

show diameter

This chapter includes the **show diameter** command output tables.

- show diameter aaa-statistics, on page 1
- show diameter aaa-statistics misc-data, on page 13
- show diameter authentication servers, on page 14
- show diameter diactrl proxy-vm-map, on page 14
- show diameter dynamic-dictionary all, on page 15
- show diameter endpoints all, on page 15
- show diameter message-queue counters outbound endpoint, on page 16
- show diameter osid-info sessmgr, on page 18
- show diameter osid-info sessmgr all, on page 18
- show diameter peers full all, on page 19
- show diameter statistics, on page 20
- show diameter tps-statistics verbose, on page 28

show diameter aaa-statistics

Table 1: show diameter aaa-statistics Command Output Descriptions

Field	Description
Authentication Servers Summary	
Message Stats	Total Diameter session message statistics.
Total MA Requests	Total number of Multimedia-Auth-Requests.
Total MA Answers	Total number of Multimedia-Auth-Answers.
MAR - Retries	Total number of Multimedia-Auth-Request retries.
MAA Timeouts	Total number of Multimedia-Auth-Answer timeouts.
MAA - Dropped	Total number of Multimedia-Auth-Answer dropped.
Total SA Requests	Total number of Server-Assignment-Requests.

Field	Description
Total SA Answers	Total number of Server-Assignment-Answers.
SAR - Retries	Total number of Server-Assignment-Request retries.
SAA Timeouts	Total number of Server-Assignment-Answer timeouts.
SAA - Dropped	Total number of Server-Assignment-Answers dropped.
Total UA Requests	Total number of User-Authorization-Requests.
Total UA Answers	Total number of User-Authorization-Answers.
UAR - Retries	Total number of User-Authorization-Request retries.
UAA Timeouts	Total number of User-Authorization-Answer timeouts.
UAA - Dropped	Total number of User-Authorization-Answers dropped.
Total LI Requests	Total number of Location-Info-Requests.
Total LI Answers	Total number of Location-Info-Answers.
LIR - Retries	Total number of Location-Info-Request retries.
LIA Timeouts	Total number of Location-Info-Answer timeouts.
LIA - Dropped	Total number of Location-Info-Answers dropped.
Total RT Requests	Total number of Registration-Termination-Requests.
Total RT Answers	Total number of Registration-Termination-Answers.
RTR - Rejected	Total number of Registration-Termination-Requests rejected.
Total PP Requests	Total number of Push-Profile-Requests.
Total PP Answers	Total number of Push-Profile-Answers.
PPR - Rejected	Total number of Push-Profile-Requests rejected.
Total DE Requests	Total number of Diameter-EAP-Requests.
Total DE Answers	Total number of Diameter-EAP-Answers.
DEA - Accept	Total number of Diameter-EAP-Answers accepted.
DEA - Reject	Total number of Diameter-EAP-Answers rejected.
DER - Retries	Total number of Diameter-EAP-Request retries.
DEA Timeouts	Total number of Diameter-EAP-Answer timeouts.
DEA - Dropped	Total number of Diameter-EAP-Answer dropped.

Field	Description
Total AA Requests	Indicates the total number of AA (Authentication and/or Authorization) Request messages sent by P-GW on S6b interface to AAA Server/Proxy.
Total AA Answers	Indicates the total number of AA (Authentication and/or Authorization) Answer messages received by P-GW on S6b interface from AAA Server/Proxy.
AAR - Retries	Indicates the total number of AAR (AA Request) messages retransmitted by P-GW on S6b interface to AAA Server/Proxy.
AAA Timeouts	Indicates the total number of AAA (AA Answer) messages timed-out due to no response from AAA Server/Proxy.
AAA - Dropped	Indicates the total number of AAA (AA Answer) messages dropped due any reason from AAA Server/Proxy.
ASR	Total number of Abort-Session-Requests.
ASA	Total number of Abort-Session-Answers.
RAR	Total number of Re-Auth-Requests.
RAA	Total number of Re-Auth-Answers.
STR	Total number of Session-Termination-Requests.
STA	Total number of Session-Termination-Answers.
STR - Retries	Total number of Session-Termination-Request retries.
AAA-Failure-Indication	Total number of times the AAA-Failure-Indication AVP is sent over Diameter Authentication interfaces (S6b/SWm/STa).
DE Message Error Stats	
Diameter Protocol Errs	Total number of Diameter protocol errors.
Bad Answers	Total number of bad answers.
Unknown Session Reqs	Total number of unknown session requests.
Unknown Command Code	Total number of unknown command codes.
Request Timeouts	Total number of request timeouts.
Parse Errors	Total number of parse errors.
Request Retries	Total number of request retries.
Session Stats	Diameter Session Statistics.
Total Sessions	Total number of sessions.
Freed Sessions	Total number of freed sessions.

Field	Description
Session Timeouts	Total number of session timeouts.
Active Auth Sessions	Total number of active authentication sessions.
Active Acct Sessions	Total number of active accounting sessions.
FH Behavior (emps)	
Continue	Indicated the number of times the failure handling action "Continue" was triggered.
With Retry	Indicates the number of times failure handling action “continue with Retry” is taken using the eMPS template.
Without Retry	Indicates the number of times failure handling action “continue without Retry” is taken using the eMPS template.
Retry and Terminate	Indicates the number of times failure handling “Retry and Terminate” was triggered.
Retry and Terminate	Indicates the number of times failure handling “retry and terminate” is taken using eMPS template.
Retry Term without STR	Indicates the number of times failure handling “retry and terminate without STR” is taken using eMPS template.
Termination	Indicates the number of times failure handling “Termination” was triggered.
Terminate	Indicates the number of times failure handling “terminate” is taken using eMPS template.
Terminate without STR	Indicates the number of times failure handling “terminate without STR” is taken using eMPS template.
STR Termination Cause Stats	Session-Termination-Request termination cause statistics.
Diameter Logout	Total number of Session-Termination-Request terminations due to Diameter logouts.
Service Not Provided	Total number of Session-Termination-Request terminations due to service not provided.
Bad Answer	Total number of Session-Termination-Request terminations due to bad answers.
Administrative	Total number of Session-Termination-Request terminations due to administrative reasons.
Link Broken	Total number of Session-Termination-Request terminations due to links broken.
Auth Expired	Total number of Session-Termination-Request terminations due to auth expiry.
User Moved	Total number of Session-Termination-Request terminations due to user moves.

