Performance Measurements Reference

This appendix provides details on the performance measurements you might see in the Cisco Media Gateway Controller (MGC) Node Manager (MNM) Performance Manager. It includes

Note The above is an exhaustive list of performance data on Cisco PGW 2200 Softswitch, Cisco BAMS, Cisco HSI, Cisco ITP, and Cisco LAN Switches. The performance data is available only when the objects or components with which the performance data is associated are supported and provisioned on the device and discovered by Cisco MNM.

Common Performance Data Collected for Several Devices

Many devices collect the same performance data. Common performance attributes are listed in Table B-1, Table B-2, and Table B-3, and are referenced in the following sections.

Common Performance Data Available On

- BAMS object
- HSI object
- Cisco PGW 2200 Softswitch host object
- SLT object
- LAN Switch object

Note   A Cisco PGW 2200 Softswitch host object, which you can access in Host-View in Map Viewer, contains host devices along with the associated interfaces and system components. A Cisco PGW 2200 Softswitch node object, which you can access in MGC-Node-View in Map Viewer, contains all the logical components of the node and the Cisco PGW 2200 Softswitch host object.

Table B-1   IP Performance Counters

Counter	Description
SNMP:RFC1213-MIB.ipInReceived	Number of input datagrams received from interfaces, including those received in error
SNMP:RFC1213-MIB.ipInHdrErrors	Number of input datagrams discarded due to errors in their IP headers, including bad checksums
SNMP:RFC1213-MIB.ipInAddrErrors	Number of input datagrams discarded because of invalid IP header destination address
SNMP:RFC1213-MIB.ipForwDatagrams	Number of input datagrams for which this entity was not a final IP destination
SNMP:RFC1213-MIB.ipInUnknownProtos	Number of locally addressed datagrams discarded because of an unknown or unsupported protocol
SNMP:RFC1213-MIB.ipInDiscards	Number of input IP datagrams that were discarded for some reason (such as lack of buffer space)
SNMP:RFC1213-MIB.ipInDelivers	Total number of input datagrams successfully delivered to IP user protocols
SNMP:RFC1213-MIB.ipOutRequests	Total number of IP datagrams that local IP user protocols supplied to IP in requests for transmission
SNMP:RFC1213-MIB.ipOutDiscards	Number of output IP datagrams that were discarded for some reason (such as lack of buffer space)
SNMP:RFC1213-MIB.ipOutNoRoutes	Number of IP datagrams discarded because no route was found to transmit them to their destination
SNMP:RFC1213-MIB.ipFragOKs	Number of IP datagrams that have been successfully fragmented at this entity
SNMP:RFC1213-MIB.ipFragFails	Number of IP datagrams that have been discarded because they could not be fragmented
SNMP:RFC1213-MIB.ipFragCreates	Number of IP datagram fragments that have been generated as a result of fragmentation

Table B-2   TCP Performance Counter

Counter	Description
RFC1213-MIB.tcpActiveOpens	Number of times TCP[1] connections have made a direct transition to the SYN-SENT state from the CLOSED state
RFC1213-MIB.tcpAttemptFails	Number of times TCP connections have made a direct transition to the CLOSED state from either the SYN-SENT state or the SYN-RCVD state, plus the number of times TCP connections have made a direct transition to the LISTEN state from the SYN-RCVD state
RFC1213-MIB.tcpCurrEstab	Number of TCP connections for which the current state is either ESTABLISHED or CLOSE-WAIT
RFC1213-MIB.tcpEstabResets	Number of times TCP connections have made a direct transition to the CLOSED state from either the ESTABLISHED state or the CLOSE-WAIT state
RFC1213-MIB.tcpInErrs	Total number of segments received in error (for example, bad TCP checksums)
RFC1213-MIB.tcpInSegs	Total number of segments received, including those received in error
RFC1213-MIB.tcpMaxConn	Total number of TCP connections the entity can support
RFC1213-MIB.tcpOutRsts	Number of TCP segments sent containing the RST flag
RFC1213-MIB.tcpOutSegs	Total number of segments sent, including those on current connections but excluding those containing only retransmitted octets
RFC1213-MIB.tcpPassiveOpens	Number of times TCP connections have made a direct transition to the SYN-RCVD state from the LISTEN state
RFC1213-MIB.tcpRetransSegs	Total number of segments retransmitted—that is, the number of TCP segments transmitted containing one or more previously transmitted octets
RFC1213-MIB.udpInDatagrams	Total number of UDP[2] datagrams delivered to UDP users

1.   Transmission Control Protocol

2.   User Datagram Protocol

Table B-3   UDP Performance Counters

Counter	Description
RFC1213-MIB.udpInDatagrams	Total number of UDP datagrams delivered to UDP users
RFC1213-MIB.udpInErrors	Number of received UDP datagrams that could not be delivered for reasons other than the lack of an application at the destination port
RFC1213-MIB.udpNoPorts	Total number of received UDP datagrams for which there was no application at the destination port
RFC1213-MIB.udpOutDatagrams	Total number of UDP datagrams sent from this entity

Performance Data Collected for the Cisco PGW 2200 Softswitch

Performance Data Collected on Cisco PGW 2200 Softswitch Host Object

- IP performance counters (see Table B-1)
- TCP performance counters (see Table B-2)
- UDP performance counters (see Table B-3)
- The usage attributes (see Table B-4)

Performance Data Collected on Cisco PGW 2200 Softswitch Node Object

- The CALL measurement group that tracks call processing volume (see Table B-5)
- The OVL (overload) group that tracks overload statistics (see Table B-7)
- The STATE group that tracks user-defined statistics (see Table B-8)

Performance Data Collected on Cisco PGW 2200 Softswitch Node Object > Signaling > Label Components

- The LABEL measurement group, that tracks rejected and successful calls per location (see Table B-6)

Other Performance Data Collected on Cisco PGW 2200 Softswitch

- Data on system components, such as RAM and disk space (see the "Performance Data Collected for System Components" section on page B-11).
- Data on signaling and trunk group components (see the "Performance Data Collected for Signaling and Trunk Group Components" section on page B-12).

Table B-4   Cisco PGW 2200 Softswitch Host Performance Counters

Counter	Description
SNMP:HOST-RESOURCES-MIB.hrSystemNumUsers	Number of users on the host
SNMP:HOST-RESOURCES-MIB.hrSystemProcesses	Number of processes running on the system

Table B-5   CALL Measurement Group

Counter	Description
CALL:SuccCall TOT	Number of successful calls.
CALL:FailCall TOT	Number of failed calls.
CALL:RUFailCall TOT	Number of failed calls due to resource unavailable.
CALL:ORFailCall TOT	Number of failed calls due to other reasons.
CALL:OLFailCall TOT	Number of failed calls due to overload.
CALL: SuccRedirected TOT	Added in Release 2.7(3) Patch 3. Number of successful redirected calls initiated by PGW
CALL:PrepaidAccess	This counter is incremented each time a prepaid IN service is invoked.

Table B-5   CALL Measurement Group (continued)

Counter	Description
CALL:PrepaidComplet	This counter is incremented each time a prepaid call reaches the connected state.
CALL:RLFailCall TOT	Total number of failed calls due to route list exhaustion.
CALL:INC T38 FAX REQUEST	This counter is incremented each time T.38 Fax tone is reported for H.323 – SS7 calls.
CALL:INC T38 FAX USED	This counter is incremented for each T.38 Fax Call successfully completed for H.323 – SS7 calls.
CALL:OTG T38 FAX REQUEST	This counter is incremented each time T.38 Fax tone is reported for SS7 – H.323 calls.
CALL:OTG T38 FAX USED	This counter is incremented for each T.38 Fax Call successfully completed for SS7 – H.323 calls.
CALL: CoFailCallTOT	Number of calls that failed due to a codec being unavailable.
CALL:RoInvokesSent	This counter is incremented each time an RO invocation request is internally generated and sent out over the DPNSS interface.
CALL:RoInvokesReceived	This counter is incremented each time an RO invocation request is received over the DPNSS interface at a point of inter-working.
CALL:RoCompleted	This counter is incremented each time the RO feature is actioned and concludes successfully.
CALL:RoDenialsSent	This counter is incremented each time an RO invocation request is refused by the PGW and sent out over the DPNSS interface.
CALL:RoDenialsReceived	This counter is incremented each time an RO rejection/refusal is received over the DPNSS interface.
CALL:InvalidMsgDestination	This counter is incremented each time an internal message cannot be delivered because the destination call reference does not exist (or no longer exists).
CALL: CallBackFeatureReq	This counter is incremented each time a CallBackRequest comes to PGW from DPNSS/CallManager.
CALL: CallBackFeatureReqCancel	This counter is incremented each time a CallBackRequestCancel comes to PGW from DPNSS/CallManager.
CALL: CallBackFeatureReqExpired	This counter is incremented each time a CallBackRequest from CallManager expires from its time to live value.
CALL:RoInvokesSent	This counter is incremented each time an RO invocation request is internally generated and sent out over the DPNSS interface.
CALL:RoInvokesReceived	This counter is incremented each time an RO invocation request is received over the DPNSS interface at a point of interworking.
CALL:RoCompleted	This counter is incremented each time the RO feature is actioned and concludes successfully.

Table B-5   CALL Measurement Group (continued)

Counter	Description
CALL:RoDenialsSent	This counter is incremented each time an RO invocationrequest is refused by the PGW and sent out over the DPNSS interface.
CALL:RoDenialsReceived	This counter is incremented each time an RO rejection/refusal is received over the DPNSS interface.
CALL:InvalidMsgDestination	This counter is incremented each time an internal message cannot be delivered because the destination call reference does not exist (or no longer exists).
CALL: CallBackFeatureReq	This counter is incremented each time a CallBackRequest comes to PGW from DPNSS/CallManager.
CALL: CallBackFeatureReqCancel	This counter is incremented each time a CallBackRequestCancel comes to PGW from DPNSS/CallManager.
CALL: CallBackFeatureReqExpired	This counter is incremented each time a CallBackRequest from CallManager expires from its time to live value.
CALL:CTICBReq	This counter is incremented each time a Call Back request is received by the PGW from a DPNSS, QSIG, or Tunneled QSIG interface.
CALL:CTICBCancel	This counter is incremented each time a Call Back Cancellation is received by the PGW from a DPNSS, QSIG, or Tunneled QSIG interface.
CALL:CallBackFreeNotification	This counter is incremented each time a Call Back Line Free Notification is received by the PGW from a DPNSS, QSIG, or Tunneled QSIG interface.
CALL:CallBackCallSetup	This counter is incremented each time a Call Back Call set up request is received by the PGW from a DPNSS, QSIG, or EISUP interface (with tunneled QSIG).
CALL:MessageWaitingIndication	This counter is incremented each time a Message Waiting Indication is received by the PGW over DPNSS, QSIG, Tunneled QSIG, or SIP.

Table B-6   Label Measurement Group

Counter	Description
LABEL:LabelRej TOT	Rejected calls per location
LABEL:LabelSucc TOT	Successful calls per location

Table B-7   OVL Group Performance Counters

Counter	Description
OVL:LVL1 Duration	Minutes in Level1 overload condition
OVL:LVL2 Duration	Minutes in Level2 overload condition

Table B-7   OVL Group Performance Counters (continued)

Counter	Description
OVL:LVL3 Duration	Minutes in Level3 Overload Condition
OVL:LVL0 Duration	Minutes in Level0 Overload Condition
OVL:LVL0-LVL1 TOT	Transitions from Level0 to Level1 Overload Condition
OVL:LVL0-LVL2 TOT	Transitions from Level0 to Level2 Overload Condition
OVL:LVL0-LVL3 TOT	Transitions from Level0 to Level3 Overload Condition

Table B-8   STATE Group Performance Counters

Counter	Description
STATE: CDB ReCord Xmit	Number of CDBs transmitted
STATE: User Count1	User-defined count 1
STATE: User Count2 ... User Count25	User-defined counts 2 through 25

Performance Data Collected for the Cisco BAMS

Performance Data Collected on Billing and Measurements Server (BAMS) Object

- IP performance counters (see Table B-1)

- TCP performance counters (see Table B-2)

- UDP performance counters (see Table B-3)

- The usage attributes (see Table B-9)

Other Performance Data Collected on BAMS

- Data on system components, such as RAM and disk space (see the "Performance Data Collected for System Components" section on page B-11).

- Trunk group data (see the "Performance Data Collected for Signaling and Trunk Group Components" section on page B-12).

Table B-9   BAMS Performance Counters

Counter	Description
SNMP:HOST-RESOURCES-MIB.hrSystemNumUsers	Number of users on the host
SNMP:HOST-RESOURCES-MIB.hrSystemProcesses	Number of processes running on the system

Note In the Map Viewer, access the Performance Manager for the trunk groups by selecting the Trunk Groups folder under the Cisco PGW 2200 Softswitch Node.

