |
| CCA-Final Errors | Total number of errors in parsing the CCA-Terminate Message. |
| CCA-Final Dropped | Total number of CCA-T messages which are dropped due to S-GW restoration, DPCA is off or not present or if the IMSA session is in preservation mode. |
| ASR | Total number of Abort-Session-Requests (ASRs) received. |
| ASA | Total number of Abort-Session-Accept (ASA) messages sent in response to Abort-Session-Requests (ASRs). |
| RAR | Total number of Re-Auth-Requests (RARs) received for re-authorization. |
| RAA | Total number of Re-Auth-Requests (RARs) answered with Re-Auth-Answer (RAA) message. |
| RAR-CCR collision | Total number of Re-Auth-Request (RAR) messages received from PCRF when there is any outstanding Credit Control Request (CCR) message. |
| IRAT RAR Reject | The total number of DPCA Re-Auth-Accept messages sent in response to Re-Auth-Request (RAR) messages received from PCRF during S2b handoff. |
| CCA Parse Failure | |
| CCA-Initial Failure | This is the counter incremented when failure cb is invoked for CCR-Initial due to parse error at diabase. |
| CCA-Update Failure | This is the counter incremented when failure cb is invoked for CCR-Update due to parse error at diabase. |
| CCA-Final Failure | This is the counter incremented when failure cb is invoked for CCR-Final due to parse error at diabase |
| SGW Restoration | |

| Field | Description |
|---------------------------------|---|
| RAR Reject | The total number of RAR messages that were not processed during S-GW restoration. That is, the total number of RAR messages from the PCRF, that were rejected with result-code 5012 (UNABLE_TO_COMPLY). |
| RAR Accepted | |
| Rule Removals | The total number of times the P-GW accepted RAR with rule removals from the PCRF during S-GW Restoration. |
| Session Release | The total number of times the P-GW accepted RAR with Session Release Cause from the PCRF during S-GW Restoration. |
| CCA-U Dropped | The total number of times that the P-GW dropped CCA-U during S-GW Restoration. |
| CCA-U Accepted | |
| Rule Removals | The total number of times that the P-GW accepted CCA-U with rule removals from the PCRF during S-GW Restoration. |
| Session Release | The total number of times the P-GW accepted CCA-U with Session Release Cause from the PCRF during S-GW Restoration. |
| Internal Updates Dropped | |
| Revalidation Timeout | The total number of DPCA messages that were not sent towards PCRF due to the expiry of revalidation timer when S-GW is down. |
| Pending Updates | The total number of CCR-U's that were dropped when S-GW is down and update is received from SM/ECS. |
| Sync Request | The total number of messages that were dropped when S-GW is down and the session sync request is received. |
| SGW Restoration Reported | |
| RAA Sent | The total number of times S-GW restoration reported in RAA to the PCRF during S-GW Restoration. |
| CCR-U Sent | The total number of times that S-GW restoration reported in CCR-U to the PCRF during S-GW Restoration. |
| DPCA Message Error Stats | |
| Diameter Protocol Errs | Total number of errors related to Diameter protocol. |
| Bad Answers | Total number of errors related to invalid response/answers. |
| Unknown Session Reqs | Total number of errors related to unknown session requests. |
| Unknown Command Code | Total number of errors related to unknown command codes. |
| Unsupported Command Code | Total number of errors related to unsupported command codes. |

| Field | Description |
|---|---|
| Unk Failure Handling | Total number of errors related to unknown handling of failures. |
| DPCA Termination Cause Stats | |
| Diameter Logout | Total number of DPCA session termination due to Diameter logout. |
| Service Not Provided | Total number of DPCA session termination due to unavailability of service. |
| Bad Answer | Total number of DPCA sessions terminated due to invalid/bad response reason. |
| Administrative | Total number of DPCA sessions terminated due to administrative reasons. |
| Link Broken | Total number of DPCA sessions terminated due to link broken. |
| Auth Expired | Total number of DPCA sessions terminated due to authorization expired. |
| User moved | Total number of DPCA sessions terminated as subscriber/user moved to unknown/non-service area. |
| Session Timeout | Total number of DPCA sessions terminated due to timed out reason. |
| Auth Rejected | Total number of DPCA sessions terminated due to authorization rejected. |
| Other Errors | Total number of DPCA sessions terminated due to unknown reasons or reasons not listed in this list. |
| DPCA Experimental Result Code Stats: | Statistics of the number of times the specific Experimental-Result-Code value was received in the Diameter Gx Credit-Control-Answer (CCA) from the PCRF per IMSA service. |
| Error Initial Parameters | The number of times DIAMETER_ERROR_INITIAL_PARAMETERS (5140) Experimental-Result-Code value was received in the Diameter Gx CCA. |
| Error Trigger Event | The number of times DIAMETER_ERROR_TRIGGER_EVENT (5141) Experimental-Result-Code value was received in the Diameter Gx CCA. |
| Bearer Not Authorized | The number of times DIAMETER_ERROR_BEARER_NOT_AUTHORIZED (5143) Experimental-Result-Code value was received in the Diameter Gx CCA. |

