



CHAPTER 6

Using BTS Measurements

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Introduction

This chapter describes BTS traffic measurements and tells you how to use them. BTS does the following:

- Collects statistics in 5-, 15-, 30-, or 60-minute intervals.
- Collects TG statistics at 100 second intervals.
- Clears measurements after each interval without loss of ongoing counts.
- Saves 48 hours of statistical data in 5-, 15-, 30-, or 60-minute increments in persistent store.
- Displays of summary report of past 48-hour period.
- Provides On-demand report queries keyed by collection interval.
- Issues events.

There are many measurement types, but they all have a similar format. Only titles and measurement labels differ. Each header tells you where the data is from and whether it is normal or suspect.

Access BTS measurements using the following:

- Command-line interface (CLI), which runs over a telnet or secure shell (SSH) session.
- Comma-separated value (CSV) or Extensible Markup Language (XML) format via FTP or SFTP interface.
- SNMP MIB (version v2c).

Measurements without data for the given interval do not appear in reports.


Using Measurements

When working with measurements watch for the following:

- rapid buildup of counts—Sometimes that means congestion or processing failures.
- disparity in measurement pairs that are normally equal—The greater the difference between the two, the more likely there is a problem. For example, successful incoming messages should be nearly equal to incoming messages:

SIP_TOTAL_INCOMING_MSG
and
SIP_TOTAL_SUCCESS_INCOMING_MSG

Table 6-1 Using Measurements

Task	Sample Command
Viewing measurement types	<code>show measurement-prov type=<type>;</code>
Enabling measurements	<code>change measurement-prov type=<type>; enable=<yes>; time-interval=<time interval>;</code>
Disabling measurements	<code>change measurement-prov type=<type>; enable=<no>; time-interval=<time interval>;</code>
Changing measurement intervals	<code>change measurement-prov type=<type>; enable=<yes>; time-interval=<5>;</code>
Viewing measurement summaries	<code>report measurement-isdn-summary start-time=<start time>; end-time=<end time>; call-agent-id=<CA ID>;</code> Note Results may take a few minutes to display.
Reporting historical measurements	<code>report measurement-sim-summary start-time=2003-03-27 10:00:00; end-time=2003-03-27 12:00:00; call-agent-id=CA146; output=sim-report; output-type=csv;</code> Create reports as either CSV or XML files. Then you can view or transfer them using FTP/SFTP. Note Results may take a few minutes to display.
Viewing in-progress measurements from the data source	<code>report measurement-isdn-summary call-agent-id=CA146; output=isdn-partial-report; output-type=csv; interval=current;</code> Note This is not supported for tg-usage measurements. Note Results may take a few minutes to display.
Clearing in-progress measurements from the data source	<code>clear measurement-isdn-summary call-agent-id=CA146;</code>  Caution This permanently erases in-progress measurements.

Learning the Measurement Types

These tables list the different measurement types the BTS collects.

ISDN Measurements

Table 6-2 ISDN Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
ISDN_ALERTING_RX	ISDN ALERTING messages received.
ISDN_ALERTING_TX	ISDN ALERTING messages sent from the reporting CA.

Table 6-2 ISDN Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
ISDN_CALL_PROCEED_RX	ISDN CALL PROCEED messages received.
ISDN_CALL_PROCEED_TX	ISDN CALL PROCEED messages sent from the reporting CA.
ISDN_CONG_CNTL_TX	ISDN Congestion Control messages sent from the reporting CA, this only applies to ETSI PRI.
ISDN_CONNECT_ACK_RX	ISDN CONNECT ACK messages received.
ISDN_CONNECT_ACK_TX	ISDN CONNECT ACK messages sent from the reporting CA.
ISDN_CONNECT_RX	ISDN CONNECT messages received.
ISDN_CONNECT_TX	ISDN CONNECT messages sent from the reporting CA.
ISDN_DISCONNECT_RX	ISDN DISCONNECT messages received.
ISDN_DISCONNECT_TX	ISDN DISCONNECT messages sent from the reporting CA.
ISDN_FACILITY_RX	ISDN FACILITY messages received.
ISDN_FACILITY_TX	ISDN FACILITY messages sent from the reporting CA.
ISDN_INFORMATION_RX	ISDN INFORMATION messages received.
ISDN_INFORMATION_TX	ISDN INFORMATION messages sent from the reporting CA.
ISDN_NOTIFY_RX	ISDN NOTIFY messages received.
ISDN_NOTIFY_TX	ISDN NOTIFY messages sent from the reporting CA.
ISDN_OC_SETUP_REJECTED	ISDN calls rejected due to system overload.
ISDN_PROGRESS_RX	ISDN PROGRESS messages received.
ISDN_PROGRESS_TX	ISDN PROGRESS messages sent from the reporting CA.
ISDN_RELEASE_COMPLETE_RX	ISDN RELEASE COMPLETE messages received.
ISDN_RELEASE_COMPLETE_TX	ISDN RELEASE COMPLETE messages sent from the reporting CA.
ISDN_RELEASE_RX	ISDN RELEASE messages received.
ISDN_RELEASE_TX	ISDN RELEASE messages sent from the reporting CA.
ISDN_RESTART_ACK_RX	ISDN RESTART ACK messages received.
ISDN_RESTART_ACK_TX	ISDN RESTART ACK messages sent from the reporting CA.
ISDN_RESTART_RX	ISDN RESTART messages received.
ISDN_RESTART_TX	ISDN RESTART messages sent from the reporting CA.
ISDN_RESUME_ACK_RX	ISDN Resume Acknowledge messages received, this only applies to ETSI PRI.
ISDN_RESUME_ACK_TX	ISDN Resume Acknowledge messages sent from the reporting CA, this only applies to ETSI PRI.
ISDN_RESUME_REJ_RX	ISDN Resume Reject messages received, this only applies to ETSI PRI.
ISDN_RESUME_REJ_TX	ISDN Resume Reject messages sent from the reporting CA, this only applies to ETSI PRI.
ISDN_RESUME_TX	ISDN Resume messages sent from the reporting CA, this only applies to ETSI PRI.
ISDN_SEGMENT_RX	ISDN Segment messages received, this only applies to ETSI PRI.
ISDN_SEGMENT_TX	ISDN Segment messages sent from the reporting CA, this only applies to ETSI PRI.

Table 6-2 ISDN Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
ISDN_SETUP_ACK_RX	ISDN SETUP ACK messages received.
ISDN_SETUP_ACK_TX	ISDN SETUP ACK messages sent from the reporting CA.
ISDN_SETUP_RX	ISDN SETUP messages received.
ISDN_SETUP_TX	ISDN SETUP messages sent from the reporting CA.
ISDN_SRVC_ACK_RX	ISDN SERVICE ACK messages received.
ISDN_SRVC_ACK_TX	ISDN SERVICE ACK messages sent from the reporting CA.
ISDN_SRVC_RX	ISDN SERVICE messages received.
ISDN_SRVC_TX	ISDN SERVICE messages sent from the reporting CA.
ISDN_STATUS_ENQUIRY_RX	ISDN STATUS ENQUIRY messages received.
ISDN_STATUS_ENQUIRY_TX	ISDN STATUS ENQUIRY messages sent from the reporting CA.
ISDN_STATUS_RX	ISDN STATUS messages received.
ISDN_STATUS_TX	ISDN STATUS messages sent from the reporting CA.
ISDN_SUSPEND_ACK_RX	ISDN Suspend Acknowledge messages received, this only applies to ETSI PRI.
ISDN_SUSPEND_ACK_TX	ISDN Suspend Acknowledge messages sent from the reporting CA, this only applies to ETSI PRI.
ISDN_SUSPEND_REJ_RX	ISDN Suspend Reject messages received, this only applies to ETSI PRI.
ISDN_SUSPEND_REJ_TX	ISDN Suspend Reject messages sent from the reporting CA, this only applies to ETSI PRI.
ISDN_SUSPEND_RX	ISDN Suspend messages received, this only applies to ETSI PRI.
ISDN_SUSPEND_TX	ISDN Suspend messages sent from the reporting CA, this only applies to ETSI PRI.
ISDN_USER_INFO_RX	ISDN User Information messages received, this only applies to ETSI PRI.
ISDN_USER_INFO_TX	ISDN User Information messages sent from the reporting CA, this only applies to ETSI PRI.

Call Processing Measurements

Table 6-3 Call Processing Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
CALLP_NCT_TEST_FAIL	Unsuccessful Network Continuity Tests completed, both call setup failures and resource failures. These are test calls abnormally released by the CA due to resource priorities.
CALLP_NLB_TEST_FAIL	Unsuccessful Network Loop Back Tests completed. This includes both call setup failures and resource failures. These are test calls abnormally released by the CA due to reasons such as resource priorities.
CALLP_NLB_TEST_SUCC	Successful Network Loop Back Tests completed.
CALLP_CALL_ABAND	Originating call attempts of all types abandoned.
CALLP_CALL_SUCC	Successful originating and terminating call attempts of all types.
CALLP_CAS_CALL_ABAND	CAS originating call attempts abandoned.
CALLP_CAS_CALL_SUCC	Successful CAS originating and terminating call attempts.
CALLP_CAS_CAS_CALL	Successfully completed calls from an CAS originator to an CAS terminator.
CALLP_CAS_H323_CALL	Successfully completed calls from a CAS originator to an H323 terminator.
CALLP_CAS_ISDN_CALL	Successfully completed calls from an CAS originator to an ISDN terminator.
CALLP_CAS_MGCP_CALL	Successfully completed calls from an CAS originator to an MGCP terminator.
CALLP_CAS_ORIG_ATTMP	Originating CAS call attempts.
CALLP_CAS_ORIG_FAIL	CAS originating call attempts that failed.
CALLP_CAS_SIP_CALL	Successfully completed calls from an CAS originator to an SIP terminator.
CALLP_CAS_SS7_CALL	Successfully completed calls from an CAS originator to an SS7 terminator.
CALLP_CAS_TERM_ATTMP	CAS terminating call attempts.
CALLP_CAS_TERM_FAIL	CAS terminating call attempts that failed.
CALLP_EMGNCY_ATTMP	Emergency call attempts.
CALLP_EMGNCY_CALL_ABAND	Emergency call origination attempts abandoned.
CALLP_EMGNCY_CALL_SUCC	Emergency call attempts that completed successfully.
CALLP_EMGNCY_FAIL	Emergency call attempts that failed.
CALLP_H323_CALL_ABAND	Terminating and originating H323 call attempts abandoned.
CALLP_H323_CALL_SUCC	Originating and terminating H323 call attempts that completed successfully.
CALLP_H323_CAS_CALL	Successfully completed calls from an H323 originator to a CAS terminator.
CALLP_H323_H323_CALL	Successfully completed calls from an H323 originator to an H323 terminator.
CALLP_H323_ISDN_CALL	Successfully completed calls from an H323 originator to an ISDN terminator.
CALLP_H323_MGCP_CALL	Successfully completed calls from an H323 originator to an MGCP terminator.
CALLP_H323_ORIG_ATTMP	Originating H323 call attempts.
CALLP_H323_ORIG_FAIL	Originating H323 call attempts that failed.
CALLP_H323_SIP_CALL	Successfully completed calls from an H323 originator to a SIP terminator.
CALLP_H323_SS7_CALL	Successfully completed calls from an H323 originator to an SS7 terminator.

Table 6-3 Call Processing Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
CALLP_H323_TERM_ATTMP	Terminating H323 call attempts.
CALLP_H323_TERM_FAIL	Terminating H323 call attempts that failed.
CALLP_INTERLA_ABAND	Interlata call origination attempts abandoned.
CALLP_INTERLA_ATTMP	Interlata call attempts.
CALLP_INTERLA_FAIL	Interlata call attempts that failed.
CALLP_INTERLA_SUCC	Interlata call attempts that completed successfully.
CALLP_INTL_ABAND	International call origination attempts abandoned.
CALLP_INTL_ATTMP	International call attempts.
CALLP_INTL_FAIL	International call attempts that failed.
CALLP_INTL_SUCC	International call attempts that completed successfully.
CALLP_INTRALA_ABAND	Intralata call origination attempts abandoned.
CALLP_INTRALA_ATTMP	Intralata call attempts.
CALLP_INTRALA_FAIL	Intralata call attempts that failed.
CALLP_INTRALA_SUCC	Intralata call attempts that completed successfully.
CALLP_ISDN_CALL_ABAND	ISDN originating call attempts abandoned.
CALLP_ISDN_CALL_SUCC	Successful ISDN originating and terminating call attempts.
CALLP_ISDN_CAS_CALL	Successfully completed calls from an ISDN originator to an CAS terminator.
CALLP_ISDN_H323_CALL	Successfully completed calls from an ISDN originator to an H323 terminator.
CALLP_ISDN_ISDN_CALL	Successfully completed calls from an ISDN originator to an ISDN terminator.
CALLP_ISDN_MGCP_CALL	Successfully completed calls from an ISDN originator to an MGCP terminator.
CALLP_ISDN_ORIG_ATTMP	Originating ISDN call attempts.
CALLP_ISDN_ORIG_FAIL	ISDN originating call attempts that failed.
CALLP_ISDN_SIP_CALL	Successfully completed calls from an ISDN originator to an SIP terminator.
CALLP_ISDN_SS7_CALL	Successfully completed calls from an ISDN originator to an SS7 terminator.
CALLP_ISDN_TERM_ATTMP	ISDN terminating call attempts.
CALLP_ISDN_TERM_FAIL	ISDN terminating call attempts that failed.
CALLP_IVR_NATIVE_REQ	Requests for native IVR service.
CALLP_IVR_NETWORK_REQ	Requests for network based IVR service.
CALLP_IVR_RESOURCE_FAIL	IVR sessions that could not be established.
CALLP_LB_TEST_SUCC	Successful TDM Loop Back 108 Tests completed.
CALLP_LNP_RCV_MISROUTED_PORTED	The LNP Data Inconsistencies with release message (REL): misrouted calls to a ported number (ANSI ISUP REL cause 26) reported by another exchange after an LNP query in the reporting CA.
CALLP_LNP_RCV_MISROUTED_PORTED	Misrouted calls to a ported number (ANSI ISUP REL cause 26) reported by another exchange after an LNP query.

Table 6-3 Call Processing Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
CALLP_LNP_SND_MISROUTED_PORTED	Misrouted calls to a ported number detected after an LNP query.
CALLP_LNP_SND_MISROUTED_PORTED	Misrouted calls to a ported number detected after an LNP query in the reporting CA.
CALLP_LNP_UNALLOC_NUM_NO_GAP	<p>The LNP Unallocated Number Calls: calls resulting in either:</p> <ul style="list-style-type: none"> • an unallocated number • a misrouted ported number <p>This shows when an LNP query (from the BTS or another switch) results in either of the above conditions from the donor switch's reporting CA.</p> <p>To find out when this query occurred use the Forward Call Indicator's (FCI) Ported Number Translation indicator parameter with no "Ported Number" generic address parameter (GAP).</p>
CALLP_LNP_UNALLOC_NUM_OWN_LRN	<p>LNP calls getting an Unallocated indication. This occurs when a donor (or another switch) detects the reporting CA's own local routing number (LRN) after an LNP query.</p> <p>To find out when this query occurred use the Forward Call Indicator's (FCI) Ported Number Translation indicator parameter with a "Ported Number" generic address parameter (GAP).</p> <p>Note This does not apply to DN's marked "LNP-Reserved."</p>
CALLP_LNP_UNALLOC_NUM_NO_GAP	<p>Calls that cause unallocated number indications in the donor switch reporting call agent. This follows an LNP query in this or another switch. View the FCI parameter's Ported Number Translation indicator with no "Ported Number" GAP.</p>
CALLP_LNP_UNALLOC_NUM_OWN_LRN	<p>LNP calls getting an unallocated indication; this means the LNP query to the donor (or another) switch returns the CA's own LRN. View the FCI parameter's Ported Number Translation indicator with no "Ported Number" GAP.</p> <p>Note This does not apply to "LNP-Reserved" DN's.</p>
CALLP_LOCAL_ABAND	Local call origination attempts abandoned.
CALLP_LOCAL_ATTMP	Local call attempts.
CALLP_LOCAL_FAIL	Local call attempts that failed.
CALLP_LOCAL_SUCC	Local call attempts that completed successfully.
CALLP_MGCP_CALL_ABAND	MGCP originating call attempts abandoned.
CALLP_MGCP_CALL_SUCC	Successful MGCP originating and terminating call attempts.
CALLP_MGCP_CAS_CALL	Successfully completed calls from an MGCP originator to an CAS terminator.
CALLP_MGCP_H323_CALL	Successfully completed calls from an MGCP originator to an H323 terminator.
CALLP_MGCP_ISDN_CALL	Successfully completed calls from an MGCP originator to an ISDN terminator.
CALLP_MGCP_MGCP_CALL	Successfully completed calls from an MGCP originator to an MGCP terminator.
CALLP_MGCP_ORIG_ATTMP	Originating MGCP call attempts.
CALLP_MGCP_ORIG_FAIL	MGCP originating call attempts that failed.
CALLP_MGCP_SIP_CALL	Successfully completed calls from an MGCP originator to an SIP terminator.

Table 6-3 Call Processing Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
CALLP_MGCP_SS7_CALL	Successfully completed calls from an MGCP originator to an SS7 terminator.
CALLP_MGCP_TERM_ATTMP	MGCP terminating call attempts.
CALLP_MGCP_TERM_FAIL	MGCP terminating call attempts that failed.
CALLP_MODEM_MEDIA_SETUP_FAIL	Failed Modem calls. These calls fail because of resource or priority limits.
CALLP_MODEM_MEDIA_SETUP_SUCC	Successfully completed Modem calls.
CALLP_NAS_ADMIN_REBOOT	Admin Reboot - Reason Code 807 - that are received in the DLCX messages.
CALLP_NAS_ADMIN_RESET	Admin Reset - Reason Code 806 - that are received in the DLCX messages.
CALLP_NAS_AUTH_FAIL	Failed NAS Authentication Requests.
CALLP_NAS_AUTH_SUCC	Successful NAS Authentication Requests.
CALLP_NAS_CALLBACK	NAS Callback - Reason Code 816 - that are received in the DLCX messages.
CALLP_NAS_CLD_UNACC	NAS calls that failed on the reporting CA due to the called party number being blocked
CALLP_NAS_CLG_UNACC	NAS calls that failed on the reportingCA due to the calling party number being blocked
CALLP_NAS_HOST_REQUEST	Host Request - Reason Code 818 - that are received in the DLCX messages.
CALLP_NAS_IDLE_TIMEOUT	Idle Timeout - Reason Code 804 - that are received in the DLCX messages.
CALLP_NAS_ISP_PORT_LIMIT	NAS calls that failed on the reporting CA due to the port limit of a modem being exceeded
CALLP_NAS_LOST_CARRIER	Lost Carrier - Reason Code 802 - that are received in the DLCX messages.
CALLP_NAS_LOST_SERVICE	Lost Service - Reason Code 803 - that are received in the DLCX messages.
CALLP_NAS_NAS_ERROR	NAS Error- Reason Code 809 - that are received in the DLCX messages.
CALLP_NAS_NAS_REBOOT	NAS Reboot- Reason Code 811 - that are received in the DLCX messages.
CALLP_NAS_NAS_REQUEST	NAS Request - Reason Code 810 - that are received in the DLCX messages.
CALLP_NAS_NO_MODEMS	NAS calls that failed on the reporting CA due to the unavailability of a modem
CALLP_NAS_OP_FAIL	Operation failures that occurred on the reporting CA - typically indicative of a modem failure
CALLP_NAS_PORT_ERROR	Port Error- Reason Code 808 - that are received in the DLCX messages.
CALLP_NAS_PORT_PREEMPTED	Port Pre-empted - Reason Code 813 - that are received in the DLCX messages.
CALLP_NAS_PORT_SUSPENDED	Port Suspended - Reason Code 814 - that are received in the DLCX messages.
CALLP_NAS_PORT_UNNEEDED	Port Unneeded - Reason Code 812 - that are received in the DLCX messages.
CALLP_NAS_SERVICE_UNAVAIL	Service Unavailable - Reason Code 815 - that are received in the DLCX messages.
CALLP_NAS_SESSION_TIMEOUT	Session Timeout - Reason Code 805 - that are received in the DLCX messages.
CALLP_NAS_USER_ERROR	User Error - Reason Code 817 - that are received in the DLCX messages.
CALLP_NAS_USER_REQUEST	User Requests - Reason Code 801 - that are received in the DLCX messages.
CALLP_NCT_TEST_SUCC	Successful Network Continuity Tests completed.

Table 6-3 Call Processing Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
CALLP_OHD_DIALTONE_TIMEO UT	Times the off hook delay trigger timed out.
CALLP_OLM _ ACCEPT	Calls accepted by OLM.
CALLP_OLM _ ACCEPT_MCL0	Calls accepted by OLM at MCL0.
CALLP_OLM _ ACCEPT_MCL1	Calls accepted by OLM at MCL1.
CALLP_OLM _ ACCEPT_MCL2	Calls accepted by OLM at MCL2.
CALLP_OLM _ ACCEPT_MCL3	Calls accepted by OLM at MCL3.
CALLP_OLM _ MCL1_COUNT	MCL1 occurrences.
CALLP_OLM _ MCL2_COUNT	MCL2 occurrences.
CALLP_OLM _ MCL3_COUNT	MCL3 occurrences.
CALLP_OLM _ MCL4_COUNT	MCL4 occurrences.
CALLP_OLM _ REJECT	Calls rejected by OLM.
CALLP_OLM _ REJECT_EMERGENCY	Emergency Calls rejected by OLM at MCL4.
CALLP_OLM _ REJECT_MCL1	Calls rejected by OLM at MCL1.
CALLP_OLM _ REJECT_MCL2	Calls rejected by OLM at MCL2.
CALLP_OLM _ REJECT_MCL3	Calls rejected by OLM at MCL3.
CALLP_OLM _ REJECT_MCL4	Calls rejected by OLM at MCL4.
CALLP_OLM _ OFFERED	Calls offered to OLM.
CALLP_OLM_ISUP_MSG_DUMPE D	ISUP messages dumped at MCL4 by layer3 (MIM) due to system overload.
CALLP_ORIG_ATTMP	Originating call attempts of all types.
CALLP_ORIG_FAIL	Originating call attempts of all types that failed.
CALLP_SIP_AS_302_TOTAL	Application Server calls that returned a 302 message.
CALLP_SIP_AS_REFERERRED_NEW DN	Application Server calls that returned a new DN.
CALLP_SIP_AS_REFERERRED_TOT AL	Application Server calls referred back.
CALLP_SIP_CALL_ABAND	SIP originating call attempts abandoned.
CALLP_SIP_CALL_SUCC	Successful SIP originating and terminating call attempts.
CALLP_SIP_CAS_CALL	Successfully completed calls from a SIP originator to an CAS terminator.
CALLP_SIP_H323_CALL	Successfully completed calls from a SIP originator to an H323 terminator.
CALLP_SIP_ISDN_CALL	Successfully completed calls from a SIP originator to an ISDN terminator.
CALLP_SIP_MGCP_CALL	Successfully completed calls from a SIP originator to an MGCP terminator.
CALLP_SIP_ORIG_ATTMP	Originating SIP call attempts.
CALLP_SIP_ORIG_CALL_ABDN	This counter is pegged when the caller abandons the call before the called party answers the call.