Field	Description
Session Timeout	Total number of Session-Termination-Request terminations due to session timeouts.
User Request	Total number of Session-Termination-Request terminations due to user requests.
Lost Carrier	Total number of Session-Termination-Request terminations due to lost carriers.
Lost Service	Total number of Session-Termination-Request terminations due to lost service.
Idle Timeout	Total number of Session-Termination-Request terminations due to idle timeouts.
NAS Session Timeout	Total number of Session-Termination-Request terminations due to NAS session timeouts.
Admin Reset	Total number of Session-Termination-Request terminations due to admin resetting.
Admin Reboot	Total number of Session-Termination-Request terminations due to admin reboots.
Port Error	Total number of Session-Termination-Request terminations due to port errors.
NAS Error	Total number of Session-Termination-Request terminations due to NAS errors.
NAS Request	Total number of Session-Termination-Request terminations due to NAS requests.
NAS Reboot	Total number of Session-Termination-Request terminations due to NAS reboots.
Port Unneeded	Total number of Session-Termination-Request terminations due to unneeded ports.
Port Preempted	Total number of Session-Termination-Request terminations due to preempted ports.
Port Suspended	Total number of Session-Termination-Request terminations due to suspended ports.
Service Unavailable	Total number of Session-Termination-Request terminations due to unavailable service.
Callback	Total number of Session-Termination-Request terminations due to callback.
User Error	Total number of Session-Termination-Request terminations due to user errors.
Host Request	Total number of Session-Termination-Request terminations due to host requests.
Result Code Stats	

Field	Description
Result Code 1xxx	Total number of S6b messages processed and responded with the result code 1xxx.
Result Code 2xxx	Total number of S6b messages processed and responded with the result code 2xxx.
Result Code 3xxx	Total number of S6b messages processed and responded with the result code 3xxx.
Result Code 4xxx	Total number of S6b messages processed and responded with the result code 4xxx.
Result Code 5xxx	Total number of S6b messages processed and responded with the result code 5xxx.
Other Result Code	Total number of S6b messages processed and responded with the result code other than 1xxx –5xxx.
Protocol Errors (3xxx]	
Result Code (3002)	Shows the DIAMETER_UNABLE_TO_DELIVER result code value (3002), if Diameter cannot deliver the message to the destination, either because no host within the realm supporting the required application was available to process the request or because the Destination-Host AVP was specified without the associated Destination-Realm AVP.
Result Code (3004)	Displays the DIAMETER_TOO_BUSY error result code value (3004) only when a specific server is requested and it cannot provide the requested service.
Result Code (3005)	Shows the DIAMETER_LOOP_DETECTED result code value (3005), when an agent detected a loop while trying to get the message to the intended recipient. The message may be sent to an alternate peer, if one is available, but the peer reporting the error has identified a configuration problem.
Result Code (3008)	Shows DIAMETER_INVALID_HDR_BITS result code value (3008), if a request was received whose bits in the Diameter header were set either to an invalid combination or to a value that is inconsistent with the Command Code definition.
Result Code (3009)	Shows DIAMETER_INVALID_AVP_BITS result code value (3009), if a request was received that included an AVP whose flag bits are set to an unrecognized value or that is inconsistent with the AVP definition.
Result Code Others	Total number of other messages processed and responded.
Transient Failures (4xxx)	
Result Code 4001	Shows the DIAMETER_AUTHENTICATION_REJECTED result code value (4001),when the authentication process for the user fails, due to an invalid password used by the user. Further attempts must only be allowed after prompting the user for a new password.

Field	Description
Result Code 4002	Shows the DIAMETER_OUT_OF_SPACE Result code value (4002), when a Diameter node receives the accounting request but was unable to commit it to stable storage due to a temporary lack of space.
Result Code Others	Total number of other messages processed and responded.
Permanent Failures (5xxx]	
Result Code 5002	Displays the DIAMETER_UNKNOWN_SESSION_ID result code value (5002), if the request contains an unknown Session-Id.
Result Code 5003	Displays the DIAMETER_AUTHORIZATION_REJECTED (5003) result code value, if a request was received for which the user could not be authorized. This error occurs if the requested service is not permitted to the user.
Result Code 5005	Displays the DIAMETER_MISSING_AVP (5005) result code value, if a request did not contain an AVP that is required by the Command Code definition. **Important** If this value is sent in the Result-Code AVP, a Failed-AVP should be included in the message. The Failed-AVP must contain an example of the missing AVP complete with the Vendor-Id if applicable. The value field of the missing AVP should be of correct minimum length and contain zeroes.
Result Code 5006	Displays the DIAMETER_RESOURCES_EXCEEDED (5006) result code value, when a request was received that cannot be authorized because the user has already expended allowed resources. For example, error occurs when a user is restricted to one dial-up PPP port, attempts to establish a second PPP connection.
Result Code 5012	Displays DIAMETER_UNABLE_TO_COMPLY (5012) result code value, if an error is returned when a request is rejected for unspecified reasons.
Result Code 5030	Displays the total number of DIAMETER_USER_UNKNOWN (5030) result code value.
Experimental Result Code Stats	
Exp Result Code 5199	Total number of times the Experimental-Result-Code "DIAMETER_NEWER_SESSION_DETECTED (5199)" is received in the authentication response message. This result code is introduced to detect stale message requests and support session uniqueness.
Exp Result Code 5001	Total number of times the Experimental-Result-Code DIAMETER_ERROR_USER_UNKNOWN (5001) is received in the authentication response message.
Exp Result Code 5004	Total number of times the Experimental-Result-Code DIAMETER_ERROR_ROAMING_NOT_ALLOWED (5004) is received in the authentication response message.

