

# show sbc

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


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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. |
| 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. |

| Field | Description |
|---|---|
| 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.<br>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).<br>S - indicates the status of the path, either (D) Disabled or (A) Active. |
| 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. |
| 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. |

| Field | Description |
|---|---|
| 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. |
| IE Errors | The total number of CBC IE failures. |

| Field | Description |
|---|---|
| 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. |