Table 6-3 Call Processing Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
CALLP_SIP_ORIG_CALL_NOT_ANS	This counter is pegged when the incoming call is not answered by the called party.
CALLP_SIP_ORIG_END_USR_BUSY	This counter is pegged when the incoming call is not complete due to the called party being busy.
CALLP_SIP_ORIG_FAIL	The number of incoming SIP calls that are not established. This counter does not include the calls in these conditions: <ul style="list-style-type: none"> • When the call is abandoned by the caller before the called party answers. • The called party is busy. • The called party is not responding to the incoming call.
CALLP_SIP_ORIG_SUCC	Number of incoming established SIP calls.
CALLP_SIP_SIP_CALL	Successfully completed calls from a SIP originator to an SIP terminator.
CALLP_SIP_SS7_CALL	Successfully completed calls from a SIP originator to an SS7 terminator.
CALLP_SIP_TERM_ATTMP	SIP terminating call attempts.
CALLP_SIP_TERM_CALL_ABDN	This counter is pegged when the outgoing call is abandoned by the originator before the called party answers.
CALLP_SIP_TERM_CALL_NOT_ANS	This counter is pegged when the outgoing call is not answered by the called party.
CALLP_SIP_TERM_END_USR_BUSY	This counter is pegged when the outgoing call is terminated as the called party was busy. <p>Note The originating and terminating counters are pegged for both originating and terminating calls if both are using SIP.</p>
CALLP_SIP_TERM_FAIL	The number of outgoing SIP calls that are not established. This counter does not include the calls in these conditions: <ul style="list-style-type: none"> • When the call is abandoned by the caller before the called party answers. • The called party is busy. • The called party is not responding to the incoming call.
CALLP_SIP_TERM_SUCC	Number of outgoing established SIP calls.
CALLP_SS7_CALL_ABAND	SS7 originating call attempts abandoned.
CALLP_SS7_CALL_SUCC	Successful SS7 originating and terminating call attempts.
CALLP_SS7_CAS_CALL	Successfully completed calls from an SS7 originator to an CAS terminator.
CALLP_SS7_H323_CALL	Successfully completed calls from an SS7 originator to an H323 terminator.
CALLP_SS7_ISDN_CALL	Successfully completed calls from an SS7 originator to an ISDN terminator.
CALLP_SS7_MGCP_CALL	Successfully completed calls from an SS7 originator to an MGCP terminator.
CALLP_SS7_ORIG_ATTMP	Originating SS7 call attempts.
CALLP_SS7_ORIG_FAIL	SS7 originating call attempts that failed.
CALLP_SS7_SIP_CALL	Successfully completed calls from an SS7 originator to an SIP terminator.
CALLP_SS7_SS7_CALL	Successfully completed calls from an SS7 originator to an SS7 terminator.

Table 6-3 Call Processing Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
CALLP_SS7_TERM_ATTMP	SS7 terminating call attempts.
CALLP_SS7_TERM_FAIL	SS7 terminating call attempts that failed.
CALLP_T38_FAX_MEDIA_SETUP_FAIL	Unsuccessful T.38 media connections between the endpoints for T.38 fax transmission.
CALLP_T38_FAX_MEDIA_SETUP_SUCC	Successful T.38 media connections between the endpoints for T.38 fax transmission.
CALLP_TDD_MEDIA_SETUP_FAIL	Failed calls of Call Type RELAY. The CA abnormally releases these calls because of resource or priority limits.
CALLP_TDD_MEDIA_SETUP_SUCC	Successfully completed calls of Call Type RELAY.
CALLP_TERM_ATTMP	Terminating call attempts of all types.
CALLP_TERM_FAIL	Terminating call attempts of all types that failed.
CALLP_TERM_WB_LIST_ALLOW	Terminating calls allowed by the white/black list.
CALLP_TERM_WB_LIST_BLOCK	Terminating calls blocked by the white/black list.
CALLP_TEST_ROUTE_SUCC	Successful TDM Loop Back 108 Tests with DN dialed out in outgoing message completed.
CALLP_TOLL_FREE_ABAND	Toll Free call origination attempts abandoned.
CALLP_TOLL_FREE_ATTMP	Toll Free call attempts.
CALLP_TOLL_FREE_FAIL	Toll Free call attempts that failed.
CALLP_TOLL_FREE_SUCC	Toll Free call attempts that completed successfully.
CALLP_TOTAL_SEASONAL_SUSPEND_ORIG_ATTMP	Origination attempts by subscribers marked as seasonal suspend.
CALLP_TOTAL_TDISC_ORIG_ATTMP	Origination attempts by subscribers marked as temporarily disconnected.

MGCP Adapter Measurements

Table 6-4 MGCP Adapter Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
MGCP_AUCX_ACK_RX	AUCX ACK (Audit Connection Acknowledgement) messages received. Note This is enabled in a future release.
MGCP_AUCX_NACK_RX	AUCX NACK (Audit Connection NotAcknowledgement) messages received. Note This is enabled in a future release.
MGCP_AUCX_TX	AUCX (Audit Connection) messages sent. Note This is enabled in a future release.
MGCP_AUEP_ACK_RX	MGCP AUEP acknowledgement messages received.
MGCP_AUEP_NACK_RX	MGCP AUEP non-acknowledgement messages received.
MGCP_AUEP_TX	MGCP AUEP messages sent.
MGCP_CRCX_ACK_RX	MGCP CRCX acknowledgement messages received.
MGCP_CRCX_NACK_RX	MGCP CRCX non-acknowledgement messages received.
MGCP_CRCX_TX	MGCP CRCX messages sent.
MGCP_DECODE_ERROR	MGCP messages received that failed decoding.
MGCP_DLCX_ACK_RX	MGCP DLCX acknowledgement messages received.
MGCP_DLCX_NACK_RX	MGCP DLCX non-acknowledgement messages received.
MGCP_DLCX_RX	MGCP DLCX messages received from gateways.
MGCP_DLCX_TX	MGCP DLCX messages sent.
MGCP_ENCODE_ERROR	MGCP messages to be sent that failed encoding.
MGCP_MDCX_ACK_RX	MGCP MDCX acknowledgement messages received.
MGCP_MDCX_NACK_RX	MGCP MDCX non-acknowledgement messages received.
MGCP_MDCX_TX	MGCP MDCX messages sent.
MGCP_NTFY_RX	MGCP NTFY messages received from gateways.
MGCP_OC_CALL_REJECTED	MGCP calls rejected due to system overload.
MGCP_RQNT_ACK_RX	MGCP RQNT acknowledgement messages received.
MGCP_RQNT_NACK_RX	MGCP RQNT non-acknowledgement messages received.
MGCP_RQNT_TX	MGCP RQNT messages sent.
MGCP_RSIP_ACK_TX	MGCP RSIP acknowledgement messages sent.
MGCP_RSIP_RX	MGCP RSIP messages received from gateways.
MGCP_SEND_FAILED	MGCP messages sent from the reporting CA that failed while being sent to the target gateway.
MGCP_UNREACHABLE	MGCP messages sent from the reporting CA that failed due to the target gateway being unreachable.

DQoS Measurements

Table 6-5 DQoS Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
DQOS_GATE_CLOSE_RX	DQOS Gate-Open messages received by the reporting BTS.
DQOS_GATE_DELETE_ACK_RX	DQOS Gate-Delete-Ack messages received by the reporting BTS.
DQOS_GATE_DELETE_TX	DQOS Gate-Delete messages sent from the reporting BTS.
DQOS_GATE_DELETE_ERR_RX	DQOS Gate-Delete-Err messages received by the reporting BTS.
DQOS_GATE_INFO_ACK_RX	DQOS Gate-Info-Ack messages received by the reporting BTS.
DQOS_GATE_INFO_ERR_RX	DQOS Gate-Info-Err messages received by the reporting BTS.
DQOS_GATE_INFO_TX	DQOS Gate-Info messages sent from the reporting BTS.
DQOS_GATE_OPEN_RX	DQOS Gate-Open messages received by the reporting BTS.
DQOS_GATE_SET_ACK_RX	DQOS Gate-Set-Ack messages received by the reporting BTS.
DQOS_GATE_SET_ERR_RX	DQOS Gate-Set-Err messages received by the reporting BTS.
DQOS_GATE_SET_TX	DQOS Gate-Set messages sent from the reporting BTS.

SIP Measurements

This table lists measurements for the Session Initiation Protocol (SIP). These are common to several reporting types: SIM, AIN-SVC, POTS-MISC, and SIA.

Table 6-6 Session Initiation Protocol (SIP) Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
SIS_100_RX	100 class (TRYING) messages the reporting CA or FS received.
SIS_100_TX	100 class (TRYING) messages the reporting CA or FS sent.
SIS_18x_RX	18x class (INFORMATIONAL) messages the reporting CA or FS received.
SIS_18x_TX	18x class (INFORMATIONAL) messages the reporting CA or FS sent.
SIS_200_RX	200 class (SUCCESS) messages the reporting CA or FS received.
SIS_200_TX	200 class (SUCCESS) messages the reporting CA or FS sent.
SIS_3xx_RX	3xx class (REDIRECTION) messages the reporting CA or FS received.
SIS_3xx_TX	3xx class (REDIRECTION) messages the reporting CA or FS sent.
SIS_4xx_RX	4xx class (REQUEST FAILURES) messages the reporting CA or FS received.
SIS_4xx_TX	4xx class (REQUEST FAILURES) messages the reporting CA or FS sent.
SIS_5xx_RX	5xx class (SERVER FAILURES) messages the reporting CA or FS received.
SIS_5xx_TX	5xx class (SERVER FAILURES) messages the reporting CA or FS sent.
SIS_6xx_RX	6xx class (GLOBAL FAILURES) messages the reporting CA or FS received.
SIS_6xx_TX	6xx class (GLOBAL FAILURES) messages the reporting CA or FS sent.

Table 6-6 Session Initiation Protocol (SIP) Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
SIS_7xx_RX	7xx class (RESERVED) messages the reporting CA or FS received.
SIS_7xx_TX	7xx class (RESERVED) messages the reporting CA or FS sent.
SIS_ACK_RX	SIP ACK messages the reporting CA or FS received.
SIS_ACK_TX	SIP ACK messages the reporting CA or FS sent.
SIS_BYE_RX	SIP BYE messages the reporting CA or FS received.
SIS_BYE_TX	SIP BYE messages the reporting CA or FS sent.
SIS_CANCEL_RX	SIP CANCEL messages the reporting CA or FS received.
SIS_CANCEL_TX	SIP CANCEL messages the reporting CA or FS sent.
SIS_INFO_RX	SIP INFO messages the reporting CA or FS received.
SIS_INFO_TX	SIP INFO messages the reporting CA or FS sent.
SIS_INVITE_REPLACES_RX	SIP INVITE REPLACES messages the reporting CA or FS received.
SIS_INVITE_REPLACES_TX	SIP INVITE REPLACES messages the reporting CA or FS sent..
SIS_INVITE_RX	SIP INVITE messages the reporting CA or FS received.
SIS_INVITE_TX	SIP INVITE messages the reporting CA or FS sent.
SIS_NOTIFY_RX	SIP NOTIFY messages the reporting CA or FS received.
SIS_NOTIFY_TX	SIP NOTIFY messages the reporting CA or FS sent.
SIS_OPTIONS_RX	SIP OPTIONS messages the reporting CA or FS received.
SIS_OPTIONS_TX	SIP OPTIONS messages the reporting CA or FS sent.
SIS_PRACK_RX	SIP PRACK messages the reporting CA or FS received.
SIS_PRACK_TX	SIP PRACK messages the reporting CA or FS sent.
SIS_PROV_RSP_RETRAN_RX	SIP provisioning response retransmission messages the reporting CA or FS received.
SIS_PROV_RSP_RETRAN_TX	SIP provisioning response retransmission messages the reporting CA or FS sent.
SIS_REFERER_RX	SIP REFER messages the reporting CA or FS received.
SIS_REFERER_TX	SIP REFER messages the reporting CA or FS sent..
SIS_REFERER_W_REPLACES_RX	SIP REFER with REPLACES messages the reporting CA or FS received.
SIS_REGISTER_RX	SIP REGISTER messages the reporting CA or FS received.
SIS_REGISTER_TX	SIP REGISTER messages the reporting CA or FS sent.
SIS_REL100_RX	REL100 class (TRYING) messages the reporting CA or FS received.
SIS_REL100_TX	REL100 class (TRYING) messages the reporting CA or FS sent..
SIS_REQ_RETRAN_RX	SIP request retransmission messages the reporting CA or FS received.
SIS_REQ_RETRAN_TX	SIP request retransmission messages the reporting CA or FS sent.
SIS_RSP_RETRAN_RX	SIP response retransmission messages the reporting CA or FS received.
SIS_RSP_RETRAN_TX	SIP response retransmission messages the reporting CA or FS sent.
SIS_SUBSCRIBE_RX	SIP SUBSCRIBE messages the reporting CA or FS received.

Table 6-6 Session Initiation Protocol (SIP) Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
SIS_SUBSCRIBE_TX	SIP SUBSCRIBE messages the reporting CA or FS sent.
SIS_T1_TIMER_EXPIRED	SIP T1 Timer expirations that occurred on the reporting CA or FS received over the collection interval.
SIS_T2_TIMER_REACHED	SIP T2 Timer expirations that occurred on the reporting CA or FS received over the collection interval.
SIS_TOTAL_INCOM_MSG	SIP messages the reporting CA or FS attempted to receive.
SIS_TOTAL_OUTG_MSG_ATTMP	SIP messages the reporting CA or FS attempted to send.
SIS_TOTAL_SUCC_INCOM_MSG	SIP messages the reporting CA or FS successfully received.
SIS_TOTAL_SUCC_OUTG_MSG	SIP messages the reporting CA or FS successfully sent.
SIS_UNSUPPORTED_RX	Unsupported SIP messages the reporting CA or FS received.
SIS_UPDATE_RX	SIP UPDATE messages the reporting CA or FS received.
SIS_UPDATE_TX	SIP UPDATE messages the reporting CA or FS sent..

Service Interaction Manager Measurements

Table 6-7 Service Interaction Manager Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
SIM_AUDIT_CCB_FREED	SIM relationships terminated with SSF due to the SIM memory audit.
SIM_AUDIT_SIP_CCB_FREED	SIM to SIP relationships released with the FS do to the SIM memory audit.
SIM_BCM_MSG	messages received by call processing from a FS in the reporting CA.
SIM_EDP_N	Event Detection Point messages received from call processing in the reporting CA that do not require a response from the target FS.
SIM_EDP_R	Event Detection Point messages received from call processing in the reporting CA that do require a response from the target FS.
SIM_FS_ASYNC_MSG_TX	ASYNC messages sent to FSs.
SIM_FS_MSG_RX	FCP messages received from FSs.
SIM_FS_MSG_TX	FCP messages sent to FSs.
SIM_FS_PING_MSG_TX	PING messages sent to FSs.
SIM_FS_PING_NO_RSP_FAULTY	Times no response was received from the target FS when sent a PING message.
SIM_FS_RESTART_MSG_TX	RESTART messages sent to FSs.
SIM_INSTRUCT	INSTRUCT messages sent to FSs.
SIM_INSTRUCT_RSP	INSTRUCT messages received from FSs.
SIM_OC_EMG_TRIG_FORCED	Emergency triggers forced when the FS is overloaded.
SIM_OC_TRIG_FILTERED	Triggers dropped when the FS is overloaded.
SIM_OC_TRIG_FORCED	Triggers forced when the FS is overloaded. This is usually for triggers in an existing call.
SIM_RELATIONS	TDP-Rs received from call processing by SIM in the reporting CA.
SIM_TDP_N	Trigger Detection Point messages received from call processing in the reporting CA that do not require a response from the target FS.
SIM_TDP_R	Trigger Detection Point messages received from call processing in the reporting CA that do require a response from the target FS.
SIM_TERMINATE_RX	TERMINATE messages received from FSs.
SIM_TERMINATE_TX	TERMINATE messages sent to FSs.

POTS Local FS Measurements

Table 6-8 Local POTS Local Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_CFC_INTERROG_ATTMP	Call Forward Combination interrogation attempts on the reporting FS.
POTS_CFC_DEACT_ATTMP	Call Forward Combination deactivation attempts on the reporting FS.
POTS_CCW_ATTMP	Cancel Call Waiting attempts on the reporting FS.

Table 6-8 Local POTS Local Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_CCW_LENGTH	Subscriber-seconds that Cancel Call WAITING was active on the reporting FS.
POTS_CCW_REJECT_BY_CCW	Cancel Call Waiting attempts rejected due to Call Waiting not already being active on the reporting FS.
POTS_CCW_REJECT_NO_RSRC	Cancel Call Waiting attempts rejected due to a lack of available resources on the reporting FS.
POTS_CFB_ACT_ATTMP	Call Forward Busy activation attempts on the reporting FS.
POTS_CFB_ACT_REFUSED	Call Forward Busy activation attempts refused on the reporting FS.
POTS_CFB_DEACT_ATTMP	Call Forward Busy deactivation attempts on the reporting FS.
POTS_CFB_FORWARD_FAIL	Call Forward Busy service instances that failed on the reporting FS.
POTS_CFB_FORWARD_SUCC	Call Forward Busy service instances that succeeded on the reporting FS.
POTS_CFB_INTERROG_ATTMP	Call Forward Busy interrogation attempts on the reporting FS.
POTS_CFC_ACT_ATTMP	Call Forward Combination activation attempts on the reporting FS.
POTS_CFC_ACT_FAIL	Unsuccessful Call Forward Combination activation attempts on the reporting FS.
POTS_CFC_ACT_SUCC	Successful Call Forward Combination activation attempts on the reporting FS.
POTS_CFC_DEACT_FAIL	Unsuccessful Call Forward Combination deactivation attempts on the reporting FS.
POTS_CFC_DEACT_SUCC	Successful Call Forward Combination deactivation attempts on the reporting FS.
POTS_CFC_DN_CHG_ACT_ATTMP	Call Forward Combination directory number change activation attempts on the reporting FS.
POTS_CFC_DN_CHG_ACT_FAIL	Unsuccessful Call Forward Combination directory number change activation attempts on the reporting FS.
POTS_CFC_DN_CHG_ACT_SUCC	Successful Call Forward Combination directory number change activation attempts on the reporting FS.
POTS_CFC_FORWARD_ATTMP	Call Forward Combination forwarding attempts on the reporting FS.
POTS_CFC_FORWARD_FAIL	Unsuccessful Call Forward Combination forwarding attempts on the reporting FS.
POTS_CFC_FORWARD_SUCC	Successful Call Forward Combination forwarding attempts on the reporting FS.
POTS_CFC_INTERROG_FAIL	Unsuccessful Call Forward Combination interrogation attempts on the reporting FS.
POTS_CFC_INTERROG_SUCC	Successful Call Forward Combination interrogation attempts on the reporting FS.
POTS_CFNA_ACT_ATTMP	Call Forward No Answer activation attempts on the reporting FS.
POTS_CFNA_ACT_REFUSED	Call Forward No Answer activation attempts refused on the reporting FS.
POTS_CFNA_DEACT_ATTMP	Call Forward No Answer deactivation attempts on the reporting FS.
POTS_CFNA_FORWARD_FAIL	Call Forward No Answer service instances that failed on the reporting FS.
POTS_CFNA_FORWARD_SUCC	Call Forward No Answer service instances that succeeded on the reporting FS.
POTS_CFNA_INTERROG_ATTMP	Call Forward No Answer interrogation attempts on the reporting FS.

Table 6-8 Local POTS Local Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_CFU_ACT_ANSWERED	Call Forward Unconditional activation attempts answered by the called party on the reporting FS.
POTS_CFU_ACT_ATTMP	Call Forward Unconditional activation attempts on the reporting FS.
POTS_CFU_ACT_REFUSED	Call Forward Unconditional activation attempts refused on the reporting FS.
POTS_CFU_ACT_SECOND	Call Forward Unconditional second activation attempts on the reporting FS.
POTS_CFU_DEACT_ATTMP	Call Forward Unconditional deactivation attempts on the reporting FS.
POTS_CFU_FORWARD_FAIL	Call Forward Unconditional service instances that failed on the reporting FS.
POTS_CFU_FORWARD_SUCC	Call Forward Unconditional service instances that succeeded on the reporting FS.
POTS_CFU_INTERROG_ATTMP	Call Forward Unconditional interrogation attempts on the reporting FS.
POTS_CHD_ANSWER	Call Hold service instance attempts resulting in reconnection on the reporting FS.
POTS_CHD_ATTMP	Call Hold service instance attempts on the reporting FS.
POTS_CHD_NOT_ANSWER	Call Hold service instance attempts not reconnected on the reporting FS.
POTS_CHD_REJECT_INTERACT	Call Hold service instance attempts rejected due to feature interactions on the reporting FS.
POTS_CHD_REJECT_NO_RSRC	Call Hold service instance attempts rejected due to a lack of available resources on the reporting FS.
POTS_CIDS_ATTMP	Calling Identity Delivery attempts made on the reporting FS.
POTS_CIDSS_ATTMP	Calling Identity Delivery Suppression attempts made on the reporting FS.
POTS_CNAB_ATTMP	Calling Name Delivery Blocking attempts made on the reporting FS.
POTS_CNDB_ATTMP	Calling Number Delivery Blocking attempts made on the reporting FS.
POTS_CPRK_CLEAR	Call Park Attempts to clear during the collection interval
POTS_CPRK_FAIL_ATTMP	Call Park Attempts that failed during the collection interval
POTS_CPRK_FAIL_RET_ATTMP	Call Park Retrieval Attempts that failed during the collection interval
POTS_CPRK_FORWARD	Call Park Attempts to forward a call during the collection interval
POTS_CPRK_SUCC_ATTMP	Call Park Attempts successful during the collection interval
POTS_CPRK_SUCC_RET_ATTMP	Call Park Retrieval Attempts successful during the collection interval
POTS_CT_ANSWER	Call Transfer service instance attempts answered by the called party on the reporting FS.
POTS_CT_ATTMP	Call Transfer service instance attempts on the reporting FS.
POTS_CT_CONF	Call Transfer service instance attempts resulting in a successfully setup conference call on the reporting FS.
POTS_CT_FAIL	Call Transfer service instance attempts that failed on the reporting FS.
POTS_CT_TRANSFER	Call Transfer service instance attempts resulting in a successfully transferred call on the reporting FS.
POTS_CW_ANSWERED	Call Waiting service instance attempts answered by the called party on the reporting FS.

