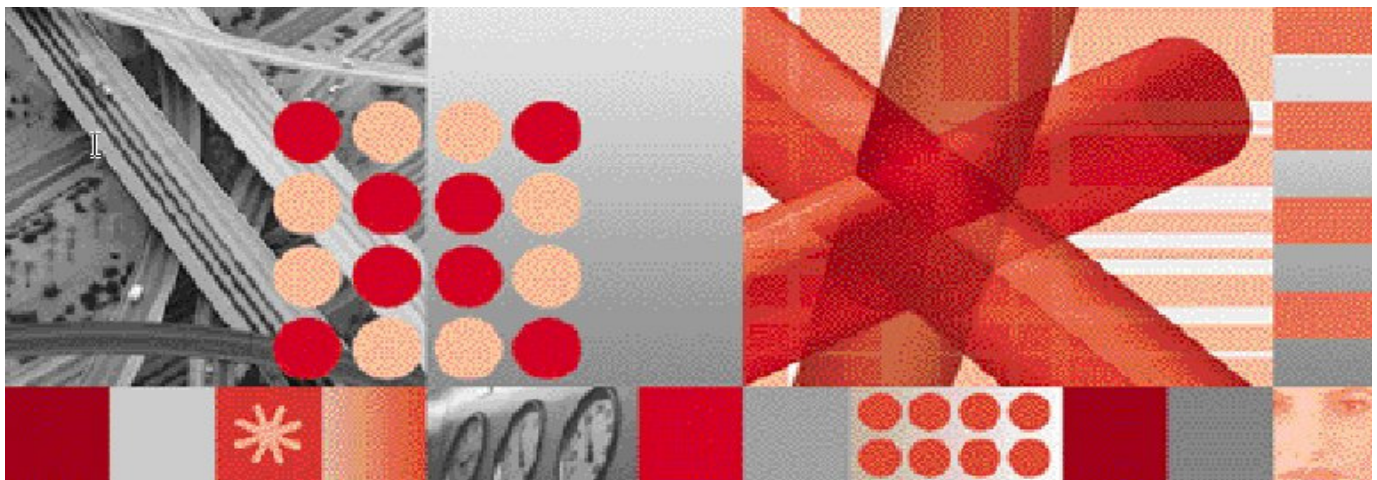




Version 3.5



## Ericsson UTRAN Gateway Configuration Distribution Note

**TIVOLI® NETCOOL® PERFORMANCE MANAGER FOR WIRELESS  
ERICSSON UTRAN GATEWAY CONFIGURATION DISTRIBUTION NOTE**

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**Note:** Before using this information and the product it supports, read the information in  
Notices on page 21.

This edition applies to Version 4.1 of IBM® Tivoli® Netcool® Performance Manager for Wireless and to all subsequent releases and modifications until otherwise indicated in new editions.

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# 1 About this Documentation

## 1.1 Audience

The target audience of this document is IBM Performance Manager for Wireless customers. They should be familiar with telecommunication and IT principles and should also have a good understanding of Solaris.

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**IMPORTANT:** Before attempting an installation of Performance Manager for Wireless you are strongly advised to read the release notes and any readme files distributed with your Performance Manager for Wireless software. Readme files and release notes may contain information specific to your installation not contained in this guide. Failure to consult readme files and release notes may result in a corrupt, incomplete or failed installation.

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**Note:** Performance Manager for Wireless Administrators should not, without prior consultation and agreement from IBM, make any changes to the Index Organized tables or database schema. Changes to the Index Organized tables or database schema may result in corruption of data and failure of the Performance Manager for Wireless System. This applies to all releases of Performance Manager for Wireless using all versions of interfaces.

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## 1.2 Required Skills and Knowledge

This guide assumes you are familiar with the following:

- General IT Principles
- Sun Solaris Operating System
- Oracle Database
- Windows operating systems
- Graphical User Interfaces
- Network Operator's OSS and BSS systems architecture

This guide also assumes that you are familiar with your company's network and with procedures for configuring, monitoring, and solving problems on your network.

## 2 Associated Documents

The following documentation accompanies this release:

### 2.1 Referenced Documents

Document Name	Document Description
[Gateways Install Note]	This document describes the steps required to install and run a Gateway.