| Field | Description |
|---------------------------|--|
| Traffic Mapping Rejected | The number of times DIAMETER_ERROR_TRAFFIC_MAPPING_INFO_REJECTED (5144) Experimental-Result-Code value was received in the Diameter Gx CCA. |
| PCC Rule Event | The number of times DIAMETER_PCC_RULE_EVENT (5142) Experimental-Result-Code value was sent in the Diameter Gx Re-Auth-Request (RAR). |
| Conflicting Request | This error is used when the PCRF cannot accept the UE-initiated resource request as a network-initiated resource allocation is already in progress with packet filters that cover the packet filters in the received UE-initiated resource request. |
| Bearer Event | This error is used when a PCC rule for some reason cannot be enforced or modified successfully in a network initiated procedure. |
| Bad Exp Result Code | The number of times an unknown Experimental-Result-Code value (apart from the ones recognized in CCA that are listed above PCC Rule Event) was received in the Diameter CCA. |
| PCRF Too Busy | This error is used when the PCRF is unable to process the CCR message due to transient failures. |
| Pending-Trans-Sent | The total number of times the Experimental Result Code DIAMETER_PENDING_TRANSACTION (4198) is sent to the server. |
| Pending-Trans-rcvd | The total number of times the Experimental Result Code DIAMETER_PENDING_TRANSACTION (4198) is received from the server. |
| Session Recovery Req | The total number of times the session recovery request experimental result code is received from PCRF. |
| Diameter Overload Control | The total number of times the Experimental-Result-code (5198 - DIAMETER_OVERLOAD_RETRY_NOT_ALLOWED_TO_ANY) is received from the PCRF. This result code is used to indicate that all the nodes connected behind the Diameter Agent are overloaded and that the client (ePDG and P-GW) should not attempt the message on the alternate connection. |
| Newer Session Detected | The total number of times the Experimental-Result-code (5199 - DIAMETER_NEWER_SESSION_DETECTED) is received from the PCRF. When the response message is received with 5199 result code, the Diameter application does not retry to a secondary AAA server. If the Experimental Result-Code 5199 is received in Assume Positive mode, then the current call is terminated. |

| Field | Description |
|--|--|
| Gx APN Change | The total number of times the Experimental-Result-code (5999 - DIAMETER_GX_APN_CHANGE) is received from the PCRF. This result code is sent when Virtual APN is selected through PCRF. |
| Diameter Overload Control Stats: | |
| CCA-Initial | The total number of times the Experimental-Result-code (5198 - DIAMETER_OVERLOAD_RETRY_NOT_ALLOWED_TO_ANY) is received in CCA-I. |
| CCA-Update | The total number of times the Experimental-Result-code (5198 - DIAMETER_OVERLOAD_RETRY_NOT_ALLOWED_TO_ANY) is received in CCA-U. |
| CCA-Terminate | The total number of times the Experimental-Result-code (5198 - DIAMETER_OVERLOAD_RETRY_NOT_ALLOWED_TO_ANY) is received in CCA-T. |
| Session Sync Request Stats: | |
| RAR | The total number of times the RARs in which the session sync request is received. |
| CCA | The total number of times the CCAs in which the session sync request is received. |
| DPCA FH Retry Server On Event | |
| Important The counters under "DPCA FH Retry Server On Event" will not be incremented if the message is sent or received after session recovery/ICSR switchover. | |
| CCR-Update | The total number of times the CCR-U is sent out after Failure-Handling action " continue retry-server-on-event " is applied. |
| CCR-Terminate | The total number of times the CCR-T is sent out after Failure-Handling action " continue retry-server-on-event " is applied. |
| RAR | The total number of times the RAR is received after Failure-Handling action " continue retry-server-on-event " is applied. |
| Session Release Cause | |
| CCA | |
| Unspecified Reason | The total number of IP CAN sessions terminated because of Session Release Cause "Unspecified Reason" received in CCA. |

| Field | Description |
|------------------------------------|--|
| UE Subscription Changed | The total number of IP CAN sessions terminated because of Session Release Cause "UE Subscription Changed" received in CCA. |
| Insuffct Srvr Resource | The total number of IP CAN sessions terminated because of Session Release Cause "Insufficient Server Resources" received in CCA. |
| RAR | |
| Unspecified Reason | The total number of IP CAN sessions terminated because of Session Release Cause "Unspecified Reason" received in RAR. |
| UE Subscription Changed | The total number of IP CAN sessions terminated because of Session Release Cause "UE Subscription Changed" received in RAR. |
| Insuffct Srvr Resource | The total number of IP CAN sessions terminated because of Session Release Cause "Insufficient Server Resources" received in CCA. |
| DPCA Failure Handling Stats | |
| Connection Based FH | |
| Total FH Triggered | Total number of times when ims-auth-service Failure Handling is triggered. |
| Total Message Timeouts | Total number of response message timeouts, i.e. PCRF failed to respond within the configured timeout value. |
| CCA-Initial | Response to the CCR-I message was timed out. |
| CCA-Update | Response to the CCR-U message was timed out. |
| CCA-Terminate | Response to the CCR-T message was timed out. |
| Total Message Send Errs | Total number of requests failed to be sent due to socket based send errors. |
| CCR-Initial | CCR-I failed to be sent due to socket based errors. |
| CCR-Update | CCR-U failed to be sent due to socket based errors. |
| CCR-Terminate | CCR-T failed to be sent due to socket based errors. |
| Result Code Based FH | |
| Configured Result Code | Failure handling being undertaken due to configured result code range. |
| CCA-Initial | Failure handling being undertaken due to configured result code range for CCA-Initial messages. |

