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Objet / Subject : RPM OMC 5.0 Huawei BSS – Technical description	

This document describes all technical points related to " RPM OMC 5.0 – Huawei BSS "

- General RPM OMC overview
- Customer Requirements
- PM File Collection
- RPM OMC description
- RPM OMC configuration (Connections & Process)

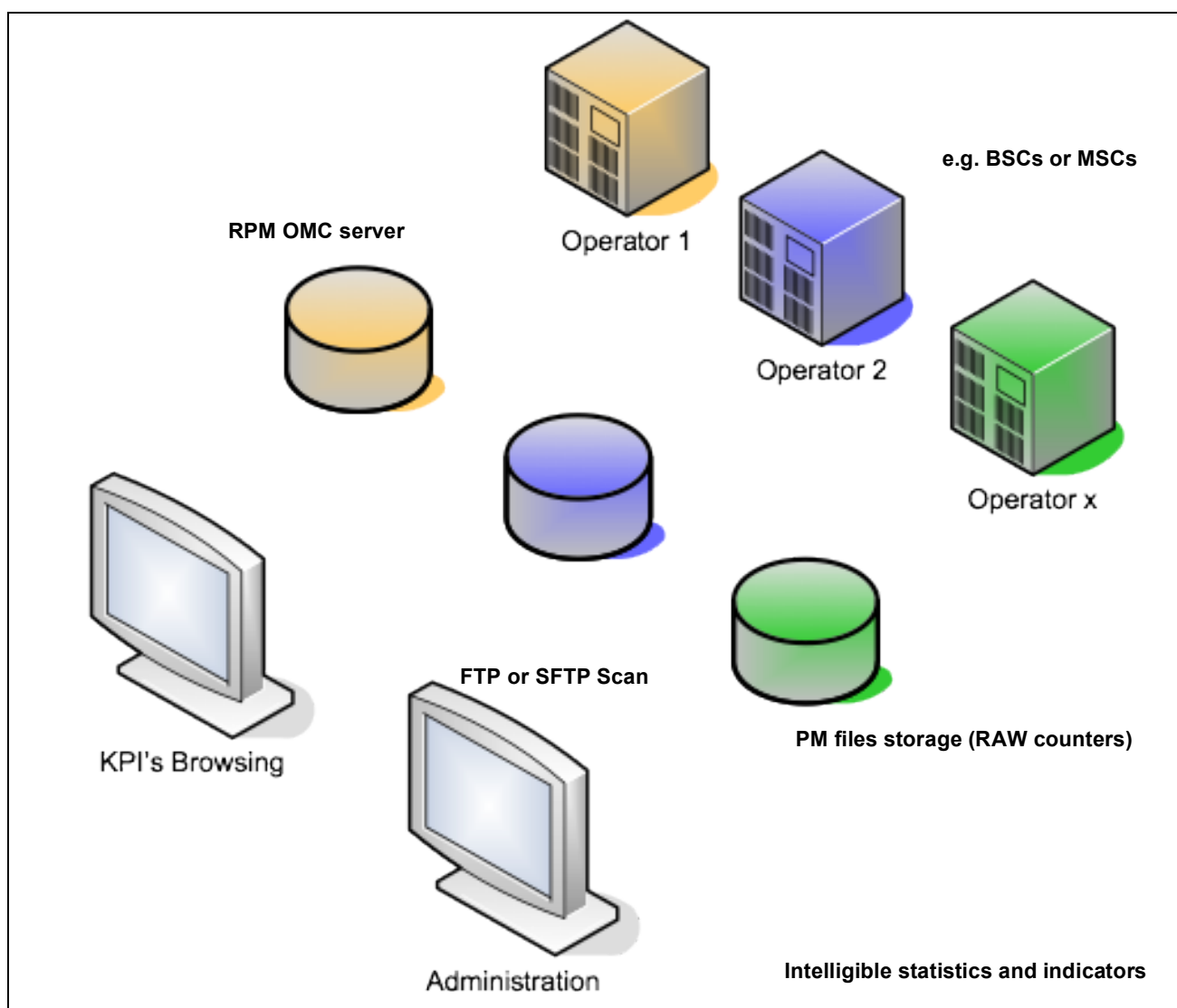
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20150625	25/06/2015	PNI	Equipment and integration
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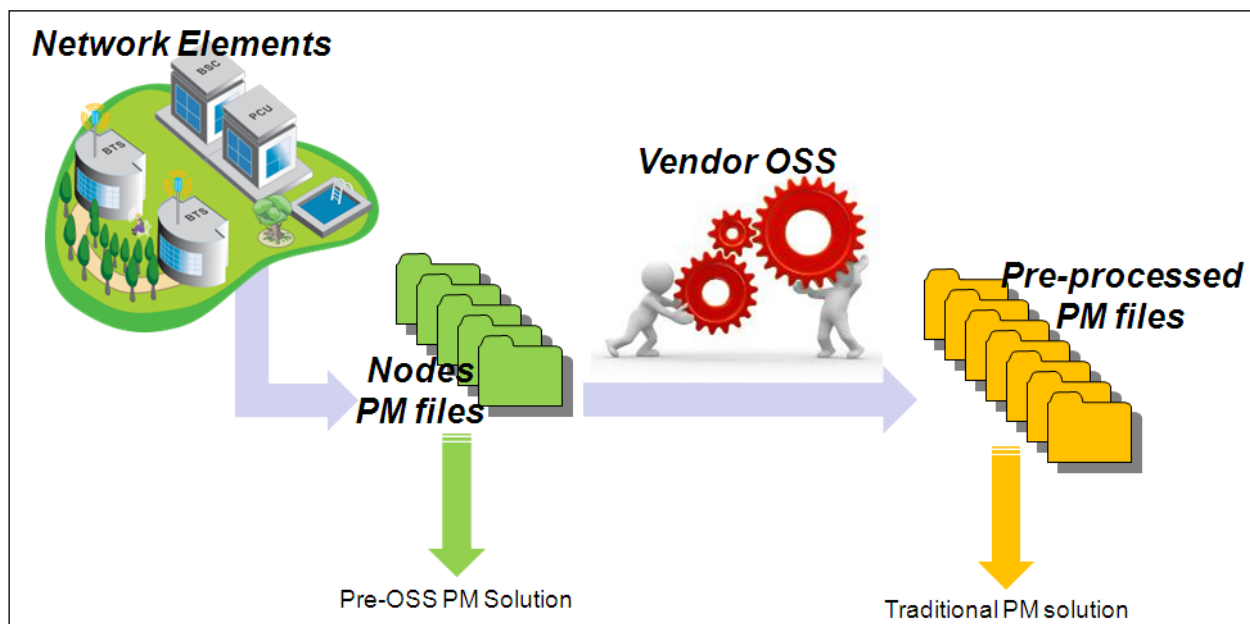
1. RPM OMC OVERVIEW

