

# MTAS Performance Measurements

## MTAS

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### USER GUIDE

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# 1 Introduction

This document describes the Performance Measurement (PM) parameters available in the MTAS.

## **Scope**

This document covers the following topics:

- Performance measurement groups
- Performance measurements

## **Target Groups**

This document is intended for personnel involved in initiation of performance monitoring of the MTAS, designing performance, reports, and evaluating performance data of the MTAS.

## 1.1 Prerequisites

It is assumed that the user of this document is familiar with the Operation and Maintenance (O&M) area, in general.





## 2 Overview of Performance Management

This section describes the MTAS performance measurements. MTAS reports performance measurement information using Core MW Performance Management.

For more information on Performance Management, refer to the *Performance Management*.

### 2.1 Performance Measurement Name Convention

Recommended format for performance measurement name is structured in the three parts described and exemplified in Table 1.

*Table 1 Performance Measurement Name Structure*

	<b>Node Instance</b>	<b>Object Class</b>	<b>Counter Name</b>
<b>Example:</b>	MTAS	Mmt	InitOrigSessOk

The QoS counter names guide the operator where to take possible actions, as follows:

- Counter names including “Init” and “Ok” – hold the number of sessions that have been successfully set up.
- Counter names including “Init” and “NOkI” – hold the number of sessions that have failed during setup, and indicate that actions are needed to correct or improve the operation of the MTAS (internal).
- Counter names including “Init” and “NOkE” – hold the number of sessions that have failed during setup, and point out the rest of the IMS network (external).
- Counter names including “Term” and “NOkI” – hold the number of sessions that have been dropped, and indicate that actions are needed to correct or improve the dropped operation of the MTAS (internal).
- Counter names including “Term” and “NOkE” – hold the number of sessions that have been dropped, and point out the rest of the IMS network (external).
- Counter names including “Term” and “Ok” – hold the number of sessions that were successfully set up, minus the number of sessions that were dropped:  
 “Term” and “Ok” = “Init” and “Ok” - “Term” and “NOkI” - “Term” and “NOkE”



## 2.2 MTAS Performance Measurement File Location

The default file location for the performance measurement XML files is:  
`/cluster/storage/no-backup/nbi_root/PerformanceManagement  
ReportFiles/`

The report files has a default preventive maintenance policy in which the maximum number of PM report files is 1000.

If the preventive maintenance limit is exceeded, the oldest files is automatically deleted.

## 2.3 Measurement Description Template

Each parameter listed in this document is described as follows:

- **Measurement Name**  
This contains the name of measurement
- **Description**  
This contains a short description of the measurement.
- **Condition**  
This contains the condition which causes the measurement result data to be updated.
- **Collection Method**  
This contains the form in which this measurement data is obtained.  
The Collection Method can be on the following  
`Cumulative Counter (CC)` and `GAUGE`
- **Aggregation**  
The Aggregation could be one of the following.  
`SUM`, `AVG`, `LAST UPDATE`, `MIN`, and `MAX`.
- **Measurement Result (Result Type, Output Unit)**  
This contains a description of expected result values, the result type (for example, integer or float value), and output unit (for example, seconds, number of messages).
- **cpi Heading**  
This specifies the measured object class name.





- measurement Status

Measurement status, possible values are PRELIMINARY, USED, OBSOLETE and DEPRECATED.

- KeyName

This contains names of the keys related to this measurement.

- Multiplicity

This represents the size of the array if counter is an array of values

- fmAlarmType

Reference to a possible alarm associated with the measurement, in case the measurement generates a threshold alarm.

## 2.4 MTAS Performance Measurements

The MTAS provides measurements supporting the following features:

- A Measurement Job is a group of performance measurements, or counters that are output in a report. A default set of Measurement Jobs is provided as PDB configuration. A default set of Measurement Jobs is provided as PDB Reference Configuration. The Measurement Readers are described in the context of them belonging to these Measurement Jobs. The grouping of Measurement Jobs and Measurement Readers is flexible using PDB.

For information on configuring PM Jobs using PDB refer to *Preparing MTAS Configuration Files Using Parameter Database*.

- Monitor Quality of Service (QoS). QoS is available on both node and service level. As long as the QoS on node level is within the wanted target, there is no need to analyze the data on service level.
- Support Fault Investigation (drill down). Fault investigation is supported by counters on node level, function level, and protocol level. The counter names relate to the Managed Object (MO).

## 2.5 Configure Threshold based Alarms

Threshold-based Alarms can be configured for the measurement types that have threshold alarm support by defining Threshold Monitoring Jobs.

For information on how to create Threshold Monitoring Jobs refer to *Create Threshold Monitoring Job*.



## 2.6 Performance Management Report Files

Performance measurement results are reported in XML files, which must be transferred out of the MTAS node using the secure File Transfer mechanism.

For more information on File Transfer, refer to *Fetch File in Logical File System*.

For information of Performance Management Report File format, refer to *Performance Management Report File Format*.

## 2.7 Platform Specific Measurement Jobs and Counters

This section describes the Platform Performance measurements with links. For information about the measurements, refer to *Managed Object Model (MOM)*.

- *Diameter Measurements*
- *DBS Measurements*
- *LDE Measurements*
- *LEM Measurements*
- *LPM Measurements*

## 2.8 Threshold Monitoring Job for MtasChargingBufferedEventsCount

The threshold Monitoring Job for PM measurement Counter `MtasChargingBufferedEventsCount` is included in the PDB Reference with the values detailed in Table 2.