Performance Data Collected for the Cisco HSI Server

Performance Data Collected on HSI Object

- RAS Statistics (see Table B-38 on page B-42)
- Q931 Statistics (see Table B-39 on page B-43)
- H245 Statistics (see Table B-40 on page B-43)

Performance Data Collected for the Cisco ITP-L

Note Cisco IP Transfer Point LinkExtender (ITP-L) is the new name for Cisco Signaling Link Terminal (SLT). Over time, ITP-L will replace SLT in publications and the product.

Performance Data Collected on Cisco ITP-L Object

- IP performance counters (see Table B-1)
- TCP performance counters (see Table B-2)
- UDP performance counters (see Table B-3)
- other performance counters (see Table B-10)

Table B-10   Cisco ITP-L Performance Counters

Counter	Description
SNMP:OLD-CISCO-CHASSIS-MIB.nvRamUsed	Amount of RAM in use

Performance Data Collected for Cisco ITP-L TDM Interfaces

Performance Data Collected on Cisco ITP-L > TDM Interface Components

- Performance counters of TDM interface to the SS7 network (see Table B-11)

Note Data can be viewed only in raw, not summarized, form.

Table B-11   TDM Interface Performance Counters

Counter	Description
SNMP:RFC1406-MIB.dsx1$Table$BESs[1]	Number of bursty errored seconds
SNMP:RFC1406-MIB.dsx1$Table$CSSs	Number of controlled slip seconds
SNMP:RFC1406-MIB.dsx1$Table$DMs	Number of degraded minutes
SNMP:RFC1406-MIB.dsx1$Table$ESs	Number of errored seconds
SNMP:RFC1406-MIB.dsx1$Table$LCVs	Number of line code violations
SNMP:RFC1406-MIB.dsx1$Table$LESs	Number of line errored seconds

Table B-11   TDM Interface Performance Counters (continued)

SNMP:RFC1406-MIB.dsx1*Table*PCVs	Number of path coding violations
SNMP:RFC1406-MIB.dsx1*Table*SEFSs	Number of severely errored framing seconds
SNMP:RFC1406-MIB.dsx1*Table*SESs	Number of severely errored seconds
SNMP:RFC1406-MIB.dsx1*Table*UASs	Number of unavailable seconds

1. *Table* refers to the RFC-1406 DSX1 table and is either Current or Total.

Performance Data Collected for the Cisco LAN Switch

Performance Data Collected on Cisco LAN Switch Object

- IP performance counters (see Table B-1)
- TCP performance counters (see Table B-2)
- UDP performance counters (see Table B-3)

Performance Data Collected on Cisco IOS LAN Switch (Cisco 2900XL Switch)

- IP performance counters (see Table B-1)
- TCP performance counters (see Table B-2)
- UDP performance counters (see Table B-3)
- other performance data (see Table B-12)

Table B-12   IOS LAN Switch Performance Counters

Counter	Description
SNMP:OLD-CISCO-CHASSIS-MIB.nvRamUsed	Amount of RAM in use

Performance Data Collected on Cisco LAN Switch (Cisco Catalyst 5500 Switch and Catalyst 6509 Switch)

- IP performance counters (see Table B-1)
- TCP performance counters (see Table B-2)
- UDP performance counters (see Table B-3)
- other performance data (see Table B-13)

Table B-13   Catalyst LAN Switch Performance Counters

Counter	Description
SNMP:CISCO-STACK-MIB.sysTrafficPeak	Peak traffic utilization

Performance Data Collected for the Cisco 2900XL LAN Switch Port

Performance Data Collected on Cisco 2900XL LAN Switch > Port Components

- Performance counts for port components (see Table B-14)

Note   Data can be viewed only in raw, not summarized form.

Table B-14   Cisco 2900XL LAN Switch Port Performance Counters

Counter	Description
SNMP:CISCO-C2900-MIB.c2900PortRxNoBwFrames	Frames discarded due to lack of bandwidth
SNMP:CISCO-C2900-MIB.c2900PortRxNoBufferFrames	Frames discarded due to lack of buffer
SNMP:CISCO-C2900-MIB.c2900PortRxNoDestUniFrames	Number of unicast frames discarded
SNMP:CISCO-C2900-MIB.c2900PortRxNoDestMultiFrames	Number of multicast frames discarded
SNMP:CISCO-C2900-MIB.c2900PortRxFcsErrFrames	Frames received with an FCS error
SNMP:CISCO-C2900-MIB.c2900PortCollFragFrames	Frames whose length was less than 64 kb
SNMP:CISCO-C2900-MIB.c2900PortTxMulticastFrames	Frames successfully transmitted (multicast)
SNMP:CISCO-C2900-MIB.c2900PortTxBroadcastFrames	Frames successfully transmitted (broadcast)

Performance Data Collected for Network Interfaces

Performance Data Collected on Cisco PGW 2200 Softswitch Host/ITP-L/BAMS/Catalyst Switch/HSI > Ethernet/Serial/Generic Interfaces

- Ethernet, serial, and generic interface performance data on Cisco PGW 2200 Softswitch Host, ITP-L, BAMS, Catalyst Switch and HSI object (see Table B-15)

Note   The TDM interface data applies only to the Cisco ITP-L. See Table B-11 on page B-8 for those measurements.

Table B-15   Network Interface Performance Counters[1]

Counter	Description
SNMP:IF-MIB.ifInErrors	Number of inbound packets that contained errors preventing them from being delivered to a higher-layer protocol
SNMP:IF-MIB.ifInOctets	Total number of octets received on the interface, including framing characters
SNMP:IF-MIB.ifOutErrors	Number of outbound packets that could not be transmitted because of errors
SNMP:IF-MIB.ifOutOctets	Total number of octets transmitted out of the interface, including framing characters

1. No performance attributes are collected for loopback interfaces.

Performance Data Collected for System Components

The performance of the Cisco PGW 2200 Softswitch host and BAMS system components (fixed disks, processors, RAM, and virtual memory) is monitored as described in the following tables.

Note
- Data can be viewed only in raw, not summarized form. Performance measurements on system components are collected by the CIAgent application, resident in Cisco MNM.
- Cisco MNM also traps application- and file-system-related events (resource alarms) that occur on the Cisco PGW 2200 Softswitch host and the BAMS. See Appendix A, "Alarm Message Reference."

Tip   System component measurements can be used for threshold crossing alarms. See Chapter 6, "Managing Faults with Cisco MNM."

Fixed Disk Measurements

Performance Data Collected on Cisco PGW 2200 Softswitch Host/BAMS > Fixed Disk Components
- Performance counts for each fixed disk object (see Table B-16)

Table B-16   Fixed Disk Performance Counters

Counter	Description
SNMP:HOST-RESOURCES-MIB.hrStorageAllocationFailures	Number of failed allocation requests
SNMP:HOST-RESOURCES-MIB.hrStorageUsed	Amount of storage used

Processor Measurements

Performance Data Collected on Cisco PGW 2200 Softswitch Host/BAMS > Processor Components
- Performance counts for each processor object (see Table B-17)

Table B-17   Processor Performance Counters

Counter	Description
SNMP:HOST-RESOURCES-MIB.hrDeviceErrors	Number of errors detected on the device
SNMP:HOST-RESOURCES-MIB.hrProcessorLoad	Average load on the processor

RAM Measurements

Performance Data Collected on Cisco PGW 2200 Softswitch Host/BAMS > RAM Components

• Performance counts for each RAM object (see Table B-18)

Table B-18   RAM Performance Counters

Counter	Description
SNMP:HOST-RESOURCES-MIB.hrStorageAllocationFailures	Number of failed allocation requests
SNMP:HOST-RESOURCES-MIB.hrStorageUsed	Amount of storage used

Virtual Memory Measurements

Performance Data Collected on Cisco PGW 2200 Softswitch Host/BAMS > Virtual Memory Components

• Performance counts for each virtual memory object (see Table B-19)

Table B-19   Virtual Memory Performance Counters

Counter	Description
SNMP:HOST-RESOURCES-MIB.hrStorageAllocationFailures	Number of failed allocation requests
SNMP:HOST-RESOURCES-MIB.hrStorageUsed	Amount of storage used

Performance Data Collected for Signaling and Trunk Group Components

Cisco MNM collects extensive performance information on most signaling and trunk group components. Use Table B-20 to find the measurement groups for MGC Node Object > Signaling and Trunk Group Components. See the appropriate measurement group heading for measurement descriptions. If you are viewing this document online, you can click the table number to go to the measurement group.

Unless otherwise stated, measurement units are occurrence times.

Note The release of the Cisco PGW 2200 Softswitch you are using determines which components are supported. The table identifies which components are supported only in Release 9.x.

Table B-20   Lookup Table for Signaling and Trunk Group Measurement Groups

Component	Description	Measurement Groups
hostAssociation	Association between SCTP (Stream Control Transmission Protocol) end points	SCTP Association (Table B-41) IUA Association (Table B-42)
hostC7IpLink	C7 IP link	C7LNK (Table B-22) SC (Table B-28)

Table B-20   Lookup Table for Signaling and Trunk Group Measurement Groups (continued)

Component	Description	Measurement Groups
hostCASPath	CAS path	CAS (Table B-31)
hostDPNSSPath	DPNSS path	CALL (Table B-24)
hostDPC	Destination point code	SP (Table B-29) C7SP (Table B-23) ISUP (Table B-25) TUP (Table B-30) NUP (Table B-26)
hostEISUPPath	EISUP path	ACC (Table B-21) CALL (Table B-24) ISUP (Table B-25) SP (Table B-29)
hostIpFASPath	IP FAS path	ACC (Table B-21) PRI (Table B-27) SP (Table B-29)
hostLabel	Label	LABEL (Table B-6)
hostMGCPPath	MGCP path	ACC (Table B-21) SP (Table B-29)
hostNASPath	NAS path	ACC (Table B-21) SP (Table B-29)
hostSGP	SGP (SS7 Signaling Gateway Process), the representation of a local SCTP endpoint	M3UA SGP (Table B-43) SUA SGP (Table B-44)
hostSIPLink	SIP signal channel	SIPSP (Table B-32)
hostSIPPath	SIP signal path	SP (Table B-29) SIP (Table B-33) SIPSP (Table B-32)
hostSS7Path	SS7 path	ACC (Table B-21) C7SP (Table B-23) ISUP (Table B-25) NUP (Table B-26) SP (Table B-29) TUP (Table B-30)
hostTrunkGroup	Trunk group	ACC (Table B-21) BAM (Table B-34)
hostH248Path	H.248 Path	ACC (Table B-21) SP (Table B-29)

Measurement Groups for Signaling and Trunk Group Components

Performance Data Collected on MGC Node Object > Signaling and Trunk Group Components

- Performance data for a signaling or trunk group component (see Table B-21 to Table B-44)

To find out which measurement groups apply to the network component you are interested in, see Table B-20 on page B-12.

Table B-21   Automatic Congestion Control (ACC) Measurement Group

Measurement	Description
ACC: CALL REJ	Number of calls rejected by ACC
ACC: CALL RE-RTE	Number of calls rerouted by ACC

Table B-22   C7 Link (C7LNK) Measurement Group

Measurement	Description
C7LNK: DUR IS	Duration in-server (in seconds)
C7LNK: DUR UNAVAIL	Duration unavailable (in seconds)
C7LNK: MSU DROP-CONG	Total messages dropped due to congestion
C7LNK: RCV SIO TOT	Total realignments (SIF/SIO) received
C7LNK: RCV SU ERR	Total number of signaling units received
C7LNK: XMIT SIO TOT	Total realignments (SIF/SIO) transmitted

Table B-23   C7SP Measurement Group

Measurement	Description
C7SP: SP DUR UNAVAIL	Duration unavailable (in seconds)
C7SP: XMIT MSU DROP/RTE	Total number of messages dropped due to routing failure

Table B-24   Call Measurement Group

Measurement	Description
CALL: CallBackCallSetup	This counter increments each time a Call Back Call set up request is received by the Cisco PGW 2200 Softswitch from a DPNSS, QSIG, or EISUP (with tunneled QSIG) interface.
CALL: CallBackFreeNotification	This counter increments each time a Call Back Line Free Notification is received by the Cisco PGW 2200 Softswitch from a DPNSS, QSIG, or Tunneled QSIG interface.
CALL: CTICBCancel	This counter increments each time a Call Back Cancellation comes to the Cisco PGW 2200 Softswitch from a DPNSS, QSIG, or Tunneled QSIG interface.
CALL: CTICBReq	This counter increments each time a Call Back request comes to the Cisco PGW 2200 Softswitch from a DPNSS, QSIG, or Tunneled QSIG interface.
CALL: FailCall TOT	Number of failed calls.

Table B-24   Call Measurement Group (continued)

CALL: MessageWaitingIndication	This counter increments each time a Message Waiting Indication is received by the Cisco PGW 2200 Softswitch over DPNSS, QSIG, Tunneled QSIG, or SIP.
CALL: OLFailCall TOT	Failed calls due to an overload.
CALL: ORFailCall TOT	Failed calls due to other reasons.
CALL: RUFailCall TOT	Failed calls due to unavailable resources.
CALL: SuccCall TOT	Number of successful calls.