| Field | Description |
|--------------------------------------|--|
| CCA-Update | Failure handling being undertaken due to configured result code range for CCA-Update messages. |
| CCA-Terminate | Failure handling being undertaken due to configured result code range for CCA-Terminate messages. |
| Unh and Unk Result Code | Failure handling being undertaken due to a result code which is neither defined in the diameter or customer specs. |
| CCA-Initial | Failure handling being undertaken due to unknown result code for CCA-Initial messages. |
| CCA-Update | Failure handling being undertaken due to unknown result code for CCA-Update messages. |
| CCA-Terminate | Failure handling being undertaken due to unknown result code for CCA-Terminate messages. |
| FH Behavior | |
| Continue | Total number of times the failure handling action "continue" has been undertaken. |
| Retry-And-Continue | Total number of times the failure handling action "retry-and-continue" has been undertaken. |
| CCR on Call Terminate | Total number of times the failure handling action "continue" has been undertaken and CCR-T has been sent to PCRF on call termination. |
| Continue-Without-Retry | Total number of times the failure handling action "continue-without-retry" has been undertaken. This failure action implies that the IMSA call will be continued without retrying to the secondary PCRF. |
| Continue-With-Fallback | Total number of times the failure handling action "continue-with-fallback" has been undertaken. This failure action implies that the IMSA call will be continued with the PCC rules defined in local policy. |
| Continue-With-Fallback Without Retry | Total number of times the failure handling action "continue-fallback-wo-retry" has been undertaken. This failure action implies that the IMSA call will be continued with the PCC rules defined in local policy without retrying to the secondary PCRF server. |
| Retry Server On Event | Total number of times the failure-handling action "continue retry-server-on-event" has been undertaken. |
| Retry and Terminate | |
| Retry-And-Terminate | Total number of times the failure handling action "retry-and-terminate" has been undertaken. |

| Field | Description |
|------------------------------|---|
| Retry Term without CCRT | Total number of times the failure handling action "retry-and-terminate" has been undertaken without sending CCR-T to PCRF on call termination. |
| Retry same server | Total number of times the failure handling action "retry-and-terminate" has been applied to retry to the same server within a configurable timer. |
| Termination | |
| Terminate | Total number of times the failure handling action "terminate" has been undertaken. |
| Terminate without CCRT | Total number of times the failure handling action "terminate" has been undertaken without sending CCR-T to PCRF on call termination. |
| Local Fallback Cause Stats | Displays the reason for fallback to local-policy. |
| Tx-expiry | Total number of the times the OCS server is unreachable due to Tx expiry. |
| Request-timeout | Total number of the times the OCS server is unreachable due to request timeout. |
| Diabase error | Total number of the times the OCS server is unreachable due to Diabase error. |
| Result-code error | Total number of the times the OCS server is unreachable due to Result code errors. |
| Peer Switches | |
| Attempted Switches | Total number of peer switches attempted. |
| Successful Switches | Total number of peer switches successful. |
| Switches-Tx timeout | Total number of peer switches due to timeout expiry. |
| Switches-RAR change | Total number of peer switches due to RAR from secondary server. |
| CCA Result Code Stats | |
| Result Code 2xxx | Total number of CCA messages that have been received with result code 2xxx for Gx. |
| Result Code 3xxx | Total number of CCA messages that have been received with result code 3xxx for Gx. |
| Result Code 4xxx | Total number of CCA messages that have been received with result code 4xxx for Gx. |

| Field | Description |
|---------------------------|---|
| Result Code 5xxx | Total number of CCA messages that have been received with result code 5xxx for Gx. |
| Other Result Code | Total number of CCA messages that have been received with other result codes for Gx. |
| Backpressure Stats | |
| CCR-I Backpressure Stats | |
| Messages | Total number of CCR-I messages that are in backpressure state. |
| Failures | Total number of times the application fails to create a CCR-I message due to no TCP connection when the messages are in backpressure state. |
| Sess-Id Recovery Failures | Total number of times the CCR-I message is sent before recovering the session ID when the call is running in proxy mode and session recovery happens. |
| CCR-U Backpressure Stats | |
| Messages | Total number of CCR-U messages that are in backpressure state. |
| Failures | Total number of times the application fails to create a CCR-U message due to no TCP connection when the messages are in backpressure state. |
| Max Retry | Total number of times the max retries have been attempted when the CCR-U message is in backpressure state. |
| Dropped Messages | Total number of CCR-U request messages that are dropped when there are already some messages in backpressure state. |
| Sess-Id Recovery Failures | Total number of times the CCR-U message is sent before recovering the session ID when the call is running in proxy mode and session recovery happens. |
| CCR-T Backpressure Stats | |
| Messages | Total number of CCR-T messages that are in backpressure state. |
| Failures | Total number of times the application fails to create a CCR-T message due to no TCP connection when the messages are in backpressure state. |
| Sess-Id Recovery Failures | Total number of times the CCR-T message is sent before recovering the session ID when the call is running in proxy mode and session recovery happens. |
| RAA Result Code Stats | |