### 2.2 Other Related Documents

Document Name	Document Description
[Gateway Framework User Guide]	Gateway Framework User Guide describing the management and configuration of the Gateway Framework.
[3GPP XML User Guide]	3GPP XML User Guide describing the management and configuration of the Vendor Gateway.
[Generic CSV User Guide]	Generic CSV User Guide describing the management and configuration of the Vendor Gateway.

## 3 Introduction

You should read this Distribution Note before proceeding to install the Gateway Configuration.

For information on the Gateway Framework, its configuration and use refer to the [Gateway Framework User Guide].

The Gateway Framework and Vendor Gateway are supplied as separate packages. As part of the Vendor Gateway installation process, it must reference a Gateway Framework installation. This separation simplifies the maintenance and version control of multiple vendor Gateway installations on a single server.

This Distribution Note provides an overview of the release history of the Gateway Configuration.

### 3.1 Vendor Gateway Version

This Gateway Configuration requires the following Vendor Gateway:

- 3GPP XML 3.5.1
- Generic CSV 3.5.0

## 4 Release History

### 4.1 Release 3.5.1

Release date 20 November 2009.

Listed below are the enhancements to this release.

#	Description
1	Split PDF enabled PDF counters from Performance LIF files to improve core loader performance

### 4.2 Release 3.5.0

Release date 12 Aug 2009.

Listed below are the enhancements to this release.

#	Description
N/A	N/A



## 5 Data type and releases supported

Data Type	Vendor Gateway Release Version	Gateway Configuration Release Directory
Ericsson UTRAN Topology & Performance	P5	p5_hier p5_perf
Ericsson UTRAN Topology & Performance	P6	p6_hier p6_perf
Ericsson UTRAN Topology & Performance	P7	p7_hier p7_perf
Ericsson UTRAN Topology & Performance	P7.1	p7.1_hier p7.1_perf

### 5.1 Raw input files

The gateway configuration was built against and supports the following performance raw file definition. Differences in file naming may occur due to the configurable nature of some vendor equipment. Under such conditions, the variances are not immediately supported by the gateway configuration.

Scope	Attended Format/Syntax																		
Input files names to expect	<p>Example: A20070618.1100+0300-1115+0300_SubNetwork=ONRM_RootMo,SubNetwork=RNC02,MeContext=AptechnoNova_statsfile.xml</p> <p>Where</p> <table> <tr> <td>A</td><td>– Type</td></tr> <tr> <td>20070618</td><td>– Start Date</td></tr> <tr> <td>1100</td><td>– Start Time</td></tr> <tr> <td>+0300</td><td>– Time Zone Offset</td></tr> <tr> <td>1115</td><td>– End Time</td></tr> <tr> <td>+0300</td><td>– Time Zone Offset</td></tr> <tr> <td>ONRM_RootMo</td><td>– SubNetwork</td></tr> <tr> <td>RNC02</td><td>– SubNetwork</td></tr> <tr> <td>AptechnoNova</td><td>– MeContext</td></tr> </table>	A	– Type	20070618	– Start Date	1100	– Start Time	+0300	– Time Zone Offset	1115	– End Time	+0300	– Time Zone Offset	ONRM_RootMo	– SubNetwork	RNC02	– SubNetwork	AptechnoNova	– MeContext
A	– Type																		
20070618	– Start Date																		
1100	– Start Time																		
+0300	– Time Zone Offset																		
1115	– End Time																		
+0300	– Time Zone Offset																		
ONRM_RootMo	– SubNetwork																		
RNC02	– SubNetwork																		
AptechnoNova	– MeContext																		
Input file formats to expect	<pre>&lt;?xml version="1.0"?&gt; &lt;?xml-stylesheet type="text/xsl" href="MeasDataCollection.xsl"?&gt; &lt;!DOCTYPE mdc SYSTEM "MeasDataCollection.dtd"&gt; &lt;mdc xmlns:HTML="http://www.w3.org/TR/REC-xml"&gt; &lt;mfh&gt;</pre>																		