Table B-25   ISDN User Part (ISUP) Measurement Group

Measurement	Description
ISUP: ABN REL TOT	Total number of abnormal clears
ISUP: AOC TOT	Total number of calls that have invoked the Advice-of-Charge feature
ISUP: CHAN MATE UNAVAILABLE	Total number of channel mates that are unavailable
ISUP: FAIL_H323_ORIG	Number of failed calls that originated in an H.323 network
ISUP: FAIL_H323_TERM	Number of failed calls that terminated in an H.323 network
ISUP: RCV ACM TOT	Number of ACMs received
ISUP: RCV ANM TOT	Number of ANMs received
ISUP: RCV APM TOT	Number of APMs received
ISUP: RCV BELGACOM1 TOT	Number of BELGACOM1s received
ISUP: RCV BELGACOM1 TOT	ISDN UserPart: BELGACOM1 rcv total
ISUP: RCV BELGACOM2 TOT	Number of BELGACOM2s received
ISUP: RCV BELGACOM2 TOT	ISDN UserPart: BELGACOM2 rcv total
ISUP: RCV BLA TOT	Number of BLAs received
ISUP: RCV BLO TOT	Number of BLOs received
ISUP: RCV CCL TOT	Number of CCLs received
ISUP: RCV CCR TOT	Number of CCRs received
ISUP: RCV CFN TOT	Number of CFNs received
ISUP: RCV CGB TOT	Number of CGBs received
ISUP: RCV CGBA TOT	Number of CGBAs received
ISUP: RCV CGU TOT	Number of CGUs received
ISUP: RCV CGUA TOT	Number of CGUAs received
ISUP: RCV CHG TOT	Number of CHGs received
ISUP: RCV CHG TOT	ISDN UserPart: CHG rcv total
ISUP: RCV COM TOT	Number of COMs received

Table B-25   ISDN User Part (ISUP) Measurement Group (continued)

Measurement	Description
ISUP: RCV CON TOT	Number of CONs received
ISUP: RCV COT TOT	Number of COTs received
ISUP: RCV CPG TOT	Number of CPGs received
ISUP: RCV CQM TOT	Number of CQMs received
ISUP: RCV CQR TOT	Number of CQRs received
ISUP: RCV CRA TOT	Number of CRAs received
ISUP: RCV CRG TOT	Number of CRGs received
ISUP: RCV CRM TOT	Number of CRMs received
ISUP: RCV CVR TOT	Number of CVRs received
ISUP: RCV CVT TOT	Number of CVTs received
ISUP: RCV EOH TOT	ISDN UserPart: EOH rcv total
ISUP: RCV EOHA TOT	ISDN UserPart: EOHA rcv total
ISUP: RCV EXM TOT	Number of EXMs received
ISUP: RCV FAA TOT	Number of FAAs received
ISUP: RCV FAC TOT	Number of FACs received
ISUP: RCV FAD TOT	Number of FADs received
ISUP: RCV FAR TOT	Number of FARs received
ISUP: RCV FLA TOT	Number of FLAs received
ISUP: RCV FOT TOT	Number of FOTs received
ISUP: RCV FRJ TOT	Number of FRJs received
ISUP: RCV FWT TOT	ISDN UserPart: FWT rcv total
ISUP: RCV GRA TOT	Number of GRAs received
ISUP: RCV GRS TOT	Number of GRSs received
ISUP: RCV IAM TOT	Number of IAMs received
ISUP: RCV IDR TOT	ISDN UserPart: IDR rcv total
ISUP: RCV INF TOT	Number of INFs received
ISUP: RCV INR TOT	Number of INRs received
ISUP: RCV IRS TOT	ISDN UserPart: IRS rcv total
ISUP: RCV ITX TOT	Number of ITXs received
ISUP: RCV LPA TOT	Number of LPAs received
ISUP: RCV LPM TOT	ISDN UserPart: LPM rcv total
ISUP: RCV MCID TOT	ISDN UserPart: MCID rcv total
ISUP: RCV MCP TOT	ISDN UserPart: MCP rcv total
ISUP: RCV MCT TOT	Number of MCTs received
ISUP: RCV MPM TOT	Number of MPMs received
ISUP: RCV MSG TOT	Total messages received

Table B-25   ISDN User Part (ISUP) Measurement Group (continued)

Measurement	Description
ISUP: RCV NRM TOT	ISDN UserPart: NRM rcv total
ISUP: RCV OFR TOT	Number of OFRs received
ISUP: RCV OPR TOT	ISDN UserPart: OPR rcv total
ISUP: RCV PAM TOT	Number of PAMs received
ISUP: RCV PRI TOT	ISDN UserPart: PRI rcv total
ISUP: RCV REL TOT	Number of RELs received
ISUP: RCV RES TOT	Number of RESs received
ISUP: RCV RLC TOT	Number of RLCs received
ISUP: RCV RNG TOT	Number of RNGs received
ISUP: RCV RSC TOT	Number of RSCs received
ISUP: RCV SAM TOT	Number of SAMs received
ISUP: RCV SDM TOT	Number of SDMs received
ISUP: RCV SGM TOT	Number of SGMs received
ISUP: RCV SUS TOT	Number of SUSs received
ISUP: RCV TKO TOT	Number of TKOs received
ISUP: RCV TOF TOT	Number of TOFs received
ISUP: RCV TXA TOT	Number of TXAs received
ISUP: RCV UBA TOT	Number of UBAs received
ISUP: RCV UBL TOT	Number of UBLs received
ISUP: RCV UCIC TOT	Number of UCICs received
ISUP: RCV UPA TOT	Number of UPAs received
ISUP: RCV UPT TOT	Number of UPTs received
ISUP: RCV USR TOT	Number of USRs received
ISUP: SUCC_H323_ORIG	Number of successful calls that originated in an H.323 network
ISUP: SUCC_H323_TERM	Number of successful calls that terminated in an H.323 network
ISUP: UNEX MSG TOT	Total number of unexpected messages
ISUP: UNREC MSG TOT	Total number of unrecognized messages
ISUP: XMIT ACM TOT	Number of ACMs transmitted
ISUP: XMIT ANM TOT	Number of ANMs transmitted
ISUP: XMIT APM TOT	Number of APMs transmitted
ISUP: XMIT BELGACOM1 TOT	ISDN UserPart: BELGACOM1 xmitted total
ISUP: XMIT BELGACOM2 TOT	ISDN UserPart: BELGACOM2 xmitted total
ISUP: XMIT BLA TOT	Number of BLAs transmitted
ISUP: XMIT BLO TOT	Number of BLOs transmitted
ISUP: XMIT CCL TOT	Number of CCLs transmitted

Table B-25   ISDN User Part (ISUP) Measurement Group (continued)

Measurement	Description
ISUP: XMIT CCR TOT	Number of CCRs transmitted
ISUP: XMIT CFN TOT	Number of CFNs transmitted
ISUP: XMIT CGB TOT	Number of CGBs transmitted
ISUP: XMIT CGBA TOT	Number of CGBAs transmitted
ISUP: XMIT CGR TOT	Number of CGRs transmitted
ISUP: XMIT CGU TOT	Number of CGUs transmitted
ISUP: XMIT CGUA TOT	Number of CGUAs transmitted
ISUP: XMIT CHG TOT	ISDN UserPart: CHG xmitted total
ISUP: XMIT COM TOT	Number of COMs transmitted
ISUP: XMIT CON TOT	Number of CONs transmitted
ISUP: XMIT COT TOT	Number of COTs transmitted
ISUP: XMIT CPG TOT	Number of CPGs transmitted
ISUP: XMIT CQM TOT	Number of CQMs transmitted
ISUP: XMIT CQR TOT	Number of CQRs transmitted
ISUP: XMIT CRA TOT	Number of CRAs transmitted
ISUP: XMIT CRG TOT	Number of CRGs transmitted
ISUP: XMIT CRM TOT	Number of CRMs transmitted
ISUP: XMIT CVR TOT	Number of CVRs transmitted
ISUP: XMIT CVT TOT	Number of CVTs transmitted
ISUP: XMIT EOH TOT	ISDN UserPart: EOH xmitted total
ISUP: XMIT EOHA TOT	ISDN UserPart: EOHA xmitted total
ISUP: XMIT EXM TOT	Number of EXMs transmitted
ISUP: XMIT FAA TOT	Number of FAAs transmitted
ISUP: XMIT FAC TOT	Number of FACs transmitted
ISUP: XMIT FAD TOT	Number of FADs transmitted
ISUP: XMIT FAR TOT	Number of FARs transmitted
ISUP: XMIT FLA TOT	Number of FLAs transmitted
ISUP: XMIT FOT TOT	Number of FOTs transmitted
ISUP: XMIT FRJ TOT	Number of FRJs transmitted
ISUP: XMIT FWT TOT	ISDN UserPart: FWT xmitted total
ISUP: XMIT GRA TOT	Number of GRAs transmitted
ISUP: XMIT GRS TOT	Number of GRSs transmitted
ISUP: XMIT IAM TOT	Number of IAMs transmitted
ISUP: XMIT IDR TOT	ISDN UserPart: IDR xmitted total
ISUP: XMIT INF TOT	Number of INFs transmitted
ISUP: XMIT INR TOT	Number of INRs transmitted

Table B-25   ISDN User Part (ISUP) Measurement Group (continued)

Measurement	Description
ISUP: XMIT IRS TOT	ISDN UserPart: IRS xmitted total
ISUP: XMIT ITX TOT	Number of ITXs transmitted
ISUP: XMIT LPA TOT	Number of LPAs transmitted
ISUP: XMIT LPM TOT	ISDN UserPart: LPM xmitted total
ISUP: XMIT MCID TOT	ISDN UserPart: MCID xmitted total
ISUP: XMIT MCP TOT	ISDN UserPart: MCP xmitted total
ISUP: XMIT MCT TOT	Number of MCTs transmitted
ISUP: XMIT MPM TOT	Number of MPMs transmitted
ISUP: XMIT MSG TOT	Total messages transmitted
ISUP: XMIT NRM TOT	ISDN UserPart: RNG xmitted total
ISUP: XMIT OFR TOT	Number of OFRs transmitted
ISUP: XMIT OPR TOT	Number of OPRs transmitted
ISUP: XMIT OPR TOT	ISDN UserPart: OPR xmitted total
ISUP: XMIT PAM TOT	Number of PAMs transmitted
ISUP: XMIT PRI TOT	ISDN UserPart: PRI xmitted total
ISUP: XMIT REL TOT	Number of RELs transmitted
ISUP: XMIT RES TOT	Number of RESs transmitted
ISUP: XMIT RLC TOT	Number of RLCs transmitted
ISUP: XMIT RSC TOT	Number of RSCs transmitted
ISUP: XMIT SAM TOT	Number of SAMs transmitted
ISUP: XMIT SDM TOT	Number of SDMs transmitted
ISUP: XMIT SGM TOT	Number of SGMs transmitted
ISUP: XMIT SUS TOT	Number of SUSs transmitted
ISUP: XMIT TKO TOT	Number of TKOs transmitted
ISUP: XMIT TOF TOT	Number of TOFs transmitted
ISUP: XMIT TXA TOT	Number of TXAs transmitted
ISUP: XMIT UBA TOT	Number of UBAs transmitted
ISUP: XMIT UBL TOT	Number of UBLs transmitted
ISUP: XMIT UCIC TOT	Number of UCICs transmitted
ISUP: XMIT UPA TOT	Number of UPAs transmitted
ISUP: XMIT UPT TOT	Number of UPTs transmitted
ISUP: XMIT USR TOT	Number of USRs transmitted

Table B-26   National User Part (NUP) Measurement Group

Measurement	Description
NUP: RCV MSG TOT	Total number of messages received
NUP: UNEX MSG TOT	Total number of unexpected messages
NUP: XMIT MSG TOT	Total number of messages transmitted

Table B-27   PRI Measurement Group

Measurement	Description
PRI: CHAN MATE UNAVAILABLE	Total number of channel mates unavailable

Table B-28   Signal Channel (SC) Measurement Group

Measurement	Description
SC: RCV BAD CRC	Number of frames received with bad CRC
SC: RCV BAD TOT	Total number of bad frames received
SC: RCV FRMR	Number of bad FRMR responses
SC: RCV FRM TOT	Total number of frames received
SC: RCV RESET	Total number of resets received
SC: XMIT FRM TOT	Total number of frames transmitted

Table B-29   Signal Path (SP) Measurement Group

Measurement	Description
SP: Blacklist Call Ctr	Black list threshold counter.
SP: CBReqExpired	Call Back request from the Cisco CallManager expires for its ttl.
SP: cInit in	Number of call-init messages received.
SP: cInit out	Number of call-init messages sent.
SP: COT Failure	Number of COT failures.
SP: PDU in	Number of messages received.
SP: PDU out	Number of messages sent.
SP: IPIN REJ TOT	Only available to hostSIPPath and hostEISUPPath components. Total number of rejected calls due to IPIN screening.

