show srp

This chapter describes the outputs of the **show srp** command.

show srp audit-statistics

Table 1: show srp audit-statistics Command Output Descriptions

Field	Description
Message statistics	
Audit Request	
sent	Displays the number of audit requests sent.
received	Displays the number of audit requests received.
dropped	
decode error	Displays the number of audit requests dropped due to decode error.
invalid state	Displays the number of audit requests dropped due to invalid state.
Audit Response	
sent	Displays the number of audit responses sent.
received	Displays the number of audit responses received.

Field	Description
dropped	
decode error	Displays the number of audit responses dropped due to decode error.
invalid state	Displays the number of audit responses dropped due to invalid state.
Session statistics	
Audit-2 as standby started at	Displays a time stamp for when the standby chassis audit began and the amount of time it took to finish.
Audit round trip time	Displays audit round trip time.
Audit triggered by switchover	Displays whether audit was triggered by a switchover.
Active sessions	Displays the number of active sessions and their percentage of total calls.
New sessions	Displays the number of new sessions and their percentage of total calls.
Stale sessions	Displays the number of stale sessions and their percentage of total calls.
Inactive sessions	Displays the number of inactive sessions and their percentage of total calls.
Audit-1 as active started at	Displays a time stamp for when the active chassis audit began and the amount of time it took to finish.
Audit round trip time	Displays audit round trip time.
Audit triggered by switchover	Displays whether audit was triggered by a switchover.
Active sessions	Displays the number of active sessions and their percentage of total calls.
New sessions	Displays the number of new sessions and their percentage of total calls.
Stale sessions	Displays the number of stale sessions and their percentage of total calls.
Inactive sessions	Displays the number of inactive sessions and their percentage of total calls.

show srp call-loss statistics

Table 2: show srp call-loss statistics Command Output Descriptions

Field	Description
Switchover-n	Identifies the switchover by number.
Started at	Displays the timestamp for when the switchover was initiated.
took	Displays how many seconds the switchover took to finish.
Switchover Reason	Indicates the reason for the switchover: • Manual Switchover • AAA failure • BFD failure • BGP failure • Chassis-Chassis BFD failure • Dead Timer Expiry • Diameter failure • Dual Active • Dual Standby • HSRP switchover (WSG/SecGW service only) • Not Defined (replaces "Unknown")
Total number of active calls at switchover time	Displays the total number of active calls on this chassis when the switchover was initiated.
Total number of VoLTE capable subscribers	Displays the total number of subscribers with VoLTE capable phones that were on the system when the switchover was initiated.
Total number of subscribers engaged in voice calls	Displays the total number of subscribers that were on voice calls when the switchover was initiated.
Total number of lost calls at switchover time	Displays the number of calls that were lost on this chassis during the switchover.
Chkpt never sent	Displays the total number of checkpoints that were never sent by the chassis during the switchover.
Chkpt failed	Displays the total number of checkpoints that this chassis failed to receive during the switchover.

show srp checkpoint info

Table 3: show srp checkpoint info Command Output Descriptions

Field	Description
CMD ID	Displays the checkpoint number associated with the micro-checkpoint.
NAME	Displays the name assigned to the micro-checkpoint.
CRITICAL	Indicates whether or not the micro-checkpoint is in a critical state (Yes or No).
STATS	Indicates whether or not audit statistics are available for the micro-checkpoint (Yes or No).
NACK	Indicates whether or not NACK messaging from the standby chassis has been disabled for the micro-checkpoint (Enable or Disable).

show srp checkpoint statistics

Table 4: show srp checkpoint statistics Command Output Descriptions

Field	Description
The following statistics indicates the state of session managers on the chassis. For ideal invocation of SRP procedures, the SessMgr state should *-Connected state.	
Number of Sessmgrs	Displays the total number of session managers
Sessmgrs in Active-Connected state	Displays the number of session managers in the active-connected state.
Sessmgrs in Standby-Connected state	Displays the number of session managers in the standby-connected state.
Sessmgrs in Pending-Active state	Displays the number of sessions managers in the pending-active state.
These statistics indicate the conversion status of checkpoint information on the standby chassis.	
Current Call Recovery Records (CRRs)	Displays the number of current call recovery records.
Current pre-allocated calls	Displays the number of pre-allocated calls.
The following statistics are indicative of the status of various kinds of SRP message exchanges between active and standby chassis.	