| Field | Description |
|---------------------------------|--|
| Result Code 2xxx | Total number of RAA messages that are received with the result-code between 2000 and 2999 |
| Result Code 3xxx | Total number of RAA messages that are received with result-code between 3000 to 3999. |
| Result Code 4xxx | Total number of RAA messages that are received with result-code between 4000 to 4999. |
| Result Code 5xxx | Total number of RAA messages that are received with result-code between 5000 to 5999. |
| Other Result Code | Total number of RAA messages that are received with result-code other than the range of 2xxx to 5xxx. |
| Responses in Queue | |
| Current Responses in Queue | Total number of out of order responses present in queue across all sessions at current time. |
| Purged Responses | Total number of responses purged without sending to the session manager. |
| Total Response in Queue | Total number of responses that are buffered in the queue. |
| Requests in Queue for LP | |
| Current Requests in Queue | Total number of requests present in the queue which are yet to be sent to Local Policy module. |
| Purged Requests | Total number of requests purged without sending to Local Policy. |
| Total Requests Fwd to LP | Total number of outstanding requests forwarded to Local Policy. |
| Session Recovery Failure | |
| Resource Limitation | Total number of times the rule installation failed due to the resource limitation i.e. when received string is more than expected size like redirecturlen more than 512. |
| Unknown Bearer ID | Total number of times the rule installation failed due to unknown bearer ID. |
| Invalid QCI | Total number of times the rule installation failed due to invalid QCI. |
| Invalid ARP | Total number of times the rule installation failed due to invalid ARP. |
| Bearer-Id in QoS | Total number of times the rule installation failed due to a mismatch in the bearer ID present in QoS flow. |
| Session Recovery Failure | |

| Field | Description |
|------------------|---|
| Activate-LP-Rule | Indicates the total number of times lp-activate-rules session recovery or ICSR recovery failed. |

show ims-authorization policy-gate status full



Important This command is no longer an option in StarOS release 11.0 and beyond.

Table 2: show ims-authorization policy-gate status full Command Output Descriptions

| Field | Description |
|---------------|--|
| CallID | Specifies Call Identifier. |
| IMSI | Specifies International Mobile Subscriber Identity (IMSI) of subscriber. |
| NSAPI | Specifies Network Service Access Point Identifier (NSAPI) to a single PDP context of the subscriber. |
| Charging Rule | Specifies dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service. |
| Precedence | Displays the precedence of the dynamic charging rule applicable to specific flow. |
| Flow Status | Specifies the status of flow with specific charging rule. Possible states are: <ul style="list-style-type: none"> • Open • Closed • Dormant |
| Flow Dir | Specifies the direction of flow with specific dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service. Possible states are: <ul style="list-style-type: none"> • Uplink • Downlink |
| Source Addr | Specifies the source IP address of flow with specific dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service. |

| Field | Description |
|-----------------------|--|
| Source Addr Mask | Specifies the masking of source IP address of flow with specific dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service. |
| Destination Addr | Specifies the destination IP address of flow with specific dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service. |
| Destination Addr Mask | Specifies the masking of destination IP address of flow with specific dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service. |
| Source Port | Specifies the IP port of flow origin with specific dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service. |
| Destination Port | Specifies the destination IP port of flow end with specific dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service. |

show ims-authorization policy-gate counters all



Important This command is no longer an option in StarOS release 11.0 and beyond.

Table 3: show ims-authorization policy-gate counters all Command Output Descriptions

| Field | Description |
|--------------------|---|
| CallID | Specifies Call Identifier. |
| IMSI | Specifies International Mobile Subscriber Identity (IMSI) of subscriber. |
| NSAPI | Specifies Network Service Access Point Identifier (NSAPI) to a single PDP context of the subscriber. |
| Charging Rule | Specifies dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service. |
| Gate State changed | Displays the change state of policy gate for specific subscriber flow. Possible values are: <ul style="list-style-type: none"> • 0: No change • 1: Changed |

| Field | Description |
|--------------------------|--|
| Uplink Pkts Statistics | Displays the statistics of packets in uplink direction. |
| Downlink Pkts Statistics | Displays the statistics of packets in downlink direction. |
| Pkts processed | Displays the total number of packets received and processed. |
| Bytes processed | Displays the total number of bytes received and processed. |
| Pkts dropped | Displays the total number of packets received but dropped. |
| Bytes dropped | Displays the total number of bytes received but dropped. |

show ims-authorization servers

Table 4: show ims-authorization servers ims-auth-service Command Output Descriptions

| Field | Description |
|--------------------------------------|---|
| Service Name | IMS authorization service name. |
| IMS Authorization Server | IMS authorization server name. |
| Server Type | IMS Authorization server type. It may be Policy, Charging, or both. |
| PCRF host | Identifies the Policy Control and Charging Rules Function (PCRF) host. |
| Operational State | Indicates operational state of the authorization server. |
| Server Session State | Indicates authorization server session state. |
| Server Statistics | Indicates authorization server session statistics. |
| Session Active | Total number of active authorization server sessions. |
| Session Opened | Total number of opened authorization server sessions. |
| Session Closed | Total number of closed authorization server sessions. |
| Sessions switched due to Tx Expiry | Total number of sessions switched due to transmission expiry. |
| Sessions switched due to reselection | Total number of sessions switched due to re-selection of authorization servers. |
| Server Up -> down indications | Total number of servers going to down state from up state. |
| Pending-Transactions | |

| Field | Description |
|---|---|
| RAA sent | Total number of times the Experimental Result Code DIAMETER_PENDING_TRANSACTION (4198) is sent to the server. |
| CCA rcvd | Total number of times the Experimental Result Code DIAMETER_PENDING_TRANSACTION (4198) is received from the server. |
| Session Recovery Request | |
| CCA rcvd | Total number of times the session recovery request is received in CCA. |
| CCR sent | Total number of times the subsequent CCR updates are sent in session recovery request. |
| Session Sync Request | |
| RAR rcvd | Total number of times the session sync request is received in RAR. |
| CCA rcvd | Total number of times the session sync request is received in CCA. |
| CCR sent | Total number of times the subsequent CCR updates are sent in session sync request. |
| Total servers matching specified criteria | Total number of servers matching the specified criteria. |