Product Release	RPM OMC 5.0 – Huawei BSS
Stat Availability	PM files
Collect mode	Default FTP (Scan directory)
PM Files format	Csv format
Output PM File Mode	Traditional post -OSS
Data base Type	Sun Solaris



RPM OMC Architecture

The RPM OMC application integrate on PM source files coming from network Nodes and centralized on OSS server. The connection on OSS Database could be different depending on the vendor and customer choice (FTP/SFTP/Direct Access)



Output PM Files Mode

The Huawei BSS RPM OMC application is post-oss compatible.

Main Remarks about RPM OMC 5.0 – Huawei_BSS

Output PM Files Mode	Post-OSS PM solution
OSS system	Sun Solaris
PM Files Location	Description available in chapter PM File Location
PM Files format	csv files
Type of connexion	FTP
Definition of connexion	1 connexion per OMC(M2000 server) should be defined in Setup connexion

All Huawei source files are generated by the **M2000** server via the **l manager software**..



2. CUSTOMER REQUIREMENTS

This chapter describes how all information you need before going on site.

Comment:

On Huawei OMC servers, PM files are always generated under

“**/export/home/omc/var/fileint/pm/pm_export_”date**” directory. This should be confirmed by the Customer.

2.1. SPECIFIC CONFIGURATION ON OMC SERVER

Depending on each vendor, a specific configuration on OMC side can be needed in order to generate PM files in a known format by RPM application.

Regarding HUAWEI BSS OMC:

- **M2000** server is Huawei OMC server
- **I-Manager** is the OMC configuration software

Source files are generated automatically by Huawei, nevertheless, if the files are not available on the specific directory on the M2000 server, the customer may need to ask Huawei to start the generation of the PM files.

A license may be necessary for it.

The availability of the files under the proposed path is not under PNI responsibility.