Table B-30   Telephone User Part (TUP) Measurement Group

Measurement	Description
TUP: ABN REL TOT	Total number of abnormal clears
TUP: CHAN MATE UNAVAILABLE	Total number of channel mates that are unavailable
TUP: RCV ACB TOT	Number of ACBs received
TUP: RCV ACC TOT	Number of ACCs received
TUP: RCV ACF TOT	Number of ACFs received
TUP: RCV ACM TOT	Number of ACMs received
TUP: RCV ADI TOT	Number of ADIs received
TUP: RCV ANC TOT	Number of ANCs received
TUP: RCV ANN TOT	Number of ANNs received
TUP: RCV ANU TOT	Number of ANUs received
TUP: RCV AUU TOT	Number of AUUs received
TUP: RCV BLA TOT	Number of BLAs received
TUP: RCV BLO TOT	Number of BLOs received
TUP: RCV CBK TOT	Number of CBKs received
TUP: RCV CBU TOT	Number of CBUs received
TUP: RCV CCF TOT	Number of CCFs received
TUP: RCV CCL TOT	Number of CCLs received
TUP: RCV CCR TOT	Number of CCRs received
TUP: RCV CFL TOT	Number of CFLs received
TUP: RCV CGC TOT	Number of CGCs received
TUP: RCV CHA TOT	Number of CHAs received
TUP: RCV CHG TOT	Number of CHGs received
TUP: RCV CHP TOT	Number of CHPs received
TUP: RCV CHT TOT	Number of CHTs received
TUP: RCV CLF TOT	Number of CLFs received
TUP: RCV CLU TOT	Number of CLUs received
TUP: RCV COT TOT	Number of COTs received
TUP: RCV DPN TOT	Number of DPNs received
TUP: RCV EUM TOT	Number of EUMs received
TUP: RCV FOT TOT	Number of FOTs received
TUP: RCV GRA TOT	Number of GRAs received
TUP: RCV GRQ TOT	Number of GRQs received
TUP: RCV GRS TOT	Number of GRSs received
TUP: RCV GSE TOT	Number of GSEs received
TUP: RCV GSM TOT	Number of GSMs received
TUP: RCV HBA TOT	Number of HBAs received

Table B-30   Telephone User Part (TUP) Measurement Group (continued)

Measurement	Description
TUP: RCV HGB TOT	Number of HGBs received
TUP: RCV HGU TOT	Number of HGUs received
TUP: RCV HUA TOT	Number of HUAs received
TUP: RCV IAF TOT	Number of IAFs received
TUP: RCV IAI TOT	Number of IAIs received
TUP: RCV IAM TOT	Number of IAMs received
TUP: RCV ICF TOT	Number of ICFs received
TUP: RCV LOS TOT	Number of LOSs received
TUP: RCV MAL TOT	Number of MALs received
TUP: RCV MBA TOT	Number of MBAs received
TUP: RCV MGB TOT	Number of MGBs received
TUP: RCV MGU TOT	Number of MGUs received
TUP: RCV MPM TOT	Number of MPMs received
TUP: RCV MPR TOT	Number of MPRs received
TUP: RCV MSG TOT	Total number of messages received
TUP: RCV MUA TOT	Number of MUAs received
TUP: RCV NNC TOT	Number of NNCs received
TUP: RCV OPR TOT	Number of OPRs received
TUP: RCV RAN TOT	Number of RANs received
TUP: RCV RLG TOT	Number of RLGs received
TUP: RCV RSC TOT	Number of RSCs received
TUP: RCV SAM TOT	Number of SAMs received
TUP: RCV SAO TOT	Number of SAOs received
TUP: RCV SBA TOT	Number of SBAs received
TUP: RCV SCN TOT	Number of SCNs received
TUP: RCV SEC TOT	Number of SECs received
TUP: RCV SGB TOT	Number of SGBs received
TUP: RCV SGU TOT	Number of SGUs received
TUP: RCV SLB TOT	Number of SLBs received
TUP: RCV SNA TOT	Number of SNAs received
TUP: RCV SSB TOT	Number of SSBs received
TUP: RCV SST TOT	Number of SSTs received
TUP: RCV STB TOT	Number of STBs received
TUP: RCV SUA TOT	Number of SUAs received
TUP: RCV UBA TOT	Number of UBAs received
TUP: RCV UBL TOT	Number of UBLs received

Table B-30   Telephone User Part (TUP) Measurement Group (continued)

Measurement	Description
TUP: RCV UNN TOT	Number of UNNs received
TUP: RCV USR TOT	Number of USRs received
TUP: UNEX MSG TOT	Total number of unexpected messages
TUP: UNREC MSG TOT	Total number of unrecognized messages
TUP: XMIT ACB TOT	Number of ACBs transmitted
TUP: XMIT ACC TOT	Number of ACCs transmitted
TUP: XMIT ACF TOT	Number of ACFs transmitted
TUP: XMIT ACM TOT	Number of ACMs transmitted
TUP: XMIT ADI TOT	Number of ADIs transmitted
TUP: XMIT ANC TOT	Number of ANCs transmitted
TUP: XMIT ANN TOT	Number of ANNs transmitted
TUP: XMIT ANU TOT	Number of ANUs transmitted
TUP: XMIT AUU TOT	Number of AUUs transmitted
TUP: XMIT BLA TOT	Number of BLAs transmitted
TUP: XMIT BLO TOT	Number of BLOs transmitted
TUP: XMIT CBK TOT	Number of CBKs transmitted
TUP: XMIT CBU TOT	Number of CBUs transmitted
TUP: XMIT CCF TOT	Number of CCFs transmitted
TUP: XMIT CCL TOT	Number of CCLs transmitted
TUP: XMIT CCR TOT	Number of CCRs transmitted
TUP: XMIT CFL TOT	Number of CFLs transmitted
TUP: XMIT CGC TOT	Number of CGCs transmitted
TUP: XMIT CHA TOT	Number of CHAs transmitted
TUP: XMIT CHG TOT	Number of CHGs transmitted
TUP: XMIT CHP TOT	Number of CHPs transmitted
TUP: XMIT CHT TOT	Number of CHTs transmitted
TUP: XMIT CLF TOT	Number of CLFs transmitted
TUP: XMIT COT TOT	Number of COTs transmitted
TUP: XMIT DPN TOT	Number of DPNs transmitted
TUP: XMIT EUM TOT	Number of EUMs transmitted
TUP: XMIT FOT TOT	Number of FOTs transmitted
TUP: XMIT GRA TOT	Number of GRAs transmitted
TUP: XMIT GRQ TOT	Number of GRQs transmitted
TUP: XMIT GRS TOT	Number of GRSs transmitted
TUP: XMIT GSE TOT	Number of GSEs transmitted
TUP: XMIT GSM TOT	Number of GSMs transmitted

Table B-30   Telephone User Part (TUP) Measurement Group (continued)

Measurement	Description
TUP: XMIT HBA TOT	Number of HBAs transmitted
TUP: XMIT HGB TOT	Number of HGBs transmitted
TUP: XMIT HGU TOT	Number of HGUs transmitted
TUP: XMIT HUA TOT	Number of HUAs transmitted
TUP: XMIT LAF TOT	Number of LAFs transmitted
TUP: XMIT IAI TOT	Number of IAIs transmitted
TUP: XMIT IAM TOT	Number of IAMs transmitted
TUP: XMIT ICF TOT	Number of ICFs transmitted
TUP: XMIT LOS TOT	Number of LOSs transmitted
TUP: XMIT MAL TOT	Number of MALs transmitted
TUP: XMIT MBA TOT	Number of MBAs transmitted
TUP: XMIT MGB TOT	Number of MGBs transmitted
TUP: XMIT MGU TOT	Number of MGUs transmitted
TUP: XMIT MPM TOT	Number of MPMs transmitted
TUP: XMIT MPR TOT	Number of MPRs transmitted
TUP: XMIT MSG TOT	Number of messages transmitted
TUP: XMIT MUA TOT	Number of MUAs transmitted
TUP: XMIT NNC TOT	Number of NNCs transmitted
TUP: XMIT OPR TOT	Number of OPRs transmitted
TUP: XMIT RAN TOT	Number of RANs transmitted
TUP: XMIT RLG TOT	Number of RLGs transmitted
TUP: XMIT RSC TOT	Number of RSCs transmitted
TUP: XMIT SAM TOT	Number of SAMs transmitted
TUP: XMIT SAO TOT	Number of SAOs transmitted
TUP: XMIT SBA TOT	Number of SBAs transmitted
TUP: XMIT SCN TOT	Number of SCNs transmitted
TUP: XMIT SEC TOT	Number of SECs transmitted
TUP: XMIT SGB TOT	Number of SGBs transmitted
TUP: XMIT SGU TOT	Number of SGUs transmitted
TUP: XMIT SLB TOT	Number of SLBs transmitted
TUP: XMIT SNA TOT	Number of SNAs transmitted
TUP: XMIT SSB TOT	Number of SSBs transmitted
TUP: XMIT SST TOT	Number of SSTs transmitted
TUP: XMIT STB TOT	Number of STBs transmitted
TUP: XMIT SUA TOT	Number of SUAs transmitted
TUP: XMIT UBA TOT	Number of UBAs transmitted

Table B-30   Telephone User Part (TUP) Measurement Group (continued)

Measurement	Description
TUP: XMIT UBL TOT	Number of UBLs transmitted
TUP: XMIT UNN TOT	Number of UNNs transmitted
TUP: XMIT USR TOT	Number of USRs transmitted

Table B-31   CAS Measurement Group

Measurement	Description
CAS: IN CALL ATMPT TOT	Number of incoming CAS call attempts
CAS: IN CALL SUCC TOT	Number of incoming CAS call successes
CAS: IN SZR ATMPT TOT	Number of incoming CAS seizure attempts
CAS: IN SZR SUCC TOT	Number of incoming CAS seizure success
CAS: IN UNEXPECTED MSG	Number of incoming unexpected messages
CAS: OUT CALL ATMPT TOT	Number of outgoing CAS call attempts
CAS: OUT CALL SUCC TOT	Number of outgoing CAS call successes
CAS: OUT SZR ATMPT TOT	Number of outgoing CAS seizure attempts
CAS: OUT SZR SUCC TOT	Number of outgoing CAS seizure successes

Table B-32   SIP Link Measurement Group

Measurement	Description
SIPSP: BAD URL TOT	Total unresolved URLs
SIPSP: DNS CACHE NEW TOT	Total new DNS cache entries
SIPSP: DNS CACHE PURGE TOT	Total purged DNS cache entries
SIPSP: DNS CACHE REFRESHED TOT	Total refreshed DNS cache entries
SIPSP: DNS QUERY TOT	Total DNS queries
SIPSP: DNS TIMEOUT TOT	Total DNS query timeouts
SIPSP: ICMP ERR TOT	Total ICMP errors
SIPSP: RCV FAIL TOT	Total failed received messages
SIPSP: RCV MSG TOT	Total received messages
SIPSP: XMIT FAIL TOT	Total failed transmitted messages
SIPSP: XMIT MSG TOT	Total transmitted messages

Table B-33   SIP Path Measurement Group

Measurement	Description
SIP: RCV 100 TOT	Total 100 (TRYING) messages received
SIP: RCV 180 TOT	Total 180 (RINGING) messages received

Table B-33   SIP Path Measurement Group (continued)

Measurement	Description
SIP: RCV 181 TOT	Total 181 (CALL FORWARDED) messages received
SIP: RCV 182 TOT	Total 182 (QUEUED) messages received
SIP: RCV 183 TOT	Total 183 (SESSION PROGRESS) messages received
SIP: RCV 200 TOT	Total 200 (OK) messages received
SIP: RCV 300 TOT	Total 300 (MULTIPLE CHOICES) messages received
SIP: RCV 301 TOT	Total 301 (MOVED PERMANENTLY) messages received
SIP: RCV 302 TOT	Total 302 (MOVED TEMPORARILY) messages received
SIP: RCV 305 TOT	Total 305 (USE PROXY) messages received
SIP: RCV 380 TOT	Total 380 (ALTERNATIVE SERVICE) messages received
SIP: RCV 400 TOT	Total 400 (BAD REQUEST) messages received
SIP: RCV 401 TOT	Total 401 (UNAUTHORIZED) messages received
SIP: RCV 402 TOT	Total 402 (PAYMENT REQUIRED) messages received
SIP: RCV 403 TOT	Total 403 (FORBIDDEN) messages received
SIP: RCV 404 TOT	Total 404 (NOT FOUND) messages received
SIP: RCV 405 TOT	Total 405 (METHOD NOT ALLOWED) messages received
SIP: RCV 406 TOT	Total 406 (NOT ACCEPTABLE) messages received
SIP: RCV 407 TOT	Total 407 (PROXY AUTHENTICATION REQUIRED) messages received
SIP: RCV 408 TOT	Total 408 (REQUEST TIMEOUT) messages received
SIP: RCV 409 TOT	Total 409 (CONFLICT) messages received
SIP: RCV 410 TOT	Total 410 (GONE) messages received
SIP: RCV 411 TOT	Total 411 (LENGTH REQUIRED) messages received
SIP: RCV 413 TOT	Total 413 (REQUEST ENTITY TOO LARGE) messages received
SIP: RCV 414 TOT	Total 414 (REQUEST-URI TOO LONG) messages received
SIP: RCV 415 TOT	Total 415 (UNSUPPORTED MEDIA TYPE) messages received
SIP: RCV 420 TOT	Total 420 (BAD EXTENSION) messages received
SIP: RCV 480 TOT	Total 480 (TEMPORARILY UNAVAILABLE) messages received
SIP: RCV 481 TOT	Total 481 (CALL LEG/TRANSACTION DOES NOT EXIST) messages received
SIP: RCV 482 TOT	Total 482 (LOOP DETECTED) messages received