Field	Description
Total id-mapping checkpoint rcvd	Displays the total number of id-mapping checkpoints received by the chassis.
Total APN id-mapping chkpnt rcvd	Displays the total number of APN id-mapping checkpoints received by the chassis.
Total SFW id-mapping chkpnt rcvd	Displays the total number of SFW (Stateful Firewall) checkpoints received by the chassis.
Total sync rcvd	Displays the total number of sync messages received by the chassis.
Total sync-ack rcvd	Displays the total number of sync acknowledgement messages received by the chassis.
Total full session checkpoint rcvd	Displays the total number of complete session information checkpoints received by the chassis.
Total nat-ips add rcvd	Displays the total number of NAT IP address additions received by the chassis.
Total nat-ips delete rcvd	Displays the total number of NAT IP address deletions received by the chassis.
Total micro session checkpoint rcvd	Displays the total number of incremental micro session information checkpoints received.
Total inv-crr micro-chkpnt rcvd	Displays the total number of session teardown indication micro-checkpoints received.
total pcrf provided info micro-chkpnt rcvd	Displays the total number of PCRF provided MCC-MNC related information for P-GW and GGSN micro-checkpoints received.
Total call-stats micro-chkpnt rcvd	Displays the total number of call statistics update micro-checkpoints received.
Total nat-ips micro-chkpnt rcvd	Displays the total number of NAT-IP micro-checkpoints received at standby.
Total nat-ips add rcvd	Displays the total number of NAT IP address additions received at standby.
Total nat-ips delete rcvd	Displays the total number of NAT IP address deletions received at standby.
Total nat-port micro-chkpnt rcvd	Displays the total number of NAT port micro-checkpoints received at standby.
Total nat-bypass micro-chkpnt rcvd	Displays the total number of NAT-Bypass Micro-checkpoints received at standby.
Total acs-sess-info micro-chkpnt rcvd	Displays the total number of Active Charging Service (ACS) session information Micro-checkpoints received.

Field	Description
Total dyn-rule micro-chkpnt rcvd	Displays the total number of dynamic rules received and checkpointed to the standby chassis respectively.
Total gx-li micro-chkpnt rcvd	Displays the total number of LI session information, as enabled from Gx, received at standby counter.
Total Instance checkpoint rcvd	Displays the total number of PCRF-generated policy information as received session independent at standby.
Total dyn-rule-instance micro-chkpnt rcvd	Displays the total number of session specific policy received counter.
Total dyn-rule-instance delete micro-chkpnt rcvd	Displays the total number of session specific policy remove counter.
Total dyn-rule-instance ACK rcvd	Displays the total number of session independent information acknowledged from standby counter.
Total id-mapping checkpoint sent	Displays the total number of configuration specific id mapping for VPN/VRF context ids, service ids, and APN ids as sent to standby.
Total APN id-mapping chkpt sent	Displays the total number of configuration specific id mapping for APN ids as sent to standby.
Total SFW id-mapping chkpt sent	Displays the total number of configuration specific id mapping for SFW ids as sent to standby.
Total sync sent	Displays the total number of SYN message received counter.
Total sync-ack sent	Displays the total number of SYN Ack received counter.
Total full session checkpoint sent	Displays the total number of full session checkpoints sent by the chassis.
Total nat-ip add sent	Displays the total number of NAT-IP add sent counter to standby.
Total full chkpnt encoding failures	Displays the total number of complete session information formation failure counter primarily due to release of the session at active
Total micro session checkpoint sent	Displays the total number of micro session checkpoints sent by the chassis.
Total inv-crr micro-chkpnt sent	Displays the total number of invalid CRR micro checkpoints sent.
total pcrf provided info micro-chkpnt sent	Displays the total number of PCRF provided MCC-MNC related information for P-GW and GGSN micro-checkpoints sent.
Total call-stats micro-chkpnt sent	Displays the total number of call statistics micro checkpoints sent.
Total nat-ip micro-chkpnt sent	Displays the total number of NAT-IP Micro-checkpoint sent from active.