Field	Description
Exp Result Code 5041	Total number of times the Experimental-Result-Code DIAMETER_ERROR_USER_NO_WLAN_SUBSCRIPTION (5041) is received in the authentication response message.
S6b Stats	
Total Assume-positive	Total number of active subscribers which are in S6b by-passed state (assume positive). That is, the total count of active number of PDN sessions for which S6b by-passed. This statistics is available per aaamgr-instance level.
FH Behavior	
Continue	
With Retry	Total number of times the failure handling action "continue" is applied through the failure-handling-template.
Without Retry	Total number of times the failure handling action "continue-without-retry" is applied through the failure-handling-template. This failure action implies that the call will be continued without retrying to the secondary PCRF server.
Retry and Terminate	
Retry and Terminate	Total number of times the failure handling action "retry and terminate" is applied through the failure-handling-template.
Retry Term without STR	Total number of times the failure handling action "retry and terminate" is applied without sending the Session Terminate Request (STR) on call termination.
Termination	
Terminate	Total number of times the failure handling action "terminate" is applied through the failure-handling-template.
Terminate without STR	Total number of times the failure handling action "terminate" is applied through the failure-handling-template without the Session Terminate Request (STR).
Diameter Overload Control Stats	
AAA	Total number of times the Diameter Experimental Result-Code "DIAMETER_OVERLOAD_RETRY_NOT_ALLOWED_TO_ANY" (5198) is received in AAA message.
DEA	Total number of times the Diameter Experimental Result-Code "DIAMETER_OVERLOAD_RETRY_NOT_ALLOWED_TO_ANY" (5198) is received in DEA message.
Accounting Servers Summary	
Message Stats	Accounting message statistics.

Field	Description
Total AC Requests	Total number of AC-Requests.
Total AC Answers	Total number of AC-Answers.
ACR-Start	Total number of AC-Request starts.
ACA-Start	Total number of AC-Answer starts.
ACR-Start Retries	Total number of AC-Request start retries.
ACA-Start Timeouts	Total number of AC-Answer timeouts. **Important** This statistics is not supported in 17. 0 and later releases.
ACA-Start Req-Timeouts	Total number of times the AC-Answer Start Request timeout happens happens due to no response from CCF/peer.
ACA-Start Res-Timeouts	Total number of times the AC-Answer Start Response timeout happens due to no response from CCF/peer.
ACA-Interim Req-Timeouts	Total number of times the AC-Answer Interim Request timeout happens due to no response from CCF/peer.
ACA-Interim Res-Timeouts	Total number of times the AC-Answer Interim Response timeout happens due to no response from CCF/peer.
ACA-Stop Req-Timeouts	Total number of times the AC-Answer Stop Request timeout happens due to no response from CCF/peer.
ACA-Stop Res-Timeouts	Total number of times the AC-Answer Stop Response timeout happens due to no response from CCF/peer.
ACR-Interim	Total number of AC-Request interim.
ACA-Interim	Total number of AC-Answer interim.
ACR-Interim Retries	Total number of AC-Request interim retries.
ACA-Interim Timeouts	Total number of AC-Answer interim timeouts. **Important** This statistics is not supported in 17. 0 and later releases.
ACR-Event	Total number of AC-Request events.
ACA-Event	Total number of AC-Answer events.
ACR-Stop	Total number of AC-Request stops.
ACA-Stop	Total number of AC-Answer stops.
ACR-Stop Retries	Total number of AC-Request stop retries.

Field	Description
ACA-Stop Timeouts	Total number of AC-Answer stop timeouts. **Important** This statistics is not supported in 17. 0 and later releases.
ACA-Dropped	Total number of AC-Answers dropped.
ACR-Stop Event Stats	Accounting message Event statistics.
Service-Sp-Unit-Limit	Total number of ACR-STOP messages that are sent with the change-condition "SERVICE-SPECIFIC-UNIT-LIMIT".
AC Message Error Stats	Accounting message error statistics.
Diameter Protocol Errs	Total number of Diameter protocol errors.
Bad Answers	Total number of bad answers.
Unknown Session Reqs	Total number of unknown session requests.
Unknown Command Code	Total number of unknown command codes.
Request Timeouts	Total number of request timeouts.
Response Timeouts	Total number of response timeouts.
Parse Errors	Total number of parse errors.
Request Retries	Total number of request retries.
ACR Message Interim Event Stats	
Volume-limit	The total number of ACR-Interims that were triggered because of the event trigger "Volume-Limit"
Time-Limit	The total number of ACR-Interims that were triggered because of the event trigger "Time-Limit"
RAT-Change	The total number of ACR-Interims that were triggered because of the event trigger "RAT-Change"
TimeZone-Change	The total number of ACR-Interims that were triggered because of the event trigger "Timezone-Change"
PLMN-Change	The total number of ACR-Interims that were triggered because of the event trigger "PLMN-Change"
Max-Charging-Condition	The total number of ACR-Interims that were triggered because of the event trigger "Max-Charging-Condition"
Service-Data-Time-Limit	The total number of ACR-Interims that were triggered because of the event trigger "Service-Data-Time-Limit"

