

SS7 Performance Measurements

USER GUIDE

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1 Introduction

This document describes the SS7 performance measurements.

For description of PM concepts and operations, i.e. how to work with PM jobs, refer to the [Performance Management](#).





2 Performance Measurement Groups

Page 3 lists the SS7 performance measurement groups.

Table 1 PmGroups

pmGroupId	Properties
Ss7TcapIetc	<ul style="list-style-type: none"> • description: Measurements at TCAP ITU/ETSI/TTC/Chinese (IETC) level. The measured object identifier is "Ss7=1,TcapIetc=1". • pmGroupVersion: 1
Ss7TcapAnsi	<ul style="list-style-type: none"> • description: Measurements at TCAP ANSI level. The measured object identifier is "Ss7=1,TcapAnsi=1". • pmGroupVersion: 1
Ss7Sccp	<ul style="list-style-type: none"> • description: Measurements at SCCP level. The measured object identifier is "Ss7=1,Sccp=1". • pmGroupVersion: 1
Ss7M3uaAssociation	<ul style="list-style-type: none"> • description: Measurements at M3UA association level. The measured object identifier is "Ss7=1,M3ua=1,LocalSp=<A>,RemoteSp=", where <A> and are integers. • pmGroupVersion: 2

The update frequency is 60 seconds for all measurements.





3 Measurements of Ss7TcapIetc PM Group

Page 5 provides measurement types of Ss7TcapIetc PM group.

Table 2 Ss7TcapIetc Measurements

measurementTypeId	Properties
ss7TcapIetcTransactionsPerSecond	<ul style="list-style-type: none">• description: Number of TCAP IETC transactions per second. A transaction is one received and one sent TCAP message.• collectionMethod: GAUGE• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Transactions per second (TPS)
ss7TcapIetcOutComponents	<ul style="list-style-type: none">• description: Number of sent TCAP IETC components.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of components sent
ss7TcapIetcInComponents	<ul style="list-style-type: none">• description: Number of received TCAP IETC components.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of components received



Table 2 Ss7TcapIetc Measurements

ss7TcapIetcAbortedDialoguesLocally	<ul style="list-style-type: none">• description: Number of aborted TCAP IETC dialogues by the local side.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of Aborted dialogues
ss7TcapIetcAbortedDialoguesRemotely	<ul style="list-style-type: none">• description: Number of aborted TCAP IETC dialogues by the remote side.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of Aborted dialogues



4 Measurements of Ss7TcapAnsi PM Group

Page 7 provides measurement types of Ss7TcapAnsi PM group.

Table 3 Ss7TcapAnsi Measurements

measurementTypeId	Properties
ss7TcapAnsiTransactionsPerSecond	<ul style="list-style-type: none"> • description: Number of TCAP ANSI transactions per second. A transaction is one received and one sent TCAP message. • collectionMethod: GAUGE • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Transactions per second (TPS)
ss7TcapAnsiOutComponents	<ul style="list-style-type: none"> • description: Number of sent TCAP ANSI components. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of components sent
ss7TcapAnsiInComponents	<ul style="list-style-type: none"> • description: Number of received TCAP ANSI components. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of components received



Table 3 Ss7TcapAnsi Measurements

ss7TcapAnsiAbortedDialoguesLocally	<ul style="list-style-type: none">• description: Number of aborted TCAP ANSI dialogues by the local side.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of Aborted dialogues
ss7TcapAnsiAbortedDialoguesRemotely	<ul style="list-style-type: none">• description: Number of aborted TCAP ANSI dialogues by the remote side.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of Aborted dialogues



5 Measurements of Ss7Sccp PM Group

Page 9 provides measurement types of Ss7Sccp PM group.

Table 4 Ss7Sccp Measurements

measurementTypeId	Properties
ss7SccpAttemptsToBindWithWrongSsn	<ul style="list-style-type: none">• description: Number of unsuccessful attempts to bind with a not configured or faulty configured Sub System Number (SSN).• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of unsuccessful attempts





6 Measurements of Ss7M3uaAssociation PM Group

Page 11 provides measurement types of Ss7M3uaAssociation PM group.

Table 5 Ss7M3uaAssociation Measurements

measurementTypeId	Properties
ss7M3uaAssociationInDatas	<ul style="list-style-type: none"> • description: Number of received DATA messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationOutDatas	<ul style="list-style-type: none"> • description: Number of sent DATA messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationInKBytes	<ul style="list-style-type: none"> • description: Amount of received data on M3UA association in KBytes. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: KByte

Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationOutKBytes	<ul style="list-style-type: none"> • description: Amount of sent data on M3UA association in KBytes. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: KByte
ss7M3uaAssociationLostDataInCongestion	<ul style="list-style-type: none"> • description: Number of lost DATA messages on M3UA association due to congestion. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationNotActiveTime	<ul style="list-style-type: none"> • description: Duration in seconds M3UA association has spent in a state other than ACTIVE. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Seconds



Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationCongestionTime	<ul style="list-style-type: none"> • description: Duration in seconds M3UA association has spent in congestion. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Seconds
ss7M3uaAssociationInErrors	<ul style="list-style-type: none"> • description: Number of received ERROR messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationOutErrors	<ul style="list-style-type: none"> • description: Number of sent ERROR messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages



Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationDiscardedDatas	<ul style="list-style-type: none">• description: Number of discarded DATA messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages
ss7M3uaAssociationInNotifies	<ul style="list-style-type: none">• description: Number of received NOTIFY messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages
ss7M3uaAssociationInScons	<ul style="list-style-type: none">• description: Number of received Signaling Congestion (SCON) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages



Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationInCongestionInds	<ul style="list-style-type: none"> • description: Number of received congestion indications from SCTP on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of occurrences
ss7M3uaAssociationNotActive	<ul style="list-style-type: none"> • description: Number of times M3UA association became not active. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Seconds
ss7M3uaAssociationInAspacs	<ul style="list-style-type: none"> • description: Number of received Application Server Process (ASP) Active (ASPAC) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages

Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationOutAspacs	<ul style="list-style-type: none"> • description: Number of sent Application Server Process (ASP) Active (ASPAC) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationInAspacAcks	<ul style="list-style-type: none"> • description: Number of received Application Server Process (ASP) Active Acknowledgements (ASPAC ACK) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationOutAspacAcks	<ul style="list-style-type: none"> • description: Number of sent Application Server Process (ASP) Active Acknowledgements (ASPAC ACK) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages



Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationInDauds	<ul style="list-style-type: none"> • description: Number of received DAUD messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationOutDauds	<ul style="list-style-type: none"> • description: Number of sent DAUD messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationInDavas	<ul style="list-style-type: none"> • description: Number of received DAVA messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages



Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationOutDavas	<ul style="list-style-type: none">• description: Number of sent DAVA messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages
ss7M3uaAssociationInDunas	<ul style="list-style-type: none">• description: Number of received DUNA messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages
ss7M3uaAssociationOutDunas	<ul style="list-style-type: none">• description: Number of sent DUNA messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages



Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationInDupus	<ul style="list-style-type: none"> • description: Number of received DUPU messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationOutDupus	<ul style="list-style-type: none"> • description: Number of sent DUPU messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationInAspdnAcks	<ul style="list-style-type: none"> • description: Number of received Application Server Process (ASP) Down Acknowledgement (ASPDN ACK) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages



Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationOutAspdnAcks	<ul style="list-style-type: none">• description: Number of sent Application Server Process (ASP) Down Acknowledgment (ASPDN ACK) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages
ss7M3uaAssociationInAspdns	<ul style="list-style-type: none">• description: Number of received Application Server Process (ASP) Down (ASPDN) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages
ss7M3uaAssociationOutAspdns	<ul style="list-style-type: none">• description: Number of sent Application Server Process (ASP) Down (ASPDN) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages



Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationInAspiaAcks	<ul style="list-style-type: none"> • description: Number of received Application Server Process (ASP) Inactive Acknowledgements (ASPIA ACK) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
s7M3uaAssociationOutAspiaAcks	<ul style="list-style-type: none"> • description: Number of sent Application Server Process (ASP) Inactive Acknowledgements (ASPIA ACK) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationInAspias	<ul style="list-style-type: none"> • description: Number of received Application Server Process (ASP) Inactive (ASPIA) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages

Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationOutAspias	<ul style="list-style-type: none"> • description: Number of sent Application Server Process (ASP) Inactive (ASPIA) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationInAspupAcks	<ul style="list-style-type: none"> • description: Number of received Application Server Process (ASP) Up Acknowledgements (ASPUP ACK) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationOutAspupAcks	<ul style="list-style-type: none"> • description: Number of sent Application Server Process (ASP) Up Acknowledgements (ASPUP ACK) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages



Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationInAspups	<ul style="list-style-type: none"> • description: Number of received Application Server Process (ASP) Up (ASPUP) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationOutAspups	<ul style="list-style-type: none"> • description: Number of sent Application Server Process (ASP) Up (ASPUP) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationInAspsms	<ul style="list-style-type: none"> • description: Number of received Application Server Process (ASP) State Maintenance (ASPSM) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages



Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationOutAspsms	<ul style="list-style-type: none">• description: Number of sent Application Server Process (ASP) State Maintenance (ASPSM) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages
ss7M3uaAssociationInAsptms	<ul style="list-style-type: none">• description: Number of received Application Server Process (ASP) Traffic Maintenance (ASPTM) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages
ss7M3uaAssociationOutAsptms	<ul style="list-style-type: none">• description: Number of sent Application Server Process (ASP) Traffic Maintenance (ASPTM) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages



Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationInNonDats	<ul style="list-style-type: none"> • description: Number of received non-DATA messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationOutNonDats	<ul style="list-style-type: none"> • description: Number of sent non-DATA messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages
ss7M3uaAssociationInMgmts	<ul style="list-style-type: none"> • description: Number of received Management (MGMT) messages (ERROR and NOTIFY) on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair. • collectionMethod: CC • aggregation: SUM • measurementStatus: USED • resetAtGranPeriod: true • measurementResult: Number of messages



Table 5 Ss7M3uaAssociation Measurements

ss7M3uaAssociationOutMgmts	<ul style="list-style-type: none">• description: Number of sent Management (MGMT) messages (ERROR and NOTIFY) on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages
ss7M3uaAssociationInSsnms	<ul style="list-style-type: none">• description: Number of received SS7 Signalling Network Management (SSNM) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages
ss7M3uaAssociationOutSsnms	<ul style="list-style-type: none">• description: Number of sent SS7 Signalling Network Management (SSNM) messages on M3UA association. There is one measurement per association identified by the Local Sp, Remote Sp value pair.• collectionMethod: CC• aggregation: SUM• measurementStatus: USED• resetAtGranPeriod: true• measurementResult: Number of messages