Field	Description
Total nat-ip add sent	Displays the total number of NAT-IP address addition indications to standby.
Total nat-ip delete sent	Displays the total number of NAT-IP address deletion indications to standby.
Total nat-port micro-chkpnt sent	Displays the total number of NAT-Port Micro-checkpoint sent from active.
Total nat-bypass micro-chkpnt sent	Displays the total number of NAT-Bypass Micro-checkpoint sent from active.
Total acs-sess-info micro-chkpnt sent	Active Charging Service (ACS) specific session information as sent to standby.
Total dyn-rule micro-chkpnt sent	Displays the total number of dynamic rules sent and checkpointed to the standby chassis respectively.
Total gx-li micro-chkpnt sent	LI session information sent from active.
Total instance micro-chkpnt sent	PCRF generated policy information as sent session independent from active.
Total dyn-rule-instance micro-chkpnt sent	Session specific policy add sent counter at active.
Total dyn-rule-instance delete micro-chkpnt sent	Session specific policy remove sent counter from active.
Total dyn-rule-instance ACK sent	Session independent information acknowledgements sent from standby counter.
Total micro chkpnt encoding failures	Incremental session information failed to be sent due to bad encoding at active.
Total instance micro chkpnt encoding failures	PCRF generated policy encoding failed while being sent session independent from active.
Total ipsec non urgent micro-chkpnt rcvd from active chassis serial number mismatch	Non-urgent IPsec mircro-checkpoint received from Active Chassis with serial number mismatch.
Total ipsec urgent micro-chkpnt rcvd from active chassis serial number mismatch	Urgent IPsec mircro-checkpoint received from Active Chassis with serial number mismatch.
sessmgr --> ipsecmgr checkpoint queue stats	Displays sessmgr to ipsecmgr queue statistics. • Imgr • QFull • UQFull (Urgent Queue) • QLen • UQLen • QSent • UQSent • TotalMsgSent

Field	Description
sessmgr --> aaamgr ipsec checkpoint queue stats	Displays sessmgr to aaamgr queue statistics.gr to ipsecmgr queue statistics. • Amgr • QFull • UQFull (Urgent Queue) • QLen • UQLen • QSent • UQSent • TotalMsgSent
Total micro-chkpnt to send dropped full-chkpnt not sent	Displays number of unsent micro- checkpoints due to dropped full checkpoints.
Total micro-chkpnt to send dropped srp state not active	Displays number of unsent micro- checkpoints that were dropped because SRP state was not Active.
Total micro-chkpnt to send deleted from chkpnt queue	Displays number of unsent micro-checkpoints that were deleted from the checkpoint queue.
Session full checkpoint never sent	Displays the number of calls which failed to send out complete session information.
Total Macro chkpnt Nack Sent	Displays the number of NACKs sent from Standby due to macro-checkpoint failure.
Total Micro chkpnt Nack Sent	Displays the number of NACKs sent from Standby due to micro-checkpoint failure.
Coherency_key mismatch	Displays the number of NACKs sent from Standby due to micro-checkpoint failure with reason coherency_key mismatch.
Micro-Checkpoint failed to apply	Displays the number of NACKs sent from Standby due to micro-checkpoint failure with reason application failure.
Session Not Found	Displays the number of NACKs sent from Standby due to micro-checkpoint failure with reason session failure.
Total Macro chkpnt Nack Rcvd:	Displays the number of NACKs received from Standby due to macro-checkpoint failure.
Total Micro chkpnt Nack Rcvd	Displays the number of NACKs received from Standby due to micro-checkpoint failure.
Coherency_key mismatch	Displays the number of NACKs received from Standby due to micro-checkpoint failure with reason coherency_key mismatch.
Micro-Checkpoint failed to apply	Displays the number of NACKs received from Standby due to micro-checkpoint failure with reason application failure.