Field	Description
Service-Data-Vol-Limit	The total number of ACR-Interims that were triggered because of the event trigger "Service-Data-Volume-Limit"
AII-Timer	The total number of ACR-Interims that were triggered because of the event trigger "AII-Timer"
Result Code Stats	
Result Code 1xxx	Total number of Diameter accounting messages processed and responded with the result code 1xxx.
Result Code 2xxx	Total number of accounting messages processed and responded with the result code 2xxx.
Result Code 3xxx	Total number of accounting messages processed and responded with the result code 3xxx.
Result Code 4xxx	Total number of accounting messages processed and responded with the result code 4xxx.
Result Code 5xxx	Total number of accounting messages processed and responded with the result code 5xxx.
Other Result Code	Total number of accounting messages processed and responded with the result code other than 1xxx –5xxx.
Backpressure Stats	Diameter Backpressure statistics
Protocol Errors (3xxx]	
Result Code (3002)	Shows the DIAMETER_UNABLE_TO_DELIVER result code value (3002), if Diameter cannot deliver the message to the destination, either because no host within the realm supporting the required application was available to process the request or because the Destination-Host AVP was specified without the associated Destination-Realm AVP.
Result Code (3004)	Displays the DIAMETER_TOO_BUSY error result code value (3004) only when a specific server is requested and it cannot provide the requested service.
Result Code (3005)	Shows the DIAMETER_LOOP_DETECTED result code value (3005), when an agent detected a loop while trying to get the message to the intended recipient. The message may be sent to an alternate peer, if one is available, but the peer reporting the error has identified a configuration problem.
Result Code (3008)	Shows DIAMETER_INVALID_HDR_BITS result code value (3008), if a request was received whose bits in the Diameter header were set either to an invalid combination or to a value that is inconsistent with the Command Code definition.
Result Code (3009)	Shows DIAMETER_INVALID_AVP_BITS result code value (3009), if a request was received that included an AVP whose flag bits are set to an unrecognized value or that is inconsistent with the AVP definition.

Field	Description
Result Code Others	Total number of other messages processed and responded.
Transient Failures (4xxx)	
Result Code 4001	Shows the DIAMETER_AUTHENTICATION_REJECTED result code value (4001),when the authentication process for the user fails, due to an invalid password used by the user. Further attempts must only be allowed after prompting the user for a new password.
Result Code 4002	Shows the DIAMETER_OUT_OF_SPACE Result code value (4002), when a Diameter node receives the accounting request but was unable to commit it to stable storage due to a temporary lack of space.
Result Code Others	Total number of other messages processed and responded.
Permanent Failures (5xxx]	
Result Code 5002	Displays the DIAMETER_UNKNOWN_SESSION_ID result code value (5002), if the request contains an unknown Session-Id.
Result Code 5003	Displays the DIAMETER_AUTHORIZATION_REJECTED (5003) result code value, if a request was received for which the user could not be authorized. This error occurs if the requested service is not permitted to the user.
Result Code 5005	Displays the DIAMETER_MISSING_AVP (5005) result code value, if a request did not contain an AVP that is required by the Command Code definition. **Important** If this value is sent in the Result-Code AVP, a Failed-AVP should be included in the message. The Failed-AVP must contain an example of the missing AVP complete with the Vendor-Id if applicable. The value field of the missing AVP should be of correct minimum length and contain zeroes.
Result Code 5006	Displays the DIAMETER_RESOURCES_EXCEEDED (5006) result code value, when a request was received that cannot be authorized because the user has already expended allowed resources. For example, error occurs when a user is restricted to one dial-up PPP port, attempts to establish a second PPP connection.
Result Code 5012	Displays DIAMETER_UNABLE_TO_COMPLY (5012) result code value, if an error is returned when a request is rejected for unspecified reasons.
Result Code 5030	Displays the total number of DIAMETER_USER_UNKNOWN (5030) result code value.
Experimental Result Code Stats	
Exp Result Code 5001	Total number of times the Experimental-Result-Code DIAMETER_ERROR_USER_UNKNOWN (5001) is received in the authentication response message.

Field	Description
Exp Result Code 5004	Total number of times the Experimental-Result-Code DIAMETER_ERROR_ROAMING_NOT_ALLOWED (5004) is received in the authentication response message.
Exp Result Code 5041	Total number of times the Experimental-Result-Code DIAMETER_ERROR_USER_NO_WLAN_SUBSCRIPTION (5041) is received in the authentication response message.
Peer BP Queue Length	Displays the peer backpressure queue length.
Peer BP Queue Insertions	Displays the peer backpressure insertions to the queue.
Peer BP Queue deletions	Displays the peer backpressure deletions from the queue.
Global BP Queue Length	Displays the global backpressure queue length.
Global BP Queue Insertions	Displays the global backpressure insertions to the queue.
Global BP Queue Deletions	Displays the global backpressure deletions from the queue.
Duplicate Accounting Records Stats	
ACR-Start Dropped	Displays the total number of duplicate Rf START records which were dropped because of the failure in sending the Accounting records instead of adding them to HDD or archival list.
ACR-Interim Dropped	Displays the total number of duplicate Rf INTERIM records which were dropped because of the failure in sending the Accounting records instead of adding them to HDD or archival list.
ACR-Stop Dropped	Displays the total number of duplicate Rf STOP records which were dropped because of the failure in sending the Accounting records instead of adding them to HDD or archival list.

show diameter aaa-statistics misc-data

Table 2: show diameter aaa-statistics misc-data Command Output Descriptions

Field	Description
Facility	The AAA manager facility name.
Instance	The AAA manager instance number which has the highest backpressure statistics.
Max Peer BP Queue Length	The maximum peer backpressure queue length.
Max BP Time	The timestamp at which the maximum peer backpressure happened.

show diameter authentication servers

Table 3: show diameter authentication servers Command Output Descriptions

Field	Description
Context Name	Name of the context in which the Diameter servers are configured.
AAA Group	Name of the AAA group.
Endpoint	Name of the Diameter endpoint.
Peer	Name of the Diameter server host.
No of Instance in UP state	The number of instances between Diameter server and AAA Manager in up state.
No of Instance in DOWN state	The number of instances between Diameter server and AAA Manager in down state.
Priority	The relative priority of this server considered when the system is selecting which Diameter server to use. Lower number has higher priority.
Message Sent/Queued	The number of messages sent/queued from Diameter server to AAA Manager.