	<pre> &lt;ffv&gt;32.401 V6.2&lt;/ffv&gt; &lt;sn&gt;SubNetwork=AT_R,SubNetwork=WQ01,MeContext=W Q01&lt;/sn&gt; &lt;st&gt;&lt;/st&gt; &lt;vn&gt;&lt;/vn&gt; &lt;cbt&gt;20070401210000Z&lt;/cbt&gt; &lt;/mfh&gt; &lt;md&gt; &lt;neid&gt; &lt;neun&gt;1&lt;/neun&gt; &lt;nedn&gt;SubNetwork=AT_R,SubNetwork=WQ01,MeContext= WQ01&lt;/nedn&gt; &lt;nesw&gt;CXP9012014_R9AM/6&lt;/nesw&gt; &lt;/neid&gt; &lt;mi&gt; &lt;mts&gt;20070401211500Z&lt;/mts&gt; &lt;gp&gt;900&lt;/gp&gt; &lt;mt&gt;pmExisOrigConns&lt;/mt&gt; &lt;mt&gt;pmExisTermConns&lt;/mt&gt; &lt;mt&gt;pmExisTransConns&lt;/mt&gt; &lt;mt&gt;pmUnRecMessages&lt;/mt&gt; &lt;mt&gt;pmUnRecParams&lt;/mt&gt; &lt;mv&gt; &lt;moid&gt;ManagedElement=1,TransportNetwork=1,Aal2Sp=1,A al2Ap=b547&lt;/moid&gt; &lt;r&gt;12&lt;/r&gt; &lt;r&gt;0&lt;/r&gt; &lt;r&gt;2&lt;/r&gt; &lt;r&gt;0&lt;/r&gt; &lt;r&gt;0&lt;/r&gt; &lt;/mv&gt; &lt;mv&gt; </pre>
Equipment/devices to expect data	N/A
Extraction mechanism	N/A
Transfer mechanism	N/A

## 5.2 Hierarchy input files

### 5.2.1 Hierarchy File Definition

The gateway configuration was built against and supports the following hierarchy raw file definition. Differences in file naming may occur due to the configurable nature of some vendor equipment. Under such conditions, the variances are not immediately supported by the gateway configuration.

Scope	Attended Format/Syntax
Input files names to expect	UTRAN_TOPOLOGY.xml, or rlab1_6.3.7_5_RADIO_TOPOLOGY200901291527 25.xml, or RADIO_TOPOLOGY20090415050000.xml

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Input file formats to expect	<p>XML. Sample below:</p> <pre> &lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;bulkCmConfigDataFile xmlns:es="EricssonSpecificAttributes.4.7.xsd"   xmlns:un="utranNrm.xsd" xmlns:xn="genericNrm.xsd"   xmlns:gn="geranNrm.xsd" xmlns="configData.xsd"&gt;   &lt;fileHeader fileFormatVersion="32.615 V4.5" vendorName="Ericsson"/&gt;   &lt;configData dnPrefix="Undefined"&gt;     &lt;xn:SubNetwork id="ONRM_RootMo_R"&gt;       &lt;un:UtranCell id="52322"&gt;         &lt;un:attributes&gt;  &lt;un:userLabel&gt;6th_septemvri_2&lt;/un:userLabel&gt;           &lt;un:cId&gt;1322&lt;/un:cId&gt;           &lt;un:localCellId&gt;1322&lt;/un:localCellId&gt;           &lt;un:uarfcnUl&gt;9612&lt;/un:uarfcnUl&gt;           &lt;un:uarfcnDI&gt;10562&lt;/un:uarfcnDI&gt;  &lt;un:primaryScramblingCode&gt;8&lt;/un:primaryScramblingCode&gt;  &lt;un:primaryCpichPower&gt;312&lt;/un:primaryCpichPower&gt;  &lt;un:maximumTransmissionPower&gt;430&lt;/un:maximumTransmi ssionPower&gt;           &lt;un:primarySchPower&gt;- 18&lt;/un:primarySchPower&gt;           &lt;un:secondarySchPower&gt;- 35&lt;/un:secondarySchPower&gt;           &lt;un:bchPower&gt;-31&lt;/un:bchPower&gt;           &lt;un:lac&gt;23200&lt;/un:lac&gt;           &lt;un:rac&gt;2&lt;/un:rac&gt;           &lt;un:sac&gt;52322&lt;/un:sac&gt;  &lt;un:utranCellIubLink&gt;SubNetwork=ONRM_RootMo_R,SubN etwork=RNC02,MeContext=RNC02,ManagedElement=1,RncF unction=1,IubLink=Iub_6th_septemvri&lt;/un:utranCellIubLink&gt;           &lt;un:uraList&gt;&lt;/un:uraList&gt;         &lt;/un:attributes&gt;       &lt;/xn:SubNetwork&gt;     &lt;/configData&gt;     &lt;fileFooter dateTime="2007-07-04T04:28:39Z"/&gt;   &lt;/bulkCmConfigDataFile&gt; </pre>
Equipment/devices to expect data	N/A
Extraction mechanism	N/A
Transfer mechanism	N/A