Table B-33   SIP Path Measurement Group (continued)

Measurement	Description
SIP: RCV 483 TOT	Total 483 (TOO MANY HOPS) messages received
SIP: RCV 484 TOT	Total 484 (ADDRESS INCOMPLETE) messages received
SIP: RCV 485 TOT	Total 485 (AMBIGUOUS) messages received
SIP: RCV 486 TOT	Total 486 (BUSY HERE) messages received
SIP: RCV 487 TOT	Total 487 (REQUEST CANCELED) messages received
SIP: RCV 500 TOT	Total 500 (INTERNAL SERVER ERROR) messages received
SIP: RCV 501 TOT	Total 501 (NOT IMPLEMENTED) messages received
SIP: RCV 502 TOT	Total 502 (BAD GATEWAY) messages received
SIP: RCV 503 TOT	Total 503 (SERVICE UNAVAILABLE) messages received
SIP: RCV 504 TOT	Total 504 (GATEWAY TIMEOUT) messages received
SIP: RCV 505 TOT	Total 505 (SIP VERSION NOT SUPPORTED) messages received
SIP: RCV 600 TOT	Total 600 (BUSY EVERYWHERE) messages received
SIP: RCV 603 TOT	Total 603 (DECLINE) messages received
SIP: RCV 604 TOT	Total 604 (DOES NOT EXIST ANYWHERE) messages received
SIP: RCV 606 TOT	Total 606 (NOT ACCEPTABLE) messages received
SIP: RCV ACK TOT	Total ACK messages received
SIP: RCV BYE TOT	Total BYE messages received
SIP: RCV CAN TOT	Total CANCEL messages received
SIP: RCV INV TOT	Total INVITE messages received
SIP: RCV INVALID MSG TOT	Total invalid messages received
SIP: RCV MSG TOT	Total messages received
SIP: RCV OPT TOT	Total OPTION messages received
SIP: RCV REG TOT	Total REGISTER messages received
SIP: RETX BYE TOT	Total BYE messages retransmitted
SIP: RETX CAN TOT	Total CANCEL messages retransmitted
SIP: RETX INV TOT	Total INVITE messages retransmitted
SIP: RETX MSG TOT	Total messages retransmitted
SIP: RETX REG TOT	Total REGISTER messages retransmitted
SIP: RETX RESP TOT	Total RESPONSE messages retransmitted
SIP: SIP2SIP CALLS ATTEMPT	Total number of SIP-to-SIP calls attempted
SIP: SIP2SIP CALLS COMPL	Total number of SIP-to-SIP calls completed
SIP: XMIT 100 TOT	Total 100 (TRYING) messages transmitted

Table B-33   SIP Path Measurement Group (continued)

Measurement	Description
SIP: XMIT 180 TOT	Total 180 (RINGING) messages transmitted
SIP: XMIT 181 TOT	Total 181 (CALL FORWARDED) messages transmitted
SIP: XMIT 182 TOT	Total 182 (QUEUED) messages transmitted
SIP: XMIT 183 TOT	Total 183 (SESSION PROGRESS) messages transmitted
SIP: XMIT 200 TOT	Total 200 (OK) messages transmitted
SIP: XMIT 300 TOT	Total 300 (MULTIPLE CHOICES) messages transmitted
SIP: XMIT 301 TOT	Total 301 (MOVED PERMANENTLY) messages transmitted
SIP: XMIT 302 TOT	Total 302 (MOVED TEMPORARILY) messages transmitted
SIP: XMIT 305 TOT	Total 305 (USE PROXY) messages transmitted
SIP: XMIT 380 TOT	Total 380 (ALTERNATIVE SERVICE) messages transmitted
SIP: XMIT 400 TOT	Total 400 (BAD REQUEST) messages transmitted
SIP: XMIT 401 TOT	Total 401 (UNAUTHORIZED) messages transmitted
SIP: XMIT 402 TOT	Total 402 (PAYMENT REQUIRED) messages transmitted
SIP: XMIT 403 TOT	Total 403 (FORBIDDEN) messages transmitted
SIP: XMIT 404 TOT	Total 404 (NOT FOUND) messages transmitted
SIP: XMIT 405 TOT	Total 405 (METHOD NOT ALLOWED) messages transmitted
SIP: XMIT 406 TOT	Total 406 (NOT ACCEPTABLE) messages transmitted
SIP: XMIT 407 TOT	Total 407 (PROXY AUTHENTICATION REQUIRED) messages transmitted
SIP: XMIT 408 TOT	Total 408 (REQUEST TIMEOUT) messages transmitted
SIP: XMIT 409 TOT	Total 409 (CONFLICT) messages transmitted
SIP: XMIT 410 TOT	Total 410 (GONE) messages transmitted
SIP: XMIT 411 TOT	Total 411 (LENGTH REQUIRED) messages transmitted
SIP: XMIT 413 TOT	Total 413 (REQUEST ENTITY TOO LARGE) messages transmitted
SIP: XMIT 414 TOT	Total 414 (REQUEST-URI TOO LONG) messages transmitted
SIP: XMIT 415 TOT	Total 415 (UNSUPPORTED MEDIA TYPE) messages transmitted
SIP: XMIT 420 TOT	Total 420 (BAD EXTENSION) messages transmitted

Table B-33   SIP Path Measurement Group (continued)

Measurement	Description
SIP: XMIT 480 TOT	Total 480 (TEMPORARILY UNAVAILABLE) messages transmitted
SIP: XMIT 481 TOT	Total 481 (CALL LEG/TRANSACTION DOES NOT EXIST) messages transmitted
SIP: XMIT 482 TOT	Total 482 (LOOP DETECTED) messages transmitted
SIP: XMIT 483 TOT	Total 483 (TOO MANY HOPS) messages transmitted
SIP: XMIT 484 TOT	Total 484 (ADDRESS INCOMPLETE) messages transmitted
SIP: XMIT 485 TOT	Total 485 (AMBIGUOUS) messages transmitted
SIP: XMIT 486 TOT	Total 486 (BUSY HERE) messages transmitted
SIP: XMIT 487 TOT	Total 487 (REQUEST CANCELED) messages transmitted
SIP: XMIT 500 TOT	Total 500 (INTERNAL SERVER ERROR) messages transmitted
SIP: XMIT 501 TOT	Total 501 (NOT IMPLEMENTED) messages transmitted
SIP: XMIT 502 TOT	Total 502 (BAD GATEWAY) messages transmitted
SIP: XMIT 503 TOT	Total 503 (SERVICE UNAVAILABLE) messages transmitted
SIP: XMIT 504 TOT	Total 504 (GATEWAY TIMEOUT) messages transmitted
SIP: XMIT 505 TOT	Total 505 (SIP VERSION NOT SUPPORTED) messages transmitted
SIP: XMIT 600 TOT	Total 600 (BUSY EVERYWHERE) messages transmitted
SIP: XMIT 603 TOT	Total 603 (DECLINE) messages transmitted
SIP: XMIT 604 TOT	Total 604 (DOES NOT EXIST ANYWHERE) messages transmitted
SIP: XMIT 606 TOT	Total 606 (NOT ACCEPTABLE) messages transmitted
SIP: XMIT ACK TOT	Total ACK messages transmitted
SIP: XMIT BYE TOT	Total BYE messages transmitted
SIP: XMIT CAN TOT	Total CANCEL messages transmitted
SIP: XMIT INV TOT	Total INVITE messages transmitted
SIP: XMIT MSG TOT	Total messages transmitted
SIP: XMIT OPT TOT	Total OPTION messages transmitted
SIP: XMIT REG TOT	Total REGISTER messages transmitted

Table B-34   Trunk Group (BAM) Measurement Group

Measurement[1]	Description	Derivation for Selected Measurements
BAM:EGR ASR	Answer Seizure Ratio Outgoing	This is calculated as percentage of "EGR CALL ANS" divided by "EGR CALL ATT", precision to 1 digit after the decimal point. For example, 92/96 = 95.8%. If the "EGR CALL ATT" is 0, then the value should be 100%.
BAM:EGR CALL ANS	Answered Calls Outgoing	Pegged when a 1010 CDB is recorded with 4015, 4104 and 4105 populated.
BAM:EGR CALL ATT	Outgoing call attempts	Pegged when a 1010 CDB is recorded w/4015 or when 1030 is recorded w/4015.
BAM:EGR CALL BLKD	Outgoing attempts blocked	4015 populated, 1030 or 1040 with (Cause Code) Tag {2008, 3008}== {21, 25, 27, 29, 34, 38, 41, 42, 44, 46, 47, 53, 63}.
BAM:EGR OFL BLKD	Overflow, outgoing attempts blocked	Pegged for 1030 CDB where 4015 is populated and {2008 or 3008} == {27, 34, 41, 42, 44, 47, 53, 63}. Suppressed in MGCP Dial or MGCP Scripting calls.
BAM:EGR PCT TRK USE	Percent trunk group usage outgoing	Measured as a percentage of time that circuits are occupied based on the total number of circuits belonging to a trunk group over the provisioned interval of measurement. Any circuit on Tag 4015 triggers this measurement from CDB Tag 1010. The starting time point is the earlier of 4100 or 4101; the end time point is in the 1040 CDB, the later of tag 4108 or 4109.
BAM:EGR SETUP DURATION	Setup duration egress	Duration measured from timepoint in earlier of tag 4100 or 4101 of 1010 CDB, end with later of 4102 or 4103 in 1010 CDB. For 1030 CDB, start with earlier of 4100 or 4101, end with earlier of 4106 or 4107, when tag 4015 is populated with valid trunk group number. Suppressed in MGCP Dial or MGCP Scripting calls.
BAM:EGR SUCCESSFUL ISUP	Successful ISUP Terminating Pegs	Pegged when a 1010 CDB is received with a tag 4073 of value 0.
BAM:EGR TANDEM ATT	Tandem routing attempts, outgoing	Pegged when Tag 4015 (trunk group) is marked T (tandem connection) for 1010 or 1030 CDB. Always suppressed for dynamically added trunk groups. Also suppressed in MGCP Dial or MGCP Scripting calls.

Table B-34   Trunk Group (BAM) Measurement Group (continued)

Measurement[1]	Description	Derivation for Selected Measurements
BAM:EGR TANDEM COMPLT	Tandem completions, outgoing	Pegged when Tag 4015 (trunk group) is marked T (tandem connection) for 1010 CDB. Always suppressed for dynamically added trunk groups. Also suppressed in MGCP Dial or MGCP Scripting calls.
BAM:EGR TANDEM DUR	Tandem duration, outgoing	Duration measured when Tag 4015 (trunk group) is marked T (tandem connection) for 1010 CDB. Always suppressed for dynamically added trunk groups.
BAM:EGR TEARDOWN DURATION	Teardown duration egress	Duration measured from timepoint in earlier of 4106 or 4107, end with later of 4108 or 4109, when tag 4015 is populated with valid trunk group number. Suppressed in MGCP Dial or MGCP Scripting calls.
BAM:EGR TERM NORM	Successful calls outgoing	Pegged when 1030 or 1040 CDB recorded with 4015 populated and {2008 or 3008} == {16, 17, 18, 19}.
BAM:EGR UNSUCCESSFUL H.323	Unsuccessful H.323 Terminating Pegs	Pegged when a 1030 CDB is received with a tag 4073 with a value of 7. **Note** The H.323 measurements are output only when the enable-H323 parameter is set to 1 in the Node Parameters table.
BAM:IGR ASR	Answer Seizure Ratio Incoming	This is calculated as percentage of "IGR CALL ANS" divided by "IGR CALL ATT", with precision to 1 digit after the decimal point. For example, 92/96 = 95.8%. If the "IGR CALL ATT" is 0, then the value should be 100%.
BAM:IGR CALL ANS	Answered Calls Incoming	Pegged when a 1010 CDB is recorded with 4008, 4104, and 4105 populated.
BAM:IGR CALL ATT	Call attempts incoming	Pegged when a 1010 CDB is recorded w/4008 or when 1030 is recorded w/4008.
BAM:IGR CONV DURATION	Conversation duration ingress	Duration measured from the later of tag 4104 or 4105 in the 1010 CDB, till the earlier of tag 4106 or 4107, when tag 4008 is populated with valid trunk group number.