Table 6-8 Local POTS Local Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_CW_ATTMP	Call Waiting service instance attempts on the reporting FS.
POTS_CW_NOT_ANSWERED	Call Waiting service instance attempts not answered by the called party on the reporting FS.
POTS_CW_REJECT_NO_RSRC	Call Waiting service instance attempts rejected due to a lack of available resources on the reporting FS.
POTS_CW_REJECTE_INTERACT	Call Waiting service instance attempts rejected due to feature interactions on the reporting FS.
POTS_CWD_ACT_FAIL	Call Waiting Deluxe unsuccessful service activation attempts on the reporting FS.
POTS_CWD_ACT_SUCC	Call Waiting Deluxe successful service activation attempts on the reporting FS.
POTS_CWD_ANSWER	Call Waiting Deluxe service instance attempts answered by the called party on the reporting FS.
POTS_CWD_ATTMP	Call Waiting Deluxe service instance attempts on the reporting FS.
POTS_CWD_DEACT_FAIL	Call Waiting Deluxe unsuccessful service deactivation attempts on the reporting FS.
POTS_CWD_DEACT_SUCC	Call Waiting Deluxe successful service deactivation attempts on the reporting FS.
POTS_CWD_INTERROG_FAIL	Call Waiting Deluxe unsuccessful service interrogation attempts on the reporting FS.
POTS_CWD_INTERROG_SUCC	Call Waiting Deluxe successful service interrogation attempts on the reporting FS.
POTS_DND_ACT_FAIL	Do Not Disturb deactivation attempts during the collection interval
POTS_DND_ACT_SUCC	Do Not Disturb activation attempts during the collection interval
POTS_DND_DEACT_FAIL	Do Not Disturb deactivation attempts during the collection interval
POTS_DND_DEACT_SUCC	Do Not Disturb activation attempts that failed due to a lack of resources during the collection interval
POTS_DND_REJECT	Do Not Disturb activation attempts successful during the collection interval
POTS_DRCW_ATTMP	Distinctive Ring Call Waiting service instance attempts on the reporting FS.
POTS_DRCW_REJECT_NO_RSRC	Distinctive Ring Call Waiting attempts rejected due to a lack of available resources on the reporting FS.
POTS_DRCW_SUCC	Distinctive Ring Call Waiting attempts successful on the reporting FS.
POTS_ECB_CALL_ATTEMPT	Calls originated from PSAP line to a subscriber.
POTS_EXT_CNAM_FAIL_APP	CNAM translation queries that resulted in a failed external query to a network database due to an application failure from the reporting FS.
POTS_EXT_CNAM_FAIL_NETW	CNAM translation queries that resulted in a failed external query to a network communication failure from the reporting FS.
POTS_EXT_CNAM_FAIL_NETW	CNAM translation queries that resulted in a failed external query to a network communication failure from the reporting FS.

Table 6-8 Local POTS Local Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_EXT_CNAM_QUERY	CNAM translation queries that resulted in an external query to a network database attempted on the reporting FS.
POTS_EXT_CNAM_QUERY_SUCC	CNAM translation queries that resulted in a successful external query to a network database attempted on the reporting FS.
POTS_MDC_ATTMP	Mid Call Trigger attempts made by subscribers on the reporting FS.
POTS_MDC_REJECT_INTERACT	Mid Call Trigger attempts made by subscribers rejected due to feature interactions on the reporting FS.
POTS_MDC_REJECT_NO_RSRC	Mid Call Trigger attempts made by subscribers rejected due to a lack of available resources on the reporting FS.
POTS_MDC_REJECT_OTHERS	Mid Call Trigger attempts made by subscribers rejected due to unknown reasons on the reporting FS.
POTS_NSA_INVOKE_ABANDON	No Solicitation Announcement invocations detected on the reporting FS abandoned after the NSA announcement started but before the terminating endpoint began ringing
POTS_NSA_INVOKE_FAIL	No Solicitation Announcement unsuccessful invocations detected on the reporting FS.
POTS_NSA_INVOKE_SUCC	No Solicitation Announcement successful invocations detected on the reporting FS.
POTS_OCB_ACT_SUCC	Outward Call Barring successful activation attempts on the reporting FS.
POTS_OCB_DEACT_SUCC	Outward Call Barring successful deactivation attempts on the reporting FS.
POTS_OCB_INTERROG_SUCC	Outward Call Barring successful interrogation attempts on the reporting FS.
POTS_OCB_INTL_BLOCK	international calls blocked on the reporting FS via Outward Call Barring
POTS_OCB_INVALID_PASSWORD	Outward Call Barring attempts unsuccessful due to invalid password entry by the user on the reporting FS.
POTS_OCB_INVOCATION	Outward Call Barring invocation attempts on the reporting FS.
POTS_OCB_LOCAL_BLOCK	local calls blocked on the reporting FS via Outward Call Barring
POTS_OCB_NATL_BLOCK	national calls blocked on the reporting FS via Outward Call Barring
POTS_RACF_ATTMP	Remote Activation Call Forward attempts on the reporting FS.
POTS_RACF_CFU_ACT	Remote Activation Call Forward activation attempts successful on the reporting FS.
POTS_RACF_CFU_DEACT	Remote Activation Call Forward deactivation attempts successful on the reporting FS.
POTS_RACF_CFU_UNCHANGED	Remote Activation Call Forward service instances successful but resulted in no change to the forwarding-to number on the reporting FS.
POTS_RACF_PIN_ATTMP	Remote Activation Call Forward PIN input attempts on the reporting FS.
POTS_RACF_PIN_CHANGE	Remote Activation Call Forward PIN input attempts that resulted in a change to the previous PIN for that subscriber on the reporting FS.
POTS_RACF_PIN_REFUSE	Remote Activation Call Forward PIN input attempts refused on the reporting FS.

Table 6-8 Local POTS Local Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_RACF_PIN_REJECT_NO_RSRC	Remote Activation Call Forward PIN input attempts refused due to a lack of resources on the reporting FS.
POTS_RACF_PIN_UNCHANGE	Remote Activation Call Forward PIN input attempts that resulted in no change to the previous PIN for that subscriber on the reporting FS.
POTS_RACF_REFUSE	Remote Activation Call Forward service instances refused by the reporting FS.
POTS_RACF_REJECT_NO_RSRC	Remote Activation Call Forward service instances refused due to a lack of available resources on the reporting FS.
POTS_RC_SUCC	Return Call attempts successful during the collection interval
POTS_REFERER_ATTMP	REFER attempts made on the reporting FS.
POTS_REFERER_FAIL	REFER failed attempts made on the reporting FS.
POTS_REFERER_SUCC	REFER successful attempts made on the reporting FS.
POTS_SC_1_DIGIT_ATTMP	Speed Call 1 digit attempts during the collection interval
POTS_SC_2_DIGIT_ATTMP	Speed Call 2 digit attempts during the collection interval
POTS_SC_SUCC_CCSC	CCSC successful attempts during the collection interval
POTS_SEASONAL_SUSPEND_CALLS_OUTG_BLOCKED	Calls blocked based on seasonal suspend status of the subscriber. Note This does not apply to Centrex, MLHG, or PBX-based subscribers.
POTS_TOTAL_CNAM_QUERY	CNAM translation queries attempted on the reporting FS.
POTS_TWC_ANSWERED	Three Way Call service instance attempts answered by the called party on the reporting FS.
POTS_TWC_ATTMP	Three Way Call service instance attempts on the reporting FS.
POTS_TWC_CONF	Three Way Call service instance attempts resulting in a successfully setup conference call on the reporting FS.
POTS_TWC_FAIL	Three Way Call service instance attempts that failed on the reporting FS.
POTS_TWCD_ATTMP	Three Way Calling Deluxe service instance attempts on the reporting FS. Incremented when a subscriber in a stable two-way call presses flash button followed by DN of a third party
POTS_TWCD_CONF	Three Way Calling Deluxe service instance conferencing attempts on the reporting FS. Incremented when a subscriber attempts to bridge all three parties (flash button followed by digit 3)

POTS Application Server Measurements

Table 6-9 POTS Application Server Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_AS_ORIG_ABANDON	Times a origination to the Application Server was abandoned while trying to connect.
POTS_AS_ORIG_ATTMP	attempts to place a call to an Application Server on the originating side.
POTS_AS_ORIG_FAIL	Unsuccessfully placed calls to an Application Server on the originating side.
POTS_AS_ORIG_SUCC	Successfully placed calls to an Application Server on the originating side.
POTS_AS_TERM_ABANDON	Times a termination to the Application Server was abandoned while trying to connect.
POTS_AS_TERM_ATTMP	attempts to place a call to an Application Server on the terminating side.
POTS_AS_TERM_FAIL	unsuccessfully placed calls to an Application Server on the terminating side.
POTS_AS_TERM_SUCC	Successfully placed calls to an Application Server on the terminating side.
POTS_AS_VSC_ABANDON	Times a VSC initiated connection to the Application Server was abandoned while trying to connect.
POTS_AS_VSC_ATTMP	attempts to place a call to an Application Server using the VSC code
POTS_AS_VSC_FAIL	Failed call attempts on an Application Server. This includes abandon calls as well.
POTS_AS_VSC_SUCC	Successfully placed call attempts on an Application Server.
POTS_CFC_REDIRECT_SUCC	This increases when BTS uses redirection mechanism to perform CFC-No-Answer feature.
POTS_CFNA_REDIRECT_SUCC	This increases when BTS uses redirection mechanism to perform CFNA feature.
POTS_CFR_FORWARD_ATTMP	This increases when BTS receives SIP 302 and POTS-FS initiates the CFR processing.
POTS_CFR_FORWARD_FAIL	This increases when BTS receives SIP 302 and POTS-FS fails to forward the call to new destination.
POTS_CFR_FORWARD_SUCC	This increases when BTS receives SIP 302 and POTS-FS forwards the call to new destination successfully.
POTS_OC_DP_RECEIVED	DPs (Detection Points) reported by the FS during periods of congestion.
POTS_VM_REDIRECT_SUCC	This increases when BTS uses redirection mechanism to perform VW-No-Answer feature.

POTS Miscellaneous FS Measurements

Table 6-10 Miscellaneous POTS Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_BLV_ATTMP	Busy Line Verification service instance attempts on the reporting FS.
POTS_CTX_SFG_OVERFLOW	Centrex SFG measurements that overflowed during the collection interval on the reporting FS.
POTS_HOTLINE_ATTMP	Hotline service instance attempts on the reporting FS.
POTS_HOTV_ACT_SUCC	Successful Hotline Variable activation attempts on the reporting FS.

Table 6-10 Miscellaneous POTS Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_HOTV_ATTMP	Successful Hotline Variable instance attempts on the reporting FS.
POTS_HOTV_DEACT_SUCC	Successful Hotline Variable deactivation attempts on the reporting FS.
POTS_HOTV_INTERROG_SUCC	Successful Hotline Variable interrogation attempts on the reporting FS.
POTS_LCD_AUTH_ATTMP	Authorization attempts made for Limited Call Duration feature invocations on the reporting FS.
POTS_LCD_AUTH_FAIL	Unsuccessful authorization attempts made for Limited Call Duration feature invocations on the reporting FS.
POTS_LCD_AUTH_SUCC	Successful authorization attempts made for Limited Call Duration feature invocations on the reporting FS.
POTS_LCD_FORCED_DISC	forced call disconnections made for Limited Call Duration calls on the reporting FS.
POTS_LCD_REAUTH_FAIL	Unsuccessful re-authorization attempts made for Limited Call Duration feature invocations on the reporting FS.
POTS_MLS_ATTMP	Attempts on the reporting FS to change the language of choice by the user.
POTS_MLS_REJECT_NO_RSRC	Language change attempts refused due to a lack of available resources on the reporting FS. The most likely cause of this situation is a lack of resources on the FS to handle the IVR activity. This is normally a result of database access issues.
POTS_MLS_SUCC	Language change attempts there were successfully processed by the reporting FS. This is indicative of successful termination of the IVR when the user successfully changes their language choice, selects a language choice, or refuses to confirm a new choice.
POTS_OC_EDP_RECEIVED	EDP triggers received by a FS during periods of congestion.
POTS_OP_INTERRUPT_ATTMP	Operator Interrupt service instance attempts on the reporting FS.
POTS_PS_FAIL	Privacy Screening Invocations failures detected on the reporting FS. This is indicative of the external application server not answering the call or the trunk between the app server and the BTS is out of service.
POTS_PS_MANAGE_FAIL	Unsuccessful Managed Privacy Screening Activations/Deactivations detected on the reporting FS. This is indicative of the external application server not answering the call or the trunk between the app server and the BTS is out of service for PS Manage feature invocations.
POTS_PS_MANAGE_SUCC	Successful Managed Privacy Screening Activations/Deactivations detected on the reporting FS. This is indicative of the external application server having answered the call and sent a 200 OK to the BTS for PS Manage feature invocations.
POTS_PS_SUCC	Privacy Screening Invocations detected on the reporting FS. This is indicative of the external application server having answered the call and sent a 200 OK to the BTS.
POTS_VM_ACCESS	Voice Mail Redirect Accesses detected on the reporting FS.
POTS_VM_ACT_FAIL	Unsuccessful Voice Mail Redirect Activations detected on the reporting FS.
POTS_VM_ACT_SUCC	Successful Voice Mail Redirect Activations detected on the reporting FS.
POTS_VM_ATTMP	Voice Mail Redirect Invocations detected on the reporting FS.
POTS_VM_DEACT_FAIL	Unsuccessful Voice Mail Redirect Deactivations detected on the reporting FS.
POTS_VM_DEACT_SUCC	Successful Voice Mail Redirect Deactivations detected on the reporting FS.
POTS_WARMLINE_ATTMP	Warmline service instance attempts on the reporting FS.

POTS Class of Service FS Measurements

Table 6-11 POTS Class of Service Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_COS_900_BLOCKED	Calls denied due to subscriber based 900 restrictions on the reporting FS.
POTS_COS_976_BLOCKED	Calls denied due to subscriber based 976 restrictions on the reporting FS.
POTS_COS_ACCT_CODE_FAIL	Not currently used.
POTS_COS_ACCT_CODE_SUCC	Successful account code validations on the reporting FS. Account codes do not get validated - any dialed account code entered by the user is considered valid - including an empty account code.
POTS_COS_ANI_ATTMP_SUCC	Automatic Number ID directory number lookups successfully attempted on the reporting FS. An ANI attempt is successful when the ANI DN is available on the reporting FS, and ANI status is allowed as per provisioning. In the case of casual calls, ALL ANI attempts are successful if the Casual Code is valid and allowed on reporting FS.
POTS_COS_ANI_BLOCKED_CALL	Calls blocked based on Automatic Number ID directory number lookups on the reporting FS. In the case of Casual calls, ANI does also get blocked if Casual Codes are invalid.
POTS_COS_AUTH_CODE_FAIL	Unsuccessful authentication code validations on the reporting FS.
POTS_COS_AUTH_CODE_SUCC	Successful authentication code validations on the reporting FS.
POTS_COS_CASUAL_RESTRICT	Calls denied due to subscriber based casual dialing restrictions on the reporting FS.
POTS_COS_DA_BLOCKED	calls denied due to subscriber based directory assistance restrictions on the reporting FS.
POTS_COS_INTL_BLOCKED_BW	International based calls blocked due to a match on a black list or an exclusion from a white list on the reporting FS.
POTS_COS_INTL_OP_BLOCKED	Calls denied due to subscriber based international operator restrictions on the reporting FS.
POTS_COS_INTL_RESTRICT	Not currently used.
POTS_COS_NANP_BLOCKED_BW	NANP based calls blocked due to a match on a black list or an exclusion from a white list on the reporting FS.
POTS_COS_NANP_OP_BLOCKED	Calls denied due to subscriber based NANP operator restrictions on the reporting FS.
POTS_COS_NANP_RESTRICT	Calls denied due to subscriber based NANP restrictions on the reporting FS.
POTS_COS_TOLLFREE_BLOCKED	Calls screened based on class of service restrictions on making toll free calls.
POTS_COS_TOT_ACCT_IVR_SESS ION	Class of Service Account Code IVR sessions established on the reporting FS.
POTS_COS_TOT_AUTH_IVR_SESS ION	Class of Service Authorization Code IVR sessions established on the reporting FS.
POTS_COS_TOT_IVR_FAIL	Class of Service IVR sessions that Failed to established due to an IVR related failure on the reporting FS.
POTS_TDISC_CALLS_OUTG_BLO CKED	Calls blocked because the subscriber is temporarily disconnected. This applies to POTS, Centrex, MLHG, and PBX based subscribers.

POTS Screen List Editing FS Measurements

Table 6-12 POTS Screen List Editing Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_SCA_ATTMP	Selective Call Acceptance service instance attempts on the reporting FS.
POTS_SCA_REJECT_NO_RSRC	Selective Call Acceptance attempts made by subscribers rejected due to a lack of available resources on the reporting FS.
POTS_SCA_SUCC	Selective Call Acceptance service instance attempts resulting in successful acceptance of the call on the reporting FS.
POTS_SCF_ATTMP	Selective Call Forwarding service instance attempts on the reporting FS.
POTS_SCF_REJECT_NO_RSRC	Selective Call Forwarding attempts rejected due to a lack of available resources on the reporting FS.
POTS_SCF_SUCC	Selective Call Forwarding attempts successful on the reporting FS.
POTS_SCR_ATTMP	Selective Call Rejection service instance attempts on the reporting FS.
POTS_SCR_REJECT_NO_RSRC	Selective Call Rejection attempts made by subscribers rejected due to a lack of available resources on the reporting FS.
POTS_SCR_SUCC	Selective Call Rejection service instance attempts resulting in successful rejections of the call on the reporting FS.

POTS Customer Originated Trace FS Measurements

Table 6-13 POTS Customer Originated Trace Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_COT_ABAND	Caller Originated Trace service activation abandonments that occurred on the reporting FS.
POTS_COT_ACCESS	Times the Caller Originated Trace star code was dialed by the subscriber (feature accesses and activations)
POTS_COT_ACT	Same as POTS_COT_ACCESS in this release. When 2-level COT (the digit "1" dialed) is available - this is both those and the current 1-level activations tracked in POTS_COT_ACCESS.
POTS_COT_DENY	Times the Caller Originated Trace data was unsuccessfully accessed on the reporting FS.
POTS_COT_DN_UNAVAIL	Caller Originated Trace service activation that failed due to the calling party directory number not be available on the reporting FS.
POTS_COT_TRACE_CONFIRM	Caller Originated Trace service instances successfully completed on the reporting FS.
POTS_COT_TRACE_OUTPUT	Caller Originated Trace service instances successfully completed and the data was stored persistently on the reporting FS.

POTS Automatic Callback, Recall, and Call Return Measurements

Table 6-14 POTS Automatic Callback, Recall, and Call Return Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_AC_ACT_ATTMP	Automatic Callback service activation attempts on the reporting FS.
POTS_AC_DEACT_ATTMP	Automatic Callback service activation attempts deactivated by the requesting subscriber on the reporting FS.
POTS_AC_DEACT_BY_SYSTEM	Automatic Callback service activation attempts deactivated by the system on the reporting FS.
POTS_AC_DELAYED_PROC	Automatic Callback service activation attempts that resulted in delayed connection on the reporting FS.
POTS_AC_IMMEDIATE_PROC	Automatic Callback service activation attempts that resulted in immediate connection on the reporting FS.
POTS_AC_INTERLATA_ATTMP	Automatic Callback service activation attempts performed on an interlata basis on the reporting FS.
POTS_AC_OVERFLOW	Automatic Callback service activation attempts resulting in an overflow on the reporting FS.
POTS_ACART_ORIG_SCAN_REQ	Automatic Callback and Automatic Recall service requests queued for originators on the reporting FS.
POTS_ACART_QUEUED_REQ	Automatic Callback and Automatic Recall service requests queued on the reporting FS.
POTS_ACART_REJECT_NO_RSRC	Automatic Callback and Automatic Recall service requests rejected due to a lack of resources on the reporting FS.
POTS_ACART_TERM_SCAN_REQ	Automatic Callback and Automatic Recall service requests queued for terminators on the reporting FS.
POTS_ACR_ACT_ATTMP	Anonymous Call Rejection activation attempts during the collection interval
POTS_ACR_ACT_REJECT_NO_RSRC	Anonymous Call Rejection activation attempts that failed due to a lack of resources during the collection interval
POTS_ACR_DEACT_REJECT_NO_RSRC	Anonymous Call Rejection deactivation attempts during the collection interval
POTS_ACR_DEACT_ATTMP	Anonymous Call Rejection deactivation attempts during the collection interval
POTS_ACR_SUCC	Anonymous Call Rejection attempts successful during the collection interval
POTS_AR_2LEVEL_ACC_CODE_ATT MP	Automatic Callback service activation attempts on the reporting FS.
POTS_AR_2LEVEL_ACT_CODE_ATT MP	Times the activation code (*69) is dialed for the two level Automatic Recall activation procedure on the reporting FS.
POTS_AR_ACT_ATTMP	Automatic Recall service activation attempts on the reporting FS.
POTS_AR_DEACT_ATTMP	Automatic Recall service activation attempts deactivated by the requesting subscriber on the reporting FS.
POTS_AR_DEACT_BY_SYSTEM	Automatic Recall service activation attempts deactivated by the system on the reporting FS.

Table 6-14 POTS Automatic Callback, Recall, and Call Return Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_AR_DELAYED_PROC	Automatic Recall service activation attempts that resulted in delayed connection on the reporting FS.
POTS_AR_IMMEDIATE_PROC	Automatic Recall service activation attempts that resulted in immediate connection on the reporting FS.
POTS_AR_INTERLATA_ATTMP	Automatic Recall service activation attempts performed on an interlata basis on the reporting FS.
POTS_AR_OVERFLOW	Automatic Recall service activation attempts resulting in an overflow on the reporting FS.

POTS Limited Call Duration (Prepaid/Postpaid) with RADIUS Interface to AAA Measurements

Table 6-15 POTS Limited Call Duration (Prepaid/Postpaid) with RADIUS Interface to AAA

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_LCD_AUTH_ATTMP	authorization attempts made for Limited Call Duration feature invocations on the reporting FS. Note For three-leg calls, each call is authorized separately.
POTS_LCD_AUTH_FAIL	Unsuccessful authorization attempts made for Limited Call Duration feature invocations on the reporting FS.
POTS_LCD_AUTH_SUCC	Successful authorization attempts made for Limited Call Duration feature invocations on the reporting FS.
POTS_LCD_FORCED_DISC	forced call disconnections made for Limited Call Duration calls on the reporting FS.
POTS_LCD_REAUTH_FAIL	Unsuccessful reauthorization attempts made for Limited Call Duration feature invocations on the reporting FS.

