

show sbc

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show sbc-service all

Table 1: show sbc-service all Command Output Descriptions

Field	Description
Service name	The name of the service for which SBc statistics are being displayed.
Context	The name of the context configured on the system that is currently facilitating the SBc service.
Service-Id	The identification number of the service.
Status	The Operational status of the SBc service.
Bind	The Bind status of the SBc service.
SBc-MME IP Address	Displays the IP address of SBc interface on the MME side.
SCTP Port	Displays the SCTP Port number of the SBc interface on MME side.
Max SBc Associations Allowed	Displays the maximum number of CBC association allowed per SBc service.
SCTP Parameters	Displays the SCTP parameter template associated to SBc service.
SCTP Alpha	Displays the SCTP Retransmission Timeout (RTO) alpha value as configured in the SCTP Parameter Template.

Field	Description
SCTP Beta	Displays the SCTP Retransmission Timeout (RTO) beta value as configured in the SCTP Parameter Template.
SCTP Checksum Type	Displays the SCTP checksum type as configured in the SCTP Parameter Template.
SCTP Valid Cookie Lifetime	Displays the SCTP cookie lifetime value as configured in the SCTP Parameter Template.
SCTP Max Assoc Retrans	Displays the maximum number of retransmissions for SCTP associations value as configured in the SCTP Parameter Template.
SCTP Max Number of In Streams	Displays the maximum number of incoming streams for SCTP value as configured in the SCTP Parameter Template.
SCTP Init Retransmissions	Displays the maximum number of retransmissions for SCTP initiations value as configured in the SCTP Parameter Template.
SCTP Max MTU	Displays the maximum Maximum Transmission Unit (MTU) size for SCTP value as configured in the SCTP Parameter Template.
SCTP Max Number of Out Streams	Displays the maximum number of outgoing streams for SCTP value as configured in the SCTP Parameter Template.
SCTP Path Retransmissions	Displays the maximum number of retransmissions for SCTP paths value as configured in the SCTP Parameter Template.
SCTP Min MTU	Displays the minimum Maximum Transmission Unit (MTU) size for SCTP value as configured in the SCTP Parameter Template.
SCTP RTO Initial	Displays the initial time for SCTP Retransmission Timeout (RTO) value as configured in the SCTP Parameter Template.
SCTP RTO Max	Displays the maximum time for SCTP Retransmission Timeout (RTO) value as configured in the SCTP Parameter Template.
SCTP RTO Min	Displays the minimum time for SCTP Retransmission Timeout (RTO) value as configured in the SCTP Parameter Template.
SCTP Sack Frequency	Displays the frequency for SCTP Selective Acknowledgement value as configured in the SCTP Parameter Template.
SCTP Sack Period	Displays the period of time for SCTP Selective Acknowledgement value as configured in the SCTP Parameter Template.
SCTP Start MTU	Displays the initial Maximum Transmission Unit (MTU) size for SCTP value as configured in the SCTP Parameter Template.

Field	Description
SCTP Heartbeat Status	Displays the SCTP heartbeat status as configured in the SCTP Parameter Template.
SCTP HeartBeat Timer	Displays the SCTP heartbeat timer value as configured in the SCTP Parameter Template.
SCTP Bundle Status	Displays the SCTP data chunk bundle status as configured in the SCTP Parameter Template.
SCTP Bundle Timer	Displays the SCTP data chunk bundle timer value as configured in the SCTP Parameter Template.
SCTP Alternate Accept Flag	Displays the SCTP additional lifetime accept flag status as configured in the SCTP Parameter Template.

show sbc-service cbc-associations all

Table 2: show sbc-service cbc-associations all Command Output Descriptions

Field	Description
MM	Indicates the MME Manager instance (showing first 2 characters).
PEERID	Displays the Peer ID number of the Cell Broadcast Center (CBC) association.
Sbc Service Name	Displays the SBc service name to which the CBC is associated.
Assoc UpTime	Displays the total uptime of the association between the MME and the CBC.
CBC IP:Port	Displays the IP address and port number of the CBC. Up to 2 IPv4 or 2 IPv6 addresses can be used by the same CBC with SCTP multi-homing.

show sbc-service cbc-associations path-info all

Table 3: show sbc-service cbc-associations path-info all Command Output Descriptions

Field	Description
MMS	Indicates the MME Manager instance (showing first 2 characters). S - indicates the status of the path, either (D) Disabled or (A) Active.