Table B-34   Trunk Group (BAM) Measurement Group (continued)

Measurement[1]	Description	Derivation for Selected Measurements
BAM:IGR PCT TRK USE	Percent trunk group usage incoming	Measured as a percentage of time that circuits are occupied based on the total number of circuits belonging to a trunk group over the provisioned interval of measurement. Any circuit on Tag 4008 triggers this measurement from CDB Tag 1010. The starting time point is the earlier of 4100 or 4101; the end time point is in the 1040 CDB, the later of tag 4108 or 4109.
BAM:IGR SETUP DURATION	Setup duration ingress	Duration measured from timepoint in earlier of tag 4100 or 4101 of 1010 CDB, end with later of 4102 or 4103 in 1010 CDB. For 1030 CDB, start with earlier of 4100 or 4101, end with earlier of 4106 or 4107, when tag 4008 is populated with valid trunk group number.
BAM:IGR SUCCESSFUL H.323	Successful H.323 Originating Pegs	Pegged when a 1010 CDB is received with a tag 4069 with a value of 7. Note The H.323 measurements are output only when the enable-H323 parameter is set to 1 in the Node Parameters table.
BAM:IGR TANDEM ATT	Tandem Attempts, Incoming	Pegged when Tag 4008 (trunk group) is marked T (tandem connection) for 1010 or 1030 CDB. Always suppressed for dynamically added trunk groups.
BAM:IGR TANDEM COMPLT	Tandem completions, outgoing	Pegged when Tag 4008 (trunk group) is marked T (tandem connection) for 1010 CDB. Always suppressed for dynamically added trunk groups.
BAM:IGR TANDEM DUR	Tandem duration, incoming	Duration measured when Tag 4008 (trunk group) is marked T (tandem connection) for 1010 CDB. Start with earlier of timepoint in 4100 or 4101 of 1010 CDB, end with later of 4108 or 4109 in 1040 CDB. Always suppressed for dynamically added trunk groups.
BAM:IGR TEARDOWN DURATION	Teardown duration ingress	Duration measured from timepoint in earlier of 4106 or 4107, end with later of 4108 or 4109, when tag 4008 is populated with valid trunk group number.
BAM:IGR TERM NORM	Successful calls incoming	Peg for all 1030 or 1040 CDB where 4008 is populated and {2008 or 3008} == {16, 17, 18, 19}.

Table B-34   Trunk Group (BAM) Measurement Group (continued)

Measurement[1]	Description	Derivation for Selected Measurements
BAM:IGR UNSUCCESSFUL H.323	Unsuccessful H.323 Originating Pegs	Pegged when a 1030 CDB is received with a tag 4069 of value 7. **Note** The H.323 measurements are output only when the enable-H323 parameter is set to 1 in the Node Parameters table.
BAM:TTL ASR	Answer Seizure Ratio Total	This is calculated as percentage of "TTL CALL ANS" divided by "TTL CALL ATT", precision to 1 digit after the decimal point. For example, 92/96 = 95.8%. If the "TTL CALL ATT" is 0, then the value should be 100%.
BAM:TTL AVLBL CIC	Average number of available CICs during the measurement period.	= total - maintDuration / intervalLengthwheretotal = Total number of circuitsmaintDuration = total maintenance duration, see BAM:TTL MAINT USE below for details; intervalLength = total number of seconds for the measurement period.
BAM:TTL BH	Busy Hour	The hour during the day in which the hourly "TTL ERLANG" is greatest. This is displayed in the format of HHMM (in UTC). For example, 1400. This is based on the BAMS hourly measurements from the acc_h files.
BAM:TTL BP	Busy Period	The measurement interval during the day in which "TTL ERLANG" (#13) is greatest among all acc_r files. This is displayed in the format HHMM UTC, for the starting time of the interval. For example, with 15 minute intervals, 1415.
BAM:TTL CALL ANS	Answered Calls Total	This equals the sum of "IGR CALL ANS" and "EGR CALL ANS" for the trunk group.
BAM:TTL CALL ATT	Call Attempts Total	This equals the sum of "IGR CALL ATT" and "EGR CALL ATT" for the trunk group.
BAM:TTL CALL ROUTING I	Call Routing I Peg	Pegged when ingress and egress traffic terminations are maintained by the same gateway. When tag 4038 and tag 4039 are equal and neither tag 4069 nor 4073 equal 6 (EISUP).

Cisco Media Gateway Controller Node Manager User Guide, Release 2.7(3)

Table B-34   Trunk Group (BAM) Measurement Group (continued)

Measurement[1]	Description	Derivation for Selected Measurements
BAM:TTL CALL ROUTING II	Call Routing II Peg	Pegged when ingress and egress traffic terminations are maintained by the different gateways, but under control of the same MGC. When tag 4038 and tag 4039 are not equal and neither tag 4069 nor 4073 equal 6.
BAM:TTL CALL ROUTING III	Call Routing III Peg	Pegged when one side of a call originates or terminates under the control of a gateway connected to the MGC, but the other side of the call terminates in another network not under the control of the MGC. When either tag 4069 or 4073 equal 6.
BAM:TTL CALLS REJECTED	Calls rejected	Pegged for any 1030 CDB where {2008 or 3008} == {21}
BAM:TTL CARRIERSELECT NOTPRESUBSCRIBED	Carrier Id Code Not PreSubscribed but Input by Customer	Pegged when Tag 2015 = { 4 } and marked "T" for tandem connected in the Trunk Group table. Output by trunkgroup and carrier. Always suppressed for dynamically added trunk groups.
BAM:TTL CARRIERSELECT PRESUBSCRIBED INPT	CarrierSelect PreSubscribed and Input	Pegged when Tag 2015 = { 2 } and marked "T" for tandem connected in the Trunk Group table. Output by trunkgroup and carrier. Always suppressed for dynamically added trunk groups.
BAM:TTL CARRIERSELECT PRESUBSCRIBED NIPT	Carrier Select PreSubscribed Not Input	Pegged when Tag 2015 = { 1 } and marked "T" for tandem connected in the Trunk Group table. Output by trunkgroup and carrier. Always suppressed for dynamically added trunk groups.
BAM:TTL CARRIERSELECT PRESUBSCRIBED WNI	CarrierSelect PreSubscribed with No Indication	Pegged when Tag 2015 = { 3 } and marked "T" for tandem connected in the Trunk Group table. Output by trunkgroup and carrier. Always suppressed for dynamically added trunk groups.
BAM:TTL CIC DEFINED	Average number of defined CICs during the measurement period	Number of circuits provisioned in the trunk group table.

Table B-34   Trunk Group (BAM) Measurement Group (continued)

Measurement[1]	Description	Derivation for Selected Measurements
BAM:TTL ERLANGS	Total traffic in erlangs	Measured as Erlangs for both Ingress and Egress for a trunk group. Use total seconds duration, from 1010 CDB, use timepoint in earlier of 4100 or 4101. For the end of the duration, use the later of 4108 or 4109. Erlangs = (total seconds) / (seconds in measured interval) Example: For a one-hour measurement, with 99,000 secs measured, the formula would be (99,000)/(3600secs) = 27.5 Erlangs. If the same measurement occurred over a 15-minute interval, the formula would be (99,000)/(900secs) = 110 Erlangs.
BAM:TTL FAILED CONGEST	Failed Calls-Congestion	Peg for all 1030 or 1040 where {2008 or 3008} == {42, 44, 47}.
BAM:TTL MAINT USE	Maintenance duration per trunk group	Measured as a percentage of time that circuits are unavailable, based on the total number of circuits belonging to a trunk.
BAM:TTL REJECTED DIALNUM	Calls rejected, unknown dialed number	Pegged for any 1030 CDB where {2008 or 3008} == {1, 5, 22, 28}
BAM:TTL REJECTED OTHER	Calls rejected, other reasons	Pegged for any 1030 CDB where {2008 or 3008} != {1,5,16,17,18,19,21,22,28,29}
BAM:TTL TERM ABNORM	Calls terminated abnormally	Pegged for any 1040 where {2008 or 3008} != {16,17,18,19, 31} or for 1030 CDB with any release code.
BAM:TTL TERM FAILED MGW	Calls terminated, failed MGW or NAS	Pegged for any 1030 or 1040 CDB where {2008 or 3008} == {29}
BAM:TTL TERM NORM	Total calls terminated normally	Pegged when 1040 CDB recorded and release code in the set {16,17,18,19, 31}
BAM:TTL TRAFFIC USAGE PEGS	Total sum of usage pegs per trunk group (not including maintenance pegs)	Pegged for any 1010 or 1030 CDB.

1. For a complete description of BAMS, see the *Billing and Measurements Server User's Guide* for your version of the BAMS.

Table B-35   Virtual Trunk Group (BAM) Measurement Group

Measurement	Description	Derivation for Selected Measurements
BAM:EGR CALL ATT	Outgoing call attempts	Pegged when a 1010 CDB is recorded w/4015 or when 1030 is recorded w/4015.
BAM:EGR CALL BLKD	Outgoing attempts blocked	4015 populated, 1030 or 1040 with (Cause Code) Tag {2008, 3008}== {21, 25, 27, 29, 34, 38, 41, 42, 44, 46, 47, 53, 63}.
BAM:EGR CONV DURATION	Conversation duration egress	Duration measured from the later of tag 4104 or 4105 in the 1010 CDB, till the earlier of tag 4106 or 4107, when tag 4015 is populated with valid trunk group number. Suppressed in MGCP Dial or MGCP Scripting calls.
BAM:EGR OFL BLKD	Overflow, outgoing attempts blocked	Pegged for 1030 CDB where 4015 is populated and {2008 or 3008} == {27, 34, 41, 42, 44, 47, 53, 63}. Suppressed in MGCP Dial or MGCP Scripting calls.
BAM:EGR PCT TRK USE	Percent trunk group usage outgoing	Measured as a percentage of time that circuits are occupied based on the total number of circuits belonging to a trunk group over the provisioned interval of measurement. Any circuit on Tag 4015 triggers this measurement from CDB Tag 1010. The starting time point is the earlier of 4100 or 4101; the end time point is in the 1040 CDB, the later of tag 4108 or 4109.
BAM:EGR SETUP DURATION	Setup duration egress	Duration measured from timepoint in earlier of tag 4100 or 4101 of 1010 CDB, end with later of 4102 or 4103 in 1010 CDB. For 1030 CDB, start with earlier of 4100 or 4101, end with earlier of 4106 or 4107, when tag 4015 is populated with valid trunk group number. Suppressed in MGCP Dial or MGCP Scripting calls.
BAM:EGR SUCCESSFUL ISUP	Successful ISUP Terminating Pegs	Pegged when a 1010 CDB is received with a tag 4073 of value 0.
BAM:EGR TANDEM ATT	Tandem routing attempts, outgoing	Pegged when Tag 4015 (trunk group) is marked T (tandem connection) for 1010 or 1030 CDB. Always suppressed for dynamically added trunk groups. Also suppressed in MGCP Dial or MGCP Scripting calls.

Table B-35   Virtual Trunk Group (BAM) Measurement Group (continued)

Measurement	Description	Derivation for Selected Measurements
BAM:EGR TANDEM COMPLT	Tandem completions, outgoing	Pegged when Tag 4015 (trunk group) is marked T (tandem connection) for 1010 CDB. Always suppressed for dynamically added trunk groups. Also suppressed in MGCP Dial or MGCP Scripting calls.
BAM:EGR TANDEM DUR	Tandem duration, outgoing	Duration measured when Tag 4015 (trunk group) is marked T (tandem connection) for 1010 CDB. Always suppressed for dynamically added trunk groups.
BAM:EGR TEARDOWN DURATION	Teardown duration egress	Duration measured from timepoint in earlier of 4106 or 4107, end with later of 4108 or 4109, when tag 4015 is populated with valid trunk group number. Suppressed in MGCP Dial or MGCP Scripting calls.
BAM:EGR TERM NORM	Successful calls outgoing	Pegged when 1030 or 1040 CDB recorded with 4015 populated and {2008 or 3008} == {16, 17, 18, 19}.
BAM:ERG UNSUCCESSFUL ISUP	Unsuccessful ISUP Terminating Pegs	Pegged when a 1030 CDB is received with a tag 4073 of value 0.
BAM:IGR ASR	Answer Seizure Ratio Incoming	This is calculated as percentage of "IGR CALL ANS" divided by "IGR CALL ATT", precision to 1 digit after the decimal point. For example, 92/96 = 95.8%. If the "IGR CALL ATT" is 0, then the value should be 100%.
BAM:IGR CALL ANS	Answered Calls Incoming	Pegged when a 1010 CDB is recorded with 4008, 4104 and 4105 populated.
BAM:IGR CALL ATT	Call attempts incoming	Pegged when a 1010 CDB is recorded w/4008 or when 1030 is recorded w/4008.
BAM:IGR CONV DURATION	Conversation duration ingress	Duration measured from the later of tag 4104 or 4105 in the 1010 CDB, till the earlier of tag 4106 or 4107, when tag 4008 is populated with valid trunk group number.
BAM:IGR ISDN SETUP MSG DELAY	ISDN Originating Setup Message Delay Pegs	Pegged when a 1010 or 1030 CDB is received with a tag 4069 having a value of 0, when the setup duration > 3000 ms. The setup duration is measured from timepoint in earlier of tag 4100 or 4101 of 1010 CDB, end with later of 4102 or 4103.