## 5.2.2 Additional Requirement on Using Hierarchy Files

### 5.2.2.1 Requirement 1

The value of the "INTERMEDIATE\_STORAGE\_DIR" property of the Ericsson UTRAN Hierarchy Parser must be set the SAME as the "INT\_DIR" property of the Ericsson UTRAN Performance Parser.

Example:

- Hierarchy Parser "properties" file:  
INTERMEDIATE\_STORAGE\_DIR=/pm-parser/spool/inter\_d
- Performance Parser "properties" file:  
INT\_DIR=/pm-parser/spool/inter\_d

### 5.2.2.2 Requirement 2

File "UTRAN\_TOPOLOGY.xml" needs to be triplicated into "UTRAN\_TOPOLOGY2.xml" file and "UTRAN\_TOPOLOGY\_NEIGHBOUR.xml".

The following are naming convention variations of the UTRAN\_TOPOLOGY.xml file and the method for handling them:

- File "rlab1\_6.3.7\_5\_RADIO\_TOPOLOGY20090129152725.xml" to be triplicated to "rlab1\_6.3.7\_5\_RADIO\_TOPOLOGY20090129152725\_2.xml" and "rlab1\_6.3.7\_5\_RADIO\_TOPOLOGY20090129152725\_3.xml".
- File "RADIO\_TOPOLOGY20090415050000.xml" to be triplicated to "RADIO\_TOPOLOGY20090415050000\_2.xml" and "RADIO\_TOPOLOGY20090415050000\_3.xml".

Triplication of the files is done before "gateway\_start.sh" script is executed, this can be done inside the "gateway\_start.sh" script itself or by creating another customized script for this purpose. This is required to retrieve the NodeBCell, UtranCell and UtranRelation blocks. The "vsDataRbsLocalCell-#-.\*-#-J-#-S.pif" intermediate PIF file is required by the performance parser.

Note that the triplication should only be executed when performing hierarchy data parsing. It should not be performed when executing performance data parsing. If modifying the gateway\_start.sh directly, also include conditions to selectively execute the triplication only when executing the hierarchy parser.

## 6 Configurations

### 6.1 Transfer Engine configuration

Instructions for configuring Transfer engine can be found in the [Gateway Framework User Guide].

The Transfer engine can be configured to transfer raw input files into the Gateway input processing directory (e.g., spool/input\_d/).

For performance data, the Tech Pack consists of two separate loaders:

- Basic performance loader
- PDF performance loader

The same raw performance file set and performance gateway configuration caters to both these loaders. The performance parser will produce LIF files for both the basic and PDF performance loaders.

In the event that both loaders are used together, the Transfer Engine should be configured to transfer out the PDF performance LIF files into the PDF loader directory. A sample Transfer engine configuration for moving the PDF performance LIF is provided with the gateway configuration package:

```
$GATEWAY_ROOT/config/ericsson-utran/example/TransferConfig.pm
```

### 6.2 Parser Engine configuration

Refer to the [3GPP XML User Guide] for the Engine Configuration for Ericsson UTRAN.