Field	Description
PEERID	Displays the Peer ID number of the Cell Broadcast Center (CBC) association.
Source IP:Port	Displays the IP address and port number of the MME.
Dest IP:Port	Displays the IP address and port number of the CBC.

show sbc-service statistics all

Table 4: show sbc-service statistics all Command Output Descriptions

Field	Description
Total Services(SBc)	Total number of SBc services configured on this system.
SBc Statistics	This group includes counters for data transmitted and received for all SBc services.
Transmitted SBc Data	This subgroup includes counters for data transmitted for all SBc services.
Total Transmitted	Total number of messages transmitted from the MME to all CBCs.
Transmit Errors	This subgroup includes counters for errors encountered while transmitting SBc messages towards CBC.
Transport Errors	Total number of failures, due to SCTP, while transmitting SBc messages towards CBC.
Encode Failures	Total number of failures in sending messages to CBC due to message encoding failures
No buffers	Total number of failures in sending messages to CBC due to memory allocation failures.
Transport Buffer Failure	Total memory allocation failures during sending of SBc message over SCTP.
Encode Buffer Failure	Total memory allocation failures during encoding of IEs for SBc message.
Write Replace Warning Response	The total number of Write-Replace Warning Responses sent for all SBc services (Tracking Area Not Valid + MME Capacity Exceeded + Warn Bcast Not Operational + Message Accepted).
Tracking Area Not Valid	The total number of Write-Replace Warning Response messages sent from the MME to the CBC with cause Tracking Area Not Valid.
MME Capacity Exceeded	The total number of Write-Replace Warning Response messages sent from the MME to the CBC with cause MME Capacity Exceeded.

Field	Description
Warn Bcast Not Operational	The total number of Write-Replace Warning Response messages sent from the MME to the CBC with cause Warning Broadcast Not Operational.
Message Accepted	The total number of Write-Replace Warning Response messages sent from the MME to the CBC with cause Message Accepted.
Stop Warning Response	The total number of Stop Warning Responses sent for all SBc services (Tracking Area Not Valid + MME Capacity Exceeded + Warn Bcast Not Operational + Message Accepted)
Tracking Area Not Valid	The total number of Stop Warning Response messages sent from the MME to the CBC with cause Tracking Area Not Valid.
MME Capacity Exceeded	The total number of Stop Warning Response messages sent from the MME to the CBC with cause MME Capacity Exceeded.
Warn Bcast Not Operational	The total number of Stop Warning Response messages sent from the MME to the CBC with cause Warning Broadcast Not Operational.
Message Accepted	The total number of Write Replace Warning Response messages sent from the MME to the CBC with cause Message Accepted.
Error Indication	The total number of Error Indication messages sent from the MME to the CBC.
Received SBc Data	This subgroup includes counters for data received for all SBc services.
Total Received PDUs	The total number of messages received from all CBCs.
PDU Decode Success	The total number of successful PDU decodes.
Receive Errors	This subgroup includes counters for PDU receive errors.
No Sbc Association	The total number of received SBc messages dropped due to no matching association.
PDU Decode Failures	The total number of received SBc messages dropped due to PDU decode failure.
Write Replace Warning Request	The total number of Write Replace Warning Request messages received from the CBC.
TAI List Not Present	The total number of Write Replace Warning Request messages received from the CBC without a List-Of-TAIs IE.
Stop Warning Request	The total number of Stop Warning Request messages received from the CBC.
TAI List Not Present	The total number of Stop Warning Request messages received from the CBC without a List-Of-TAIs IE.
Error Indication	The total number of Error Indication messages received from the CBC.

Field	Description
IE Errors	The total number of CBC IE failures.
Protocol Error Statistics	This subgroup includes counters for Protocol Errors for all SBc services.
Unknown Procedures	The total number of messages encountered with Unknown Procedure codes.
Unknown IEs	The total number of messages encountered with Unknown IEs.
Unknown Messages	The total number of unrecognized messages encountered.
Missing Mandatory IEs	The total number of messages encountered with Missing Mandatory IE.
Transfer Syntax Error	The total number of messages encountered with a Transfer Syntax Error.
Semantic Error	The total number of messages encountered with a Semantic Error
Message Not Compatible	The total number of messages encountered with error: Message Not Compatible.
Others	The total number of parser internal messages.
Abstract Syntax Errors	This subgroup includes counters for Abstract Syntax Errors for all SBc services.
Reject	The total number of messages encountered with Abstract Syntax Error with Criticality: Reject.
Ignore and notify	The total number of messages encountered with Abstract Syntax Error with Criticality: Ignore and Notify.
Ignore	The total number of messages encountered with Abstract Syntax Error with Criticality: Ignore.
Falsely Constr Message	The total number of messages encountered with Abstract Syntax Error: Falsely Constructed message.
SBc Association Statistics	This subgroup includes counters related to SBc Associations for all SBc services.
Total Active	The total number of SBc Associations currently Active.
Total Created	The total number of SBc Associations created.
Total Closed	The total number of SBc Associations closed.
Total Rejected	The total number of SBc Associations rejected.
CBC Transactions Created	The total number of CBC transactions created.
CBC Transaction Failed	The total number of CBC transactions failed.
CBC Transaction Timeout	The total number of CBC transactions timed out.