Field	Description
Session Not Found	Displays the number of NACKs received from Standby due to micro-checkpoint failure with reason session failure.
Standby call pre-alloc failures	Displays the number of standby call pre allocation failures.
table-id mapping failures	Displays the number of table id mapping failures.
vpn-id mapping failures	Displays the number of decode failures due to not finding matching vpn information on standby.
svc-id mapping failures	Displays the number of decode failures due to not finding matching service information on standby.
ntwk-id mapping failures	Displays the number of decode failures due to not finding matching ggsn network information on standby.
demux-mapping-id failures	Displays the number of decode failures due to not finding matching demux information on standby.
tpo-policy-mapping-id failures	**NOTE: The Traffic Performance Optimization (TPO) in-line service is not supported in this release.**
aaa session failures	Displays the number of AAA session failures.
recovery record alloc failures	Displays the number of recovery record allocation failures.
pre-allocate vpnmgr failure	Pre-allocation of callines at standby failed due to VPN IP address allocation.
Ipv4 failure	Pre-allocation of callines at standby failed due to VPN IPv4 address allocation.
Ipv4 Prefix failure	Pre-allocation of callines at standby failed due to VPN IPv4 prefix address allocation.
Ipv6 failure	Pre-allocation of callines at standby failed due to VPN IPv6 address allocation.
pre-allocate vpnmgr msg failure	Pre-allocation of callines at standby failed due to VPN messaging issues.
pre-allocate demuxmgr failure	Pre-allocation of callines at standby failed due to demux failure.
pre-allocate demuxmgr msg failure	Pre-allocation of callines at standby failed due to demux messaging issues.
Standby micro-checkpoint failures	Displays the number of standby micro checkpoint failures.
recovery record not found	Displays the number of recovery records not found.
nat-ip uchkpt failed	The number of NAT IP micro-checkpoint failures.
nat-port uchkpt failed	The number of NAT port micro-checkpoint failures.

Field	Description
nat-bypass uchkpt failed	The number of NAT bypass micro-checkpoint failures.
The following are audit statistics done as part of the switchover--conversion of session information failures as reported at standby going active.	
Total CRR recovery failures	Displays the total number of Call Recovery Record (CRR) call recovery failures.
audit-npumgr-failure	Audit of npumgr failures.
audit-npumgr-nat-flow-failure	Audit of npumgr NAT flow failures.
audit-npumgr-nat-bypass-flow-failure	Audit of npumgr NAT bypass flow failures.
audit-vpnmgr-failure	Audit of vpnmgr failures.
audit-vpnmgr-nat-ip-failure	Audit of vpnmgr NAT IP failures.
audit-demuxmgr-failure	Audit of demuxmgr failures for all demux managers.
For the next three audit statistics, if all three audits fail for a single call, only the counter for the first failure will be incremented. Total audit failure count will remain one (not three). There is no double counting.	
audit-egtpinmgr-imsi-failure	Audit of EGTP inbound IMSI failures following an Interchassis Session Recovery (ICSR) switchover.
audit-egtpinmgr-gtpc-failure	Audit of EGTP inbound GTPC failures following an ICSR switchover.
audit-gtpumgr-failure	Audit of gtpumgr failures following an ICSR switchover.
audit-aaamgr-failure	Audit of aaamgr failures.
audit-ipsecmgr-failure	Audit of ipsecmgr failures.
audit-dgmbmgr-failure	Audit of dgmbmgr failures.
audit-mcast-proxy-failure	Audit of mcast proxy failures.
audit-igmp-proxy-failure	Audit of igmp proxy failures.
audit-unsupported-sess-type	Audit of unsupported session type failures.
recovery-unspecified-fail	The call recovery failed due to unspecified reason.
recovery-invalid-crr	The call recovery failed due to invalid CRR.
recovery-missing-info	The call recovery failed due to missing information.
recovery-quota-reached	The call recovery failed due to quota reached.
recovery-set-acs-sess-info-failure	The call recovery failed due to set ACS session information.
recovery-acs-sfw-policy-failure	The call recovery failed due to ACS SFW policy.