#### 6.2.1 Initial PIF File Name Convention

Example:

ManagedElement\_NodeBFunction\_Sector\_Carrier-#-RNC\_SOF\_01-#-ZIIU-#-20070618090000Z-#-1-#-I.pif

Initial PIF file name is configured to have the following convention:

<Block\_Name>-#-<SubNetwork>-#-<MeContext>-#-<mts>-#-<PIF\_counter>-#-I.pif

Where:

**SubNetwork:** is the value of the SubNetwork field in the “sn” tag found in the 3GPP XML raw file,

**MeContext:** is the value of the MeContext field in the filename of the 3GPP XML raw file,

**mts:** is the value of the “mts” tag found in the 3GPP XML raw file,

**PIF\_counter:** numeric characters added by 3GPP XML Gateway to prevent PIF files with identical filenames from being overwritten.

### 6.2.2 Block Name

The Block Name can be obtained from the <moid> tags in the 3GPP XML raw file.

3GPP XML Raw File	Output Block Name
<moid>ManagedElement=1,NodeBFunction=1,Sector=1,Carrier=1</moid>	ManagedElement_NodeBFunction_Sector_Carrier
<moid>ManagedElement=1,NodeBFunction=1,Iub=AptechnoNova,IubDataStreams=1</moid>	ManagedElement_NodeBFunction_Iub_IubDataStreams

The Block Name is derived by the items before the equal “=” sign. When more than one item exists, they need to be joined by an underscore “\_”. The Block Names follows the same case as the raw file. It is therefore expected that ManagedElement remains as ManagedElement, NodeBFunction to remain as NodeBFunction, Sector as Sector, Carrier as Carrier and etc.

Some of the Block Names were renamed. The renaming is done at the parser engine and the mapping of the Block Names can be found in the Block\_Name\_Mapping.pm file.



#### **6.2.4 NETWORK\_ID and REGION\_ID**

The Engine configuration extracts the following information from the directory path where the raw input files are stored (if available).

- NETWORK\_ID - Second last directory in the path
- REGION\_ID - Last directory in the path

Example:

spool/input\_d/NETWORK\_1/REGION\_1/A20070618.1100+0300-  
1115+0300\_SubNetwork=ONRM\_RootMo,SubNetwork=RNC02,MeContext=AptechnoNova\_statsf  
ile.xml

The NETWORK\_ID is 1 and REGION\_ID is 1



## 6.3 Post Parser user configuration

The following data manipulation and additional output blocks are configured for the LIF output.

### 6.3.1 Manipulation of Data Blocks

The following data blocks were manipulated to produce LIF output according to the loader specification.

3GPP XML Raw File	Output Block Name
NODEB_IMA_GROUP RNC_IMA_GROUP RXI_IMA_GROUP NODEB_IMA_LINK RNC_IMA_LINK RXI_IMA_LINK ME_TN_Mtp3bSpItu_Mtp3bAp ME_TN_Mtp3bSpItu_Mtp3bSls_Mtp3bSIItu RNC_Mtp3bSpItu_Signaling ME_TN_Mtp3bSpItu_Mtp3bSrs_Mtp3bSr ME_TN_Mtp3bSpItu_Mtp3bSrs RNC_Signaling_Connection_Control RNC_Signaling_Connection_Control_SccpSp NODEB_SCTP RNC_SCTP ME_TN_Mtp3bSpItu_M3uAssociation RNC_Signaling_Connection_Ctrl_Acc_Criteria RNC_Signaling_Connection_Control_Policing ME_RNC_Eqpt_FastEthernet RNC_IP_Access_Spb NODEB_IP_Link RNC_IP_Link RXI_IP_Link NODEB_Ospf RNC_Ospf RXI_Ospf NODEB_OspfArea RNC_OspfArea RXI_OspfArea NODEB_OspfInterface RNC_OspfInterface RXI_OspfInterface NODEB_IpSystem_IpAccessHostGpb	<b>UNPEGGER:</b> Unpeg counters in the respective blocks according to the specification. Output to LIF unless block is required to be batched.  <b>PIF_REMOVE:</b> Remove the initial PIF files.