2.2. EQUIPMENT RELEASE COLLECTION

In order to avoid any surprise on site, it is recommended to ask the customer to provide:

- A sample of PM files in order to check their format, name etc...
- Equipment releases (BSC, PCU)

Equipment releases compatibility is described in RPM OMC release description.

3. PM FILES COLLECTION

3.1. PM FILES PRINCIPLES

This chapter describes main principles of OMC server.

Huawei OMC server is based on Sun Solaris operating system.

The soft used on this server is I manager.

This soft will create task that are run automatically from the M2000 to the equipment in order to get the related counters. Each equipment will generate stat files that will be send back to the M2000 directory: **"/export/home/omc/var/fileint/pm/pm_export_"date"** on **csv format**.

The maximum number of task that can be created on the M2000 is **149**.

Each task can contain **240 counters max**. In one task it is not possible to define counters of different kind (1 export for HO, 1 export for Paging, 1 export for sms, ...).

3.2. PM FILES LOCATION

This chapter describes where PM files are generated on OMC server.

→ BSS stats are stored on the same Huawei OMC server under **"/export/home/omc/var/fileint/pm/pm_export_"date"** directory.

→ Under this directory all equipments data are stored. **1 subdirectory correspond to one day**.

3.1. PM FILES FORMAT

This chapter describes PM file format(s) RPM OMC is able to parse.

→ On Huawei OMC server, PM file format is fixed (**CSV format**). So there's no specific configuration to do on VENDOR OMC server regarding PM file format.

→ PM files can be generated ever 1/2H, 1H. RPM Huawei BSS manages all those periodicities. Data from half hour are aggregated to 1 H.

3.1. PM FILES TYPES

This chapter describes the list of OMC PM file type.

Statistics Function Type Measure Type	Family	File_ID	Import per default	release
Cell Flow Control Measurement Function	BSS	536870947	YES	BSC32
Cell Measurement Function / Inter-cell Handover Measurement Function	BSS	536870925	YES	BSC32
BSC Measurement Function / Handover Measurement Function(2)	BSS	536870965	NO	BSC32
BSC Measurement Function / Access Measurement Function	BSS	536870912	NO	BSC32
Cell Measurement Function / Intra-cell Handover Measurement Function	BSS	536870926	YES	BSC32
Cell Measurement Function / Other Measurement Function	BSS	536870927	YES	BSC32
BSC Measurement Function / Handover Measurement Function(1)	BSS	536870964	NO	BSC32