show diameter diactrl proxy-vm-map

Table 4: show diameter diactrl proxy-vm-map Command Output Descriptions

Field	Description
If the MAX mode is configured and if the Diameter proxy to VM mapping is available, the following new fields are displayed:	
diamproxy instance	Indicates the Diameter proxy instance.
Started on VM	Indicates the VM on which the Diameter proxy instance exists.
VM served	Indicates the number of VMs served for a particular Diameter proxy instance.
If the MAX mode is configured and if Diameter proxy to VM mapping is not available, the following message is displayed: `Error: no valid diameter proxy to VM mapping present in diactrl`	
If MAX mode is not configured, the following message is displayed: `Info: proxy-vm-map CLI is valid only for max mode configuration of diamproxy`	

show diameter dynamic-dictionary all

Table 5: show diameter dynamic-dictionary all Command Output Descriptions

Field	Description
Dynamic Dictionary Name	Indicates the name of the configured Diameter dynamic dictionary.
vids	Indicates the vendor ID.
Base static dictionary	Displays the static dictionary number and name from which the dynamic dictionary is derived. **Important** This field will be displayed only if the "!base-dict <dictionary-number>" is configured in the dynamic dictioanary's ABNF text file. If "!base-dict <dictionary-number>" is configured in the ABNF text file, the output will be of the form "<dictionary-number> / <dictionary-name>". By default, "Base static dictionary: 0 / dictzero" will be displayed.
Command Code (CC) followed by AVP list	Displays the list of AVPs and command codes defined in the dynamic dictionary.
Number of Command Codes defined	Indicates the number of command codes defined.
Number of AVPs defined	Indicates the number of AVPs defined.
Total Number of dynamic-dictionaries configured	Indicates the total number of dynamic dictionaries configured.

show diameter endpoints all

Table 6: show diameter endpoints all Command Output Descriptions

Field	Description
Context	Name of the configured context.
Endpoint	Name of the endpoint.
Realm	Domain (Realm) name for subscriber.
Task	Task running on ACSMgr or AAAMgr.
CPU	Indicates the Card and CPU number.
Application	Indicates the application running on ACSMgr or AAAMgr.
Total endpoints matching specified criteria	Indicates the total number of matching endpoints.

show diameter message-queue counters outbound endpoint

Table 7: show diameter message-queue counters outbound endpoint Command Output Descriptions

Field	Description
Context	Name of the configured context.
Endpoint	Name of the endpoint.
Peer Host	Name of the peer host.
Peer Realm	Name of the peer realm.
Accounting-Answer	The number of outbound Accounting-Answer messages for the specified endpoint.
Accounting-Request	The number of outbound Accounting-Request messages for the specified endpoint.
Abort-Session-Answer	The number of outbound Abort-Session-Answer messages for the specified endpoint.
Abort-Session-Request	The number of outbound Abort-Session-Request messages for the specified endpoint.
Authorization-Authentication-Ans	The number of outbound Authorization-Authentication-Ans messages for the specified endpoint.
Authorization-Authentication-Req	The number of outbound Authorization-Authentication-Req messages for the specified endpoint.
Capabilities-Exchange-Answer	The number of outbound Capabilities-Exchange-Answer messages for the specified endpoint.
Capabilities-Exchange-Request	The number of outbound Capabilities-Exchange-Request messages for the specified endpoint.
Credit-Control-Answer	The number of outbound Credit-Control-Answer messages for the specified endpoint.
Credit-Control-Request	The number of outbound Credit-Control-Request messages for the specified endpoint.
Device-Watchdog-Answer	The number of outbound Device-Watchdog-Answer messages for the specified endpoint.
Device-Watchdog-Request	The number of outbound Device-Watchdog-Request messages for the specified endpoint.
Diameter-EAP-Answer	The number of outbound Diameter-EAP-Answer messages for the specified endpoint.
Diameter-EAP-Request	The number of outbound Diameter-EAP-Request messages for the specified endpoint.

Field	Description
Disconnect-Peer-Answer	The number of outbound Disconnect-Peer-Answer messages for the specified endpoint.
Disconnect-Peer-Request	The number of outbound Disconnect-Peer-Request messages for the specified endpoint.
Location-Info-Answer	The number of outbound Location-Info-Answer messages for the specified endpoint.
Location-Info-Request	The number of outbound Location-Info-Request messages for the specified endpoint.
Multimedia-Auth-Answer	The number of outbound Multimedia-Auth-Answer messages for the specified endpoint.
Multimedia-Auth-Request	The number of outbound Multimedia-Auth-Request messages for the specified endpoint.
Profile-Update-Answer	The number of outbound Profile-Update-Answer messages for the specified endpoint.
Profile-Update-Request	The number of outbound Profile-Update-Request messages for the specified endpoint.
Push-Profile-Answer	The number of outbound Push-Profile-Answer messages for the specified endpoint.
Push-Profile-Request	The number of outbound Push-Profile-Request messages for the specified endpoint.
Re-Auth-Answer	The number of outbound Re-Auth-Answer messages for the specified endpoint.
Re-Auth-Request	The number of outbound Re-Auth-Request messages for the specified endpoint.
Registration-Termination-Answer	The number of outbound Registration-Termination-Answer messages for the specified endpoint.
Registration-Termination-Request	The number of outbound Registration-Termination-Request messages for the specified endpoint.
Server-Assignment-Answer	The number of outbound Server-Assignment-Answer messages for the specified endpoint.
Server-Assignment-Request	The number of outbound Server-Assignment-Request messages for the specified endpoint.
Session-Termination-Answer	The number of outbound Session-Termination-Answer messages for the specified endpoint.
Session-Termination-Request	The number of outbound Session-Termination-Request messages for the specified endpoint.
User-Authorization-Answer	The number of outbound User-Authorization-Answer messages for the specified endpoint.