show ims-authorization service name

Table 5: show ims-authorization service name Command Output Descriptions

| Field | Description |
|--------------------------------|---|
| IMS Authorization Service Name | Name of IMS authorization service name. |
| Context | Name of the context in which IMS authorization service is configured. |
| Service State | State of the IMS authorization service. |
| Service mode | Mode of IMS authorization service for policy and charging. |
| Binding Mechanism | Describes the mechanism on the control of bearer resources based on a binding mechanism that binds one or more service to a bearer. |

| Field | Description |
|--|---|
| QoS Update Timeout | Specifies the timeout duration in seconds to discard QoS update request. NOTE: QoS Update Timeout is no longer shown in StarOS release 11.0 and beyond. |
| Reauth Trigger | Specifies the Re-authorization trigger's status. |
| P-CSCF Discovery | Specifies the configured route-table applicable for Proxy-Call Session Control Function (P-CSCF) discovery. |
| P-CSCF Selection Table[<i>n</i>] | Specifies the configured selection table information for Proxy-Call Session Control Function (P-CSCF) server selection. This table includes information on the configured row precedence, primary and secondary IP address, and the weight. [<i>n</i>] indicates the selection table number. |
| Tertiary IPV4 Addr: | The IPv4 Tertiary Address. |
| Tertiary IPV6 Addr: | The IPv6 Tertiary Address. |
| Primary IPV4 Addr: | The IPv4 Primary Address. |
| Primary IPV6 Addr: | The IPv6 Primary Address. |
| Secondary IPV4 Addr: | The IPv4 Secondary Address. |
| Secondary IPV6 Addr: | The IPv4 Secondary Address. |
| Diameter Policy Control | |
| Specifies Diameter Policy Control related configuration and information. | |
| Endpoint | Specifies Diameter endpoint name for Diameter Policy Control. |
| Origin-Realm | Specifies Diameter origin domain name for Diameter Policy Control. |
| Dictionary | Specifies the configured applicable dictionary for Diameter Policy Control. |
| Update-Dictionary-Avps | Indicates whether the 3GPP Rel. 8 AVPs, 3GPP Rel. 9 AVPs are selected for encoding. |
| Supported Features | Displays the information about the supported features that are configured. |
| Request Timeout | Indicates the configured request timeout value. |
| Endpoint Peer Select | Indicates the configuration of endpoint peer selection at Database. |
| Extended-bw-nr | Enables the extended bandwidth with new radio feature support on Gx interface. |

| Field | Description |
|-----------------------------------|---|
| Reauth Trigger | Indicates the re-authorization trigger status. |
| Custom Reauth Trigger | Indicates enabled custom reauth event triggers. |
| Failure Handling | Specifies the configured mechanism for failure handling in Diameter Policy Control. |
| Peer Switch | Specifies the status of Peer switching for in Diameter Policy Control. Important This field has been deprecated in 8.1 and later releases. |
| Local Policy Service | Specifies the configured local policy service name. |
| Host Selection | Specifies host selection mechanism with selection table. |
| Host Reselection Subscriber Limit | Specifies the limit of subscriber bind to specific host origin to trigger re-selection of host. |
| Host Reselection Interval | Specifies time interval to trigger host re-selection for subscriber. |
| Sgsn Change Reporting | Specifies whether or not the feature, to report SGSN-Address AVP in CCR-I messages during GnGp scenario, is configured. |
| Session-Id Mismatch Clear Session | Specifies whether or not the feature, to delete session ID mismatched subscriber sessions during ICSR switchovers or process failures, is configured. For more information on this feature, see the <i>Gx Interface Support</i> chapter in the administration guide for the product you are deploying. |
| 3GPP R9 Flow Direction Compliance | Specifies whether or not the feature, to enable Rel.9 changes for Flow-Description, TFT-Filter, and Packet-Filter-Content AVPs, is configured. For more information on this feature, see the <i>Gx Interface Support</i> chapter in the administration guide for the product you are deploying. |
| Host Selection Table[<i>n</i>] | Specifies the configured selection table information for host server selection. [<i>n</i>] indicates the selection table number. |
| Precedence | Specifies the precedence applicable. |
| Primary Host | Specifies the primary name/IP address the host. |
| Secondary Host | Specifies the secondary name/IP address of the host. |
| multiple-pra | Multiple Presence Reporting Area Information Reporting. |

show ims-authorization service name p-cscf all

Table 6: show ims-authorization service name p-cscf all Command Output Descriptions

| Field | Description |
|---|---|
| Server | Name of the Proxy-Call Session Control Function (P-CSCF) server. |
| Active Sessions | Number of active PDN sessions served per allocated P-CSCF IPv4/IPv6 address pair (primary and secondary servers). |
| Total servers matching specified criteria | Displays the total number of servers matching the specified criteria. |

show ims-authorization service statistics

Table 7: show ims-authorization service statistics Command Output Descriptions

| Field | Description |
|---|--|
| IMS Auth Service Statistics Summary | |
| Important In StarOS release 14.0 and later, all these statistics will be incremented per control session (subscriber). | |
| Total Services | Total number of IMS authorization services running in the system. |
| Control Session Statistics | |
| Current Active | Total number of current sessions that are active. |
| Total Setup | Total number of sessions set up. |
| Auth Session | |
| Current Active | Total number of current sessions that are active. |
| Current Fallback Session | Total number of the sessions that are currently in local-fallback state. |
| Current PCRF Session | Total number of the sessions that are currently associated with PCRF. |
| Total Attempted | Total number of authorization sessions attempted. |
| Total Setup | Total number of sessions set up. |
| Total Failed | Total number of failed sessions. |
| Total Released | Total number of released sessions. |