Cell Measurement Function / Random Access Measurement Function	BSS	536870924	YES	BSC32
Cell Measurement Function / SDCCH Measurement Function	BSS	536870922	YES	BSC32
BSC Measurement Function / Access Measurement Function(2)	BSS	536870974	NO	BSC32
Cell Measurement Function / TCH Measurement Function	BSS	536870923	YES	BSC32
Cell Measurement Function (2) / TCHF/H Measurement Function(1)	BSS	536870950	NO	BSC32
Cell Measurement Function (2) / TCHF/H Measurement Function(2)	BSS	536870966	YES	BSC32
Cell Measurement Function (2) / TCHF/H Measurement Function(3)	BSS	536870967	YES	BSC32
Cell Measurement Function (2) / TCHF/H Measurement Function(4)	BSS	536870971	NO	BSC32
Cell Measurement Function (3) / Handover Measurement Function	BSS	536870951	NO	BSC32
Cell Measurement Function (3) / Inter-System Handover Measurement Function	BSS	536870972	NO	BSC32
Cell Measurement Function (3) / Other Handover Measurement Function	BSS	536870968	NO	BSC32
Channel Allocation Measurement Function / TCH Allocation Measurement Function	BSS	536870945	YES	BSC32
Channel Allocation Measurement Function / TRX Level Measurement Function	BSS	536870946	NO	BSC32
Receiving Quality Measurement Function / Half Rate Receiving Quality Measurement Function	BSS	536870939	NO	BSC32
Receiving Quality Measurement / Full Rate Receiving Quality Measurement	BSS	536870938	NO	BSC32
SCCP Measurement Function	BSS	536870913	NO	BSC32
A-interface Operation and Management Statistic	BSS	536870914	NO	BSC32
A-interface Equipment Maintenance Statistic	BSS	536870915	NO	BSC32
A-interface Trunk Board Message Statistic	BSS	536870916	NO	BSC32
BSC Cell Broadcast Measurement Function/Period	BSS	536870919	NO	BSC32
BTSM Management(BTSM) / TRX Configuration Measurement per BM Subrack	BSS	1275069422	NO	BSC6000/6900
Call Measurement / CALL DROP MEASUREMENT PER CELL	BSS	1275071420	YES	BSC6000/6900
Call Measurement / Intra-Cell Handover Measurement per Cell	BSS	1275071425	YES	BSC6000/6900
Call Measurement / Immediate Assignment Measurement per Cell	BSS	1275071423	YES	BSC6000/6900
Call Measurement / Incoming Internal Inter-Cell Handover Analyzed Measurement per Cell	BSS	1275071426	YES	BSC6000/6900
Call Measurement / KPI Measurement per Cell	BSS	1275071435	YES	BSC6000/6900
Call Measurement / Outgoing External Inter-Cell Handover Requests per Cell	BSS	1275071429	YES	BSC6000/6900
Call Measurement / Outgoing Internal Inter-Cell Handover Measurement per Cell	BSS	1275071427	YES	BSC6000/6900
Channel Measurement / Channel Conversion Measurement per Cell / Channel Busy Duration Measurement per Cell	BSS	1275071819	YES	BSC6000/6900
Channel Measurement / Analyzed Measurement of Dynamically Configured Channels	BSS	1275071817	NO	BSC6000/6900
Channel Measurement / Mean Number of Busy Signaling Channels	BSS	1275071821	YES	BSC6000/6900
Channel Measurement / Channel Assignment Request Measurement per Cell	BSS	1275071822	NO	BSC6000/6900
MR Measurement / Number of MRs per Cell	BSS	1275071617	NO	BSC6000/6900
Paging Measurement / Abis Interface Paging Measurement(PAGE.AbisInterfOrig.CELL)	BSS	1275071218	YES	BSC6000/6900
Call Measurement / Short Message Measurement per Cell	BSS	1275071419	YES	BSC6000/6900
BTSM Management / Cell State Measurement per Cell(BTSM.State.Cell)	BSS	1275069419	NO	BSC6000/6900
Call Measurement / Assignment Requests per Cell	BSS	1275071424	NO	BSC6000/6900
Call Measurement / Channel Activation Measurement per Cell	BSS	1275071421	NO	BSC6000/6900
Call Measurement / Flow Control Measurement per Cell	BSS	1275071418	NO	BSC6000/6900
Call Measurement / Measurement of MRs upon Handover Initiation	BSS	1275071434	NO	BSC6000/6900
Channel Measurement / Channel Assignment Queue Measurement	BSS	1275071826	NO	BSC6000/6900
Call Measurement / Outgoing Inter-RAT Inter-Cell Handover Analyzed Measurement per Cell	BSS	1275071431	NO	BSC6000/6900