Table B-35   Virtual Trunk Group (BAM) Measurement Group (continued)

Measurement	Description	Derivation for Selected Measurements
BAM:IGR PCT TRK USE	Percent trunk group usage incoming	Measured as a percentage of time that circuits are occupied based on the total number of circuits belonging to a trunk group over the provisioned interval of measurement. Any circuit on Tag 4008 triggers this measurement from CDB Tag 1010. The starting time point is the earlier of 4100 or 4101; the end time point is in the 1040 CDB, the later of tag 4108 or 4109.
BAM:IGR SETUP DURATION	Setup duration ingress	Duration measured from timepoint in earlier of tag 4100 or 4101 of 1010 CDB, end with later of 4102 or 4103 in 1010 CDB. For 1030 CDB, start with earlier of 4100 or 4101, end with earlier of 4106 or 4107, when tag 4008 is populated with valid trunk group number.
BAM:IGR SUCCESSFUL ISUP	Successful ISUP Originating Pegs	Pegged when a 1010 CDB is received with a tag 4069 of value 0.
BAM:IGR TANDEM ATT	Tandem Attempts, Incoming	Pegged when Tag 4008 (trunk group) is marked T (tandem connection) for 1010 or 1030 CDB. Always suppressed for dynamically added trunk groups.
BAM:IGR TANDEM COMPLT	Tandem completions, outgoing	Pegged when Tag 4008 (trunk group) is marked T (tandem connection) for 1010 CDB. Always suppressed for dynamically added trunk groups.
BAM:IGR TANDEM DUR	Tandem duration, incoming	Duration measured when Tag 4008 (trunk group) is marked T (tandem connection) for 1010 CDB. Start with earlier of timepoint in 4100 or 4101 of 1010 CDB, end with later of 4108 or 4109 in 1040 CDB. Always suppressed for dynamically added trunk groups.
BAM:IGR TEARDOWN DURATION	Teardown duration ingress	Duration measured from timepoint in earlier of 4106 or 4107, end with later of 4108 or 4109, when tag 4008 is populated with valid trunk group number.
BAM:IGR TERM NORM	Successful calls incoming	Peg for all 1030 or 1040 CDB where 4008 is populated and {2008 or 3008} == {16, 17, 18, 19}.
BAM:IGR UNSUCCESSFUL ISUP	Unsuccessful ISUP Originating Pegs	Pegged when a 1030 CDB is received with a tag 4069 of value 0.

Table B-35   Virtual Trunk Group (BAM) Measurement Group (continued)

Measurement	Description	Derivation for Selected Measurements
BAM:TTL AVLBL CIC	Average number of available CICs during the measurement period.	= total - maintDuration / intervalLengthwheretotal = Total number of circuitsmaintDuration = total maintenance duration, see BAM:TTL MAINT USE below for details; intervalLength = total number of seconds for the measurement period.
BAM:TTL BH	Busy Hour	The hour during the day in which the hourly "TTL ERLANG" is greatest. This is displayed in the format of HHMM (in UTC). For example, 1400. This is based on the BAMS hourly measurements from the acc_h files.
BAM:TTL BP	Busy Period	The measurement interval during the day in which "TTL ERLANG" (#13) is greatest among all acc_r files. This is displayed in the format of HHMM UTC, for the starting time of the interval. For example, with 15 minute intervals, 1415.
BAM:TTL CALL ANS	Answered Calls Total	The sum of "IGR CALL ANS" and "EGR CALL ANS" for the trunk group.
BAM:TTL CALL ATT	Call Attempts Total	The sum of "IGR CALL ATT" and "EGR CALL ATT" for the trunk group.
BAM:TTL CALL ROUTING I	Call Routing I Peg	Pegged when ingress and egress traffic terminations are maintained by the same gateway. When tag 4038 and tag 4039 are equal and neither tag 4069 nor 4073 equal 6 (EISUP).
BAM:TTL CALL ROUTING II	Call Routing II Peg	Pegged when ingress and egress traffic terminations are maintained by the different gateways, but under control of the same MGC. When tag 4038 and tag 4039 are not equal and neither tag 4069 nor 4073 equal 6.
BAM:TTL CALL ROUTING III	Call Routing III Peg	Pegged when one side of a call originates or terminates under the control of a gateway connected to the MGC, but the other side of the call terminates in another network not under the control of the MGC. When either tag 4069 or 4073 equal 6.
BAM:TTL CALLS REJECTED	Calls rejected	Pegged for any 1030 CDB where {2008 or 3008} == {21}

Table B-35   Virtual Trunk Group (BAM) Measurement Group (continued)

Measurement	Description	Derivation for Selected Measurements
BAM:TTL CARRIERSELECT NO INDICATION	Carrier Select No Indication	Pegged when Tag 2015 != {1,2,3,4} and marked "T" for tandem connected in the Trunk Group table. Output by trunk group and carrier. Always suppressed for dynamically added trunk groups.
BAM:TTL CARRIERSELECT NOTPRESUBSCRIBED	Carrier Id Code Not PreSubscribed but Input by Customer	Pegged when Tag 2015 = { 4 } and marked "T" for tandem connected in the Trunk Group table. Output by trunkgroup and carrier. Always suppressed for dynamically added trunk groups.
BAM:TTL CARRIERSELECT PRESUBSCRIBED INPT	CarrierSelect PreSubscribed and Input	Pegged when Tag 2015 = { 2 } and marked "T" for tandem connected in the Trunk Group table. Output by trunkgroup and carrier. Always suppressed for dynamically added trunk groups.
BAM:TTL CARRIERSELECT PRESUBSCRIBED NIPT	Carrier Select PreSubscribed Not Input	Pegged when Tag 2015 = { 1 } and marked "T" for tandem connected in the Trunk Group table. Output by trunkgroup and carrier. Always suppressed for dynamically added trunk groups.
BAM:TTL CARRIERSELECT PRESUBSCRIBED WNI	CarrierSelect PreSubscribed with No Indication	Pegged when Tag 2015 = { 3 } and marked "T" for tandem connected in the Trunk Group table. Output by trunkgroup and carrier. Always suppressed for dynamically added trunk groups.
BAM:TTL CIC DEFINED	Average number of defined CICs during the measurement period.	Number of circuits provisioned in the trunkgroup table.
BAM:TTL ERLANGS	Total traffic in erlangs	Measured as Erlangs for both Ingress and Egress for a trunk group. Use total seconds duration, from 1010 CDB, use timepoint in earlier of 4100 or 4101. For the end of the duration, use the later of 4108 or 4109. Erlangs = (total seconds) / (seconds in measured interval) Example: For a one-hour measurement, with 99,000 secs measured, the formula would be (99,000)/(3600secs) = 27.5 Erlangs. If the same measurement occurred over a 15-minute interval, the formula would be (99,000)/(900secs) = 110 Erlangs.
BAM:TTL FAILED CONGEST	Failed Calls-Congestion	Peg for all 1030 or 1040 where {2008 or 3008} == {42, 44, 47}.

Table B-35   Virtual Trunk Group (BAM) Measurement Group (continued)

Measurement	Description	Derivation for Selected Measurements
BAM:TTL MAINT USE	Maintenance duration per trunk group	Measured as a percentage of time that circuits are unavailable, based on the total number of circuits belonging to a trunk.
BAM:TTL REJECTED DIALNUM	Calls rejected, unknown dialed number	Pegged for any 1030 CDB where {2008 or 3008} == {1, 5, 22, 28}
BAM:TTL REJECTED OTHER	Calls rejected, other reasons	Pegged for any 1030 CDB where {2008 or 3008} != {1,5,16,17,18,19,21,22,28,29}
BAM:TTL TERM ABNORM	Calls terminated abnormally	Pegged for any 1040 where {2008 or 3008} != {16,17,18,19, 31} or for 1030 CDB with any release code.
BAM:TTL TERM FAILED MGW	Calls terminated, failed MGW or NAS	Pegged for any 1030 or 1040 CDB where {2008 or 3008} == {29}
BAM:TTL TERM NORM	Total calls terminated normally	Pegged when 1040 CDB recorded and release code in the set {16,17,18,19, 31}
BAM:TTL TRAFFIC USAGE PEGS	Total sum of usage pegs per trunk group (not including maintenance pegs)	Pegged for any 1010 or 1030 CDB.

Table B-36   TCAP (Transaction Capabilities Application Part) Measurement Group

Counter	Description
TCAP: MSG XMIT	Total TCAP messages transmitted.
TCAP:QWP XMIT	Total query with permission transmitted.
TCAP:RSP XMIT	Total response messages transmitted.
TCAP:UNI XMIT	Total unidirectional messages transmitted.
TCAP:ABT XMIT	Total abort messages.
TCAP:MSG RCV	Total TCAP messages received.
TCAP:QWP RCV	Total query with permission received.
TCAP:RSP RCV	Total response messages received.
TCAP:UNI RCV	Total unidirectional messages received.
TCAP:MSG DROP	Total messages dropped.
TCAP:MSG UNREC	Total unrecognized messages.
TCAP:ABT RCV	Total abort messages received.
TCAP:BEGIN XMIT	Total number of TCAP BEGIN messages transmitted. This measurement is valid only for ETSI and ITU TCAP.
TCAP:BEGIN RCV	Total number of TCAP BEGIN messages received. This measurement is valid only for ETSI and ITU TCAP.

Table B-36   TCAP (Transaction Capabilities Application Part) Measurement Group (continued)

Counter	Description
TCAP:END XMIT	Total number of TCAP END messages transmitted. This measurement is valid only for ETSI and ITU TCAP.
TCAP:END RCV	Total number of TCAP END messages received. This measurement is valid only for ETSI and ITU TCAP.
TCAP:CONTINUE XMIT	Total number of TCAP CONTINUE messages transmitted. This measurement is valid only for ETSI and ITU TCAP.
TCAP:CONTINUE RCV	Total number of TCAP CONTINUE messages received. This measurement is valid only for ETSI and ITU TCAP.
TCAP:CONV XMIT	Total number of TCAP CONVERSATION messages transmitted. This measurement is valid only for ETSI and ITU TCAP.
TCAP:CONV RCV	Total number of TCAP CONVERSATION messages received. This measurement is valid only for ETSI and ITU TCAP.

Table B-37   SCCP (Signaling Connection Control Part) Measurement Group

Counter	Description
SCCP:ROUTING FAILURE	Total routing failure
SCCP:UDT XMIT	Total unit data messages transmitted
SCCP:UDTS XMIT	Total unit data service messages transmitted
SCCP:UDT RCV	Total unit data messages received
SCCP:UDTS RCV	Total unit data service messages received
SCCP:TOTAL MSG	Total messages handled

Table B-38   RAS Measurement Group

Measurement	Description
RAS:GK DISC ATT TOT	Gatekeeper Discovery Attempts
RAS: GK REG ATT TOT	Registration Request Attempts
RAS:GK REG SUCC TOT	Registration Request Successes
RAS:GK RCV UNR ATT TOT	GK Initiated Unregistration Attempts
RAS:GK XMIT UNR SUCC TOT	GK Initiated Unregistration Successes
RAS:GK XMIT UNR ATT TOT	TC Initiated Unregistration Attempts
RAS: GK RCV UNR SUCC TOT	TC Initiated Unregistration Successes
RAS:GK RLS ATT TOT	Disengage Attempts
RAS:GK RLS SUCC TOT	Disengage Successes
RAS:GK INFO REPORT TOT	Information Reports

Table B-39   Q.931 Measurement Group

Measurement	Description
Q931:FC INC CALL ATT TOT	H.225 Incoming Fast Connect Call Attempts.
Q931:FC INC CALL SUCC TOT	H.225 Incoming Fast Connect Call Successes.
Q931:FC OTG CALL ATT TOT	H.225 Incoming Fast Connect Call Successes.
Q931:FC OTG CALL SUCC TOT	H.225 Outgoing Fast Connect Call Successes.
Q931:V1 INC CALL ATT TOT	H.225 Incoming Version 1 Call Attempts.
Q931:V1 INC CALL SUCC TOT	H.225 Incoming Version 1 Call Successes.
Q931:V1 OTG CALL ATT TOT	H.225 Outgoing Version 1 Call Attempts.
Q931:V1 OTG CALL SUCC TOT	H.225 Outgoing Version 1 Call Successes.
Q931:INC NORM REL TOT	H.225 Incoming Call Normal Releases.
Q931:INC ABNORM REL TOT	H.225 Incoming Call Abnormal Releases.
Q931:OTG NORM REL TOT	H.225 Outgoing Call Normal Releases.
Q931:OTG ABNORM REL TOT	H.225 Outgoing Call Abnormal Releases.
Q931:H323 INTERWORK SUCC TOT	H323-H323 hairpinned calls.
Q931:PGW T38 FAX ATT TOT	T.38 fax call requests.
Q931:PGW T38 FAX SUCC TOT	T.38 fax calls successfully reconfigured.
Q931:INC_ANNEX_M1_REJ_TOT	This counter is incremented each time an incoming H.323 call using Annex M1 is rejected by the HSI because it is disabled.
Q931: OTG_ANNEX_M1_REJ_TOT	This counter is incremented each time an outbound H.323 call using Annex M1 is rejected by the destination.
Q931: INC_ANNEX_M1_TOT	This counter is incremented each time an incoming H.323 call using Annex M1 is rejected by the HSI because it is disabled.
Q931: OTG_ANNEX_M1_TOT	This counter is incremented each time an incoming H.323 call using Annex M1 is rejected by the HSI because it is disabled.