RNC_IpSystem_IpAccessHostGpb NODEB_IpSystem_IpAccessUdpHostMsb RNC_IpSystem_IpAccessUdpHostMsb NODEB_Mtp2tpItu RNC_Mtp2tpItu RXI_Processor_Load RNC_Processor_Load NODEB_Processor_Load NODEB_ATM_Physical_Link RNC_ATM_Physical_Link RXI_ATM_Physical_Link NODEB_Ethernet_Link RNC_Ethernet_Link RXI_Ethernet_Link NODEB_NniSAaTp_Signaling RNC_NniSAaTp_Signaling RXI_NniSAaTp_Signaling NODEB_UniSAaTp_Signaling RNC_UniSAaTp_Signaling RXI_UniSAaTp_Signaling NODEB_Virtual_Path_Connection RNC_Virtual_Path_Connection RXI_Virtual_Path_Connection RNC_AAL2_SP NODEB_AAL2_SP RXI_AAL2_SP NODEB_PlugInUnit_ExchangeTerminalIp_InternalEthPrt_IpIntf RNC_PlugInUnit_ExchangeTerminalIp_InternalEthPrt_IpIntf RXI_PlugInUnit_ExchangeTerminalIp_InternalEthPrt_IpIntf RXI_CBU_Processor_Load RNC_CBU_Processor_Load NODEB_CBU_Processor_Load NODEB_ManagedElement_IpSystem_Ip_IpAtmLink RNC_ManagedElement_IpSystem_Ip_IpAtmLink RXI_ManagedElement_IpSystem_Ip_IpAtmLink NODEB_ManagedElement_IpOam_Ip_IpAtmLink RNC_ManagedElement_IpOam_Ip_IpAtmLink RXI_ManagedElement_IpOam_Ip_IpAtmLink	
ManagedElement_RncFunction_UeRc_ACCUM	<b>JOIN:</b> Join all ManagedElement_RncFunction_UeRc PIF files together.

	<p><b>ACCUMULATE:</b> Accumulate all pm counters. PIF output only.</p> <p><b>INFOINSERT:</b> Insert Tot_pmSumTransmittedBitsSpi from ME_NodeBFunction_HsDschResources blocks according to nedn_SubNetwork. Output to LIF. LIF output only.</p> <p><b>PIF_REMOVE:</b> Remove the initial PIF files.</p>
ManagedElement_RncFunction_UeRc_CQ	<p><b>JOIN:</b> Join all ManagedElement_RncFunction_UeRc PIF files together.</p> <p><b>DATALINE_WHERE:</b> Extract PIF records with UeRc group equal to 4/5/6/7/15/16/26/27/28/29/30/31/32/39.</p> <p><b>ACCUMULATE:</b> Accumulate all pm counters. Output to LIF. LIF output only.</p> <p><b>PIF_REMOVE:</b> Remove the initial PIF files.</p>
ManagedElement_RncFunction_UeRc_TV	<p><b>JOIN:</b> Join all ManagedElement_RncFunction_UeRc PIF files together.</p> <p><b>DATALINE_WHERE:</b> Extract PIF records with UeRc group equal to 5/6/7/15/16/26/27/28/29/30/31/32/39.</p> <p><b>ACCUMULATE:</b> Accumulate all pm counters. Output to LIF. LIF output only.</p> <p><b>PIF_REMOVE:</b> Remove the initial PIF files.</p>
ManagedElement_RncFunction_UeRc_2 ManagedElement_RncFunction_UeRc_3 ManagedElement_RncFunction_UeRc_4 ManagedElement_RncFunction_UeRc_8 ManagedElement_RncFunction_UeRc_10 ManagedElement_RncFunction_UeRc_13	<p><b>JOIN:</b> Join all ManagedElement_RncFunction_UeRc PIF files together.</p> <p><b>DATALINE_WHERE:</b> Extract PIF records with UeRc group equal to 2/3/4/8/10/13 into respective PIF files (one UeRc group into one PIF file).</p>