For more information on how to create Threshold Monitor Job refer *Create Threshold Monitoring Job*

*Table 2 Threshold Job Parameters*

Parameter Name	Parameter Value
<code>granularityPeriod</code>	FIVE_MIN
<code>thresholdRateOfVariation</code>	PER_GP
<code>thresholdHigh</code>	10000
<code>thresholdLow</code>	8000
<code>thresholdDirection</code>	INCREASING
<code>thresholdSeveritythresholdSeverity</code>	MAJOR



## 3 MTAS Measurement Jobs and Counters

In this section, the performance measurements defined in the MTAS are described in detail.

### **Node-Level Measurements**

- Measurement Job = MtasFunction
- Measurement Job = MtasLicenses
- Measurement Job = MtasQos
- Measurement Job = MtasTraf

### **Service-Specific Measurements**

- Measurement Job = Mtas3pty
- Measurement Job = MtasAbDial
- Measurement Job = MtasAoc
- Measurement Job = MtasAp
- Measurement Job = MtasAslw
- Measurement Job = MtasCat
- Measurement Job = MtasCc
- Measurement Job = MtasCDiv
- Measurement Job = MtasComBarring
- Measurement Job = MtasConf
- Measurement Job = MtasCr
- Measurement Job = MtasCpc
- Measurement Job = MtasCps
- Measurement Job = MtasCs
- Measurement Job = MtasCw
- Measurement Job = MtasDnm
- Measurement Job = MtasDtm
- Measurement Job = MtasEct



- Measurement Job = MtasFcd
- Measurement Job = MtasFsfs
- Measurement Job = MtasGCac
- Measurement Job = MtasHold
- Measurement Job = MtasHotline
- Measurement Job = MtasMediaResourceSite
- Measurement Job = MtasMmt
- Measurement Job = MtasNa
- Measurement Job = MtasNp
- Measurement Job = MtasIdPres
- Measurement Job = MtasPx
- Measurement Job = MtasSds
- Measurement Job = MtasSnd
- Measurement Job = MtasSSCodes
- Measurement Job = MtasSrvcc
- Measurement Job = MtasStCac
- Measurement Job = MtasStIdPres
- Measurement Job = MtasStod
- Measurement Job = MtasTads
- Measurement Job = MtasUCac
- Measurement Job = MtasVideoFB
- Measurement Job = MtasWsNameDb

#### **Function-Specific Measurements**

- Measurement Job = MtasCharging
- Measurement Job = MtasEtxMrfc
- Measurement Job = MtasGa
- Measurement Job = MtasMrfc
- Measurement Job = MtasNumNorm



- Measurement Job = MtasReBalancing
- Measurement Job = MtasSubsData
- Measurement Job = MtasSubsDataMgmt
- Measurement Job = MtasShInterface
- Measurement Job = MtasXdms

**Interface-Specific Measurements**

- Measurement Job = MtasCsi
- Measurement Job = MtasH248
- Measurement Job = MtasScc
- Measurement Job = MtasSip





## 4 MTAS Measurement Groups

This section lists the performance measurement groups with links. For information about the measurements, refer to *Managed Object Model (MOM)*.

- [\*Mtas3pty\*](#)
- [\*MtasAbDial\*](#)
- [\*MtasAoc\*](#)
- [\*MtasAp\*](#)
- [\*MtasAslw\*](#)
- [\*MtasCDiv\*](#)
- [\*MtasCac\*](#)
- [\*MtasCat\*](#)
- [\*MtasCc\*](#)
- [\*MtasCharging\*](#)
- [\*MtasComBarring\*](#)
- [\*MtasComDetails\*](#)
- [\*MtasConf\*](#)
- [\*MtasCpc\*](#)
- [\*MtasCps\*](#)
- [\*MtasCr\*](#)
- [\*MtasCs\*](#)
- [\*MtasCsi\*](#)
- [\*MtasCsiMap\*](#)
- [\*MtasCug\*](#)
- [\*MtasCw\*](#)
- [\*MtasDen\*](#)
- [\*MtasDnm\*](#)
- [\*MtasDr\*](#)



- *MtasDtm*
- *MtasEct*
- *MtasExtMrfc*
- *MtasFcd*
- *MtasFsfs*
- *MtasFunction*
- *MtasGa*
- *MtasGenSSCodes*
- *MtasH248*
- *MtasHold*
- *MtasHotline*
- *MtasIdPres*
- *MtasLicenses*
- *MtasMcid*
- *MtasMediaPolicy*
- *MtasMediaResourceSite*
- *MtasMmt*
- *MtasMmtLongDurationCall*
- *MtasMrfc*
- *MtasNa*
- *MtasNp*
- *MtasNumNorm*
- *MtasOct*
- *MtasPrIw*
- *MtasPriorityCall*
- *MtasPriorityCallGetsService*
- *MtasPx*
- *MtasQos*





- *MtasReBalancing*
- *MtasRbt*
- *MtasSSCodes*
- *MtasScc*
- *MtasSds*
- *MtasShInterface*
- *MtasSip*
- *MtasSipOc*
- *MtasSnd*
- *MtasSrvcc*
- *MtasSt*
- *MtasStCDiv*
- *MtasStCac*
- *MtasStComBarring*
- *MtasStCps*
- *MtasStCs*
- *MtasStIdPres*
- *MtasStMcid*
- *MtasStod*
- *MtasStodCallPull*
- *MtasSubsData*
- *MtasSubsDataMgmt*
- *MtasTads*
- *MtasTrace*
- *MtasTraf*
- *MtasUCRouting*
- *MtasVideoFB*
- *MtasWsNameDb*



- *MtasXdms*