Table B-40   H.245 Measurement Group

Measurement	Description
H245:MASTER SLAVE ATT TOT	H.245 Master Slave Determination Attempts
H245:MASTER SLAVE SUCC TOT	H.245 Master Slave Determination Successes
H245:TERM CAP XCHG ATT TOT	H.245 Terminal Capability Exchange Attempts
H245:TERM CAP XCHG SUCC TOT	H.245 Terminal Capability Exchange Successes
H245:OPEN CH ATT TOT	H.245 Open Logical Channel Attempts
H245:OPEN CH SUCC TOT	H.245 Open Logical Channel Successes
H245:CLOSE CH ATT TOT	H.245 Close Logical Channel Attempts
H245:CLOSE CH SUCC TOT	H.245 Close Logical Channel Successes

Table B-40   H.245 Measurement Group (continued)

Measurement	Description
H245:AVG ROUND TRIP DELAY	H.245 Round Trip Delay Determination
H245:EMPTY CAP SET TOT	Total number of empty TCS exchanges
H245:H323 T38 FAX ATT TOT	Total of T.38 fax call requests from remote peer
H245:H323 T38 FAX SUCC TOT	Total of successfully reconfigured T.38 fax call requests from remote peer
H245:ASYMMETRIC TOT	Total of asymmetric conditions encountered
H245:DTMF RELAY TOT	Total calls using DTMF relay

Table B-41   SCTP Association Measurement Group

Counter	Description
SCTP: OOTB	Out of Blue Packets Received (ootb)
SCTP: InvalidChksum	Checksum Error Packets Received (invalidAdler)
SCTP: CtrlTx	Control Chunks Sent (numControlChunksSent)
SCTP: OrdDataTx	Ordered Data Chunks Sent (numDataChunksSentOrdered)
SCTP: UnordDataTx	Unordered Data Chunks Sent (numDataChunksSentUnordered)
SCTP: CtrlRx	Control Chunks Received (numControlChunksRcvd)
SCTP: OrdDataRx	Ordered Data Chunks Received (numDataChunksRcvdOrdered)
SCTP: UnordDataRx	Unordered Data Chunks Received (numDataChunksRcvdUnordered)
SCTP: DataSegTx	SCTP Data Segments Sent (numSctpDataDgramsSent)
SCTP: DataSegRx	SCTP Data Segments Received (numSctpDataDgramsRcvd)
SCTP: AssocFailures	Count of Association Failures (assocCommLost)
SCTP: DestFailures	Count of Destination Failures (destAddrFailed)
SCTP: PeerRestarted	Count of Peer Restarts (peerRestarted)

Table B-42   IUA Association Measurement Group

Counter	Description
IUA: ASPUpTx	Number of ASP Up messages sent from MGC to the gateway on this SCTP association, indicating to gateway that it is ready to receive traffic or maintenance messages.
IUA: ASPUpAckRx	Number of ASP Up Acknowledgement messages received by the MGC from the gateway on this SCTP association. These messages acknowledge ASP Up messages.
IUA: ASPDnTx	Number of ASP Down Sent messages sent from the MGC to the gateway on this SCTP association, indicating to the gateway that it is Not ready to receive traffic or maintenance messages.

Table B-42   IUA Association Measurement Group (continued)

Counter	Description
IUA: ASPDnAckRx	Number of ASP Down Acknowledgement messages received by the MGC from the gateway on this SCTP association. These messages acknowledge ASP Down messages.
IUA: ASPActTx	Number of ASP Active messages sent from MGC to the gateway on this SCTP association, indicating to gateway that it is active and ready to be used.
IUA: ASPActAckRx	Number of ASP Active Acknowledgement messages received by the MGC from the gateway on this SCTP association. These messages acknowledge ASP Active messages.
IUA: ASPInactTx	Number of ASP Inactive messages sent from MGC to the gateway on this SCTP association, indicating to gateway that it is no longer an active ASP.
IUA: ASPInactAckRx	Number of ASP Inactive Acknowledgement messages received by the MGC from the gateway on this SCTP association. These messages acknowledge ASP Inactive messages.
IUA: ErrorRx	Number of Error messages received by the MGC from the gateway on this SCTP association. These messages indicate various errors. See the platform log for information on individual errors.
IUA: NotifyRx	Number of Notify messages received by the MGC from the gateway on this SCTP association. These messages provide autonomous indications of IUA events on the gateway.
IUA: DataRqt	Number of Data messages sent from MGC to the gateway on this SCTP association, which are to be transmitted by the Q.921 layer using the acknowledged information transfer service.
IUA: DataInd	Number of Data messages received by the MGC from the gateway on this SCTP association, which have been received by the Q.921 layer using the acknowledged information transfer service.
IUA: UnitDataRqt	Number of Data messages sent from MGC to the gateway on this SCTP association, which are to be transmitted by the Q.921 layer using the unacknowledged information transfer service.
IUA: UnitDataInd	Number of Data messages received by the MGC from the gateway on this SCTP association, which have been received by the Q.921 layer using the unacknowledged information transfer service.
IUA: EstRqt	Number of requests to establish this SCTP association.
IUA: EstConf	Number of confirmations that IUA has established an SCTP association with the gateway.
IUA: EstInd	Number of times the gateway has informed Link Management that the MGC has established an SCTP association.
IUA: RelRqt	Number of requests to release an SCTP association with gateway.
IUA: RelConf	Number of confirmations that IUA has released an SCTP association with the gateway.
IUA: RelInd	Number of times the gateway has informed Link Management that the MGC has released an SCTP association.

Table B-43   M3UA SGP Measurement Group

Counter	Description
M3UA: ErrorTx	Number of error messages transmitted.
M3UA: ErrorRx	Number of error messages received.
M3UA: NotifyTx	Number of notify messages transmitted.
M3UA: NotifyRx	Number of notify messages received.
M3UA: DunaRx	Number of DUNA messages received.
M3UA: DavaRx	Number of DAVA messages received.
M3UA: DaudTx	Number of DAUD messages transmitted.
M3UA: SconRx	Number of SCON messages received.
M3UA: DrstRx	Number of DRST messages received.
M3UA: DupuRx	Number of DUPU messages received.
M3UA: ASPUpTx	Number of ASP UP messages transmitted.
M3UA: ASPDnTx	Number of ASP DOWN messages transmitted.
M3UA: ASPUpAckRx	Number of ASP UP acknowledge messages received.
M3UA: ASPDnAckRx	Number of ASP DOWN acknowledge messages received.
M3UA: ASPActTx	Number of ASP ACTIVE messages transmitted.
M3UA: ASPInactTx	Number of ASP INACTIVE messages transmitted.
M3UA: ASPActAckRx	Number of ASP ACTIVE ACK messages received.
M3UA: ASPInactAckRx	Number of ASP INACTIVE ACK messages received.
M3UA: DataXferTx	Number of DATA transfer messages transmitted.
M3UA: DataXferRx	Number of DATA transfer messages received.
M3UA: DataBytesTx	Number of M3UA data bytes transmitted.
M3UA: DataBytesRx	Number of M3UA data bytes received.
M3UA: InvSctpSig	Number of invalid SCTP signals received by M3UA.
M3UA: AssocFail	Number of SCTP association failures.
M3UA: AssocTxFail	Number of transmit SCTP failures.
M3UA: RxVersionErr	Number of messages received with an invalid version.
M3UA: RxMsgClassErr	Number of received messages with an unexpected or unsupported Message Class.
M3UA: RxMsgTypeErr	Number of messages received with an unexpected or unsupported Message Type.
M3UA: RxMsgLenErr	Number of messages received with message length error.
M3UA: RxStrmIdErr	Number of messages received with stream ID error—when a message is received on an unexpected SCTP stream (for example, a Management message was received on a stream other than "0").
M3UA: RxUnexpMsgErr	Number of unexpected messages received. A defined and recognized message is received that is not expected in the current state.

Table B-43   M3UA SGP Measurement Group (continued)

Counter	Description
M3UA: RxProtErr	Number of messages received with protocol errors for any protocol anomaly (for example, a reception of a parameter that is syntactically correct but unexpected in the current state).
M3UA: RxParValErr	Number of messages received with parameter value errors.
M3UA: RxParmFieldErr	Number of messages received with a parameter having a wrong length field.
M3UA: RxUnexpParmErr	Number of messages received that contain one or more invalid parameters.
M3UA: RxNtwkAppErr	Number of messages received with an invalid (unconfigured) Network Appearance.
M3UA: RouteCntxErr	Number of messages received with an invalid (unconfigured) Routing Context.
M3UA: RxNoMemErr	Number of messages that were dumped because memory ran out (buffer overflow).

Table B-44   SUA SGP Measurement Group

Counter	Description
SUA: ErrorTx	Number of error messages transmitted.
SUA: ErrorRx	Number of error messages received.
SUA: NotifyTx	Number of notify messages transmitted.
SUA: NotifyRx	Number of notify messages received.
SUA: DunaRx	Number of DUNA messages received.
SUA: DavaRx	Number of DAVA messages received.
SUA: DaudTx	Number of DAUD messages transmitted.
SUA: SconRx	Number of SCON messages received.
SUA: DrstRx	Number of DRST messages received.
SUA: DupuRx	Number of DUPU messages received.
SUA: ASPUpTx	Number of ASP UP messages transmitted.
SUA: ASPDnTx	Number of ASP DOWN messages transmitted.
SUA: ASPUpAckRx	Number of ASP UP acknowledge messages received.
SUA: ASPDnAckRx	Number of ASP DOWN acknowledge messages received.
SUA: ASPActTx	Number of ASP ACTIVE messages transmitted.
SUA: ASPInactTx	Number of ASP INACTIVE messages transmitted.
SUA: ASPActAckRx	Number of ASP ACTIVE ACK messages received.
SUA: ASPInactAckRx	Number of ASP INACTIVE ACK messages received.
SUA: CldtTx	Connectionless Data Transfers sent.
SUA: CldrRx	Connectionless Data Responses received.

Table B-44   SUA SGP Measurement Group (continued)

Counter	Description
SUA: DataBytesTx	Number of SUA data bytes transmitted.
SUA: DataBytesRx	Number of SUA data bytes received.
SUA: InvSctpSig	Number of invalid SCTP signals received by SUA.
SUA: AssocFail	Number of SCTP association failures.
SUA: AssocTxFail	Number of transmit SCTP failures.
SUA: RxVersionErr	Number of messages received with an invalid version.
SUA: RxMsgClassErr	Number of received messages with an unexpected or unsupported Message Class.
SUA: RxMsgTypeErr	Number of messages received with an unexpected or unsupported Message Type.
SUA: RxMsgLenErr	Number of messages received with a message length error.
SUA: RxStrmIdErr	Number of messages received with a stream ID error. This happens when a message is received on an unexpected SCTP stream (for example, a Management message received on a stream other than "0").
SUA: RxUnexpMsgErr	Number of unexpected messages received. A defined and recognized message is received that is not expected in the current state.
SUA: RxProtErr	Number of messages received with protocol errors for any protocol anomaly (for example, a reception of a parameter that is syntactically correct but unexpected in the current state).
SUA: RxParmValErr	Number of messages received with parameter value errors.
SUA: RxParmFieldErr	Number of messages received with a parameter having a wrong length field.
SUA: RxUnexpParmErr	Number of messages received that contain one or more invalid parameters.
SUA: RxNtwkAppErr	Number of messages received with an invalid (unconfigured) Network Appearance.
SUA: RouteCntxErr	Number of messages received with an invalid (unconfigured) Routing Context.
SUA: RxNoMemErr	Number of messages that were dumped because memory ran out (buffer overflow).