Call Measurement / Incoming External Inter-Cell Handover Requests per Cell	BSS	1275071428	YES	BSC6000/6900
Call Measurement / GSM Cell to GSM Cell Incoming Handover Measurement	BSS	1275071432	NO	BSC6000/6900
Call Measurement / GSM Cell to GSM Cell Outgoing Handover Measurement	BSS	1275071433	NO	BSC6000/6900
Call Measurement / TRX Measurement per Cell	BSS	1275071441	YES	BSC6000/6900
Call Measurement / AMR Measurement per CELL	BSS	1275071443	NO	BSC6000/6900
MR Measurement / Mean measurement in EMR Measurement per CELL	BSS	1275071633	NO	BSC6000/6900
MR Measurement / Frame Rate in EXT Measurement per Cell	BSS	1275071634	NO	BSC6000/6900
Channel Measurement / Channel Assignment GPRS Measurement per Cell	BSS	1275071827	NO	BSC6000/6900
Channel Measurement / Channel Conversion Measurement per Cell	BSS	1275071818	NO	BSC6000/6900
Channel Measurement / Measurement of Maximum Busy Channels per Cell	BSS	1275071820	NO	BSC6000/6900
CBC Measurement	BSS	1275070617	NO	BSC6000/6900
Measurement of GSM Cell Performance(GCELL)/CBC Measurement per Cell(CBC.MEASURE.CELL)	BSS	1275070618	NO	BSC6000/6900
Measurement of GSM Cell Performance(GCELL)/Incoming Inter-RAT Inter-Cell Handover Measurement per Cell	BSS	1275071430	NO	BSC6000/6900
Measurement of GSM Cell Performance(GCELL)/Local Switch Measurement per Cell	BSS	1275071437	NO	BSC6000/6900
Measurement of GSM Cell Performance(GCELL)/SDCCH Call Drop Measurement per Cell	BSS	1275071438	NO	BSC6000/6900
Measurement of GSM Cell Performance(GCELL)/Incoming Inter-RAT Inter-Cell Handover Requests (TDD)	BSS	1275071439	NO	BSC6000/6900
Measurement of GSM Cell Performance(GCELL)/Outgoing Inter-RAT Inter-Cell Handover Measurement per Cell (TDD)	BSS	1275071440	NO	BSC6000/6900
Measurement of GSM Cell Performance(GCELL)/Inter-cell Handovers(CALL.VGCSInterCellHO.CELL)	BSS	1275071526	NO	BSC6000/6900
Measurement of GSM Cell Performance(GCELL)/Intra-cell Handover(CALL.VGCSIntraCellHO.CELL)	BSS	1275071527	NO	BSC6000/6900
Measurement of GSM Cell Performance(GCELL)/Measurement of Power Control Messages in MR per Cell(MR.PowerCtrl.CELL)	BSS	1275071619	NO	BSC6000/6900
Measurement of GSM Cell Performance(GCELL)/FER Measurement per TRX(MR.FERorig.TRX)	BSS	1275071638	NO	BSC6000/6900
Measurement of GSM Cell Performance(GCELL)/Channel Assignment Failure Measurement per Cell(CHAN.AllocFail.CELL)	BSS	1275071824	NO	BSC6000/6900
Cell Performance Measurement / Cell Radio Channel Performance Measurement	GPRS	587202890	NO	BSC32
Cell Performance Measurement / Downlink RLC Data Transmission Measurement	GPRS	587202860	YES	BSC32
Cell Performance Measurement / Downlink EGPRS TBF Establishment/Release Measurement	GPRS	587202990	YES	BSC32
Cell Performance Measurement / Downlink GMSK EGPRS RLC Data Retransmission Rate Measurement	GPRS	587204580	YES	BSC32
Cell Performance Measurement / Downlink 8PSK EGPRS RLC data retransmission rate measurement	GPRS	587204590	YES	BSC32
Cell Performance Measurement / Downlink EGPRS RLC data transmission measurement	GPRS	587203040	YES	BSC32
Cell Performance Measurement / Downlink LLC Data Transmission Measurement	GPRS	587202800	YES	BSC32
BSC overall performance measurement	GPRS	587203160	NO	BSC32
Cell Performance Measurement / Packet Access Performance Measurement on CCCH	GPRS	587202600	NO	BSC32
Cell Performance Measurement / PDCH Extremum Value Measurement	GPRS	587202960	NO	BSC32
Cell Performance Measurement / PDCH Resource Performance Measurement	GPRS	587202940	YES	BSC32
Cell Performance Measurement / Paging Request Measurement	GPRS	587202690	YES	BSC32
Cell Performance Measurement / Downlink TBF Establishment/Release Measurement	GPRS	587202740	YES	BSC32
Cell Performance Measurement / Uplink TBF Establishment/Release Measurement	GPRS	587202710	YES	BSC32
Cell Performance Measurement / Uplink RLC Data Transmission Measurement	GPRS	587202830	YES	BSC32