	<p><b>ACCUMULATE:</b> Accumulate all pm counters. Output to LIF. LIF output only.</p> <p><b>PIF_REMOVE:</b> Remove the initial PIF files.</p>
ManagedElement_RncFunction_UeRc_PSACCUM	<p><b>JOIN:</b> Join all ManagedElement_RncFunction_UeRc PIF files together.</p> <p><b>DATALINE_WHERE:</b> Extract PIF records with UeRc group equal to 4/5/6/7/13/15/16/17/18/21/22/25/26/27/28/29/30/31/32/39.</p> <p><b>ACCUMULATE:</b> Accumulate all pm counters. Output to LIF. LIF output only.</p> <p><b>PIF_REMOVE:</b> Remove the initial PIF files.</p>
ManagedElement_RncFunction_UtranCell	<p><b>JOIN:</b> Join all ManagedElement_RncFunction_Utran Cell and ManagedElement_RncFunction_Utran Cell_Rach PIF files together.</p> <p><b>INFOINSERT:</b> Insert Tot_pmSumTransmittedBitsSpi counter from ME_NodeBFunction_HsDschResources blocks according UtranCell_id and timestamp.</p> <p><b>JOIN:</b> Join the same ME_NodeBFunction_HsDschResources PIF files together to ensure a single PIF is produced always after INFOINSERT. PIF output only.</p> <p><b>INFOINSERT:</b> Insert nedn_MeContext_NodeB (carrierRef_MeContext) from hierarchy PIF. PIF output only.</p> <p><b>JOIN:</b> Join the same ManagedElement_RncFunction_Utran Cell PIF files together to ensure a</p>

	<p>single PIF is produced always after INFOINSERT. PIF output only.</p> <p><b>PERLIZE:</b> Calculate Cell_Total_Traffic counter. Output to LIF. LIF and PIF output.</p> <p><b>ACCUMULATE:</b> Accumulate all pm counters. PIF output only.</p> <p><b>PIF_REMOVE:</b> Remove the initial PIF files.</p>
ManagedElement_RncFunction	<p><b>JOIN:</b> Join all ManagedElement_RncFunction, ManagedElement_RncFunction_UePositioning, and ManagedElement_RncFunction_Utran Cell PIF files together. Output to LIF. LIF output only.</p> <p><b>PIF_REMOVE:</b> Remove the initial PIF files.</p>
Group_ManagedElement	<p><b>ACCUMULATE:</b> Aggregate the pmApomcOfSpreadersUsed counter from the NodeB_DLBasebandPool block. PIF output only. PIF files are used for batching later.</p>
ManagedElement_NodeBFunction_Sector_Carrier_Aich ME_NodeBFunction_Sector_Carrier_EDchResources ME_NodeBFunction_Sector_Carrier_Prach ManagedElement_NodeBFunction_Carrier_Sccpch	<p><b>INFOINSERT:</b> Insert UtranCell_id from hierarchy PIF into CDMA Channel blocks.</p> <p><b>JOIN:</b> Join the same CDMA Channel block PIF files together respectively. This is to provide one PIF file per block type at all times so that duplicate PIF files will not be produced. PIF output only. PIF files are used for batching later.</p> <p><b>PIF_REMOVE:</b> Remove the initial PIF files.</p>
ME_NodeBFunction_HsDschResources	<p><b>INFOINSERT:</b> Insert UtranCell_id from hierarchy PIF into CDMA Channel blocks.</p> <p><b>JOIN:</b> Join the same CDMA Channel block PIF files together respectively.</p>

	<p>This is to provide one PIF file per block type at all times so that duplicate PIF files will not be produced. PIF output only.</p> <p><b>PERLIZE:</b> Total up pmSumTransmittedBitsSpi&lt;00-15&gt; and produce Tot_pmSumTransmittedBitsSpi counter. PIF output only. PIF files are used for batching later.</p> <p><b>ACCUMULATE:</b> Accumulate all pm counters up to Sector level for all ME_NodeBFunction_HsDschResources blocks. PIF output only.</p> <p><b>PERLIZE:</b> Transplant nedn_SubNetwork and nedn_MeContext from header to data segment. PIF output only.</p> <p><b>JOIN:</b> Join all PIF files with same nedn_SubNetwork and timestamp.</p> <p><b>ACCUMULATE:</b> Accumulate all counters with same nedn_SubNetwork and timestamp. PIF output only.</p> <p><b>PIF_REMOVE:</b> Remove the initial PIF files.</p>
ManagedElement_RncFunction_UtranCell_GsmRelation	<p><b>INFOINSERT:</b> Insert pmNoDirRetryAtt and pmNoDirRetrySuccess from ManagedElement_RncFunction_UtranCell.</p> <p><b>PIF_REMOVE:</b> Remove the initial PIF files.</p>
ME_NodeBFunction_IubDataStreams	<p><b>JOIN:</b> Join blocks having the same keys to join counters.</p>
NODEB_AAL2_Link	<p><b>JOIN:</b> Join NODEB_AAL2_Link with same keys to join counters.</p>
All other blocks	<p><b>PIF_2_OUTPUT:</b> Output all initial PIF files to LIF. LIF output only.</p>

### 6.3.2 PDF LIF File Splitting

The following blocks contain PDF counters. For loader performance purposes, the PDF counters are split from prevailing performance counters into separate LIF files.