Field	Description
recovery-ucheckpt-failure	The call recovery failed due to Micro-checkpoint.
recovery-service-not-found	The call recovery failed due to service not found.
recovery-restart-counter-mismatch	The call recovery failed due to restart counter mismatch.
recovery-aaa-sub-session-mismatch	The call recovery failed due to aaa sub session mismatch.
recovery-crr-no-aaa-session	The call recovery failed due to CRR no aaa session.
recovery-crr-aaa-session-not_found	The call recovery failed due to CRR aaa session not found.
recovery-flow-buffer-null	The call recovery failed due to flow buffer null.
recovery-invalid-flow-id	The call recovery failed due to invalid flow ID.
recovery-flow-id-in-use	The call recovery failed due to flow ID in use.
recovery-callline-alloc-failure	The call recovery failed due to callline allocation.
recovery-ipv6-session-alloc-failure	The call recovery failed due to IPv6 session allocation.
recovery-no-apn-group-stats-entry	The call recovery failed due to no APN group statistics.
recovery-apply-aaa-config-failure	The call recovery failed due to application of aaa configuration.
recovery-sub-session-alloc-failure	The call recovery failed due to sub session allocation.
recovery-nat-failure	The call recovery failed due to NAT.
recovery-set-dst-vpn-failure	The call recovery failed due to set destination VPN.
recovery-vpn-not-found	The call recovery failed due to VPN not found.
recovery-access-side-failure	The call recovery failed due to access side.
recovery-network-side-failure	The call recovery failed due to network side.
recovery-peer-callline-failure	The call recovery failed due to peer callline.
recovery-li-failure	The call recovery failed due to LI.
recovery-css-failure	The call recovery failed due to CSS.
recovery-uchkpt-alloc-failure	The call recovery failed due to Micro-checkpoint allocation.
recovery-acs-dyn-rule_failure	The call recovery failed due to ACS dynamic rule.
recovery-acs-acct-rule-failure	The call recovery failed due to ACS account rule.
recovery-prepaid-failure	The call recovery failed due to prepaid.
recovery-mipfa-failure	The call recovery failed due to mipfa.
call-recovery-stale-session	The call recovery failed due to stale session.

Field	Description
call-recovery-wrong-flow-type	The call recovery failed due to wrong flow type.
call-recovery-null-acct-session	The call recovery failed due to null account session.
call-recovery-wrong-acct-session-type	The call recovery failed due to wrong account session type.
call-recovery-null-acct-session	The call recovery failed due to null accounting session.
call-recovery-wrong-acct-session-type	The call recovery failed due to wrong type of accounting session.
recovery-acs-acct-dyn-chrg-update-qg-failure	The call recovery failed due to an ACS accounting dynamic charging QG update failure.
recovery-acs-acct-dyn-chrg-update-ca-failure	The call recovery failed due to an ACS dynamic charging CA update failure.
call-recovery-acs-internal-audit-failure	The call recovery failed due to an ACS internal audit failure.
Total CRR replace record	Total number of replaced CRRs (Call Recovery Records).
call-recovery-gtpu-teid-in_use	The call recoveries for in-use GTPU TEIDs (Tunnel Endpoint IDs).
call-recovery-egtpc-teid-in_use	The call recoveries for in-use EGTPC TEIDs.
NAT-NPU flow audit failures	The number of NAT NPU Flow audit failures.
NAT-IP Pool address audit failures	The number of NAT IP Flow audit failures.
NAT-Bypass flow audit failures	The number of NAT Bypass Flow audit failures.
Graceful call drops during audit failure	The number of calls dropped as a result of Audit Failure with **require graceful-cleanup-during-audit-failure** enabled.

show srp info

Table 5: show srp info Command Output Descriptions

Field	Description
Service Redundancy Protocol	
Context	Displays the srp context configured for service redundancy protocol. Only one context may be configured with this service.
Local Address	Displays the local address of the chassis.
Chassis State	Displays the chassis state (init, standby or active).
Chassis Mode	Displays the chassis mode (primary or backup).

Field	Description
Chassis Priority	Displays the chassis priority. The chassis priority is an integer that determines which chassis is in the active state. The lower number has a higher priority. The priority must be an integer from 1 through 255. Default is 125.
Local Tiebreaker	Displays the MAC address which is used to determine priority when both chassis have the same priority and route modifier. The lower MAC address has the higher priority.
Route-Modifier	Displays the modifier which is used to determine which chassis has priority. The lower the number the higher the priority.
DSCP Markings	Displays current settings for DSCP marking of SRP messages.
Control	Displays DSCP value set for SRP control messages.
Session	Displays DSCP value set for SRP checkpoint messages (session maintenance).
Peer Remote Address	Displays the IP address of the remote peer.
Peer State	Displays whether the peer is in the active or standby state.
Peer Mode	Displays the peer mode (standby or active).
Peer Priority	Displays the peer priority (primary or backup).
Peer Tiebreaker	Displays the peer MAC address.
Peer Route-Modifier	Displays the peer's BGP route modifier.
Last Hello Message received	Displays a time stamp for the most recent hello message that was received.
Peer Configuration Validation	Displays the peer configuration validation.
Last Peer Configuration Error	Displays the most recent error that was received when the chassis was not able to validate its peer configuration.
Last Peer Configuration Event	Displays a time stamp for the last peer configuration event.
Last Validate Switchover Status	Displays whether both active and standby systems are ready for a planned srp switchover.
Connection State	Displays the status of the redundancy link between the two chassis.
Next Peer Audit Scheduled	Displays minutes and seconds until next audit.
Peer Audit State	Displays current state of peer audit configuration.
Last Peer Audit Type	Displays the type of peer audit that was last run.
Last Peer Audit Successful	Indicates whether or not the last peer audit was successfully completed.