POTS Call Forwarding Combination Measurements

Table 6-16 POTS Call Forwarding Combination Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
POTS_CFC_ACT_ATTMP	CFC Activation Attempt
POTS_CFC_ACT_FAIL	CFC Activation Failure
POTS_CFC_ACT_SUCC	CFC Activation Successful
POTS_CFC_DEACT_ATTMP	CFC Deactivation Attempt
POTS_CFC_DEACT_FAIL	CFC Deactivation Failure
POTS_CFC_DEACT_SUCC:	CFC Deactivation Successful
POTS_CFC_DN_CHG_ACT_ATTMP	CFC DN Change Activation Attempt
POTS_CFC_DN_CHG_ACT_FAIL	CFC DN change Activation Failure
POTS_CFC_DN_CHG_ACT_SUCC	CFC DN change Activation Successful
POTS_CFC_FORWARD_FAIL	CFC Invocation Failure
POTS_CFC_FORWARD_SUCC	CFC Invocation Successful
POTS_CFC_INTERROG_ATTMP	CFC Interrogation Attempt
POTS_CFC_INTERROG_FAIL	CFC Interrogation Failure
POTS_CFC_INTERROG_SUCC	CFC Interrogation Success

AIN Services FS Measurements

Table 6-17 AIN Services Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
AINSCV_LOC_LNP_FAIL_APP	Failures in querying the local LNP database.
AINSCV_LOC_LNP_QUERY	DN look ups in local LNP database.
AINSCV_LOC_LNP_QUERY_RN_FOUND	Successful queries to the local LNP database that returned an RN corresponding to the DN.
AINSCV_LOC_LNP_QUERY_SUCC	Successful queries to the local LNP database.
AINSVC_8XX_QUERY	8XX translation queries attempted on the reporting FS.
AINSVC_EXT_8XX_FAIL_APP	8XX translation queries that resulted in a failed external query to a network database due to an application failure from the reporting FS.
AINSVC_EXT_8XX_FAIL_NETW	8XX translation queries that resulted in a failed external query to a network database due to a network communication failure from the reporting FS.
AINSVC_EXT_8XX_QUERY	8XX translation queries that resulted in an external query to a network database attempted on the reporting FS.
AINSVC_EXT_8XX_QUERY_FAIL	8XX queries that failed due to an SCP timeout when attempted by the reporting FS.
AINSVC_EXT_8XX_QUERY_SUCC	8XX translation queries that resulted in a successful external query to a network database attempted on the reporting FS.
AINSVC_EXT_LNP_FAIL_APP	LNP translation queries that resulted in a failed external query to a network database due to an application failure from the reporting FS.
AINSVC_EXT_LNP_FAIL_NETW	LNP translation queries that resulted in a failed external query to a network database due to a network communication failure from the reporting FS.
AINSVC_EXT_LNP_QUERY	LNP translation queries that resulted in an external query to a network database attempted on the reporting FS.
AINSVC_EXT_LNP_QUERY_FAIL	LNP queries that failed due to an SCP timeout when attempted by the reporting FS.
AINSVC_EXT_LNP_QUERY_LRN	LNP queries that resulted in a successful response from the SCP with an LRN when attempted by the reporting FS.
AINSVC_EXT_LNP_QUERY_SUCC	LNP translation queries that resulted in a successful external query to a network database attempted on the reporting FS.
AINSVC_LNP_CALLS_WITH_CAUSE_26	Calls ending in an ISUP REL with cause code of 26 reported by the FS.
AINSVC_LNP_DATA_INCONSISTENT	Calls ending in an unallocated/vacant number indication when the CMS's own LRN has been detected after an LNP query in the donor switch, or in another switch as indicated by the Ported Number Translation indicator in the FCI parameter with no "Ported Number" GAP. This case does not apply to DNs marked as "LNP-Reserved".
AINSVC_LNP_QUERY_WITH_LRN	LNP query responses containing an LRN (not the dialed number) reported by the FS.
AINSVC_LNP_UNALLOC_NUM_CALL	Calls ending in an unallocated/vacant number indication in the donor switch, or another switch as indicated by the Ported Number Translation indicator in the FCI parameter with no "Ported Number" GAP.

Table 6-17 AIN Services Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
AINSVC_LOC_8XX_ANI_BLOCK	8XX translation queries blocked due to ANI screening processed locally on the reporting FS.
AINSVC_LOC_8XX_DNIS_SUCC	8XX DNIS translation queries successfully processed locally on the reporting FS.
AINSVC_LOC_8XX_FAIL_APP	8XX translation queries that resulted in a failure due to an application error on the reporting FS.
AINSVC_LOC_8XX_II_BLOCK	8XX translation queries blocked due to II screening processed locally on the reporting FS.
AINSVC_LOC_8XX_QUERY	8XX translation queries attempted to be processed locally on the reporting FS.
AINSVC_LOC_8XX_QUERY_SUCC	8XX translation queries successfully processed locally on the reporting FS.
AINSVC_LOC_8XX_REROUTE	8XX translation queries successfully processed locally on the reporting FS that resulted in re-routing.
AINSVC_LOC_8XX_ROUTING_SUCC	8XX routing translation queries successfully processed locally on the reporting FS.
AINSVC_LOC_LNP_FAIL_APP	Failed attempts to look up a DN in the local LNP database by the reporting FS.
AINSVC_LOC_LNP_QUERY	DN look ups in the local LNP database by the reporting FS.
AINSVC_LOC_LNP_QUERY_NO_RN	Successful attempts to look up a DN in the local LNP database by the reporting FS that did not return a corresponding RN.
AINSVC_LOC_LNP_QUERY_RN_FOUND	Successful attempts to look up a DN in the local LNP database by the reporting FS that returned a corresponding RN.
AINSVC_LOC_LNP_QUERY_SUCC	Successful attempts to look up a DN in the local LNP database by the reporting FS.
AINSVC_TOTAL_LNP_QUERY	LNP translation queries attempted on the reporting FS.
AINSVC_TOTAL_QUERY	Queries attempted on the reporting FS.

SCCP Protocol Measurements

Table 6-18 *SCCP Measurements*

Measurement	Description (* = rapid count could mean a potential problem in the system)
SCCP_NSAP_OOS_GRANT_TX	Subsystem out-of-service grant messages sent on the reporting FS.
SCCP_NSAP_OOS_REQ_TX	Subsystem out-of-service request messages sent on the reporting FS.
SCCP_NSAP_PROHIBIT_TX	Subsystem prohibited messages sent on the reporting FS.
SCCP_NSAP_STAT_TEST_TX	Subsystem status test messages sent on the reporting FS.
SCCP_HOP_measurement_FAIL	Routing errors due to a hop measurement violation on the reporting FS.
SCCP_MSG_TX_BACKUP_SUBSYS	Messages sent to a backup subsystem on the reporting FS.
SCCP_NETWORK_CONGEST_FAIL	Routing errors due to network congestion on the reporting FS.
SCCP_NETWORK_FAIL	Routing errors due to a network failure from the point code being unavailable on the reporting FS.
SCCP_NO_TRANS_ADDR_FAIL	Routing errors due to no translation for address of such nature on the reporting FS.
SCCP_NO_TRANS_SPEC_ADDR_FAIL	Routing errors due to no translation for this specific address on the reporting FS.
SCCP_NSAP_ALLOW_MSG_RX	Subsystem allowed messages received on the reporting FS.
SCCP_NSAP_ALLOW_MSG_TX	Subsystem allowed messages sent on the reporting FS.
SCCP_NSAP_CONGEST_RX	Subsystem congested messages received on the reporting FS.
SCCP_NSAP_CONGEST_TX	Subsystem congested messages sent on the reporting FS.
SCCP_NSAP_OOS_GRANT_RX	Subsystem out-of-service grant messages received on the reporting FS.
SCCP_NSAP_OOS_REQ_RX	Subsystem out-of-service request messages received on the reporting FS.
SCCP_NSAP_PROHIBIT_RX	Subsystem prohibited messages received on the reporting FS.
SCCP_NSAP_STAT_TEST_RX	Subsystem status test messages received on the reporting FS.
SCCP_SUBSYS_CONGEST_FAIL	Routing errors due to subsystem congestion on the reporting FS.
SCCP_SUBSYS_FAIL	Routing errors due to a subsystem failure on the reporting FS.
SCCP_SUBSYS_OOS_REQ_DENY	Subsystem out-of-service requests denied on the reporting FS.
SCCP_SUBSYS_OOS_REQ_GRANT	Subsystem out-of-service requests granted on the reporting FS.
SCCP_SYNTAX_ERR	Syntax errors on the reporting FS.
SCCP_TOTAL_CLASS_0_RX	Class 0 messages received on the reporting FS.
SCCP_TOTAL_CLASS_0_TX	Class 0 messages sent on the reporting FS.
SCCP_TOTAL_CLASS_1_RX	Class 1 messages received on the reporting FS.
SCCP_TOTAL_CLASS_1_TX	Class 1 messages sent on the reporting FS.
SCCP_TOTAL_EXT_UDATA_RX	Extended unit data received on the reporting FS.
SCCP_TOTAL_EXT_UDATA_SVC_RX	Extended unit data service received on the reporting FS.
SCCP_TOTAL_EXT_UDATA_SVC_TX	Extended unit data service sent on the reporting FS.
SCCP_TOTAL_EXT_UDATA_TX	Extended unit data sent on the reporting FS.
SCCP_TOTAL_GLOBAL_ADDR_TRAN	Messages requiring global address translation on the reporting FS.

Table 6-18 SCCP Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
SCCP_TOTAL_LOCAL_MSG	Messages intended for local subsystems on the reporting FS.
SCCP_TOTAL_LONG_UDATA_RX	Long unit data received on the reporting FS.
SCCP_TOTAL_LONG_UDATA_SVC_RX	Long unit data service received on the reporting FS.
SCCP_TOTAL_LONG_UDATA_SVC_TX	Long unit data service sent on the reporting FS.
SCCP_TOTAL_LONG_UDATA_TX	Long unit data sent on the reporting FS.
SCCP_TOTAL_MSG	Messages handled on the reporting FS.
SCCP_TOTAL_UDATA_RX	Unit data received on the reporting FS.
SCCP_TOTAL_UDATA_SVC_RX	Unit data service received on the reporting FS.
SCCP_TOTAL_UDATA_SVC_TX	Unit data service sent on the reporting FS.
SCCP_TOTAL_UDATA_TX	Unit data sent on the reporting FS.
SCCP_UNEQUIP_USER_FAIL	Routing errors due to an unequipped user on the reporting FS.
SCCP_UNKNOWN_FAIL	Routing errors due to an unknown reason on the reporting FS.
SCCP_USAP_TOTAL_CLASS_0_RX	Class 0 messages received on the reporting FS.
SCCP_USAP_TOTAL_CLASS_0_TX	Class 0 messages sent on the reporting FS.
SCCP_USAP_TOTAL_CLASS_1_RX	Class 1 messages received on the reporting FS.
SCCP_USAP_TOTAL_CLASS_1_TX	Class 1 messages sent on the reporting FS.

TCAP Protocol Measurements

Table 6-19 TCAP Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
TCAP_INCORRECT_COMP_ENCODE_TX	Incorrect component encoding errors sent by the reporting FS.
TCAP_INVOKE_RSCR_LIMIT_PROB_TX	Resource limitation invoke problems sent by the reporting FS.
TCAP_TRANS_PORT_PERM_REL_TX	Transaction portion permission to release problems sent by the reporting FS.
TCAP_ABORT_IND_RX	Abort indication messages received on the reporting FS.
TCAP_ABORT_MSG_RX	Abort messages received on the reporting FS.
TCAP_ABORT_MSG_TX	Abort messages sent by the reporting FS.
TCAP_ACT_INVOCATIONS	Active invocations on the reporting FS.
TCAP_ACT_TRANSACTIONS	Active transactions on the reporting FS.
TCAP_BAD_STRUCT_COMP_PORT_RX	Badly-structured component portions received on the reporting FS.
TCAP_BAD_STRUCT_COMP_PORT_TX	Badly-structured component portions sent by the reporting FS.
TCAP_BAD_STRUCT_DIALOG_PORT_RX	Badly-structured dialog portions received on the reporting FS.
TCAP_BAD_STRUCT_DIALOG_PORT_TX	Badly-structured dialog portions sent by the reporting FS.
TCAP_BAD_STRUCT_TRANS_PORT_RX	Badly-structured transaction portions received on the reporting FS.
TCAP_BAD_STRUCT_TRANS_PORT_TX	Badly-structured transaction portions sent by the reporting FS.
TCAP_BEGIN_MSG_RX	Begin messages received on the reporting FS.
TCAP_BEGIN_MSG_TX	Begin messages sent by the reporting FS.
TCAP_BIND_CONFIRM_RX	TCAP bind confirm messages received on the reporting FS.
TCAP_CLOSE_IND_RX	Close indication messages received on the reporting FS.
TCAP_COMPONENT_CONFIRM_RX	Component confirm messages received on the reporting FS.
TCAP_COMPONENT_IND_RX	Component indication messages received on the reporting FS.
TCAP_COMPONENT_REQ_RX	Component request messages received on the reporting FS.
TCAP_CONT_MSG_RX	Continue messages received on the reporting FS.
TCAP_CONT_MSG_TX	Continue messages sent by the reporting FS.
TCAP_DATA_IND_RX	Data indication messages received on the reporting FS.
TCAP_DATA_REQ_RX	Data request messages received on the reporting FS.
TCAP_DELIMITER_IND_RX	Delimiter indication messages received on the reporting FS.
TCAP_DELIMITER_REQ_RX	Delimiter request messages received on the reporting FS.

Table 6-19 TCAP Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
TCAP_DIALOG_CONFIRM_RX	Dialog confirm messages received on the reporting FS.
TCAP_DUP_INVOKE_ID_RX	Duplicate invoke ids received on the reporting FS.
TCAP_DUP_INVOKE_ID_TX	Duplicate invoke ids sent by the reporting FS.
TCAP_END_MSG_RX	End messages received on the reporting FS.
TCAP_END_MSG_TX	End messages sent by the reporting FS.
TCAP_INCONSIST_DIALOG_PORT_RX	Inconsistent dialog portions received on the reporting FS.
TCAP_INCONSIST_DIALOG_PORT_TX	Inconsistent dialog portions sent by the reporting FS.
TCAP_INCORRECT_COMP_ENCODE_RX	Incorrect component encoding errors received on the reporting FS.
TCAP_INCORRECT_COMP_PORT_RX	Incorrect component portions received on the reporting FS.
TCAP_INCORRECT_COMP_PORT_TX	Incorrect component portions sent by the reporting FS.
TCAP_INCORRECT_PARAM_RE_RX	Incorrect parameters on return errors received on the reporting FS.
TCAP_INCORRECT_PARAM_RE_TX	Incorrect parameters on return errors sent by the reporting FS.
TCAP_INCORRECT_PARAM_RR_RX	Incorrect parameters on return-results received on the reporting FS.
TCAP_INCORRECT_PARAM_RR_TX	Incorrect parameters on return-results sent by the reporting FS.
TCAP_INCORRECT_PARAM_RX	Incorrect parameters received on the reporting FS.
TCAP_INCORRECT_PARAM_TX	Incorrect parameters sent by the reporting FS.
TCAP_INCORRECT_TRANS_PORT_RX	Incorrect transaction portions received on the reporting FS.
TCAP_INCORRECT_TRANS_PORT_TX	Incorrect transaction portions sent by the reporting FS.
TCAP_INIT_REL_RX	Initiating releases received on the reporting FS.
TCAP_INIT_REL_TX	Initiating releases sent by the reporting FS.
TCAP_INVOKE_COMP_RX	Invoke components received on the reporting FS.
TCAP_INVOKE_COMP_TX	Invoke components sent by the reporting FS.
TCAP_INVOKE_RSCR_LIMIT_PROB_RX	Resource limitation invoke problems received on the reporting FS.
TCAP_MISSING_DIALOG_PORT_RX	Missing dialog portions received on the reporting FS.
TCAP_MISSING_DIALOG_PORT_TX	Missing dialog portions sent by the reporting FS.
TCAP_NO_PERMISS_CONVERS_RX	Conversation without permission messages received on the reporting FS.
TCAP_NO_PERMISS_CONVERS_TX	Conversation without permission messages sent by the reporting FS.
TCAP_NO_PERMISS_QUERY_RX	Query without permission messages received on the reporting FS.
TCAP_NO_PERMISS_QUERY_TX	Query without permission messages sent by the reporting FS.
TCAP_NOTICE_IND_RX	TCAP notice indication messages received on the reporting FS.

Table 6-19 TCAP Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
TCAP_OPEN_CONFIRM_RX	Open confirm messages received on the reporting FS.
TCAP_OPEN_IND_RX	Open indication messages received on the reporting FS.
TCAP_OPERATION_CONFIRM_RX	Operation confirm messages received on the reporting FS.
TCAP_OPERATION_IND_RX	Operation indication messages received on the reporting FS.
TCAP_OPERATION_REQ_RX	Operation request messages received on the reporting FS.
TCAP_PERMISS_CONVERS_RX	Conversation with permission messages received on the reporting FS.
TCAP_PERMISS_CONVERS_TX	Conversation with permission messages sent by the reporting FS.
TCAP_PERMISS_QUERY_RX	Query with permission messages received on the reporting FS.
TCAP_PERMISS_QUERY_TX	Query with permission messages sent by the reporting FS.
TCAP_REJECT_COMP_RX	Reject components received on the reporting FS.
TCAP_REJECT_COMP_TX	Reject components sent by the reporting FS.
TCAP_RETURN_ERR_COMP_RX	Return-error components received on the reporting FS.
TCAP_RETURN_ERR_COMP_TX	Return-error components sent by the reporting FS.
TCAP_RETURN_RESULT_COMP_RX	Return-result components received on the reporting FS.
TCAP_RETURN_RESULT_COMP_TX	Return-result components sent by the reporting FS.
TCAP_RSCR_LIMIT_RX	Resource limitations received on the reporting FS.
TCAP_RSCR_LIMIT_TX	Resource limitations sent by the reporting FS.
TCAP_RSP_RX	Response messages received on the reporting FS.
TCAP_RSP_TX	Response messages sent by the reporting FS.
TCAP_STAT_CONFIRM_RX	TCAP statistics confirm messages received on the reporting FS.
TCAP_STAT_IND_RX	TCAP statistics indication messages received on the reporting FS.
TCAP_STATUS_IND_RX	Status indication messages received on the reporting FS.
TCAP_TOTAL_COMP_RX	Components received on the reporting FS.
TCAP_TOTAL_COMP_TX	Components sent by the reporting FS.
TCAP_TOTAL_DROPPED_MSG_RX	Received messages dropped on the reporting FS.
TCAP_TOTAL_MSG_RX	Messages received by the reporting FS.
TCAP_TOTAL_MSG_TX	Messages sent by the reporting FS.
TCAP_TOTAL_UNI_MSG_RX	Unidirectional messages received by the reporting FS.
TCAP_TOTAL_UNI_MSG_TX	Unidirectional messages sent by the reporting FS.
TCAP_TRANS_PORT_PERM_REL_RX	Transaction portion permission to release problems received on the reporting FS.
TCAP_TRANSACTION_IDS_INUSE	Transaction ids in use on the reporting FS.
TCAP_UDATA_IND_RX	Data indication messages received on the reporting FS.
TCAP_UNEXPECT_ERR_CODE_RX	Unexpected error codes on return-error received on the reporting FS.

Table 6-19 TCAP Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
TCAP_UNEXPECT_ERR_CODE_TX	Unexpected error codes on return-error sent by the reporting FS.
TCAP_UNEXPECT_LINK_OPER_RX	Unexpected link operations received on the reporting FS.
TCAP_UNEXPECT_LINK_OPER_TX	Unexpected link operations sent by the reporting FS.
TCAP_UNEXPECT_LINK_RSP_RX	Unexpected link responses received on the reporting FS.
TCAP_UNEXPECT_LINK_RSP_TX	Unexpected link responses sent by the reporting FS.
TCAP_UNEXPECT_RE_RX	Unexpected return error received on the reporting FS.
TCAP_UNEXPECT_RE_TX	Unexpected return error sent by the reporting FS.
TCAP_UNEXPECT_RR_RX	Unexpected return-results received on the reporting FS.
TCAP_UNEXPECT_RR_TX	Unexpected return-results sent by the reporting FS.
TCAP_UNRECOG_COMP_RX	Unrecognized components received on the reporting FS.
TCAP_UNRECOG_COMP_TX	Unrecognized components sent by the reporting FS.
TCAP_UNRECOG_DIALOG_PORT_ID_RX	Unrecognized dialog portion ids received on the reporting FS.
TCAP_UNRECOG_DIALOG_PORT_ID_TX	Unrecognized dialog portion ids sent by the reporting FS.
TCAP_UNRECOG_ERR_CODE_RX	Unrecognized error codes on return-error received on the reporting FS.
TCAP_UNRECOG_ERR_CODE_TX	Unrecognized error codes on return-error sent by the reporting FS.
TCAP_UNRECOG_INVOKE_ID_RX	Unrecognized invoke ids on return-results received on the reporting FS.
TCAP_UNRECOG_INVOKE_ID_TX	Unrecognized invoke ids on return results sent by the reporting FS.
TCAP_UNRECOG_LINK_ID_RX	Unrecognized link ids received on the reporting FS.
TCAP_UNRECOG_LINK_ID_TX	Unrecognized link ids sent by the reporting FS.
TCAP_UNRECOG_MSG_TYPE_RX	Unrecognized messages types received on the reporting FS.
TCAP_UNRECOG_MSG_TYPE_TX	Unrecognized messages types sent by the reporting FS.
TCAP_UNRECOG_OPCODE_RX	Unrecognized opcodes received on the reporting FS.
TCAP_UNRECOG_OPCODE_TX	Unrecognized opcodes sent by the reporting FS.
TCAP_UNRECOG_RE_INVOKE_ID_RX	Unrecognized invoke ids on return-error received on the reporting FS.
TCAP_UNRECOG_RE_INVOKE_ID_TX	Unrecognized invoke ids on return-error sent by the reporting FS.
TCAP_UNRECOG_TRANS_ID_RX	Unrecognized transaction ids received on the reporting FS.
TCAP_UNRECOG_TRANS_ID_TX	Unrecognized transaction ids sent by the reporting FS.