| Field | Description |
|-------------------------------|--|
| Total Fallback | Total number of sessions which fell back to the local policy. |
| Setup Failures | |
| Auth Failure | Total number of authorization failures. |
| PCRF Not Up | Total number of failures due to PCRF being down. |
| PCRF Selection Error | Total number of failures due to PCRF selection errors. |
| Table Change Init | Total number of failures due to table change initialization. |
| Server Discovery Failure | Total number of failures due to server discovery failure. |
| Session Releases | |
| Normal Released | Total number of normal session releases. |
| Abnormal Released | Total number of abnormal session releases. |
| Session Terminated | Total number of sessions aborted. |
| PCRF Down | Total number of sessions terminated when PCRF is not responding |
| Admin Release | Total number of sessions releases initiated by Administrator. |
| Server Re-selection | Total number of sessions terminated due to the server reselection. |
| Unusual Release | Displays the unusual logs. This counter will be incremented in places where ASSERT is replaced with call drop. Important This counter will NOT be displayed if "service name" filter is given to the CLI command, as the counter is incremented per IMSA instance. |
| Initial Authorization | |
| Total Attempts | Total number of initial authorization attempts. |
| Total Successful | Total number of successful initial authorization attempts. |
| Total Failed | Total number of failed initial authorization attempts. |
| Authorization Failures | |
| Diameter Errors | Total number of authorization failures due to Diameter errors. |
| Policy Enforcement | Total number of authorization failures due to policy enforcement. |
| Validation Failure | Total number of authorization failures due to validation failure. |
| UE Not Served Reject | Total number of rejections due to PCRF reselection failures. |
| Re-Authorization | |

| Field | Description |
|----------------------------------|--|
| Total Attempts | Total number of re-authorization attempts. |
| Total Successful | Total number of successful reauthorization attempts. |
| Total Failed | Total number of failed re-authorization attempts. |
| Local-Fallback | |
| CCRU received | Total number of CCR-Us received when the call is with local-policy. |
| RAR received | Total number of RARs received when the call is with local-policy. |
| Re-Authorization Failures | |
| Validation Failure | Total number of validation failures. |
| Re-Authorization Triggers | |
| SGSN Change | Total number of re-authorizations triggered due to change in SGSN for subscriber node. |
| PLMN Change | Total number of re-authorizations triggered due to change in Public Land Mobile Network (PLMN). |
| RAT Change | Total number of re-authorizations triggered due to change in Radio Access Type (RAT) of subscriber node. |
| TFT Change | Total number of re-authorizations triggered due to change in Traffic Flow Template (TFT) of subscriber session. |
| TFT Delete | Total number of re-authorizations triggered due to deletion of TFT of subscriber session. NOTE: TFT Delete is no longer shown in StarOS release 11.0 and beyond. |
| Bearer Recovery | Total number of re-authorizations triggered due to bearer or service recovery after loss of bearer or service. |
| Bearer Loss | Total number of re-authorizations triggered due to loss of bearer or service. |
| QoS Change | Total number of re-authorizations triggered due to change in Quality of Service (QoS) level/rating of subscribers. |
| Policy Failure | Total number of re-authorizations triggered due to failure of credit and charging policy. |
| IP-CAN Change | Total number of re-authorizations triggered due to IP-CAN changes. |
| Resources Limitation | Total number of re-authorizations triggered due to resource limitations. |

| Field | Description |
|---------------------------|---|
| Max Num of Bearers Rchd | Total number of re-authorizations triggered due to maximum number of bearers allowed. |
| QoS Chng Exceeding Auth | Total number of re-authorizations triggered due to QoS Change exceeding authorization. |
| RAI Change | Total number of re-authorizations triggered due to RAI changes. |
| User Location Change | Total number of re-authorizations triggered due to user location changes. |
| TAI Change | Total number of times P-GW has reported TAI_CHANGE (26) event trigger to PCRF. This field is added in support of TAI and ECGI Change Reporting feature. |
| ECGI Change | Total number of times P-GW has reported ECGI_CHANGE (27) event trigger to PCRF. This field is added in support of TAI and ECGI Change Reporting feature. |
| PCRF Triggered ReAuth | Total number of re-authorizations triggered due to PCRF triggered reauthorization. |
| Preservation Changed | Total number of re-authorizations triggered due to preservation changes. |
| Reactivation Changed | Total number of re-authorizations triggered due to reactivation changes. |
| Revalidation Timeout | Total number of re-authorization messages that are sent to PCRF because of "REVALIDATION_TIMEOUT" event trigger. |
| AN GW Changed | Total number of re-authorization messages that are sent to PCRF because of "AN_GW_CHANGE" event trigger. |
| Out Of Credit Reauth | Total number of re-authorization messages that are sent to PCRF because of "OUT_OF_CREDIT" event trigger. |
| Reallocation Of Credit | Total number of re-authorization messages that are sent to PCRF because of "REALLOCATION_OF_CREDIT" event trigger. |
| Def EPS Bearer QoS Chng | Total number of re-authorization messages that are sent to PCRF because of "DEFAULT_EPS_BEARER_QOS_CHANGE" event trigger. |
| Successful Resource Alloc | Total number of re-authorization messages that are sent to PCRF because of "SUCCESSFUL_RESOURCE_ALLOCATION" event trigger. |
| Usage Report | Total number of re-authorization messages that are sent to PCRF because of "USAGE_REPORT" event trigger. |