Field	Description
Feature Configured-status Operational-status	
allow-volte-data-traffic	Indicates system-level Configuration and Operational status of this feature as Enabled, Disabled or Mismatch.
allow-all-dat-traffic	Indicates system-level Configuration and Operational status of this feature as Enabled, Disabled or Mismatch.

show srp monitor

Table 6: show srp monitor Command Output Descriptions

Field	Description
Type:	(A) = Authentication Probe (B) = BGP (D) = Diameter (F) = Bidirectional Forwarding Detection
State:	(I) = Initializing (U) = Up (D) = Down
GroupId	SRP Peer Group Identifier (displayed as an integer from 0 through 9. Default = 0).
Auth. probe monitor	Displays the following authentication probe information: IP addr = IP address in IPv4 or IPv6 notation Port = Port number Context (VRF Name) Last Update
(AU) Auth. probe monitors up	Displays the number of authentication probe monitors in the active state.
(AD) Auth. probe monitors down	Displays the number of authentication probe monitors in the inactive state.
(AI) Auth. probe monitors init	Displays the number of authentication probe monitors in the initializing state.
BFD monitor	Displays BFD information.

Field	Description
(FU) BFD monitors up	Displays the number of BFD monitors in the active state.
(FD) BFD monitors down	Displays the number of BFD monitors in the inactive state.
(FI) BFD monitors init	Displays the number of BFD monitors in the initializing state.
BGP monitor state	Displays the following BGP information: • IP addr = IP address in IPv4 or IPv6 notation • Port = Port number • Context (VRF Name) • Last • Update
(BU) BGP monitors up	Displays the number of BGP monitors in the active state.
(BD) BGP monitors down	Displays the number of BGP monitors in the inactive state.
(BI) BGP monitors init	Displays the number of BGP monitors in the initializing state.
DIAMETER monitor state	Displays the following Diameter server information: • Context • Endpoint Name • IPAddr (port)/FQDN • Last • Update
(DU) DIAMETER monitors up	Displays the number of Diameter monitors in the active state.
(DD) DIAMETER monitors down	Displays the number of Diameter monitors in the inactive state.
(DI) DIAMETER monitors init	Displays the number of Diameter monitors in the initializing state.

show srp statistics

Table 7: show srp statistics Command Output Descriptions

Field	Description
Service Redundancy Protocol	
Peer Remote Address	The IP address for the redundant peer chassis.
Hello Messages Sent	The number of hello messages that were sent to the peer chassis.

Field	Description
Hello Message Received	The number of hello messages received from the peer chassis.
Hello Messages Discarded	The number of discarded hello messages.
Configuration Validation Messages Sent	The number of configuration validation messages sent to the peer.
Configuration Validation Message Received	The number of configuration validation messages received from the peer chassis.
Configuration Validation Messages Discarded	The number of discarded configuration validation messages.
Resource Messages Sent	The number of resource messages sent to the peer chassis.
Resource Messages Received	The number of resource messages received from the peer chassis.
Resource Messages Discarded	The number of discarded resource messages.
Switchover Req Messages Sent	The number of switchover request messages sent to the peer chassis.
Switchover Req Messages Received	The number of switchover request messages received from the peer chassis.
Switchover Rsp Messages Sent	The number of switchover response messages sent to the peer chassis.
Switchover Rsp Messages Received	The number of switchover response messages received from the peer chassis.
Switchover Messages Discarded	The number of discarded switchover messages.
Switchover Events	The number of switchover events, where one chassis went from active to inactive and the other chassis went from inactive to active.
CMP Data Messages Sent	The number of Certificate Management Protocol (CMP) data messages sent. (RFC 4210)
CMP Data Messages Received	The number of CMP data messages received.