Field	Description
User-Authorization-Request	The number of outbound User-Authorization-Request messages for the specified endpoint.
User-Data-Answer	The number of outbound User-Data-Answer messages for the specified endpoint.
User-Data-Request	The number of outbound User-Data-Request messages for the specified endpoint.
Total peers matching specified criteria	Indicates the total number of matching peers.

show diameter osid-info sessmgr

Table 8: show diameter osid-info sessmgr Command Output Descriptions

Field	Description
SessMgr Inst	Session Manager instance number.
Peer Hostname	Name of the peer host.
Peer Realm	Peer domain (realm) name for Subscriber.
OSID	Peer origin state identifier.
Timestamp	Timestamp at which the maximum peer backpressure occured.
Calls Cleared	Number of calls cleared.

show diameter osid-info sessmgr all

Table 9: show diameter osid-info sessmgr all Command Output Descriptions

Field	Description
SessMgr Inst	Session Manager instance number.
Peer Hostname	Name of the peer host.
Peer Realm	Peer domain (realm) name for Subscriber.
OSID	Peer origin state identifier.
Timestamp	Timestamp at which the maximum peer backpressure occured.
Calls Cleared	Number of calls cleared.

show diameter peers full all

Table 10: show diameter peers full all Command Output Descriptions

Field	Description
Context	Name of the context.
Endpoint	Name of the endpoint.
Inbound listening sockets	Displays listening Diameter interface:ports information when origin-host is configured as of "accept-inbound" connection type. If no inbound sockets are present these fields are not displayed.
Local Host	Name of the local host.
Local Address	IP address and port number of the local host.
Endpoint	Name of the endpoint.
Task	The task instance running on ACSMgr or AAAMgr.
Peer Hostname	Name of the peer host.
Local Hostname	Name of the local host.
Peer Realm	Peer domain (realm) name for Subscriber.
Local Realm	Local domain (realm) name for Subscriber.
Peer Address	Address of peer domain (realm).
Local Address	Address of local domain (realm).
State	Indicates the connection status.
CPU	The Card and CPU number.
Messages Out/Queued	The number of messages sent out/queued. **Important** Release 12.0 onwards, this statistic will not indicate the count of outstanding messages for Diameter proxy peers.
Task	The task running on ACSMgr or AAAMgr.
Supported Vendor IDs	The supported vendor IDs.
Admin Status	Indicates the admin status. Whether the user can administratively disable a peer while still preserving its configuration.
DPR Disconnect	Indicates the Disconnect-Peer-Request disconnect cause.
Peer Backoff Timer State	Indicates whether or not the peer-backoff-timer is running.

Field	Description
Peer Origin-State-Id	Peer origin state identifier of the peer (if enabled).
Total peers matching specified criteria	The total number of peers matching the criteria.

show diameter statistics

Table 11: show diameter statistics Command Output Descriptions

Field	Description
Connection statistics	
Connection attempts	The total number of connections attempted.
Connection failures	The total number of connections failed.
Connection reads	The total number of connections read.
Connection starts	The total number of connections started.
Connection disconnects	The total number of connections disconnected
Connection closes	The total number of connections closes.
Connection DHOST requests	The total number of connections with DHOST requested.
Connection DHOST removes	The total number of connections with DHOST removed.
Connection Timeouts	The total number of connections timed out.
Tc Expire Connection Attempts	The total number of connections attempted due to **Tc** timer expired. Note: The **Tc** timer controls the frequency that transport connection attempts are done to a peer with whom no active transport connection exists.
Tw Expire Connection Closes	The total number of connections closed due to **Tw** timer expired.
Tx Expire	On the expiry of application level timer (Tx/Pending timeout), the application like Gy and Gx will decide what failure handling has to be taken for the message sent to the server. This stats will be incremented if this application level Tx timer expires.
Application initiated Retries	If the application determines a failure on one connection on which the request message was sent to, it will retry the message to an alternate server if available. This stats will be used if the application decides to retry the message to alternate server.
Connection failure statistics	
Connection bind errors	The total number of connections failed during binding errors.

Field	Description
Connection connect errors	The total number of connections failed during connect errors.
Connection address errors	The total number of connections failed due to address errors.
Connection misc errors	The total number of connections failed due to other errors not mentioned in output.
Connection DHOST errors	The total number of connections failed due to DHOST errors.
Capabilities Exchange Request and Answers statistics	
Connection CER sent	The total number of Capabilities Exchange Request (CER) messages sent for connection.
Connection CER send errors	The total number of connections failed due to errors during CER messages sent.
CERs received	The total number of CER messages received.
Connection CER create failures	The total number of connections failed during CER message creation.
CEAs received	The total number of Capabilities Exchange Answer (CEA) messages received.
CEA AVPs unknown	The total number of unknown Attribute Value Pairs (AVPs) related to CEA message.
CEA Application ID mismatch	The total number of CEA Application ID mismatch.
Read CEA Messages	The total number of READ messages for CEA.
Read CEA Messages Unexpected	The total number of unexpected READ messages for CEA.
Read CEA Missing	The total number of missing READ messages for CEA.
Read CEA Negotiation Failure	The total number of failures in READ messages negotiation for CEA.
Read CER Messages	The total number of READ messages for CER.
Read CER Messages Unexpected	The total number of unexpected READ messages for CER.
Read CER Missing	The total number of missing READ messages for CER.
Tw Expire Waiting for CEA	The total number of CEAs waiting for answer due to **Tw** timer expired. **NOTE:** The **Tw** timer controls the changing of a peer to the SUSPECT state when no answer is received to a watchdog request.
Device Watchdog Requests and Answers statistics	
DWA attempts	The total number of attempts for Device Watchdog Answer (DWA).
DWA handle allocation failures	The total number of failures to handle allocation of DWA.
DWAs sent	The total number of DWA messages sent.