SUA Measurements

Table 6-20 SUA Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
SUA_ACTIVE_ACK_RX	ACTIVE Acknowledges received on the reporting signaling gateway process.
SUA_ACTIVE_TX	ACTIVES sent on the reporting signaling gateway process.
SUA_ASSOC_FAIL	Association failures on the reporting signaling gateway process.
SUA_BEAT_ACK_RX	BEAT Acknowledges received on the reporting signaling gateway process.
SUA_BEAT_ACK_TX	BEAT Acknowledges sent on the reporting signaling gateway process.
SUA_BEAT_RX	BEATs received on the reporting signaling gateway process.
SUA_BEAT_TX	BEATs sent on the reporting signaling gateway process.
SUA_CLDR_RX	CLDRs received on the reporting signaling gateway process.
SUA_CLDR_TX	CLDRs sent on the reporting signaling gateway process.
SUA_CLDT_RX	CLDTs received on the reporting signaling gateway process.
SUA_CLDT_TX	CLDTs sent on the reporting signaling gateway process.
SUA_DATA_BYTES_RX	Data bytes received on the reporting signaling gateway process.
SUA_DATA_BYTES_TX	Data bytes sent on the reporting signaling gateway process.
SUA_DAUD_TX	DAUDs sent on the reporting signaling gateway process.
SUA_DAVA_RX	DAVAs received on the reporting signaling gateway process.
SUA_DOWN_ACK_RX	DOWN Acknowledges received on the reporting signaling gateway process.
SUA_DOWN_TX	DOWNs sent on the reporting signaling gateway process.
SUA_DRST_RX	DRSTs received on the reporting signaling gateway process.
SUA_DUNA_RX	DUNAs received on the reporting signaling gateway process.
SUA_DUPU_RX	DUPUs received on the reporting signaling gateway process.
SUA_ERR_RX	Errors received on the reporting signaling gateway process.
SUA_ERR_TX	Errors sent on the reporting signaling gateway process.
SUA_INACTIVE_ACK_RX	INACTIVE Acknowledges received on the reporting signaling gateway process.
SUA_INACTIVE_TX	ACTIVES received on the reporting signaling gateway process.
SUA_INVALID_SCTP_SIGNALS	Invalid SCTP signals on the reporting signaling gateway process.
SUA_MSG_CLASS_ERR	Message class errors on the reporting signaling gateway process.
SUA_MSG_INVALID_LENGTH_RX	Messages of invalid length received on the reporting signaling gateway process.
SUA_MSG_TYPE_ERR	Message type errors on the reporting signaling gateway process.
SUA_NETWORK_APPEAR_ERR	Network appearance errors on the reporting signaling gateway process.
SUA_NO_MEMORY_FAIL	No memory for message errors on the reporting signaling gateway process.
SUA_NOTIFY_RX	NOTIFYs received on the reporting signaling gateway process.
SUA_NOTIFY_TX	NOTIFYs sent on the reporting signaling gateway process.
SUA_PARAM_FIELD_ERR	Parameter field errors on the reporting signaling gateway process.
SUA_PARAM_VALUE_ERR	Parameter value errors on the reporting signaling gateway process.

Table 6-20 SUA Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
SUA_PROTOCOL_ERR	Protocol errors on the reporting signaling gateway process.
SUA_ROUTING_CONTEXT_ERR	Routing context errors on the reporting signaling gateway process.
SUA_SCON_RX	SCONs received on the reporting signaling gateway process.
SUA_SCON_TX	SCONs sent on the reporting signaling gateway process.
SUA_SCTP_TX_FAIL	SCTP send failures on message processing errors on the reporting signaling gateway process.
SUA_SINCE_LAST_RESET_ASSOC	SCTP errors since last reset of association on the reporting signaling gateway process.
SUA_STREAM_ID_ERR	Stream id errors on the reporting signaling gateway process.
SUA_UNEXPECT_MSG_ERR	Unexpected message errors on the reporting signaling gateway process.
SUA_UNEXPECT_PARAM_ERR	Unexpected parameter errors on the reporting signaling gateway process.
SUA_UP_ACK_RX	UP Acknowledges received on the reporting signaling gateway process.
SUA_UP_TX	UPs sent on the reporting signaling gateway process.
SUA_VERSION_ERR	Version errors on the reporting signaling gateway process.

M3UA Protocol Measurements

Table 6-21 M3UA Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
M3UA_ACTIVE_ACK_RX	ACTIVE Acknowledges received on the reporting signaling gateway process.
M3UA_ACTIVE_TX	ACTIVEs sent on the reporting signaling gateway process.
M3UA_ASSOC_FAIL	Association failures on the reporting signaling gateway process.
M3UA_BEAT_ACK_RX	BEAT Acknowledges received on the reporting signaling gateway process.
M3UA_BEAT_ACK_TX	BEAT Acknowledges sent on the reporting signaling gateway process.
M3UA_BEAT_RX	BEATs received on the reporting signaling gateway process.
M3UA_BEAT_TX	BEATs sent on the reporting signaling gateway process.
M3UA_DATA_BYTES_RX	Data bytes received on the reporting signaling gateway process.
M3UA_DATA_BYTES_TX	Data bytes sent on the reporting signaling gateway process.
M3UA_DATA_TRANS_RX	Data transfers received on the reporting signaling gateway process.
M3UA_DATA_TRANS_TX	Data transfers sent on the reporting signaling gateway process.
M3UA_DAUD_TX	DAUDs sent on the reporting signaling gateway process.
M3UA_DAVA_RX	DAVAs received on the reporting signaling gateway process.
M3UA_DOWN_ACK_RX	DOWN Acknowledges received on the reporting signaling gateway process.
M3UA_DOWN_TX	DOWNs sent on the reporting signaling gateway process.
M3UA_DRST_RX	DRSTs received on the reporting signaling gateway process.
M3UA_DUNA_RX	DUNAs received on the reporting signaling gateway process.
M3UA_DUPU_RX	DUPUs received on the reporting signaling gateway process.
M3UA_ERR_RX	Errors received on the reporting signaling gateway process.
M3UA_ERR_TX	Errors sent on the reporting signaling gateway process.
M3UA_INACTIVE_ACK_RX	INACTIVE Acknowledges received on the reporting signaling gateway process.
M3UA_INACTIVE_TX	ACTIVEs received on the reporting signaling gateway process.
M3UA_INVALID_SCTP_SIGNALS	Invalid SCTP signals on the reporting signaling gateway process.
M3UA_MSG_CLASS_ERR	Message class errors on the reporting signaling gateway process.
M3UA_MSG_LENGTH_ERR	Messages of invalid length received on the reporting signaling gateway process.
M3UA_MSG_RX_OTHER_ERR	Messages received with other errors on the reporting CA or FS
M3UA_MSG_TYPE_ERR	Message type errors on the reporting signaling gateway process.
M3UA_NETWORK_APPEAR_ERR	Network appearance errors on the reporting signaling gateway process.
M3UA_NO_MEMORY_ERR	No memory for message errors on the reporting signaling gateway process.
M3UA_NOTIFY_RX	NOTIFYs received on the reporting signaling gateway process.
M3UA_NOTIFY_TX	NOTIFYs sent on the reporting signaling gateway process.
M3UA_PARAM_FIELD_ERR	Parameter field errors on the reporting signaling gateway process.
M3UA_PARAM_VALUE_ERR	Parameter value errors on the reporting signaling gateway process.
M3UA_PROTOCOL_ERR	Protocol errors on the reporting signaling gateway process.

Table 6-21 M3UA Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
M3UA_ROUTING_CONTEXT_ERR	Routing context errors on the reporting signaling gateway process.
M3UA_SCON_RX	SCONs received on the reporting signaling gateway process.
M3UA_SCON_TX	SCONs sent on the reporting signaling gateway process.
M3UA_SCTP_TX_FAIL	SCTP send failures on message processing errors on the reporting signaling gateway process.
M3UA_SGP_ID	The id of the signaling gateway process that these measurements are associated with.
M3UA_SINCE_LAST_RESET_ASSOC	SCTP errors since last reset of association on the reporting signaling gateway process.
M3UA_STREAM_ID_ERR	Stream id errors on the reporting signaling gateway process.
M3UA_UNEXPECT_MSG_ERR	Unexpected message errors on the reporting signaling gateway process.
M3UA_UNEXPECT_PARAM_ERR	Unexpected parameter errors on the reporting signaling gateway process.
M3UA_UP_ACK_RX	UP Acknowledges received on the reporting signaling gateway process.
M3UA_UP_TX	UPs sent on the reporting signaling gateway process.
M3UA_VERSION_ERR	Version errors on the reporting signaling gateway process.

SCTP Measurements

Table 6-22 SCTP Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
SCTP_ASSOC_COMM_LOST	Times the SCTP association communication was lost on the reporting sctp association.
SCTP_CHUNK_TOO_LARGE_ERR	Data chunks received too big on the reporting sctp association.
SCTP_CHUNK_ORDER_ERR	Ordered chunks in error on the reporting sctp association.
SCTP_CHUNK_TOO_SMALL_ERR	Data chunks received too small on the reporting sctp association.
SCTP_CONTROL_CHUNK_RX	Control chunks received on the reporting sctp association.
SCTP_CONTROL_CHUNK_TX	Control chunks sent on the reporting sctp association.
SCTP_COOKIE_IN_SHUTDOWN_ERR_RX	Times an SCTP peer reported that is received a COOKIE ECHO while in the SHUTDOWN_ACK_SENT state on the reporting sctp association.
SCTP_CWR_CHUNK_RX	CWR chunks received on the reporting sctp association.
SCTP_DATA_BYTE_RX	Data bytes received over SCTP on the reporting sctp association.
SCTP_DATA_BYTE_TX	Data bytes sent over SCTP on the reporting sctp association.
SCTP_DATA_CHUNK_DISCARD	Received duplicate data chunks discarded on the reporting sctp association.
SCTP_DATA_CHUNK_RETRAN	Data chunks retransmitted on the reporting sctp association.
SCTP_DATA_CHUNK_RX	Data chunks received on the reporting sctp association.
SCTP_DATA_CHUNK_RX_BUNDLE	Bundled data chunks received on the reporting sctp association.
SCTP_DATA_CHUNK_RX_ORDER	Ordered data chunks received on the reporting sctp association.
SCTP_DATA_CHUNK_RX_SEQ_ERR	Out-of-sequence data chunks received on the reporting sctp association.
SCTP_DATA_CHUNK_RX_UNORDER	Unordered data chunks received on the reporting sctp association.
SCTP_DATA_CHUNK_TX	Data chunks sent on the reporting sctp association.
SCTP_DATA_CHUNK_TX_BUNDLE	Bundled data chunks sent on the reporting sctp association.
SCTP_DATA_CHUNK_TX_ORDER	Ordered data chunks sent on the reporting sctp association.
SCTP_DATA_CHUNK_TX_UNORDER	Unordered data chunks sent on the reporting sctp association.
SCTP_DEST_ADDR_FAIL	Times a destination address failed on the reporting sctp association.
SCTP_ECNE_CHUNK_RX	ECNE chunks received on the reporting sctp association.
SCTP_EMPTY_DATAG_ERR	Datagrams received with no data chunks on the reporting sctp association.
SCTP_EXPIRED_COOKIE_ERR	Times a cookie echo was received after the cookie timer expired on the reporting sctp association.
SCTP_INVALID_BUNDLE_CHUNK	invalid bundle chunks received on the reporting sctp association.
SCTP_INVALID_CHECKSUM	SCTP datagrams received with an invalid checksum on the reporting sctp association.
SCTP_INVALID_COOKIE_SIG	Invalid cookie signals received on the reporting sctp association.
SCTP_INVALID_DATAG_LENGTH	Datagrams received with an invalid length on the reporting sctp association.

Table 6-22 SCTP Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
SCTP_INVALID_PARAM_ERR_RX	Times an SCTP peer reported that it received an INIT or INIT ACK chunk containing one or more mandatory parameters set to an invalid value on the reporting sctp association.
SCTP_INVALID_STREAM	Datagrams with invalid stream ids received on the reporting sctp association.
SCTP_INVALID_STREAM_ERR_RX	Times an SCTP peer reported receiving a data chunk on a non-existing stream on the reporting sctp association.
SCTP_INVALID_VERIF_TAG	Datagrams with invalid verification tags received on the reporting sctp association.
SCTP_MISSING_PARAM_ERR	Times that an INIT or INIT ACK chunk was received with one or more mandatory parameters missing on the reporting sctp association.
SCTP_MISSING_PARAM_ERR_RX	Times an INIT or INIT ACK was missing one or more mandatory parameters received on the reporting sctp association.
SCTP_NO_SPACE_INCOM_ERR	Data chunks dropped due to lack of space in the local receive window on the reporting sctp association.
SCTP_NO_USER_DATA_ERR_RX	Times an SCTP peer reported that it received a data chunk with no user data in it on the reporting sctp association.
SCTP_OOTB	Out of the blue packets received on the reporting sctp association.
SCTP_OUT_OF_RSCR_ERR_RX	Times an SCTP peer reported it was out of resources on the reporting sctp association.
SCTP_PARTIAL_CHUNK_ERR	Partial chunks received in a datagram on the reporting sctp association.
SCTP_PEER_RESTART_ERR	Times the SCTP peer restarted on the reporting sctp association.
SCTP_SCTP_ASSOC_ID	The id of the SCTP association that the measurement measurement block is associated with.
SCTP_SCTP_DATAG_RX	Datagrams received on the reporting sctp association.
SCTP_SCTP_DATAG_TX	Datagrams sent on the reporting sctp association.
SCTP_STALE_COOKIE_ERR	Times other endpoint indicates that the cookie echo was received after the cookie time expired on the reporting sctp association.
SCTP_STALE_COOKIE_ERR_RX	Times an SCTP peer received a valid cookie that had expired on the reporting sctp association.
SCTP_ULP_QUEUE	Upper layer process datagrams queued to be transmitted on the reporting sctp association.
SCTP_ULP_READY	Received datagrams that are ready to be sent to upper layer processes on the reporting sctp association.
SCTP_ULP_RX	Received upper layer process datagrams on the reporting sctp association.
SCTP_ULP_TX	ULP datagrams sent on the reporting sctp association.
SCTP_UNKNOWN_CHUNK_TYPE	datagrams with an unknown chunk type received on the reporting sctp association.
SCTP_UNKNOWN_INIT_PARAM	INIT datagrams with an unknown parameter received on the reporting sctp association.

Table 6-22 SCTP Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
SCTP_UNRECOG_CHUNK_ERR_RX	Times an SCTP peer reported that it received a chunk that it could not understand on the reporting sctp association.
SCTP_UNRECOG_PARAM_ERR_RX	Times an SCTP peer reported that it received an INIT ACK containing one or more parameters unrecognized on the reporting sctp association.
SCTP_UNRESOLV_ADDR_ERR_RX	Times an SCTP reported that it received a packet with an address it could not resolve on the reporting sctp association.
SCTP_V6_ADDR_PARAM_RX	Packets received with version 6 parameters on the reporting sctp association.

IUA Measurements

Table 6-23 IUA Measurements

Measurement	Description
IUA_ACTIVE_ACK_RX	ASP_ACTIVE_ACK messages received on the reporting SCTP association.
IUA_ACTIVE_TX	ASP_ACTIVE messages transmitted on the reporting SCTP association.
IUA_ASSOC_FAIL	SCTP association establishment failures on the reporting SCTP association.
IUA_BEAT_ACK_RX	HEARTBEAT ACK messages received on the reporting SCTP association.
IUA_BEAT_ACK_TX	HEARTBEAT ACK messages transmitted on the reporting SCTP association.
IUA_BEAT_RX	HEARTBEAT messages received on the reporting SCTP association.
IUA_BEAT_TX	HEARTBEAT messages transmitted on the reporting SCTP association.
IUA_DATA_BYTES_RX	Data bytes received on the reporting SCTP association.
IUA_DATA_BYTES_TX	Data bytes transmitted on the reporting SCTP association.
IUA_DATA_IND_RX	DATA_INDICATION messages received on the reporting SCTP association.
IUA_DATA_REQ_TX	DATA_REQUEST messages transmitted on the reporting SCTP association.
IUA_DOWN_ACK_RX	ASP_DOWN_ACK messages received on the reporting SCTP association.
IUA_DOWN_TX	ASP_DOWN messages transmitted on the reporting SCTP association.
IUA_ERR_RX	ERROR messages received on the reporting SCTP association.
IUA_ERR_TX	ERROR messages transmitted on the reporting SCTP association.
IUA_EST_CFM_RX	ESTABLISH_CONFIRM messages received on the reporting SCTP association.
IUA_EST_IND_RX	ESTABLISH_INDICATION messages received on the reporting SCTP association.
IUA_EST_REQ_TX	ESTABLISH_REQUEST messages transmitted on the reporting SCTP association.
IUA_INACTIVE_ACK_RX	ASP_INACTIVE_ACK messages received on the reporting SCTP association.
IUA_INACTIVE_TX	ASP_INACTIVE messages transmitted on the reporting SCTP association.
IUA_INTF_ID_ERR	Invalid interface id errors on the reporting SCTP association.
IUA_INVALID_SCTP_SIGNALS_SLR	Invalid SCTP signals received since last reset of association on the reporting SCTP association.
IUA_INVALID_SCTP_SIGNALS_TOTAL	Invalid SCTP signals received on the reporting SCTP association.
IUA_MSG_CLASS_ERR	Unsupported message class errors on the reporting SCTP association.
IUA_MSG_LENGTH_ERR	Message length errors on the reporting SCTP association.

Table 6-23 IUA Measurements (continued)

Measurement	Description
IUA_MSG_OTHER_ERR	Other message errors on the reporting SCTP association.
IUA_MSG_TYPE_ERR	Unsupported message type errors on the reporting SCTP association.
IUA_NO_MEMORY_ERR	No memory for message errors on the reporting SCTP association.
IUA_NOTIFY_RX	NOTIFY messages received on the reporting SCTP association.
IUA_PARAM_FIELD_ERR	Parameter field errors on the reporting SCTP association.
IUA_PARAM_VALUE_ERR	Parameter value errors on the reporting SCTP association.
IUA_PROTOCOL_ERR	Protocol errors on the reporting SCTP association.
IUA_REL_CFM_RX	RELEASE_CONFIRM messages received on the reporting SCTP association.
IUA_REL_IND_RX	RELEASE_INDICATION messages received on the reporting SCTP association.
IUA_REL_REQ_TX	RELEASE_REQUEST messages transmitted on the reporting SCTP association.
IUA_SCTP_ASSOC_ID	The id of the sctp association with which the measurement measurement block is associated. This is not an incremental measurement.
IUA_SCTP_TX_FAIL	SCTP send failures on message processing errors on the reporting SCTP association.
IUA_STREAM_ID_ERR	Invalid stream id errors on the reporting SCTP association.
IUA_TEI_SAPI_ERR	Invalid TEI or SAPI errors on the reporting SCTP association.
IUA_UNEXPECT_MSG_ERR	Unexpected message errors on the reporting SCTP association.
IUA_UNEXPECT_PARAM_ERR	Unexpected parameter errors on the reporting SCTP association.
IUA_UP_ACK_RX	ASP_UP_ACK messages received on the reporting SCTP association.
IUA_UP_TX	ASP_UP messages transmitted on the reporting SCTP association.
IUA_VERSION_ERR	Invalid version errors on the reporting SCTP association.

ISUP Measurements

Table 6-24 ISUP Protocol Measurements

ISUP_ABNORMAL_REL_RX	Release messages received with a cause other than NORMAL on the reporting trunk group.
ISUP_ABNORMAL_REL_TX	Release messages sent with a cause other than NORMAL on the reporting trunk group.
ISUP_ACM_RX	Address Complete messages received on the reporting trunk group.
ISUP_ACM_TX	Address Complete messages sent on the reporting trunk group.
ISUP_ANM_RX	Answer messages received on the reporting trunk group.
ISUP_ANM_TX	Answer messages sent on the reporting trunk group.
ISUP_ARR_RX	Automatic Re-Route messages received on the reporting trunk group.
ISUP_ARR_TX	Automatic Re-Route messages sent on the reporting trunk group.
ISUP_BLA_RX	Blocking Acknowledge messages received on the reporting trunk group.
ISUP_BLA_TX	Blocking Acknowledge messages sent on the reporting trunk group.
ISUP_BLO_RX	Blocking messages received on the reporting trunk group.
ISUP_BLO_TX	Blocking messages sent on the reporting trunk group.
ISUP_CCL_RX	Calling Party Clear messages received on the reporting trunk group.
ISUP_CCL_TX	Calling Party Clear messages sent on the reporting trunk group.
ISUP_CCR_RX	Continuity Check Request messages received on the reporting trunk group.
ISUP_CCR_TX	Continuity Check Request messages sent on the reporting trunk group.
ISUP_CFN_RX	Confusion messages received on the reporting trunk group.
ISUP_CFN_TX	Confusion messages sent on the reporting trunk group.
ISUP_CGB_RX	Circuit Group Blocking messages received on the reporting trunk group.
ISUP_CGB_TX	Circuit Group Blocking messages sent on the reporting trunk group.
ISUP_CGBA_RX	Circuit Group Blocking Acknowledgement messages received on the reporting trunk group.
ISUP_CGBA_TX	Circuit Group Blocking Acknowledgement messages sent on the reporting trunk group.
ISUP_CGU_RX	Circuit Group Unblocking messages received on the reporting trunk group.
ISUP_CGU_TX	Circuit Group Unblocking messages sent on the reporting trunk group.
ISUP_CGUA_RX	Circuit Group Unblocking Acknowledgement messages received on the reporting trunk group.
ISUP_CGUA_TX	Circuit Group Unblocking Acknowledgement messages sent on the reporting trunk group.
ISUP_CON_RX	Connect messages received on the reporting trunk group.
ISUP_CON_TX	Connect messages sent on the reporting trunk group.
ISUP_CONG_CALL_REJECTED	The congestion-rejected calls on a per trunk group basis. This is implemented for SGA.
ISUP_COT_RX	Continuity messages received on the reporting trunk group.

Table 6-24 ISUP Protocol Measurements (continued)

ISUP_COT_TX	Continuity messages sent on the reporting trunk group.
ISUP_CPG_RX	Call Progress messages received on the reporting trunk group.
ISUP_CPG_TX	Call Progress messages sent on the reporting trunk group.
ISUP_CQM_RX	Circuit Query messages received on the reporting trunk group.
ISUP_CQM_TX	Circuit Query messages sent on the reporting trunk group.
ISUP_CQR_RX	Circuit Query Response messages received on the reporting trunk group.
ISUP_CQR_TX	Circuit Query Response messages sent on the reporting trunk group.
ISUP_CRA_RX	Circuit Reservation Acknowledgement messages received on the reporting trunk group.
ISUP_CRA_TX	Circuit Reservation Acknowledgement messages sent on the reporting trunk group.
ISUP_CRG_RX	Charge Information messages received on the reporting trunk group.
ISUP_CRG_TX	Charge Information messages sent on the reporting trunk group.
ISUP_CRM_RX	Circuit Reservation messages received on the reporting trunk group.
ISUP_CRM_TX	Circuit Reservation messages sent on the reporting trunk group.
ISUP_CVR_RX	Circuit Validation Response messages received on the reporting trunk group.
ISUP_CVR_TX	Circuit Validation Response messages sent on the reporting trunk group.
ISUP_CVT_RX	Circuit Validation Test messages received on the reporting trunk group.
ISUP_CVT_TX	Circuit Validation Test messages sent on the reporting trunk group.
ISUP_EXM_RX	Exit messages received on the reporting trunk group.
ISUP_EXM_TX	Exit messages sent on the reporting trunk group.
ISUP_FAA_RX	Facility Accepted messages received on the reporting trunk group.
ISUP_FAA_TX	Facility Accepted messages sent on the reporting trunk group.
ISUP_FAC_RX	Facility messages received on the reporting trunk group.
ISUP_FAC_TX	Facility messages sent on the reporting trunk group.
ISUP_FAR_RX	Facility Request messages received on the reporting trunk group.
ISUP_FAR_TX	Facility Request messages sent on the reporting trunk group.
ISUP_FOT_RX	Forward Transfer messages received on the reporting trunk group.
ISUP_FOT_TX	Forward Transfer messages sent on the reporting trunk group.
ISUP_FRJ_RX	Facility Reject messages received on the reporting trunk group.
ISUP_FRJ_TX	Facility Reject messages sent on the reporting trunk group.
ISUP_FWT_RX	Forward Transfer messages received on the reporting trunk group.
ISUP_FWT_TX	Forward Transfer messages sent on the reporting trunk group.
ISUP_GRA_RX	Circuit Group Reset Acknowledge messages received on the reporting trunk group.
ISUP_GRA_TX	Circuit Group Reset Acknowledge messages sent on the reporting trunk group.
ISUP_GRS_RX	Circuit Group Reset messages received on the reporting trunk group.
ISUP_GRS_TX	Circuit Group Reset messages sent on the reporting trunk group.