| Field | Description |
|-------------------------------|--|
| Service Flow Detection | Total number of re-authorization messages that are sent to PCRF because of "SERVICE_FLOW_DETECTION" event trigger. |
| UE Timezone Change | Total number of re-authorization messages that are sent to PCRF because of "UE_TIME_ZONE_CHANGE" event trigger. |
| UE IP Address Allocate | Total number of re-authorization messages that are sent to PCRF because of "UE_IP_ADDRESS_ALLOCATE" event trigger. |
| UE IP Address Release | Total number of re-authorization messages that are sent to PCRF because of "UE_IP_ADDRESS_RELEASE" event trigger. |
| Resource Modification Req | Total number of reauthorization messages (CCR-U) that are sent to PCRF because of "RESOURCE_MODIFICATION_REQUEST" event-trigger. |
| APN AMBR Modification Failure | Total number of reauthorization messages (CCR-U) that are sent to PCRF because of "APN_AMBR_MODIFICATION_FAILURE" event trigger. |
| Def Bearer QOS Mod Failure | Total number of reauthorization messages (CCR-U) that are sent to PCRF because of "DEFAULT_EPS_BEARER_QOS_MODIFICATION_FAILURE" event trigger. |
| Tethering Flow Detected | Total number of reauthorization messages (CCR-U) that are sent to PCRF because of "TETHERING_FLOW_DETECTED" event trigger. Important This field is customer-specific. For more information, contact your local Cisco account representative. |
| Chrg Correlation Exchange | Total number of reauthorization messages (CCR-U) that are sent to PCRF because of "CHARGING_CORRELATION_EXCHANGE" event trigger. |
| Access Network Info Report | Total number of CCR-U's sent to PCRF because of "ACCESS_NETWORK_INFO_REPORT (45)" event trigger. This field is added in support of Network Provided Location Information (NPLI) Reporting feature. |
| Session Recovery | Total number of CCR-U's that were sent for session recovery. |
| Session Sync | Total number of CCR-U's sent for session synchronization. |
| DCCA Failure Report | Total number of reauthorization messages (CCR-U) that are sent to PCRF because of "Custom-Event-Trigger". |

| Field | Description |
|---|---|
| Application Start | Total number of CCR-Us sent to PCRF to notify the start of a specific protocol or a group of protocols through the event trigger "APPLICATION_START". This field is added in support of ADC rules over Gx feature. |
| Application Stop | Total number of CCR-Us sent to PCRF to notify the stop of a specific protocol or a group of protocols through the event trigger "APPLICATION_STOP". This field is added in support of ADC rules over Gx feature. |
| Endpoint-Peer-Select | |
| Host Select Failure | Total number of host select failures. |
| Inactive Host | Total number of inactive hosts. |
| Packet Statistics | |
| Important Packet Statistics are no longer shown in StarOS release 11.0 and beyond. | |
| Uplink Pkts Processed | Total number of uplink packets processed. |
| Downlink Pkts Processed | Total number of downlink packets processed. |
| Uplink Bytes Processed | Total number of uplink bytes processed. |
| Downlink Bytes Processed | Total number of downlink bytes processed. |
| Uplink Pkts Dropped | Total number of uplink packets dropped. |
| Downlink Pkts Dropped | Total number of downlink packets dropped. |
| Uplink Bytes Dropped | Total number of uplink bytes dropped. |
| Downlink Bytes Dropped | Total number of downlink bytes dropped. |

show ims-authorization sessions full all

Table 8: show ims-authorization sessions full all Command Output Descriptions

| Field | Description |
|-----------------|--|
| CallId | The call identifier. |
| Tertiary P-CSCF | The Tertiary P-CSF Address that are configured in IMSA. |
| Service Name | The IMS authorization service name. |
| IMSI | The International Mobile Subscriber Identity (IMSI) of subscriber. |

| Field | Description |
|-----------------------|---|
| Session ID | The session ID is of type UTF8String and is used to identify a specific session. |
| NSAPI | The Network Service Access Point Identifier (NSAPI) to a single PDP context of the subscriber. |
| Bearer Usage | Indicates the bearer usage for this session. Important This field is no longer available in 14.0 and later releases. |
| Bearer Type | Indicates the bearer type. Important This field is no longer available in 14.0 and later releases. |
| Bearer ID | Indicates the bearer identifier. Important This field is no longer available in 14.0 and later releases. |
| Context Type | Indicates the PDP context type: Primary or Secondary. Important This field is no longer available in 14.0 and later releases. |
| SGSN IP-Addr | IP address of the SGSN node. |
| APN | Indicates the Access Point Name (APN) for this service. |
| Bearer Control Mode | The bearer control mode: UE/NW Important Releases prior to 14.1, this field displays "None" for HA/MIPv6HA/PDSN service Gx calls. However, release 14.1 onwards, this field displays UE_ONLY for these calls. |
| State | Indicates the session state. Note that the state "Local fallback" will indicate that the IP CAN session has fallen back to local policy. |
| Primary PCRF Server | The primary Policy Control and Charging Rules Function (PCRF) server host name. |
| Secondary PCRF Server | The secondary PCRF server host name. |