Field	Description
SCTP Statistics	This group displays the statistics captured over the SCTP interface and processed by this SBc service.
Transmitted SCTP Data	This sub-group displays the statistics of the total data processed and transmitted over SCTP interface by this SBc service.
Init Chunks	Indicates the total SCTP packets with INIT transmitted over SCTP interface by this SBc service.
Init Ack Chunks	Indicates the total SCTP packets with INIT-ACK transmitted over SCTP interface by this SBc service.
Shutdown Chunks	Indicates the total SCTP packets with SHUTDOWN transmitted over SCTP interface by this SBc service.
Shutdown Ack Chunks	Indicates the total SCTP packets with SHUTDOWN-ACK transmitted over SCTP interface by this SBc service.
Cookie Chunks	Indicates the total SCTP packets with COOKIE transmitted over SCTP interface by this SBc service.
Cookie Ack Chunks	Indicates the total SCTP packets with COOKIE-ACK transmitted over SCTP interface by this SBc service.
Data Chunks	Indicates the total SCTP packets with DATA transmitted over SCTP interface by this SBc service.
Data Ack Chunks	Indicates the total SCTP packets with DATA-ACK transmitted over SCTP interface by this SBc service.
Shutdown Complete Chunks	Indicates the total SCTP packets with SHUTDOWN-COMPLETE transmitted over SCTP interface by this SBc service.
Heartbeat Chunks	Indicates the total SCTP packets with HEARTBEAT transmitted over SCTP interface by this SBc service.
HeartBeat Ack Chunks	Indicates the total SCTP packets with HEARTBEAT-ACK transmitted over SCTP interface by this SBc service.
Abort Chunks	Indicates the total SCTP packets with ABORT transmitted over SCTP interface by this SBc service.
Error Chunks	Indicates the total SCTP packets with ERROR transmitted over SCTP interface by this SBc service.
Received SCTP Data	This sub-group displays the statistics of the total data received over SCTP interface and processed by this SBc service.
Init Chunks	Indicates the total SCTP packets with INIT received over SCTP interface by this SBc service.
Init Ack Chunks	Indicates the total SCTP packets with INIT-ACK received over SCTP interface by this SBc service.

Field	Description
Shutdown Chunks	Indicates the total SCTP packets with SHUTDOWN received over SCTP interface by this SBc service.
Shutdown Ack Chunks	Indicates the total SCTP packets with SHUTDOWN-ACK received over SCTP interface by this SBc service.
Cookie Chunks	Indicates the total SCTP packets with COOKIE received over SCTP interface by this SBc service.
Cookie Ack Chunks	Indicates the total SCTP packets with COOKIE-ACK received over SCTP interface by this SBc service.
Data Chunks	Indicates the total SCTP packets with DATA received over SCTP interface by this SBc service.
Data Ack Chunks	Indicates the total SCTP packets with DATA-ACK received over SCTP interface by this SBc service.
Shutdown Complete Chunks	Indicates the total SCTP packets with SHUTDOWN-COMPLETE received over SCTP interface by this SBc service.
Heartbeat Chunks	Indicates the total SCTP packets with HEARTBEAT received over SCTP interface by this SBc service.
HeartBeat Ack Chunks	Indicates the total SCTP packets with HEARTBEAT-ACK received over SCTP interface by this SBc service.
Abort Chunks	Indicates the total SCTP packets with ABORT received over SCTP interface by this SBc service.
Error Chunks	Indicates the total SCTP packets with ERROR received over SCTP interface by this SBc service.
Retransmitted SCTP Data	This sub-group displays the statistics of the total data processed and retransmitted over SCTP interface by this SBc service.
Init Chunks	Indicates the total SCTP packets with INIT retransmitted over SCTP interface by this SBc service.
Shutdown Chunks	Indicates the total SCTP packets with SHUTDOWN retransmitted over SCTP interface by this SBc service.
Shutdown Ack Chunks	indicates the total SCTP packets with SHUTDOWN-ACK retransmitted over SCTP interface by this SBc service.
Cookie Chunks	Indicates the total SCTP packets with COOKIE retransmitted over SCTP interface by this SBc service.
Data Chunks	Indicates the total SCTP packets with DATA transmitted over SCTP interface by this SBc service.
Total Bytes Sent	Indicates the total bytes processed and sent to lower layer over SCTP interface by this SBc service.

Field	Description
Total Bytes Received	Indicates the total bytes received from lower layer over SCTP interface by this SBc service for processing.
Total Packets Sent	Indicates the total packets processed and sent to lower layer over SCTP interface by this SBc service.
Total Packets Received	Indicates the total packets received from lower layer over SCTP interface by this SBc service for processing.