

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 (IMSAs) 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.
Total Secondary Terminate	The total number of secondary contexts deleted. **Important** This field is no longer available in 14.0 and later releases.

Field	Description
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.
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.

Field	Description
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	
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.

Field	Description
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-Us 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.
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.

Field	Description
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.
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 form 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.

Field	Description
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.
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.
Insuffcnt 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.
Insuffcnt 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.
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.

Field	Description
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.
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.

Field	Description
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.
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.

Field	Description
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	
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.
Transient Errors: **Note** The CCA experimental result-code statistics will be displayed only for CUPS-enabled platforms.	
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	

Field	Description
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 redirecturllen 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	
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: • Open • Closed • Dormant

Field	Description
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: • 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.
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.

Field	Description
Gate State changed	Displays the change state of policy gate for specific subscriber flow. Possible values are: • 0: No change • 1: Changed
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.

Field	Description
Pending-Transactions	
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.
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.

Field	Description
P-CSCF Selection Table[*n*]	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. [*n*] 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 Diabase.
Extended-bw-nr	Enables the extended bandwidth with new radio feature support on Gx interface.
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.

Field	Description
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 *Gx Interface Support* 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 *Gx Interface Support* chapter in the administration guide for the product you are deploying.
Host Selection Table[*n*]	Specifies the configured selection table information for host server selection. [*n*] indicates the selection table number.
Precedence	Specifies the precedence applicable.
Primary Host	Specifies the primary name/IP address the host.
Secondary Host multiple-pra	Specifies the secondary name/IP address of the host. Multiple Presence Reporting Area Information Reporting.
Charging Characteristics AVP in CCR (r8-gx-standard dict)	Specifies whether the r8-gx-standard dictionary is configured to send 3gpp-Charging-Characteristics AVP in CCR message.

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.
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.

Field	Description
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 intitiated 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	
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	

Field	Description
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 tittered 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.
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.

Field	Description
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.
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.

Field	Description
Access Network Info Report	Total number of CCR-Us 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-Us that were sent for session recovery.
Session Sync	Total number of CCR-Us sent for session synchronization.
DCCA Failure Report	Total number of reauthorization messages (CCR-U) that are sent to PCRF because of “Custom-Event-Trigger”.
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.
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.

Field	Description
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.
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.

Field	Description
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.
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.

Field	Description
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.
Negotiated QoS	Displays the negotiated QoS information for a specific session. **Note** When PCRF is down, the APN-AMBR value under the Negotiated QoS field in the **show ims-authorization sessions full all** output might not be the actual APN-AMBR applied to the subscriber as it could not be negotiated with PCRF. In this scenario, to check the applied APN-AMBR for the subscriber, verify the corresponding **show subscribers** command. For example, use the **show subscriber [saegw-only | pgw-only | ggsn-only] full [** *options* **]** command.
QoS Policy	Specifies QoS policy for specific session.
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.

Field	Description
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.
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.