Field	Description
DWR send errors	The total number of errors while sending DWR messages.
Read DWA Messages	The total number of READ messages for DWA.
Read DWA Messages Unexpected	The total number of unexpected READ messages for DWA.
Read DWR Messages	The total number of missing READ messages for DWR.
Tw Expire Send DWR	The total number of DWRs sent due to **Tw** timer expired.
Send DWR Attempts	The total number of attempts to send 'DWR Sent' messages.
Send DWR Send Errors	The total number of errors while sending 'DWR Sent' messages.
Send DWR Calls	The total number of calls for 'DWR Sent' messages.
Send DWR MH Errors	The total number of message handling errors for 'DWR Sent' messages.
Disconnect Peer Request and Answers statistics	
DPRs Sent	If the diameter base protocol decides to close a connection, it will send a Disconnect-Peer-Request (DPR) to the server to notify the reason for disconnection. This statistics will be incremented when diameter base protocol sends a DPR to the system.
DPAs Received	This statistics will be incremented for the reception of Answer message the server responded for the Disconnect-Peer-Request that was sent earlier.
DPR attempts	This statistics will be incremented when the diabase base protocol decides to send a Disconnect-Peer-Answer to the server as a response to the Disconnect-Peer-Request that was sent earlier. This will be the same as "DPAs Sent" statistics if there is no failure in sending the DPA out.
DPAs Sent	This statistics will be incremented if a Disconnect-Peer-Answer is sent to the server as a response to the Disconnect-Peer-Request that was sent earlier. This will happen in case of server initiated connection closure. This will be the same as "DPR attempts" statistics if there is no failure in sending the DPA out.
DPR send errors	When a DPR is sent out for connection closure and if the sending of DPR is failed due to some connection issue, this statistics will be incremented.
DPA Message handle allocation	When a DPA is sent out for connection closure and if the sending of DPA is failed due to failure in creating the DPA message, this statistics will be incremented.
DPR error immclose	When a DPA is sent out for connection closure and if the sending of DPA is failed due to failure in creating the DPA message, the connection will be closed immediately. This statistics is incremented for those immediate closures without sending a DPA.
Read DPR Messages	This statistics will be incremented when the DPR request received from the server is successfully parsed.

Field	Description
DPA No Host Error	This statistics will be incremented if a DPR message is received without including Origin-Host AVP.
Session Discovery Request and Answer Statistics	
Read SDRs	The total number of SDR read success
Read SDR Errors	The total number of SDR read failures
Write SDAs	The total number of SDR write success
Write SDA Errors	The total number of SDR write errors
Session Not Found	The total number of requests received to recover the session but the session is not found.
Create Messages statistics	
Calls	The total number of calls for 'Create' message.
Success	The total number of messages successful for 'Create' message.
Routed	The total number of messages routed for 'Create' message.
Directed	The total number of messages directed for 'Create' message.
Buffer Errors	The total number of errors for 'Create' message buffer.
Peer Never Up Errors	The total number of errors due to peer failure for 'Create' message.
Window Errors	The total number of errors due to 'Create' message window.
Unsupported Application Errors	The total number of errors due to unsupported applications for 'Create' message.
Message Parse statistics	
Message Pool Expand Attempts	The total number of attempts for message pool expansion.
Buffer Expand Attempts	The total number of attempts for buffer expansion.
Calls	The total number of calls for message parsing.
Too Many AVP Errors	The total number of message parsed having excessive AVP errors.
Header Errors	The total number of message parsed having header errors.
AVP Unknown Errors	The total number of message parsed having unknown AVP errors (errors not listed here).
Runt Errors	The total number of message parsed having runtime errors.
AVP Header Errors	The total number of message parsed having AVP header errors.
Message Protocol Error	The total number of message parsed having protocol errors.

Field	Description
Mand AVP Unknown Errors	The total number of message parsed having unknown errors for mandatory AVP.
Message aborts	The total number of message aborted during parsing.
Send Message statistics	
Calls	The total number of calls for 'Send' message.
Truncated Errors	The total number of truncated errors for 'Send' message.
Read Statistics	
Read Bytes	The total number of bytes read.
Read Messages Total	The total number of 'Read' messages.
Requests Read	The total number of requests for 'Read' messages.
Requests Timed Out	The total number of requests timed out for 'Read' messages.
Answers Read	The total number of answers read for 'Read' messages.
Answers Timed Out	The total number of answers timed out for 'Read' messages.
Read Application Messages	The total number of 'Read application' messages.
Unexpected Answers Read	The total number of unexpected answers for 'Read' messages.
Read Parse statistics	
Begin	The total number of parsing begins for 'Read' message.
E2E Errors	The total number of End-to-End (E2E) errors during parsing of 'Read' message.
Success	The total number of successful parsing of 'Read' message.
Application ID Errors	The total number of errors with Application Id during parsing of 'Read' message.
Command/Flag Errors	The total number of command or flag errors during parsing of 'Read' message.
Diameter Protocol Errors	The total number of Diameter protocol errors during parsing of 'Read' message.
Errors	The total number of errors during parsing of 'Read' message.
Length Padding Errors	The total number of 'Length Padding' errors during parsing of 'Read' message.
H2H Errors	The total number of Host-to-Host (H2H) errors during parsing of 'Read' message.
Length Too Long	The total number of message parsed having excessive length of 'Read' message.
Command Unknown	The total number of message parsed having unknown command in 'Read' message.

Field	Description
Length Sanity Errors	The total number of message parsed having invalid length of 'Read' message.
Length-v-SCTP EOR Errors	The total number of "Length-v-SCTP EOR" errors during parsing of "Read" message.
SCTP Missing EOR Errors	The total number of "SCTP Missing EOR" errors during parsing of "Read" message.
Write statistics	
total	The total number of calls for 'Write' message.
while OPEN	The total number of calls for 'Write' message while connection is OPEN.
while IDLE	The total number of calls for 'Write' message while connection is IDLE.
in other states	The total number of calls for 'Write' message while connection state is other than OPEN or IDLE state.
backpressure events	The total number of Write messages over the maximum number of outstanding messages to queue.
Written bytes	The total number of bytes written.
iterations	The total number of write iterations.
Written messages	The total number of messages written.
EOFs	The total number of 'Write' messages with End-of-File (EOFs).
errors	The total number of 'Write' message with errors.
Peer Calls statistics	
Open Calls	The total number of calls to open a peer.
Close Calls	The total number of calls to close a peer.
Open New Peer	The total number of calls to open a new peer.
Open Unknown Peer Errors	The total number of calls to open an unknown peer.
Open Misses	The total number of missed attempts to open a peer.
Route statistics	
Adds	The total number of routes added.
Expires	The total number of routes expired.
Hits	The total number of hits to a route.
Misses	The total number of routes missed.
Indirects	The total number of indirect route.