Table 6-24 ISUP Protocol Measurements (continued)

ISUP_IAM_RX	Initial Address messages received on the reporting trunk group.
ISUP_IAM_TX	Initial Address messages sent on the reporting trunk group.
ISUP_IDR_RX	ID Request messages received on the reporting trunk group.
ISUP_IDR_TX	ID Request messages sent on the reporting trunk group.
ISUP_INF_RX	Information messages received on the reporting trunk group.
ISUP_INF_TX	Information messages sent on the reporting trunk group.
ISUP_INR_RX	Information Request messages received on the reporting trunk group.
ISUP_INR_TX	Information Request messages sent on the reporting trunk group.
ISUP_IRS_RX	ID Response messages received on the reporting trunk group.
ISUP_IRS_TX	ID Response messages sent on the reporting trunk group.
ISUP_ITX_RX	Charge Unit messages received on the reporting trunk group.
ISUP_ITX_TX	Charge Unit messages sent on the reporting trunk group.
ISUP_LPA_RX	Loop Prevention Acknowledgement messages received on the reporting trunk group.
ISUP_LPA_TX	Loop Prevention Acknowledgement messages sent on the reporting trunk group.
ISUP_LPM_RX	Loop Prevention messages received on the reporting trunk group.
ISUP_LPM_TX	Loop Prevention messages sent on the reporting trunk group.
ISUP_MSG_RX	Messages received on the reporting trunk group.
ISUP_MSG_TX	Messages sent on the reporting trunk group.
ISUP_NRM_RX	NRM messages received on the reporting trunk group.
ISUP_NRM_TX	Network Resource Management messages sent on the reporting trunk group.
ISUP_OC_IAM_REJECTED	Congestion-rejected calls per trunk group.
ISUP_OLM_RX	Overload messages received on the reporting trunk group.
ISUP_OLM_TX	Overload messages sent on the reporting trunk group.
ISUP_OPR_RX	Operator messages received on the reporting trunk group.
ISUP_OPR_TX	Operator messages sent on the reporting trunk group.
ISUP_PAM_RX	Pass Along messages received on the reporting trunk group.
ISUP_PAM_TX	Pass Along messages sent on the reporting trunk group.
ISUP_PRI_RX	Pre-Release Information messages received on the reporting trunk group.
ISUP_PRI_TX	Pre-Release Information messages sent on the reporting trunk group.
ISUP_REL_RX	Release messages received on the reporting trunk group.
ISUP_REL_TX	Release messages sent on the reporting trunk group.
ISUP_RES_RX	Resume messages received on the reporting trunk group.
ISUP_RES_TX	Resume messages sent on the reporting trunk group.
ISUP_RLC_RX	Release Complete messages received on the reporting trunk group.
ISUP_RLC_TX	Release Complete messages sent on the reporting trunk group.
ISUP_RSC_RX	Reset Circuit messages received on the reporting trunk group.

Table 6-24 ISUP Protocol Measurements (continued)

ISUP_RSC_TX	Reset Circuit messages sent on the reporting trunk group.
ISUP_SAM_RX	Subsequent Address messages received on the reporting trunk group.
ISUP_SAM_TX	Subsequent Address messages sent on the reporting trunk group.
ISUP_SGM_RX	Segmentation messages received on the reporting trunk group.
ISUP_SGM_TX	Segmentation messages sent on the reporting trunk group.
ISUP_SUS_RX	Suspend messages received on the reporting trunk group.
ISUP_SUS_TX	Suspend messages sent on the reporting trunk group.
ISUP_TXA_RX	Charging Acknowledgement messages received on the reporting trunk group.
ISUP_TXA_TX	Charging Acknowledgement messages sent on the reporting trunk group.
ISUP_UBA_RX	Unblocking Acknowledge messages received on the reporting trunk group.
ISUP_UBA_TX	Unblocking Acknowledge messages sent on the reporting trunk group.
ISUP_UBL_RX	Unblocking messages received on the reporting trunk group.
ISUP_UBL_TX	Unblocking messages sent on the reporting trunk group.
ISUP_UNEXPECT_MSG_RX	Unexpected messages received on the reporting trunk group.
ISUP_UNRECOG_MSG_RX	Unrecognized messages received on the reporting trunk group.
ISUP_UPA_RX	User Part Acknowledgement messages received on the reporting trunk group.
ISUP_UPA_TX	User Part Acknowledgement messages sent on the reporting trunk group.
ISUP_UPT_RX	User Part Test messages received on the reporting trunk group.
ISUP_UPT_TX	User Part Test messages sent on the reporting trunk group.
ISUP_USR_RX	User To User messages received on the reporting trunk group.
ISUP_USR_TX	User To User messages sent on the reporting trunk group.

The following table illustrates the message measurements applicable to a given ISUP variant, the total message, abnormal release, unexpected and unrecognized message measurements that apply to all variants:

Table 6-25 Message Measurements Applicable to ISUP Variants

Message	ANSI	China	Mexico	Thailand	Hong-Kong	Chile	Australia	Israel	ETSIv2	Hungary	France	Poland
ACM	X	X	X	X	X	X	X	X	X	X	X	X
ANM	X	X	X	X	X	X	X	X	X	X	X	X
ARR				X								
BLA	X	X	X	X	X	X	X	X	X	X	X	X
BLO	X	X	X	X	X	X	X	X	X	X	X	X
CCL		X	X				X	X	X			
CCR	X	X	X	X		X	X	X	X	X	X	X
CFN	X		X	X	X					X	X	X
CGB	X	X	X	X	X	X	X	X	X	X	X	X
CGBA	X	X	X	X	X	X	X	X	X	X	X	X
CGU	X	X	X	X	X	X	X	X	X	X	X	X

Table 6-25 Message Measurements Applicable to ISUP Variants (continued)

CGUA	X	X	X	X	X	X	X	X	X	X	X	X
CON		X	X	X	X	X	X	X	X	X	X	X
COT	X	X	X	X	X	X	X	X	X	X	X	X
CPG	X	X	X	X	X	X	X	X	X	X	X	X
CQM	X		X	X								
CQR	X		X	X								
CRA	X											
CRM	X											
CRG						X						
CVR	X											
CVT	X											
EXM	X											
FAA									X	X	X	X
FAC	X				X					X	X	X
FAR						X						
FOT	X											
FRJ						X						
FWT						X						
GRA	X	X	X	X	X	X	X	X	X	X	X	X
GRS	X	X	X	X	X	X	X	X	X	X	X	X
IAM	X	X	X	X	X	X	X	X	X	X	X	X
IDR						X				X	X	X
INF	X		X	X	X	X				X	X	X
INR			X	X	X	X				X	X	X
IRS						X				X	X	X
ITX											X	X
LPA	X											
LPM						X						
NRM					X	X						
OLM										X	X	X
OPR		X					X	X	X			
PAM	X				X	X						
PRI						X						
REL	X	X	X	X	X	X	X	X	X	X	X	X
RES	X	X	X	X	X	X	X	X	X	X	X	X
RLC	X	X	X	X	X	X	X	X	X	X	X	X
RSC	X	X	X	X	X	X	X	X	X	X	X	X
SAM		X	X	X	X	X	X	X	X	X	X	X
SGM		X			X	X	X	X	X	X	X	X
SUS	X	X	X	X	X	X	X	X	X	X	X	X
TXA											X	X
UBA	X	X		X	X	X	X	X	X	X	X	X

Table 6-25 *Message Measurements Applicable to ISUP Variants (continued)*

UBL	X	X	X	X		X	X	X	X	X	X	X
UCIC	X		X	X		X						
UPA										X	X	X
UPT										X	X	X
USR	X					X				X	X	X

ISUP (ANSI) Measurements

Table 6-26 ISUP (ANSI) Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
SGA_ABNORMAL_REL_RX	RELS received with a cause other than NORMAL on the reporting trunk group.
SGA_ACM_RX	ACM messages received on the reporting trunk group.
SGA_ACM_TX	ACM messages sent on the reporting trunk group.
SGA_ANM_RX	ANM messages received on the reporting trunk group.
SGA_ANM_TX	ANM messages sent on the reporting trunk group.
SGA_BLA_RX	BLA messages received on the reporting trunk group.
SGA_BLA_TX	BLA messages sent on the reporting trunk group.
SGA_BLO_RX	BLO messages received on the reporting trunk group.
SGA_BLO_TX	BLO messages sent on the reporting trunk group.
SGA_CCR_RX	CCR messages received on the reporting trunk group.
SGA_CCR_TX	CCR messages sent on the reporting trunk group.
SGA_CFN_RX	CFN messages received on the reporting trunk group.
SGA_CFN_TX	CFN messages sent on the reporting trunk group.
SGA_CGB_RX	CGB messages received on the reporting trunk group.
SGA_CGB_TX	CGB messages sent on the reporting trunk group.
SGA_CGBA_RX	CGBA messages received on the reporting trunk group.
SGA_CGBA_TX	CGBA messages sent on the reporting trunk group.
SGA_CGU_RX	CGU messages received on the reporting trunk group.
SGA_CGU_TX	CGU messages sent on the reporting trunk group.
SGA_CGUA_RX	CGUA messages received on the reporting trunk group.
SGA_CGUA_TX	CGUA messages sent on the reporting trunk group.
SGA_COT_RX	COT messages received on the reporting trunk group.
SGA_COT_TX	COT messages sent on the reporting trunk group.
SGA_CPG_RX	CPG messages received on the reporting trunk group.
SGA_CPG_TX	CPG messages sent on the reporting trunk group.
SGA_CQM_RX	CQM messages received on the reporting trunk group.
SGA_CQM_TX	CQM messages sent on the reporting trunk group.
SGA_CQR_RX	CQR messages received on the reporting trunk group.
SGA_CQR_TX	CQR messages sent on the reporting trunk group.
SGA_CRA_RX	CRA messages received on the reporting trunk group.
SGA_CRA_TX	CRA messages sent on the reporting trunk group.
SGA_CRM_RX	CRM messages received on the reporting trunk group.
SGA_CRM_TX	CRM messages sent on the reporting trunk group.
SGA_CVR_RX	CVR messages received on the reporting trunk group.

Table 6-26 ISUP (ANSI) Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
SGA_CVR_TX	CVR messages sent on the reporting trunk group.
SGA_CVT_RX	CVT messages received on the reporting trunk group.
SGA_CVT_TX	CVT messages sent on the reporting trunk group.
SGA_EXM_RX	EXM messages received on the reporting trunk group.
SGA_EXM_TX	EXM messages sent on the reporting trunk group.
SGA_FAC_RX	FAC messages received on the reporting trunk group.
SGA_FAC_TX	FAC messages sent on the reporting trunk group.
SGA_FOT_RX	FOT messages received on the reporting trunk group.
SGA_FOT_TX	FOT messages sent on the reporting trunk group.
SGA_GRA_RX	GRA messages received on the reporting trunk group.
SGA_GRA_TX	GRA messages sent on the reporting trunk group.
SGA_GRS_RX	GRS messages received on the reporting trunk group.
SGA_GRS_TX	GRS messages sent on the reporting trunk group.
SGA_IAM_RX	IAM messages received on the reporting trunk group.
SGA_IAM_TX	IAM messages sent on the reporting trunk group.
SGA_INF_RX	INF messages received on the reporting trunk group.
SGA_INF_TX	INF messages sent on the reporting trunk group.
SGA_INR_RX	INR messages received on the reporting trunk group.
SGA_INR_TX	INR messages sent on the reporting trunk group.
SGA_LPA_RX	LPA messages received on the reporting trunk group.
SGA_LPA_TX	LPA messages sent on the reporting trunk group.
SGA_MSG_RX	messages received on the reporting trunk group.
SGA_MSG_TX	messages sent on the reporting trunk group.
SGA_PAM_RX	PAM messages received on the reporting trunk group.
SGA_PAM_TX	PAM messages sent on the reporting trunk group.
SGA_REL_RX	REL messages received on the reporting trunk group.
SGA_REL_TX	REL messages sent on the reporting trunk group.
SGA_RES_RX	RES messages received on the reporting trunk group.
SGA_RES_TX	RES messages sent on the reporting trunk group.
SGA_RLC_RX	RLC messages received on the reporting trunk group.
SGA_RLC_TX	RLC messages sent on the reporting trunk group.
SGA_RSC_RX	RSC messages received on the reporting trunk group.
SGA_RSC_TX	RSC messages sent on the reporting trunk group.
SGA_SUS_RX	SUS messages received on the reporting trunk group.
SGA_SUS_TX	SUS messages sent on the reporting trunk group.

Table 6-26 ISUP (ANSI) Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
SGA_UBA_RX	UBA messages received on the reporting trunk group.
SGA_UBA_TX	UBA messages sent on the reporting trunk group.
SGA_UBL_RX	UBL messages received on the reporting trunk group.
SGA_UBL_TX	UBL messages sent on the reporting trunk group.
SGA_UCIC_RX	UCIC messages received on the reporting trunk group.
SGA_UCIC_TX	UCIC messages sent on the reporting trunk group.
SGA_UNEXPECT_MSG_RX	Unexpected messages received on the reporting trunk group.
SGA_UNRECOG_MSG_RX	Unrecognized messages received on the reporting trunk group.
SGA_USR_RX	USR messages received on the reporting trunk group.
SGA_USR_TX	USR messages sent on the reporting trunk group.

ISUP (France) Measurements

Table 6-27 ISUP (France) Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
SGA_ITX_RX	Charge Unit (ITX) message received on the reporting trunk group.
SGA_ITX_TX	ITX messages sent on the reporting trunk group.
SGA_TXA_RX	Charging Acknowledgement (TXA) messages received on the reporting trunk group.
SGA_TXA_TX	TXA messages sent on the reporting trunk group.

ISUP (Poland) Measurements

Table 6-28 ISUP (Poland) Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
SGA_CRG_RX	Charging Information messages received on the reporting trunk group.
SGA_CRG_TX	Charging Information messages transmitted on the reporting trunk group.

ISUP (ITU-China) Measurements

Table 6-29 ISUP (ITU-China) Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
SGA_ABNORMAL_REL_RX	RELs received with a cause other than NORMAL on the reporting trunk group.
SGA_ABNORMAL_REL_TX	RELs sent with a cause other than NORMAL on the reporting trunk group.
SGA_ACM_RX	ACM messages received on the reporting trunk group.
SGA_ACM_TX	ACM messages sent on the reporting trunk group.
SGA_ANM_RX	ANM messages received on the reporting trunk group.
SGA_ANM_TX	ANM messages sent on the reporting trunk group.
SGA_BLA_RX	BLA messages received on the reporting trunk group.
SGA_BLA_TX	BLA messages sent on the reporting trunk group.
SGA_BLO_RX	BLO messages received on the reporting trunk group.
SGA_BLO_TX	BLO messages sent on the reporting trunk group.
SGA_CCL_RX	CCL messages received on the reporting trunk group.
SGA_CCL_TX	CCL messages sent on the reporting trunk group.
SGA_CCR_RX	CCR messages received on the reporting trunk group.
SGA_CCR_TX	CCR messages sent on the reporting trunk group.
SGA_CGB_RX	CGB messages received on the reporting trunk group.
SGA_CGB_TX	CGB messages sent on the reporting trunk group.

Table 6-29 ISUP (ITU-China) Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
SGA_CGBA_RX	CGBA messages received on the reporting trunk group.
SGA_CGBA_TX	CGBA messages sent on the reporting trunk group.
SGA_CGU_RX	CGU messages received on the reporting trunk group.
SGA_CGU_TX	CGU messages sent on the reporting trunk group.
SGA_CGUA_RX	CGUA messages received on the reporting trunk group.
SGA_CGUA_TX	CGUA messages sent on the reporting trunk group.
SGA_CON_RX	CON messages received on the reporting trunk group.
SGA_CON_TX	CON messages sent on the reporting trunk group.
SGA_COT_RX	COT messages received on the reporting trunk group.
SGA_COT_TX	COT messages sent on the reporting trunk group.
SGA_CPG_RX	CPG messages received on the reporting trunk group.
SGA_CPG_TX	CPG messages sent on the reporting trunk group.
SGA_GRA_RX	GRA messages received on the reporting trunk group.
SGA_GRA_TX	GRA messages sent on the reporting trunk group.
SGA_GRS_RX	GRS messages received on the reporting trunk group.
SGA_GRS_TX	GRS messages sent on the reporting trunk group.
SGA_IAM_RX	IAM messages received on the reporting trunk group.
SGA_IAM_TX	IAM messages sent on the reporting trunk group.
SGA_MSG_RX	Messages received on the reporting trunk group.
SGA_MSG_TX	Messages sent on the reporting trunk group.
SGA_OPR_RX	OPR messages received on the reporting trunk group.
SGA_OPR_TX	OPR messages sent on the reporting trunk group.
SGA_REL_RX	REL messages received on the reporting trunk group.
SGA_REL_TX	REL messages sent on the reporting trunk group.
SGA_RES_RX	RES messages received on the reporting trunk group.
SGA_RES_TX	RES messages sent on the reporting trunk group.
SGA_RLC_RX	RLC messages received on the reporting trunk group.
SGA_RLC_TX	RLC messages sent on the reporting trunk group.
SGA_RSC_RX	RSC messages received on the reporting trunk group.
SGA_RSC_TX	RSC messages sent on the reporting trunk group.
SGA_SAM_RX	SAM messages received on the reporting trunk group.
SGA_SAM_TX	SAM messages sent on the reporting trunk group.
SGA_SGM_RX	SGM messages received on the reporting trunk group.
SGA_SGM_TX	SGM messages sent on the reporting trunk group.
SGA_SUS_RX	SUS messages received on the reporting trunk group.

Table 6-29 ISUP (ITU-China) Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
SGA_SUS_TX	SUS messages sent on the reporting trunk group.
SGA_UBA_RX	UBA messages received on the reporting trunk group.
SGA_UBA_TX	UBA messages sent on the reporting trunk group.
SGA_UBL_RX	UBL messages received on the reporting trunk group.
SGA_UBL_TX	UBL messages sent on the reporting trunk group.
SGA_UNEXPECT_MSG_RX	Unexpected messages received on the reporting trunk group.
SGA_UNRECOG_MSG_RX	Unrecognized messages received on the reporting trunk group.

ISUP (ITU-Mexico) Measurements

Table 6-30 ISUP (ITU-Mexico) Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
SGA_ABNORMAL_REL_RX	RELS received with a cause other than NORMAL on the reporting trunk group.
SGA_ABNORMAL_REL_TX	RELS sent with a cause other than NORMAL on the reporting trunk group.
SGA_ACM_RX	ACM messages received on the reporting trunk group.
SGA_ACM_TX	ACM messages sent on the reporting trunk group.
SGA_ANM_RX	ANM messages received on the reporting trunk group.
SGA_ANM_TX	ANM messages sent on the reporting trunk group.
SGA_BLA_RX	BLA messages received on the reporting trunk group.
SGA_BLA_TX	BLA messages sent on the reporting trunk group.
SGA_BLO_RX	BLO messages received on the reporting trunk group.
SGA_BLO_TX	BLO messages sent on the reporting trunk group.
SGA_CCL_RX	CCL messages sent on the reporting trunk group.
SGA_CCL_TX	CCL messages sent on the reporting trunk group.
SGA_CCR_RX	CCR messages received on the reporting trunk group.
SGA_CCR_TX	CCR messages sent on the reporting trunk group.
SGA_CFN_RX	CFN messages received on the reporting trunk group.
SGA_CFN_TX	CFN messages sent on the reporting trunk group.
SGA_CGB_RX	CGB messages received on the reporting trunk group.
SGA_CGB_TX	CGB messages sent on the reporting trunk group.
SGA_CGBA_RX	CGBA messages received on the reporting trunk group.
SGA_CGBA_TX	CGBA messages sent on the reporting trunk group.
SGA_CGU_RX	CGU messages received on the reporting trunk group.
SGA_CGU_TX	CGU messages sent on the reporting trunk group.
SGA_CGUA_RX	CGUA messages received on the reporting trunk group.
SGA_CGUA_TX	CGUA messages sent on the reporting trunk group.
SGA_CON_RX	CON messages received on the reporting trunk group.
SGA_CON_TX	CON messages sent on the reporting trunk group.
SGA_COT_RX	COT messages received on the reporting trunk group.
SGA_COT_TX	COT messages sent on the reporting trunk group.
SGA_CPG_RX	CPG messages received on the reporting trunk group.
SGA_CPG_TX	CPG messages sent on the reporting trunk group.
SGA_CQM_RX	CQM messages received on the reporting trunk group.
SGA_CQM_TX	CQM messages sent on the reporting trunk group.
SGA_CQR_RX	CQR messages received on the reporting trunk group.
SGA_CQR_TX	CQR messages sent on the reporting trunk group.

Table 6-30 ISUP (ITU-Mexico) Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
SGA_GRA_RX	GRA messages received on the reporting trunk group.
SGA_GRA_TX	GRA messages sent on the reporting trunk group.
SGA_GRS_RX	GRS messages received on the reporting trunk group.
SGA_GRS_TX	GRS messages sent on the reporting trunk group.
SGA_IAM_RX	IAM messages received on the reporting trunk group.
SGA_IAM_TX	IAM messages sent on the reporting trunk group.
SGA_INF_RX	INF messages received on the reporting trunk group.
SGA_INF_TX	INF messages sent on the reporting trunk group.
SGA_INR_RX	INR messages received on the reporting trunk group.
SGA_INR_TX	INR messages sent on the reporting trunk group.
SGA_MSG_RX	Messages received on the reporting trunk group.
SGA_MSG_TX	Messages sent on the reporting trunk group.
SGA_REL_RX	REL messages received on the reporting trunk group.
SGA_REL_TX	REL messages sent on the reporting trunk group.
SGA_RES_RX	RES messages received on the reporting trunk group.
SGA_RES_TX	RES messages sent on the reporting trunk group.
SGA_RLC_RX	RLC messages received on the reporting trunk group.
SGA_RLC_TX	RLC messages sent on the reporting trunk group.
SGA_RSC_RX	RSC messages received on the reporting trunk group.
SGA_RSC_TX	RSC messages sent on the reporting trunk group.
SGA_SAM_RX	SAM messages received on the reporting trunk group.
SGA_SAM_TX	SAM messages sent on the reporting trunk group.
SGA_SUS_RX	SUS messages received on the reporting trunk group.
SGA_SUS_TX	SUS messages sent on the reporting trunk group.
SGA_UBA_RX	UBA messages received on the reporting trunk group.
SGA_UBA_TX	UBA messages sent on the reporting trunk group.
SGA_UBL_RX	UBL messages received on the reporting trunk group.
SGA_UBL_TX	UBL messages sent on the reporting trunk group.
SGA_UCIC_RX	UCIC messages received on the reporting trunk group.
SGA_UCIC_TX	UCIC messages sent on the reporting trunk group.
SGA_UNEXPECT_MSG_RX	Unexpected messages received on the reporting trunk group.
SGA_UNRECOG_MSG_RX	Unrecognized messages received on the reporting trunk group.