Cell Performance Measurement / Uplink EGPRS TBF Establishment/Release Measurement	GPRS	587202970	YES	BSC32
Cell Performance Measurement / Uplink GMSK EGPRS RLC Data Retransmission Rate Measurement	GPRS	587204560	YES	BSC32
Cell Performance Measurement / Uplink 8PSK EGPRS RLC data retransmission rate measurement	GPRS	587204570	YES	BSC32
Cell Performance Measurement / Uplink EGPRS RLC data transmission measurement	GPRS	587203010	YES	BSC32
Cell Performance Measurement / Uplink LLC Data Transmission Measurement	GPRS	587202770	YES	BSC32
Packet Switch Call Measurement / Packet Access Capability Measurement	GPRS	1275072517	NO	BSC6000/6900
Packet Switch Call Measurement / Packet Assignment Capability Measurement	GPRS	1275072518	NO	BSC6000/6900
Packet Switch Call Measurement / Cell Paging Capability Measurement	GPRS	1275072519	YES	BSC6000/6900
Packet Switch Call Measurement / Intra-CELL Handover Measurement	GPRS	1275072520	NO	BSC6000/6900
Packet Switch Call Measurement / Uplink GPRS TBF Establish and Release Capability Measurement	GPRS	1275072521	YES	BSC6000/6900
Packet Switch Call Measurement / Downlink GPRS TBF Establish and Release Capability Measurement	GPRS	1275072522	YES	BSC6000/6900
Packet Switch Call Measurement / Uplink EGPRS TBF Establish and Release Capability Measurement	GPRS	1275072523	YES	BSC6000/6900
Packet Switch Call Measurement / Downlink EGPRS TBF Establish and Release Capability Measurement	GPRS	1275072524	YES	BSC6000/6900
Packet Switch Call Measurement / Uplink GPRS RLC Data Transfer Capability Measurement	GPRS	1275072525	YES	BSC6000/6900
Packet Switch Call Measurement / Downlink GPRS RLC Data Transfer Capability Measurement	GPRS	1275072526	YES	BSC6000/6900
Packet Switch Call Measurement / Uplink EGPRS RLC Data Transfer Capability Measurement	GPRS	1275072527	YES	BSC6000/6900
Packet Switch Call Measurement / Downlink EGPRS RLC Data Transfer Capability Measurement	GPRS	1275072528	YES	BSC6000/6900
Packet Switch Call Measurement / Number of GMSK_MEAN_BEP Different Value Measurement	GPRS	1275072529	NO	BSC6000/6900
Packet Switch Call Measurement / Number of 8PSK_MEAN_BEP Different Value Measurement	GPRS	1275072530	NO	BSC6000/6900
Packet Switch Call Measurement / Uplink LLC Data Transfer Capability Measurement	GPRS	1275072531	YES	BSC6000/6900
Packet Switch Call Measurement / Downlink LLC Data Transfer Capability Measurement	GPRS	1275072532	YES	BSC6000/6900
Packet Switch Call Measurement / Resource Maintenance Capability Measurement	GPRS	1275072533	NO	BSC6000/6900
Packet Switch Call Measurement / ABIS Resource Capability Measurement	GPRS	1275072534	NO	BSC6000/6900
Packet Switch Channel Measurement / Cell Radio Channel Capability Measurement	GPRS	1275072617	NO	BSC6000/6900
Packet Switch Channel Measurement / PDCH Resource Capability Measurement	GPRS	1275072618	YES	BSC6000/6900
BSSGP Measurement / BSSGP Capability Measurement	GPRS	1275072917	NO	BSC6000/6900
G-Abis Measurement / TRAU Link Measurement	GPRS	1275073017	NO	BSC6000/6900
Resource Measurement/Pb Interface Circuit Measurement per PCU	GPRS	1275070017	NO	BSC6000/6900
PCU Measurement/PCU Measurement per PCU	GPRS	1275071017	NO	BSC6000/6900
Number of MRs based on TA per TRX	TRX	1275071625	YES	BSC6000/6900
Downlink VQI Measurement per TRX	TRX	1275071637	NO	BSC6000/6900
MEAN_BEP in EMR Measurement per TRX	TRX	1275071630	NO	BSC6000/6900
NbrRcvBlocks in EMR Measurement per TRX	TRX	1275071632	NO	BSC6000/6900
Customized MRs per TRX	TRX	1275071629	NO	BSC6000/6900
Uplink-and-Downlink Balance Measurement per TRX	TRX	1275071624	NO	BSC6000/6900
TCHF Receive Level Measurement per TRX	TRX	1275071621	YES	BSC6000/6900
TCHH Receive Level Measurement per TRX	TRX	1275071622	YES	BSC6000/6900
RQI Measurement per TRX	TRX	1275071635	NO	BSC6000/6900

G-Abis Measurement / PTRAU Measurement	TRX	1275073018	NO	BSC6000/6900
MR Measurement / Interference Band Measurement per TRX	TRX	1275071618	YES	BSC6000/6900
Call Measurement / Channel Seizure Measurement per TRX	TRX	1275071422	NO	BSC6000/6900
Channel Measurement / Channel Assignment Success Measurement per TRX	TRX	1275071823	YES	BSC6000/6900
MR Measurement / Radio Link Failure Measurement per TRX	TRX	1275071626	NO	BSC6000/6900
MR Measurement / Receive Quality Measurement per TRX	TRX	1275071623	NO	BSC6000/6900
MR Measurement / Receive Quality Measurement Distribution per TRX	TRX	1275071636	NO	BSC6000/6900
MR Measurement / Radio Link Failure Measurement per TRX	TRX	1275071627	NO	BSC6000/6900
MR Measurement / CV_BEP in EMR Measurement per TRX	TRX	1275071631	NO	BSC6000/6900

3.2. PM FILES HISTORY

This chapter describes PM file history on OMC server.