Field	Description
Installs	The total number of redirected routes installed.
Dynamic Route statistics	
Adds	The total number of dynamic routes added.
Add Failures	The total number of failures in adding dynamic routes.
Removes	The total number of dynamic routes removed.
Hits	The total number of hits to a dynamic route.
Expires	The total number of dynamic routes expired.
Latency statistics	
Last Round Trip Time (ms)	The last round trip time, in milliseconds.
Average Round Trip Time (ms)	The average round trip time in milliseconds.
Renegotiate Peer Messages	The number of times the diabase interacts with Diameter proxy to renegotiate peer connections when the Diameter dictionary changes.
Redirect Host Usage:	
Redirected Host	The number of times the host is redirected.
Redirect Not Cached	The number of times the redirected host is not cached.
Redirect All Session	The number of times all messages within the session are sent to Redirect-Host.
Redirect All Realm	The number of times all messages destined to Realm are sent to Redirect-Host.
Redirect Realm and Application	The number of times the messages for application requested to Realm are sent to Redirect-Host.
Redirect All Application	The number of times all messages for application are sent to Redirect-Host.
Redirect All Host	The number of times the messages sent to Redirect-Host AVP value instead of Redirect-Host value sent by the host.
Redirect All User	The number of times the message for user sent to Redirect-Host value.
Peer Backoff Timer	
Start-count	The total number of times the peer-backoff-timer is started.
Stop-count	The total number of times the peer-backoff-timer is expired.
Diameter DNS Statistics	
DNS Init	The total number of times an application (diabase/proxy) initialized an instance of a DNS library.

Field	Description
DNS De-Init	The total number of times an application (diabase/proxy) closed an instance of a DNS library.
VPN Init Request	The total number of init request messages sent to VPN managers from a library.
VPN Init Response	The total number of init response messages received from the VPN managers to a library.
VPN Init Success	The total number of init success messages received from the VPN managers to a library.
VPN Init Timeout	The total number of failed init responses received from the VPN managers to a library due to a timeout.
DNS A Requests	The total number of A-type (IPv4) requests sent to the VPN from the library.
DNS A Responses	The total number of A-type (IPv4) responses received by the library from the VPN.
DNS A Hits	The total number of A-type (IPv4) responses received by the library from the VPN with valid addresses.
DNS A Timeouts	The total number of A-type (IPv4) response failures due to timeout.
DNS AAAA Requests	The total number of AAAA-type (IPv6) requests sent to the VPN from the library.
DNS AAAA Responses	The total number of AAAA-type (IPv6) responses received by the library from the VPN.
DNS AAAA Hits	The total number of AAAA-type (IPv6) responses received by the library from the VPN with valid addresses.
DNS AAAA Timeouts	The total number of AAAA-type (IPv6) response failures due to timeout.
DNS NAPTR Requests	The total number of Naming Authority Pointer requests sent to the VPN from the library.
DNS NAPTR Responses	The total number of Naming Authority Pointer responses received by the library from the VPN.
DNS NAPTR Hits	The total number of Naming Authority Pointer responses received by the library from the VPN with valid URIs.
DNS NAPTR Timeouts	The total number of Naming Authority Pointer response failures due to timeout.
DNS SRV Requests	The total number of Service Locator requests sent to the VPN from the library.
DNS SRV Responses	The total number of Service Locator responses received by the library from the VPN.
DNS SRV Hits	The total number of Service Locator responses received by the library from the VPN with valid locations.

Field	Description
DNS SRV Timeouts	The total number of Service Locator response failures due to timeout.
A Type App Request	The total number of A-type requests made by the application to the library. Single application request can result in multiple library to VPN manager requests and vice versa.
AAAA Type App Request	The total number of AAAA-type requests made by the application to the library. Single application request can result in multiple library to VPN manager requests and vice versa.
NAPTR Type App Request	The total number of Naming Authority Pointer requests made by the application to the library. Single application request can result in multiple "library to VPN manager requests and vice versa.

show diameter tps-statistics verbose

Table 12: show diameter tps-statistics verbose Command Output Descriptions

Field	Description
Application/ID	The name and the identifier of all configured Diameter applications for which the TPS KPI statistics are collected. The Diameter applications, for example, could be Gx, Gy, Rf, etc.
Average TPS	This is the sum average of all TPS values computed.
Maximum TPS	Indicates the maximum TPS value for the specified configuration.
Last 1 Sec Average TPS	Average value of TPS computed for the last 1 second.
Last 10 Secs Average TPS	Average value of TPS computed for the last 10 seconds.
Last 30 Secs Average TPS	Average value of TPS computed for the last 30 seconds.
Last 60 Secs Average TPS	Average value of TPS computed for the last 60 seconds.
Last 5 Mins Average TPS	Average value of TPS computed for the last 5 minutes.
Last 10 Mins Average TPS	Average value of TPS computed for the last 10 minutes.
Last 15 Mins Average TPS	Average value of TPS computed for the last 15 minutes.
Total number of TPS Statistics found	Shows the total number of TPS statistics collected.



Important The output of **show diameter tps-statistics diamproxy** *diamproxy_num*, **show diameter tps-statistics application** *application_name* **summary**, **show diameter tps-statistics application** *application_name* **endpoint** *endpoint_name* **summary**, **show diameter tps-statistics application** *application_name* **endpoint** *endpoint_name* **verbose** commands are almost similar to the **show diameter tps-statistics verbose** command output. The output fields might vary depending on the configuration.