ISUP (ITU-HongKong) Measurements

Table 6-31 ISUP (ITU-HongKong) Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
SGA_ABNORMAL_REL_RX	RELS received with a cause other than NORMAL on the reporting trunk group.
SGA_ABNORMAL_REL_TX	RELS sent with a cause other than NORMAL on the reporting trunk group.
SGA_ACM_RX	ACM messages received on the reporting trunk group.
SGA_ACM_TX	ACM messages sent on the reporting trunk group.
SGA_ANM_RX	ANM messages received on the reporting trunk group.
SGA_ANM_TX	ANM messages sent on the reporting trunk group.
SGA_BLA_RX	BLA messages received on the reporting trunk group.
SGA_BLA_TX	BLA messages sent on the reporting trunk group.
SGA_BLO_RX	BLO messages received on the reporting trunk group.
SGA_BLO_TX	BLO messages sent on the reporting trunk group.
SGA_CFN_RX	CFN messages received on the reporting trunk group.
SGA_CFN_TX	CFN messages sent on the reporting trunk group.
SGA_CGB_RX	CGB messages received on the reporting trunk group.
SGA_CGB_TX	CGB messages sent on the reporting trunk group.
SGA_CGBA_RX	CGBA messages received on the reporting trunk group.
SGA_CGBA_TX	CGBA messages sent on the reporting trunk group.
SGA_CGU_RX	CGU messages received on the reporting trunk group.
SGA_CGU_TX	CGU messages sent on the reporting trunk group.
SGA_CGUA_RX	CGUA messages received on the reporting trunk group.
SGA_CGUA_TX	CGUA messages sent on the reporting trunk group.
SGA_CON_RX	CON messages received on the reporting trunk group.
SGA_CON_TX	CON messages sent on the reporting trunk group.
SGA_COT_RX	COT messages received on the reporting trunk group.
SGA_COT_TX	COT messages sent on the reporting trunk group.
SGA_CPG_RX	CPG messages received on the reporting trunk group.
SGA_CPG_TX	CPG messages sent on the reporting trunk group.
SGA_FAC_RX	FAC messages received on the reporting trunk group.
SGA_FAC_TX	FAC messages sent on the reporting trunk group.
SGA_GRA_RX	GRA messages received on the reporting trunk group.
SGA_GRA_TX	GRA messages sent on the reporting trunk group.
SGA_GRS_RX	GRS messages received on the reporting trunk group.
SGA_GRS_TX	GRS messages sent on the reporting trunk group.
SGA_IAM_RX	IAM messages received on the reporting trunk group.
SGA_IAM_TX	IAM messages sent on the reporting trunk group.

Table 6-31 ISUP (ITU-HongKong) Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
SGA_INF_RX	INF messages received on the reporting trunk group.
SGA_INF_TX	INF messages sent on the reporting trunk group.
SGA_INR_RX	INR messages received on the reporting trunk group.
SGA_INR_TX	INR messages sent on the reporting trunk group.
SGA_MSG_RX	Messages received on the reporting trunk group.
SGA_MSG_TX	Messages sent on the reporting trunk group.
SGA_NRM_RX	NRM messages received on the reporting trunk group.
SGA_NRM_TX	NRM messages sent on the reporting trunk group.
SGA_PAM_RX	PAM messages received on the reporting trunk group.
SGA_PAM_TX	PAM messages sent on the reporting trunk group.
SGA_REL_RX	REL messages received on the reporting trunk group.
SGA_REL_TX	REL messages sent on the reporting trunk group.
SGA_RES_RX	RES messages received on the reporting trunk group.
SGA_RES_TX	RES messages sent on the reporting trunk group.
SGA_RLC_RX	RLC messages received on the reporting trunk group.
SGA_RLC_TX	RLC messages sent on the reporting trunk group.
SGA_RSC_RX	RSC messages received on the reporting trunk group.
SGA_RSC_TX	RSC messages sent on the reporting trunk group.
SGA_SAM_RX	SAM messages received on the reporting trunk group.
SGA_SAM_TX	SAM messages sent on the reporting trunk group.
SGA_SGM_RX	SGM messages received on the reporting trunk group.
SGA_SGM_TX	SGM messages sent on the reporting trunk group.
SGA_SUS_RX	SUS messages received on the reporting trunk group.
SGA_SUS_TX	SUS messages sent on the reporting trunk group.
SGA_UBA_RX	UBA messages received on the reporting trunk group.
SGA_UBA_TX	UBA messages sent on the reporting trunk group.
SGA_UNEXPECT_MSG_RX	Unexpected messages received on the reporting trunk group.
SGA_UNRECOG_MSG_RX	Unrecognized messages received on the reporting trunk group.

Audit Measurements

Table 6-32 Audit Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
AUDIT_FS_TOTAL_CA_SWITCHOVER	Audits to check all active CCBs in response to a CA platform switchover occurring. This is only applicable when the standby CA becomes active.
AUDIT_FS_TOTAL_SIP_NOACK_TMO	CCB audits initiated due to a SIP Invite that was not acknowledged that is detected by the reporting FS.
AUDIT_FS_TOTAL_SIP_RESP_TMO	CCB audits initiated due to a SIP Request that has timed out that is detected by the reporting FS.
AUDIT_SS7_LONG_DUR_EXCEEDED	SS7 calls that exceeded the long duration threshold on the reporting trunk group.
AUDIT_SS7_TRUNK_STATE_SYNCED	SS7 trunks that had their local and remote states synchronized on the reporting trunk group.
QOS_GATE_AUDIT_FREED	Dangling Gate IDX memory entries detected and freed by audit by the reporting BTS.

SIP Interface Adapter Measurements

Table 6-33 SIP Interface Adapter Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
SIA_AUDIT_BCM_CALL_RELEASED	Calls released when the SIP side is inactive.
SIA_AUDIT_CALL_RELEASED	SIP side calls released due to the SIA memory audit when the BCM side of the call is already released.
SIA_AUDIT_CCB_FREED	Call Control Blocks freed due to the SIA audit.
SIA_AUDIT_REGCONTACT_FREED	SIP Registration Contacts freed as a result of the SIA Memory Audit.
SIA_CALL_FAIL_BY_EXPIRED_REG	Call failures due to a registration expiration.
SIA_INCOM_CALL_ABDN	Incoming calls abandoned at the reporting CA.
SIA_INCOM_CALL_NOT_ANS	Incoming calls not answered by Called party at reporting CA.
SIA_INCOM_END_USR_BUSY	Incoming calls not completed because the end user is busy.
SIA_INCOM_FAIL	Failed incoming SIP calls.
SIA_INCOM_INIT	Incoming SIP call initializations.
SIA_INCOM_SUCC	Successful incoming SIP calls.
SIA_INVITE_NO_CALL_TO_REPLACE	“INVITE” SIP messages with “Replaces” header. Calls are rejected because the “replaces” call ID is not found.
SIA_KPML_SUBSCRIBE_RX	KPML SIP SUBSCRIBE messages received.
SIA_KPML_NOTIFY_RX	KPML SIP NOTIFY messages received.
SIA_KPML_NOTIFY_TX	KPML SIP NOTIFY messages sent to SIP phones.
SIA_KPML_SUBSCRIBE_TX	KPML SIP SUBSCRIBE messages sent out by the CA.

Table 6-33 SIP Interface Adapter Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
SIA_MWI_NOTIFY_RX	SIP Notify MWIs received from SIP subscribers.
SIA_MWI_NOTIFY_TX	SIP Notify MWIs sent to SIP phones.
SIA_MWI_NOTIFY_TX_FAIL	SIP Notify MWIs that failed to be sent to SIP phones.
SIA_OC_INVITE_REJECT	Incoming INVITE messages rejected due to an overload.
SIA_OC_REFERER_REJECT	Incoming REFER messages rejected due to an overload.
SIA_OC_REGISTER_REJECT	Incoming REGISTER messages rejected due to an overload.
SIA_OC_RX_OPTIONS_REJECT	Incoming OPTIONS requests rejected due to an overload.
SIA_OC_SUBSCRIBE_REJECT	Incoming SUBSCRIBE messages rejected due to an overload.
SIA_OC_UN SOL_NOTIFY_SUPP	Incoming unsolicited notification requests suppressed without sending to the endpoints due to an overload.
SIA_OUTG_CALL_ABDN	Outgoing calls abandoned at the reporting CA.
SIA_OUTG_CALL_NOT_ANS	Outgoing calls not answered by Called party at reporting CA.
SIA_OUTG_END_USR_BUSY	Outgoing calls not completed because the end user is busy.
SIA_OUTG_FAIL	Failed outgoing SIP calls.
SIA_OUTG_INIT	Outgoing SIP call initializations.
SIA_OUTG_SUCC	Successful outgoing SIP calls.
SIA_REFERER_TO_TRUNK_ATTENDED_RX	Calls that receive “Refer” which replaces the call ID (attended transfer) with “Refer-to” to domains that are BTS trunks. The SIA_REFERER_TO_TRUNK_RX measurement is incremented as well as this measurement.
SIA_REFERER_TO_TRUNK_RX	Tracks “Refer” with “Refer-to” via domains defined as BTS trunks
SIA_REFERER_TO_UNKNOWN_DOMAIN_RX	Tracks “Refer” with “Refer-to” via domains neither a BTS service domain nor a trunk.
SIA_REFRESHES_TX	SIP message refreshes that occurred.
SIA_SECURE_FQDN_VIOLATION_REQ	Times that a SIP request fails the validation for a secure SIP endpoint.
SIA_SECURE_FQDN_VIOLATION_RESP	Times that a SIP response fails the validation for a secure SIP endpoint.
SIA_TOTAL_FAIL	Unsuccessfully completed SIP calls on the reporting CA (DEPRECATED - always will contain a value of ZERO).
SIA_TOTAL_INCOM_MSG_FAIL	Incoming SIP message attempts not successfully received (DEPRECATED - always will contain a value of ZERO).
SIA_TOTAL_OUTG_MSG_FAIL	Outgoing SIP message attempts not successfully transmitted (DEPRECATED - always will contain a value of ZERO).
SIA_TOTAL_SESS_TIMER_FAIL	Call failures due to session timer expiry that occurred.
SIA_TOTAL_SUCC	Successfully completed SIP calls on the reporting CA (DEPRECATED - always will contain a value of ZERO).

Call Detail Block Measurements

Table 6-34 Call Detail Block Measurements

Measurement	Description (* = rapid count could mean a potential problem in the system)
BILLING_TOTAL_500	CDBs of type 500 created by the reporting EMS.
BILLING_TOTAL_700	CDBs of type 700 created by the reporting EMS.
BILLING_TOTAL_900	CDBs of type 900 created by the reporting EMS.
BILLING_TOTAL_976	CDBs of type 976 created by the reporting EMS.
BILLING_TOTAL_AIRLINES	CDBs of type Airlines created by the reporting EMS.
BILLING_TOTAL_AMBULANCE	CDBs of type ambulance created by the reporting EMS.
BILLING_TOTAL_ATTENDANT	CDBs of type attendant created by the reporting EMS.
BILLING_TOTAL_BLV	CDBs of type busy line verification created by the reporting EMS.
BILLING_TOTAL_BUSINESS	CDBs of type business created by the reporting EMS.
BILLING_TOTAL_CARRIER_OP	CDBs of type carrier operator created by the reporting EMS.
BILLING_TOTAL_CNA	CDBs of type Calling Number Announcement created by the reporting EMS.
BILLING_TOTAL_CUT_THRU	CDBs of type cut thru created by the reporting EMS.
BILLING_TOTAL_DA	CDBs of type directory assistance created by the reporting EMS.
BILLING_TOTAL_DA_INTER	CDBs of type Directory Assistance Interlata created by the reporting EMS.
BILLING_TOTAL_DA_INTL	CDBs of type Directory Assistance International created by the reporting EMS.
BILLING_TOTAL_DA_TOLL	CDBs of type directory assistance toll created by the reporting EMS.
BILLING_TOTAL_EMG	CDBs of type emergency created by the reporting EMS.
BILLING_TOTAL_EXTENSION	CDBs of type extension created by the reporting EMS.
BILLING_TOTAL_FIRE	CDBs of type fire created by the reporting EMS.
BILLING_TOTAL_INFO	CDBs of type information (i.e. 976 calls) created by the reporting EMS.
BILLING_TOTAL_INTERLATA	CDBs of type interlata created by the reporting EMS.
BILLING_TOTAL_INTL	CDBs of type international created by the reporting EMS.
BILLING_TOTAL_INTL_OPR	CDBs of type International Operator created by the reporting EMS.
BILLING_TOTAL_INTL_WZ1	CDBs of type International World Zone 1 created by the reporting EMS.
BILLING_TOTAL_INVALID	CDBs of type invalid created by the reporting EMS.
BILLING_TOTAL_LOCAL	CDBs of type local created by the reporting EMS.
BILLING_TOTAL_LRN	CDBs of type LRN created by the reporting EMS.
BILLING_TOTAL_MOBILE	CDBs of type Mobile created by the reporting EMS.
BILLING_TOTAL_NAS	CDBs of type NAS created by the reporting EMS.
BILLING_TOTAL_NAT_OPR	CDBs of type National Operator created by the reporting EMS.
BILLING_TOTAL_NATIONAL	CDBs of type national (NANP) created by the reporting EMS.
BILLING_TOTAL_NON_EMG	CDBs of type non-emergency created by the reporting EMS.
BILLING_TOTAL_NONE	CDBs of type none created by the reporting EMS.
BILLING_TOTAL_NULL	CDBs of type "null" (non-routed calls) created by the reporting EMS.

Table 6-34 Call Detail Block Measurements (continued)

Measurement	Description (* = rapid count could mean a potential problem in the system)
BILLING_TOTAL_OP	CDBs of type cut operator created by the reporting EMS
BILLING_TOTAL_OP_ASSIST	CDBs of type operator assisted created by the reporting EMS
BILLING_TOTAL_PCS	CDBs of type pcs created by the reporting EMS.
BILLING_TOTAL_POLICE	CDBs of type police created by the reporting EMS
BILLING_TOTAL_PREMIUM	CDBs of type premium (i.e. 900 calls) created by the reporting EMS
BILLING_TOTAL_RAILWAYS	CDBs of type Railways created by the reporting EMS.
BILLING_TOTAL_RELAY	CDBs of type relay created by the reporting EMS.
BILLING_TOTAL_REPAIR	CDBs of type repair created by the reporting EMS.
BILLING_TOTAL_SPEED_DIAL	CDBs of type speed dial created by the reporting EMS
BILLING_TOTAL_SVC_CODE	CDBs of type Service Code created by the reporting EMS.
BILLING_TOTAL_TANDEM	CDBs of type tandem created by the reporting EMS.
BILLING_TOTAL_TEST	CDBs of type test call created by the reporting EMS - this includes all subtypes of test calls performed by the CA.
BILLING_TOTAL_TEST	Calls of the network loopback test type (based on the CALL-TYPE field in the destination table).
BILLING_TOTAL_TIME	CDBs of type time created by the reporting EMS.
BILLING_TOTAL_TOLL	CDBs of type toll created by the reporting EMS.
BILLING_TOTAL_TOLL_FREE	CDBs of type toll free created by the reporting EMS.
BILLING_TOTAL_TRAFFIC	CDBs of type traffic created by the reporting EMS.
BILLING_TOTAL_TW	CDBs of type time and weather created by the reporting EMS
BILLING_TOTAL_UAN	CDBs of type Universal Access Number created by the reporting EMS.
BILLING_TOTAL_VACANT	CDBs of type vacant created by the reporting EMS.
BILLING_TOTAL_WEATHER	CDBs of type weather created by the reporting EMS.
CALLP_NCT_TEST_FAIL	CDBs of test calls of the “network continuity” type that are abnormally released by the BTS (due to reasons such as resource priority should be given to regular calls).
CALLP_NCT_TEST_SUCC	CDBs of type test calls of type “network continuity” created by the reporting EMS.
CALLP_NLB_TEST_FAIL	CDBs of test calls of the “network loopback” type that are abnormally released by the BTS (due to reasons such as resource priority should be given to regular calls).
CALLP_NLB_TEST_SUCC	CDBs of test calls of the “network loopback” type created by the reporting EMS.
CALLP-LB-TEST-SUCC	CDBs of test calls of the “TDM loop back 108 test” type created by the reporting EMS.
CALLP-TEST-ROUTE-SUCC	CDBs of test calls of the “TDM loop back 108 test” type and the DN dialed out in an outgoing message.

Event Messaging Measurements

Table 6-35 Event Messaging Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
BILLING_EM_ACKED	Event messages acknowledged by the Record Keeping System.
BILLING_EM_LOGGED	Event messages written to disk but not sent to any RKS.
BILLING_EM_RETRANS	Event messages transmitted to an alternate RKS due to a lack of response from a previously tried RKS, excluding retries. The measurement is incremented when an event message is first sent to an alternate RKS. Any retries that occur at the RADIUS stack level (as provisioned in the “radius-profile” table) will not be included in this count.

Dynamic QoS Measurements

Table 6-36 Dynamic QoS Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
DQOS_CONFIG_INFO_ATT MP	Configuration Info message attempts from the reporting CMS to the specified CMTS.
DQOS_CONFIG_INFO_SU CC	Configuration Acknowledgement messages received by the reporting CMS from the specified CMTS.
DQOS_CONFIG_UPDATE	Configuration Update messages received by the reporting CMS from the specified CMTS.
DQOS_GATE_OPEN_RX	DQOS Gate-Open messages received by the reporting BTS.
DQOS_GATE_CLOSE_RX	DQOS Gate-Closed messages received by the reporting BTS.
DQOS_GATE_DELETE_TX	DQOS Gate-Delete messages sent from the reporting BTS.
DQOS_GATE_DELETE_AC K_RX	DQOS Gate-Delete-Ack messages received by the reporting BTS.
DQOS_GATE_DELETE_ER R_RX	DQOS Gate-Delete-Err messages received by the reporting BTS.
DQOS_GATE_SET_TX	DQOS Gate-Set messages sent from the reporting BTS.
DQOS_GATE_SET_ACK_R X	DQOS Gate-Set-Ack messages received by the reporting BTS.
DQOS_GATE_SET_ERR_R X	DQOS Gate-Set-Err messages received by the reporting BTS.
DQOS_GATE_INFO_TX	DQOS Gate-Info messages sent from the reporting BTS.
DQOS_GATE_INFO_ACK_ RX	DQOS Gate-Info-Ack messages received by the reporting BTS.
DQOS_GATE_INFO_ERR_ RX	DQOS Gate-Info-Err messages received by the reporting BTS.

PCMM Measurements

Table 6-37 PCMM Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
PCMM_GATE_INFO_TX	PCMM Gate-Info messages sent from the reporting BTS.
PCMM_GATE_INFO_ACK_RX	PCMM Gate-Info-Ack messages received by the reporting BTS.
PCMM_GATE_INFO_ERR_RX	PCMM Gate-Info-Err messages received by the reporting BTS.
PCMM_GATE_OPEN_RX	PCMM Gate-Open messages received by the reporting BTS.
PCMM_GATE_CLOSED_RX	PCMM Gate-Closed messages received by the reporting BTS.
PCMM_GATE_DELETE_TX	PCMM Gate-Delete messages sent from the reporting BTS.
PCMM_GATE_DELETE_ACK_RX	PCMM Gate-Delete-Ack messages received by the reporting BTS.
PCMM_GATE_DELETE_ERR_RX	PCMM Gate-Delete-Err messages received by the reporting BTS.
PCMM_GATE_SET_TX	PCMM Gate-Set messages sent from the reporting BTS.
PCMM_GATE_REPORT_DELETE_RX	PCMM Gate-Report-Delete messages received by the reporting BTS.

SNMP Protocol Measurements

Table 6-38 SNMP Protocol Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
SNMP_TRAP_TX	SNMP TRAPs generated by the reporting EMS.
SNMP_SET_RX	SNMP SETs received by the reporting EMS.
SNMP_SET_TX	SNMP SETs transmitted by the reporting EMS.
SNMP_GET_RX	SNMP GETs received by the reporting EMS.
SNMP_GET_TX	SNMP GETs transmitted by the reporting EMS.
SNMP_GET_NEXT_RX	SNMP GET NEXTs received by the reporting EMS.
SNMP_GET_NEXT_TX	SNMP GET NEXTs transmitted by the reporting EMS.

Trunk Group Usage Measurements

Table 6-39 Trunk Group Usage Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
TRKGRP_401S_SENT	
TRKGRP_AVERAGE_USAGE	The percent of the trunk group used, between 0-100. This is not incremented for SIP or H323 trunk groups. $\text{TRKGRP_AVERAGE_USAGE} = 100 * (\text{TRKGRP_TOTAL_USAGE} * (100/60)) / (\text{TRKGRP_TOTAL_TRK} * \text{STATISTICS_INTERVAL_MINUTES})$
TRKGRP_EXCHANGE	The CLLI code from the POP table of the reporting trunk group.
TRKGRP_GLARE_COUNT	Attempts by the local and remote switch to use the same CIC on a 2-way trunk group. When glare is enmeasuremented and pegged here, the TRKGRP_OUTGOING_ATTMP measurement is NOT pegged. This is not incremented for SIP or H323 trunk groups.
TRKGRP_ID	The ID number of the reporting trunk group.
TRKGRP_INBOUND_FAIL	Number of failed inbound calls on a SIP trunk. However, calls that fail for Abandon, User busy, or No answer scenarios are not pegged.
TRKGRP_INBOUND_SUCC	Number of established inbound calls on a SIP trunk.
TRKGRP_INCOM_ATTMP	Times the system recognizes an incoming seizure for any trunk within the reporting trunk group: <ul style="list-style-type: none"> • In the case of a SIP trunk, this is incremented for every Invite received on a trunk. • In the case of an H.323 trunk, this is incremented for each Incoming Setup received on a trunk when not associated with a H.323 subscriber.
TRKGRP_INCOM_BUSY_TRK	Summation (CCS based) of trunk circuits within the reporting trunk group marked as busy with terminating calls taken every 100 seconds during the interval. This is not incremented for SIP or H323 trunk groups.
TRKGRP_INCOM_CALL_ABDN	Number of incoming abandoned SIP trunk calls at the reporting call agent. For SIP trunks only.
TRKGRP_INCOM_CALL_NOT_ANS	Number of incoming SIP trunk calls not answered by a called party. For SIP trunks only.
TRKGRP_INCOM_END_USR_BUSY	Number of incoming SIP trunk calls not completed because the called party was busy. For SIP trunks only.
TRKGRP_INCOM_USAGE	Summation (CCS based) of trunk circuits within the reporting trunk group marked as busy or in the maintenance state with terminating calls taken every 100 seconds during the interval. This is mapped to the same value as the TRKGRP_INCOM_BUSY_TRK in this release. This will be re-implemented to account for the MAINT state in a later release.
TRKGRP_LBLK_TRK_USAGE	The CCS value for trunks that are Local Blocked in the reporting trunk group for this reporting period. This is not incremented for SIP or H323 trunk groups.
TRKGRP_NAME	The remote switch CLLI code and trunk group type of the reporting trunk group.
TRKGRP_OOS_TRK_USAGE	The CCS value for OOS trunks in the trunk group for this period. This is not incremented for SIP or H323 trunk groups.