| Field | Description |
|--|--|
| Primary P-CSCF | The primary Proxy-Call Session Control Function gateway address. Important In 15.0 and later releases, P-CSCF server address after session recovery is removed as P-CSCF addresses are required only during call establishment and not required at later stages of the session. Hence, the server address will not be displayed post session manager recovery. |
| Secondary P-CSCF | The secondary P-CSCF gateway address. Important In 15.0 and later releases, P-CSCF server address after session recovery is removed as P-CSCF addresses are required only during call establishment and not required at later stages of the session. Hence, the server address will not be displayed post session manager recovery. |
| UE IP Address | |
| UE IP Session Type | Specifies the type of the address assigned to the user. The possible valid values are IPv4, IPv6 and IPv4_IPv6. |
| IPv4 Address | Displays the IPv4 address assigned to the user. |
| IPv6 Address | Displays the IPv6 address assigned to the user. |
| Primary OCS Important In 16.0 and later releases, Primary OCS information such as Hostname, Port and Protocol are removed from the display as there is no value stored at IMSA module. When the downgrade occurs these fields will not be present and will be shown as NA. | |
| Hostname | Specifies the Primary-Event-Charging-Function-Name of type DiameterURI, or the address of primary online charging system. |
| Port | The port associated with the primary OCS. |
| Protocol | The protocol associated with the primary OCS. |
| Secondary OCS Important In 16.0 and later releases, Secondary OCS information such as Hostname, Port and Protocol are removed from the display as there is no value stored at IMSA module. When the downgrade occurs these fields will not be present and will be shown as NA. | |
| Hostname | Specifies the Secondary-Event-Charging-Function-Name of type DiameterURI, or the address of secondary online charging system. |
| Port | The port associated with the secondary OCS. |
| Protocol | The protocol associated with the secondary OCS. |

| Field | Description |
|--|--|
| Primary CCF Important In 16.0 and later releases, Primary CCF information such as Hostname, Port and Protocol are removed from the display as there is no value stored at IMSA module. When the downgrade occurs these fields will not be present and will be shown as NA. | |
| Hostname | Specifies the Primary-Charging-Collection-Function-Name of type DiameterURI or the address of primary offline charging system for the bearer. |
| Port | The port associated with the primary CCF. |
| Protocol | The protocol associated with the primary CCF. |
| Secondary CCF Important In 16.0 and later releases, Secondary CCF information such as Hostname, Port and Protocol are removed from the display as there is no value stored at IMSA module. When the downgrade occurs these fields will not be present and will be shown as NA. | |
| Hostname | Specifies the Secondary-Charging-Collection-Function-Name of type DiameterURI or the address of secondary offline charging system for the bearer. |
| Port | The port associated with the secondary CCF. |
| Protocol | The protocol associated with the secondary CCF. |
| Auth Decision | Parameters configured for authorization decision. |
| Event Triggers | Triggers for different events for Authorization decision. |
| Custom Event Triggers | This field indicates the registration of any custom event triggers. Note This field shows None when there is no custom event trigger. |
| Local Policy Enabled Event Triggers | This field indicates the list of event-triggers that are enabled from local-policy. |
| Event Report Indication | Specifies which type of changes will trigger an event report from the PCRF. |
| Negotiated Supported Features | Displays all the supported features that are actually applied to the session after negotiation with PCRF. |
| Authorized QoS | Displays the authorized QoS information for a specific session. In 15.0 and later releases, this field name has been changed to Negotiated QoS in order to display the negotiated QoS information. |
| QoS Policy | Specifies QoS policy for specific session. |

| Field | Description |
|---------------------------|--|
| QoS Class | The QoS class applicable to this session. |
| APN AMBR Uplink(in bps) | The APN uplink AMBR, in bps. |
| APN AMBR Downlink(in bps) | The APN downlink AMBR, in bps. |
| MBR Uplink(in bps) | The maximum bandwidth for uplink direction, in bps. |
| MBR Downlink(in bps) | The maximum bandwidth for downlink direction, in bps. |
| GBR Uplink Bw(in bps) | The guaranteed bandwidth for uplink direction, in bps. Important This field will display "NA" for GBR values for non-GBR bearers. |
| GBR Downlink Bw(in bps) | The guaranteed bandwidth for downlink direction, in bps. Important This field will display "NA" for GBR values for non-GBR bearers. |
| Charging Rules | Dynamic charging rule applicable for specific session in IMSA service. NOTE: Charging Rules are no longer shown in StarOS release 11.0 and beyond. |
| Rule Name | Name of the applicable dynamic charging rule. |
| Precedence | Precedence of the applicable dynamic charging rule. |
| Revalidation Time | Specifies the time at which the next CCR-U will be sent out for the Re-validation Timeout EVENT TRIGGER. |
| Session Packet Statistics | Specifies the session data statistics. NOTE: Session Packet Statistics are no longer shown in StarOS release 11.0 and beyond. |
| Uplink Pkt Processed | Total number of packets processed in uplink direction. |
| Uplink Bytes Processed | Total number of bytes processed in uplink direction. |
| Uplink Pkt Dropped | Total number of packets dropped or not processed in uplink direction. |
| Uplink Bytes Dropped | Total number of bytes dropped or not processed in uplink direction. |
| Downlink Pkt Processed | Total number of packets processed in downlink direction. |
| Downlink Bytes Processed | Total number of bytes processed in downlink direction. |
| Downlink Pkt Dropped | Total number of packets dropped or not processed in downlink direction. |

| Field | Description |
|--|--|
| Downlink Bytes Dropped | Total number of bytes dropped or not processed in downlink direction. |
| Total sessions matching specified criteria multiple-pra | The total number of sessions matching the specified criteria. Multiple Presence Reporting Area Information Reporting. |