➔ On Huawei OMC PM files are kept on OMC server up to 90 days. 3 to 5 days is ideal. More can provoke instability or performance issue.

3.3. PM FILES SAMPLES

Find below a sample of Huawei BSS PM files:



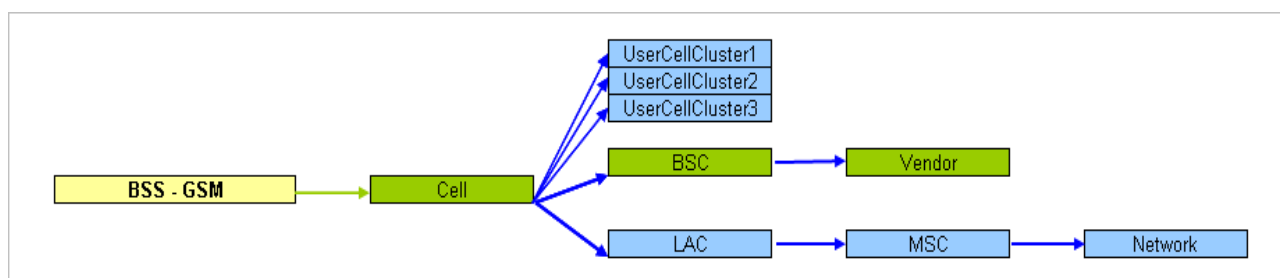
Huawei_BSS.zip

4. RPM OMC DESCRIPTION

4.1. FAMILIES & TOPOLOGIES

This chapter describes statistics families defined on RPM OMC.

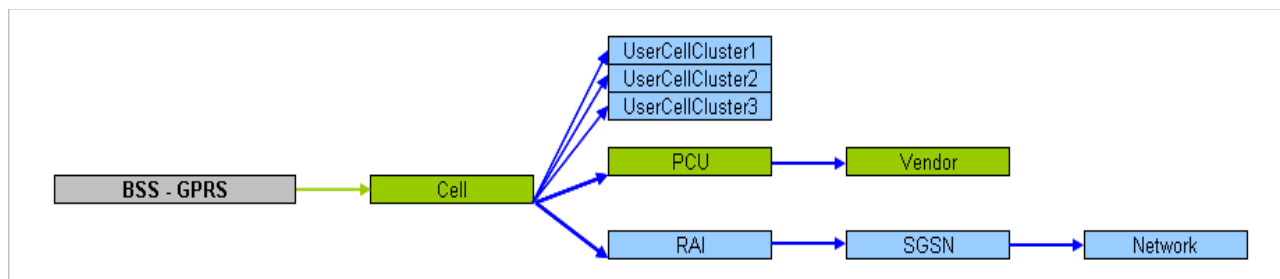
4.1.1. INT – GSM



→ Network levels description:

Extracted from PM files	Cell, BSC
Need to be updated manually	LAC, MSC, Network, Clusters
Automatically filled by RPM	Vendor
Cell ID format	<Cell ID>

4.1.2. INT – GPRS



→ Network levels description:

Extracted from PM files	Cell, PCU,
Need to be updated manually	RAI, SGSN, Network, Clusters
Automatically filled by RPM	Vendor
Cell ID format	<Cell ID>.

4.2. ADDITIONAL INFORMATION

- Automatic PM file import activation:

If the customer wants to use a counter from a deactivated file (see list in 4.2 chapter), activate the counter from “Mapping > Counters Activation” menu.
The file will be automatically imported during the next Retrieve.



5. RPM OMC CONFIGURATION

General:

On OMC server, 1 subdirectory correspond to all equipments (ex: BSC, HLR, MSC, ...) under
“**/export/home/omc/var/fileint/pm/**”

6. CONTACT

If you encountered any problem on RPM-OMC, follow the regular support process (support@planetnetworkint.com or Support Operation Engineer).

Contact Advanced Projects:

- Mail: gniang@planetnetworkint.com
- FTP server: [please contact Gorgui NIANG for access](#)