Table 6-39 Trunk Group Usage Measurements (continued)

Measurement	Description (*= rapid count could mean a potential problem in the system)
TRKGRP_OUTBOUND_FAIL	<p>Times the system tries to access any trunk for an outbound call unsuccessfully within the reporting trunk group:</p> <ul style="list-style-type: none"> In the case of a SIP trunk, this is incremented for each outgoing initial Invite request failure over a SIP trunk. For each failure response received over a trunk for any other failure causing failure of the outbound call setup. If an Invite is cancelled, the measurement for failure is not incremented as this includes just an outbound call. This counter does not include the following types of SIP calls: Abandon, User busy, No answer. In the case of an H.323 trunk, this is incremented for each Outgoing Setup sent on a trunk that failed when not associated with a H.323 subscriber.
TRKGRP_OUTBOUND_SUCC	Number of established outbound calls on a SIP trunk.
TRKGRP_OUTG_ATTMP	<p>Times the system tries to access any trunk for an outbound call within the reporting trunk group:</p> <ul style="list-style-type: none"> In the case of a SIP trunk, this is incremented for each received SetupReq request for a SIP trunk. In the case of an H.323 trunk, this is incremented for each Outgoing Setup sent on a trunk when not associated with a H.323 subscriber.
TRKGRP_OUTG_BUSY_TRK	Summation (CCS based) of trunk circuits within the reporting trunk group marked as busy with originating calls taken every 100 seconds during the interval. This is not incremented for SIP or H323 trunk groups.
TRKGRP_OUTG_CALL_ABDN	<p>Number of outgoing abandoned SIP trunk calls at the reporting call agent.</p> <p>For SIP trunks only.</p>
TRKGRP_OUTG_CALL_NOT_ANS	<p>Number of outgoing SIP trunk calls not answered by a called party.</p> <p>For SIP trunks only.</p>
TRKGRP_OUTG_END_USR_BUSY	<p>Number of SIP trunk calls not completed because the called party was busy.</p> <p>For SIP trunks only.</p>
TRKGRP_OUTG_USAGE	<p>Summation (CCS based) of trunk circuits within the reporting trunk group marked as busy or in the maintenance state with originating calls taken every 100 seconds during the interval.</p> <p>This is mapped to the same value as the TRKGRP_OUTG_BUSY_TRK in this release. This will be re-implemented to account for the MAINT state in a later release.</p>
TRKGRP_RBLK_TRK_USAGE	The CCS value for trunks that are Remote Blocked in the reporting trunk group for this reporting period. This is not incremented for SIP or H323 trunk groups.
TRKGRP_REGISTERS_RECVD	
TRKGRP_SIP_3xx_RX	Number of 3xx class (REDIRECTION) messages the reporting call agent received on a SIP trunk group.
TRKGRP_SIP_3xx_TX	Number of 3xx class (REDIRECTION) messages the reporting call agent transmitted on a SIP trunk group.
TRKGRP_SIP_4xx_RX	Number of 4xx class (REQUEST FAILURES) messages the reporting call agent received on a SIP trunk group.

Table 6-39 Trunk Group Usage Measurements (continued)

Measurement	Description (*= rapid count could mean a potential problem in the system)
TRKGRP_SIP_4xx_TX	Number of 4xx class (REQUEST FAILURES) messages the reporting call agent transmitted on a SIP trunk group.
TRKGRP_SIP_5xx_RX	Number of 5xx class (SERVER FAILURES) messages the reporting call agent received on a SIP trunk group.
TRKGRP_SIP_5xx_TX	Number of 5xx class (SERVER FAILURES) messages the reporting call agent transmitted on a SIP trunk group.
TRKGRP_SIP_6xx_RX	Number of 6xx class (GLOBAL FAILURES) messages the reporting call agent received on a SIP trunk group.
TRKGRP_SIP_6xx_TX	Number of 6xx class (GLOBAL FAILURES) messages the reporting call agent transmitted on a SIP trunk group.
TRKGRP_TOTAL_INS_TRK	The CCS value for trunks with a status of INS in the reporting trunk group. This is not incremented for SIP or H323 trunk groups.
TRKGRP_TOTAL_OOS_TRK	A total of the following types of OOS trunks in a trunk group: <ul style="list-style-type: none"> • TRKGRP_UEQP_TRK_USAGE • TRKGRP_LBLK_TRK_USAGE—this includes trunks in the administrative states of MAINT and OOS This is not incremented for SIP or H323 trunk groups.
TRKGRP_TOTAL_OVERFLOW	Outbound trunk call attempt failures due to all trunks within the reporting trunk group being in a busy state. This is not incremented for SIP or H.323 trunk groups.
TRKGRP_TOTAL_TRK	Trunks within the reporting trunk group.
TRKGRP_TOTAL_USAGE	Summation (CCS based) of the incoming usage and the outgoing usage measurements for the reporting trunk group. This is not incremented for SIP or H323 trunk groups.
TRKGRP_TYPE	The signaling type of the reporting trunk group.
TRKGRP_UEQP_TRK_USAGE	The CCS value for trunks that are UEQP, in the reporting trunk group for this reporting period. This is not incremented for SIP or H323 trunk groups.

Announcement Measurements

Table 6-40 *Announcement Measurements*

Measurement	Description (* = rapid count could mean a potential problem in the system)
ANM_SEASONAL_SUSPEND	calls that cause the CA to play the seasonal suspend announcement.
ANM_CKT_UNAVAIL	calls resulting in the playing of the circuit unavailable announcement
ANM_CALL_REJECTED	calls resulting in the playing of the call rejected announcement
ANM_ADDR_INCOMPLETE	calls resulting in the playing of the address incomplete announcement
ANM_FAC_REJECTED	calls resulting in the playing of the facility rejected announcement
ANM_PRE_0_1_ABSENT	calls resulting in the playing of the prefix of 0 or 1 absent announcement
ANM_PRE_0_1_PRESENT	calls resulting in the playing of the prefix 0 or 1 present announcement
ANM_HNPA_ABSENT	calls resulting in the playing of the HNPA area code announcement
ANM_NO_ROUTE_DEST	calls resulting in the playing of the no route to destination announcement
ANM_UNALLOCATED_NUM	calls resulting in the playing of the unallocated directory number announcement
ANM_NUM_CHANGED	calls resulting in the playing of the directory number changed announcement
ANM_DEST_OUTOFORDER	calls resulting in the playing of the destination out of order announcement
ANM_TEMP_DISCONNECT	calls resulting in the playing of the temporarily disconnected announcement
ANM_FEAT_NOT_SUBS	calls resulting in the playing of the feature not subscribed to announcement
ANM_AUTHCODE_INVALID	calls resulting in the playing of the authorization code invalid announcement
ANM_NO_RTE_TRANSITNW	calls resulting in the playing of the no route to specified network announcement
ANM_CAUSE_UNKNOWN	calls resulting in the playing of the cause unknown announcement
ANM_EMG_CKT_UNAVAIL	calls resulting in the playing of the “No Emergency Circuit Available” announcement.

H.323 Protocol Measurements

Table 6-41 *H.323 Protocol Measurements*

Measurement	Description (* = rapid count could mean a potential problem in the system)
H323_SETUP_RX	H323 SETUPs received
H323_SETUP_TX	H323 SETUPs transmitted
H323_SETUP_FAIL	H323 SETUPs that failed. The failure is due to one of the following scenarios: unable to send due to full socket queue, unable to compose message due to invalid socket, or lack of available memory.
H323_CONNECT_RX	H323 CONNECTs received
H323_CONNECT_TX	H323 CONNECTs transmitted
H323_CONNECT_FAIL	H323 CONNECT CONFIRMS that failed. The failure is due to one of the following scenarios: unable to send due to full socket queue, unable to compose message due to invalid socket, or lack of available memory.
H323_ALERT_RX	H323 ALERTs received

Table 6-41 H.323 Protocol Measurements (continued)

Measurement	Description (*= rapid count could mean a potential problem in the system)
H323_ALERT_TX	H323 ALERTs transmitted
H323_ALERT_FAIL	H323 ALERTs that failed. The failure is due to one of the following scenarios: unable to send due to full socket queue, unable to compose message due to invalid socket, or lack of available memory.
H323_IN_PROGRESS_RX	H323 IN PROGRESSs received
H323_IN_PROGRESS_TX	H323 IN PROGRESSs transmitted
H323_IN_PROGRESS_FAIL	H323 IN PROGRESSs that failed. The failure is due to one of the following scenarios: unable to send due to full socket queue, unable to compose message due to invalid socket, or lack of available memory.
H323_CALL_PROCEEDING_RX	H323 CALL PROCEEDINGs received
H323_CALL_PROCEEDING_TX	H323 CALL PROCEEDINGs transmitted
H323_CALL_PROCEEDING_FAIL	H323 CALL PROCEEDINGs that failed. The failure is due to one of the following scenarios: unable to send due to full socket queue, unable to compose message due to invalid socket, or lack of available memory.
H323_RELEASE_COMPLETE_RX	H323 RELEASEs received
H323_RELEASE_COMPLETE_TX	H323 RELEASEs transmitted
H323_RELEASE_COMPLETE_FAIL	H323 RELEASEs that failed. The failure is due to one of the following scenarios: unable to send due to full socket queue, unable to compose message due to invalid socket, or lack of available memory.
H323_REJECT_RX	H323 REJECTs received
H323_REJECT_TX	H323 REJECTs transmitted
H323_REJECT_FAIL	H323 REJECTs that failed. The failure is due to one of the following scenarios: unable to send due to full socket queue, unable to compose message due to invalid socket, or lack of available memory.
H323_INFORMATION_RX	H323 INFOs received
H323_INFORMATION_TX	H323 INFOs transmitted
H323_INFORMATION_FAIL	H323 INFOs that failed. The failure is due to one of the following scenarios: unable to send due to full socket queue, unable to compose message due to invalid socket, or lack of available memory.
H323_USER_INFO_RX	H323 USER INFOs received
H323_USER_INFO_TX	H323 USER INFOs transmitted
H323_USER_INFO_FAIL	H323 USER INFOs that failed. The failure is due to one of the following scenarios: unable to send due to full socket queue, unable to compose message due to invalid socket, or lack of available memory.
H323_FACILITY_RX	H323 FACILITYs received
H323_FACILITY_TX	H323 FACILITYs transmitted
H323_FACILITY_FAIL	H323 FACILITYs that failed. The failure is due to one of the following scenarios: unable to send due to full socket queue, unable to compose message due to invalid socket, or lack of available memory.
H323_NOTIFY_RX	H323 NOTIFYs received

Table 6-41 H.323 Protocol Measurements (continued)

Measurement	Description (*-rapid count could mean a potential problem in the system)
H323_NOTIFY_TX	H323 NOTIFYs transmitted
H323_NOTIFY_FAIL	H323 NOTIFYs that failed. The failure is due to one of the following scenarios: unable to send due to full socket queue, unable to compose message due to invalid socket, or lack of available memory.
H323_PASSTHROU_RX	H323 PASS THROUGHs received
H323_PASSTHROU_TX	H323 PASS THROUGHs transmitted
H323_PASSTHROU_FAIL	H323 PASS THROUGHs that failed. The failure is due to one of the following scenarios: unable to send due to full socket queue, unable to compose message due to invalid socket, or lack of available memory.
H323_GRQ_TX	H323 GRQs transmitted
H323_GRQ_RX	H323 GRQs received
H323_GCF_TX	H323 GCFs transmitted
H323_GCF_RX	H323 GCFs received
H323_GRJ_TX	H323 GRJs received
H323_GRJ_RX	H323 GRJs transmitted
H323_RRQ_TX	H323 RRQs transmitted
H323_RRQ_RX	H323 RRQs received
H323_RCF_TX	H323 RCFs transmitted
H323_RCF_RX	H323 RCFs received
H323_RRJ_TX	H323 RRJs transmitted
H323_RRJ_RX	H323 RRJs received
H323_RIP_TX	H323 RIPs transmitted
H323_RIP_RX	H323 RIPs received
H323_RAI_TX	H323 RAIs transmitted
H323_RAI_RX	H323 RAIs received
H323_RAC_TX	H323 RACs transmitted
H323_RAC_RX	H323 RACs received
H323_ARQ_TX	H323 ARQs transmitted
H323_ARQ_RX	H323 ARQs received
H323_ACF_TX	H323 ACFs transmitted
H323_ACF_RX	H323 ACFs received
H323_ARJ_TX	H323 ARJs transmitted
H323_ARJ_RX	H323 ARJs received
H323_URQ_RX	H323 URQs received
H323_URQ_TX	H323 URQs transmitted
H323_UCF_RX	H323 UCFs received

Table 6-41 H.323 Protocol Measurements (continued)

Measurement	Description (*=rapid count could mean a potential problem in the system)
H323_UCF_TX	H323 UCFs transmitted
H323_URJ_RX	H323 URJs received
H323_URJ_TX	H323 URJs transmitted
H323_BRQ_RX	H323 BRQs received
H323_BRQ_TX	H323 BRQs transmitted
H323_BCF_RX	H323 BCFs received
H323_BCF_TX	H323 BCFs transmitted
H323_BRJ_RX	H323 BRJs received
H323_BRJ_TX	H323 BRJs transmitted
H323_DRQ_RX	H323 DRQs received
H323_DRQ_TX	H323 DRQs transmitted
H323_DCF_RX	H323 DCFs received
H323_DCF_TX	H323 DCFs transmitted
H323_DRJ_RX	H323 DRJs received
H323_DRJ_TX	H323 DRJs transmitted
H323_OC_SETUP_REJECTED	incoming H323 SETUP messages received and rejected due to overload condition.

Call Tools Measurements

Table 6-42 Call Tools Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
TOOLS_TRUNK_TRANS_ATTMP	Times the TVT process on the reporting CA received a request to perform a trunk based translation.
TOOLS_TRUNK_TRANS_SUCC	Times the TVT process on the reporting CA received a request to perform a trunk based translation and completed it successfully.
TOOLS_LINE_TRANS_ATTMP	Times the TVT process on the reporting CA received a request to perform a line based translation.
TOOLS_LINE_TRANS_SUCC	Times the TVT process on the reporting CA received a request to perform a line based translation and completed it successfully.

AIN Tools Measurements

Table 6-43 AIN Tools Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
TOOLS_LNP_QUERY_ATTMP	Times the reporting FS received a request to perform an LNP query from the QVT tool.
TOOLS_LNP_QUERY_SUCC	Times the reporting FS received a request to perform an LNP query from the QVT tool and completed it successfully.
TOOLS_TOLLFREE_QUERY_ATTMP	Times the reporting FS received a request to perform a Toll Free query from the QVT tool.
TOOLS_TOLLFREE_QUERY_SUCC	Times the reporting FS received a request to perform a Toll Free query from the QVT tool and completed it successfully.

PCT Tools Measurements

Table 6-44 PCT Tools Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
TOOLS_LIDB_QUERY_ATTMP	Times the reporting FS received a request to perform an LIDB query from the QVT tool.
TOOLS_LIDB_QUERY_SUCC	Times the reporting FS received a request to perform an LIDB query from the QVT tool and completed it successfully.

CPU Usage Measurements

Table 6-45 CPU Usage Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
CPU_USAGE_CPU_ID	The id of CPU.
CPU_USAGE_IDLE	The percent of CPU in idle in the last sample interval (100 sec CCS based).
CPU_USAGE_USER	The percent of CPU in idle in the last sample interval (100 sec CCS based).
CPU_USAGE_SYSTEM	The percent of CPU used by system in the last sample interval (100 sec CCS based).
CPU_USAGE_IOWAIT	The percent of CPU used by iowait in the last sample interval (100 sec CCS based).

Memory Usage Measurements

Table 6-46 Memory Usage Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
TOTAL_MEMORY	MBs in overall memory.
FREE_MEMORY	MBs in free memory.
TOTAL_SWAP	MBs in total swap.
FREE_SWAP	MBs in free swap.

Network I/O Usage Measurements

Table 6-47 Network I/O Usage Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
NETWORK_DEVICE_NAME	The ID name of network device.
IN_PACKETS_PER_SECOND	input packets/sec (100 sec CCS based).
IN_BYTES_PER_SECOND	input bytes/sec (100 sec CCS based).
OUT_PACKETS_PER_SECOND	output packets/sec (100 sec CCS based).
OUT_BYTES_PER_SECOND	output bytes/sec (100 sec CCS based)

Disk Usage Measurements

Table 6-48 Disk Usage Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
DISK_USAGE_PARTITION_NAME	The ID name of disk partition. Retrieved from /etc/mnttab.

Table 6-48 Disk Usage Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
DISK_USAGE_TOTAL_AVAILABLE	blocks on file system.
DISK_USAGE_TOTAL_USED	used blocks.

System Load Usage Measurements

Table 6-49 System Load Usage Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
SYSTEM_LOAD_AVERAGE_1MIN	Decaying averages over the last 1 minute of the sum of user + system times +runqueue wait times. The decaying averages are updated once per second. In other words, it is effectively the average number of running plus runnable (waiting on a cpu run queue) threads over the sample period. (100 sec CCS based)
SYSTEM_LOAD_AVERAGE_5MIN	Decaying averages over the last 5 minutes of the sum of user + system times +runqueue wait times. The decaying averages are updated once per second. In other words, it is effectively the average number of running plus runnable (waiting on a cpu run queue) threads over the sample period. (100 sec CCS based)
SYSTEM_LOAD_AVERAGE_15MIN	Decaying averages over the last 15 minutes of the sum of user + system times +runqueue wait times. The decaying averages are updated once per second. In other words, it is effectively the average number of running plus runnable (waiting on a cpu run queue) threads over the sample period. (100 sec CCS based)

Disk I/O Usage Measurements

Table 6-50 Disk I/O Usage Measurements

Measurement	Description (*= rapid count could mean a potential problem in the system)
DISK_IO_DEVICE_NAME	The ID name of disk.
DISK_IO_BYTES_READ	The average value of read bytes during the last several sample intervals, in bytes/sec (100 sec CCS based).
DISK_IO_BYTES_WRITTEN	The average value of write bytes during the last several sample intervals, in bytes/sec (100 sec CCS based).
DISK_IO_READ_OPERATION	The average value of read operation during the last several sample intervals, per second (100 sec CCS based).
DISK_IO_WRITE_OPERATION	The average value of write operation during the last several sample intervals, per second (100 sec CCS based).

Diameter Message Counters

The BTS 10200 keeps counters for both base Diameter messages and Sh Diameter messages. You can reset (clear) measurement counters for both types.

Table 6-51 lists the measurement counters related to Diameter messages:

Table 6-51 Diameter Message Measurement Counters

Measurement	Description (*= rapid count could mean a potential problem in the system)
DI_TX_DEVICE_WATCHDOG_REQ	Diameter Device-Watchdog-Request transmitted
DI_RX_DEVICE_WATCHDOG_REQ	Diameter Device-Watchdog-Request received
DI_RX_DEVICE_WATCHDOG_ANS	Diameter Device-Watchdog-Answer received
DI_TX_DEVICE_WATCHDOG_ANS	Diameter Device-Watchdog-Answer transmitted
DI_RX_CAPABILITY_EXCHANGE_REQ	Diameter Capability-Exchange-Request received
DI_TX_CAPABILITY_EXCHANGE_REQ	Diameter Capability-Exchange-Request transmitted
DI_RX_CAPABILITY_EXCHANGE_ANS	Diameter Capability-Exchange-Answer received
DI_TX_CAPABILITY_EXCHANGE_ANS	Diameter Capability-Exchange-Answer transmitted
DI_RX_DISCONNECT_PEER_REQ	Diameter Disconnect Peer Request received
DI_RX_DISCONNECT_PEER_ANS	Diameter Disconnect Peer Answer transmitted
DI_RX_SESSION_TERMINATION_REQ	Diameter Session-Termination-Request received
DI_RX_SESSION_TERMINATION_ANS	Diameter Session-Termination-Answer received
DI_RX_ABORT_SESSION_REQ	Diameter Session-Termination-Answer transmitted
DI_TX_ABORT_SESSION_REQ	Diameter Abort-Session-Request received
DI_RX_ABORT_SESSION_ANS	Diameter Abort-Session-Answer received
DI_TX_ABORT_SESSION_ANS	Diameter Abort-Session-Answer transmitted
DI_USER_DATA_REQ	Diameter User-Data-Request
DI_USER_DATA_ANS	Diameter User-Data-Answer
DI_PROFILE_UPDATE_REQ	Diameter Profile-Update-Request
DI_PROFILE_UPDATE_ANS	Diameter Profile-Update-Answer
DI_SUBSCRIBER_NOTIFICATION_REQ	Diameter Subscriber-Notification-Request
DI_SUBSCRIBER_NOTIFICATION_ANS	Diameter Subscriber-Notification-Answer
DI_PROFILE_NOTIFICATION_REQ	Diameter Profile-Notification-Request
DI_PROFILE_NOTIFICATION_ANS	Diameter Profile-Notification-Answer
DI_SH_ERROR_MSG	Diameter Sh Interface error message

Single Number Reach Counters

Table 6-52 lists Single Number Reach counters. These counters are kept on a BTS 10200 system-wide basis rather than for each subscriber.

Use the **report measurement-pots-local-summary** command to generate a report of the counters.

Because Single Number Reach (follow-me) uses CFU and VM service logic, the invocation of follow-me shows in CFU and VM counters.

Table 6-52 *Single Number Reach Feature Counters*

Counter Label	Counter Context
POTS_SNR_FIND_ME_ATTMP	Number of find me attempts (in FS Table).
POTS_SNR_FIND_ME_ANSWERED	Number of find me calls answered (in FS Table).
POTS_SNR_FIND_ME_FAIL	Number of find me calls failed due to the system failure (in FS Table).
POTS_SNR_FIND_ME_FORK_INVOKE	Number of forked calls invoked (in FS Table).
POTS_SNR_IVR_REDIRECT_VM	Number of find me calls redirected to voice mail (in FS Table).
POTS_SNR_IVR_ACCESS	Number of times Single Number Reach IVR system accessed.
POTS_SNR_IVR_INVALID_UID_ATTMP	Number of IVR invalid User ID attempts (in FS Table).
POTS_SNR_IVR_INVALID_PIN_ATTMP	Number of IVR invalid PIN attempts (in FS Table).