Input Blocks	Post Parsing Rules
ME_NodeBFunction_Sector_Carrier_EDchResources ME_NodeBFunction_Sector_Carrier_Prach ManagedElement_NodeBFunction_Carrier_Scpcch ME_NodeBFunction_HsDschResources ManagedElement_RncFunction_UtranCell ManagedElement_RncFunction ME_NodeBFunction_IubDataStreams ManagedElement ManagedElement_RncCapacity ManagedElement_RncFunction_IurLink ManagedElement_RncFunction_UtranCell_HsdSCH ManagedElement_RncFunction_UtranCell_HsdSCH_Eul ME_Eqpt_Subrack_UplinkBaseBandPool ME_NodeBFunction_Carrier_RadioLinks ME_NodeBFunction_RbsLocalCell_Carrier ME_RNC_IubLink ME_RNC_IubLink_IubEdch NodeB_DLBasebandPool NodeB_ULBasebandPool RNC_PIU_GeneralProcessorUnit_LoadControl RNC_SwitchFabric_InternalLinkGroup RNC_Virtual_Channel_Link	<p><b>PIF_2_OUTPUT:</b> Output the basic performance LIF files using the initial PIF while removing redundant PDF counters.</p> <p><b>FILE_SPLIT_BY_COUNTERS:</b> Extract PDF counters from the base PIF into intermediate PDF PIF files.</p> <p><b>PIF_2_OUTPUT:</b> Output the intermediate PDF PIF files and rename the block to the original base block name.</p> <p><b>PIF_REMOVE:</b> Remove the initial PIF and intermediate PDF PIF files.</p>

### 6.3.3 Batching of LIF files

The following data blocks were batched using the block name as key. Batching is disabled by default.

3GPP XML Raw File	Output Block Name
NODEB_ATM_Physical_Link RXI_ATM_Physical_Link NODEB_Virtual_Channel_Link	<b>BATCHFILE:</b> Group PIF files with same block name together and output to LIF. LIF output only.

RXI_Virtual_Channel_Link NODEB_Virtual_Path_Link RXI_Virtual_Path_Link NodeB_DLBasebandPool Group_ManagedElement ME_NodeBFunction_IubDataStreams ME_NodeBFunction_RbsLocalCell_Carrier NodeB_ULBasebandPool NODEB_AAL2_AP ME_NodeBFunction_HsDschResources ManagedElement_NodeBFunction_Sector_Carrier_Aich ME_NodeBFunction_Sector_Carrier_EDchResources ME_NodeBFunction_Sector_Carrier_Prach ManagedElement_NodeBFunction_Carrier_Scpcch NODEB_AAL2_Link NODEB_AAL2_SP NODEB_E1_T1_J1_PHYSICAL_LINK NODEB_IMA_GROUP NODEB_IMA_LINK NODEB_Virtual_Path_Connection NODEB_UniSAalTp_Signaling NODEB_IP_ATM_Link NODEB_IP_Link NODEB_IpSystem_IpAccessHostGpb NODEB_IpSystem_IpAccessUdpHostMsb NODEB_Mtp2tpItu NODEB_NniSAalTp_Signaling NODEB_Ospf NODEB_OspfArea NODEB_OspfInterface NODEB_SCTP ME_NodeBFunction_Carrier_RadioLinks ME_NodeBFunction_NbapCommon ManagedElement_NodeBFunction_Iub	<b>PIF_REMOVE:</b> Remove input PIF files.
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## 6.4 Time Normalisation Support

N/A.



## Appendix A Notices and Trademarks

This appendix contains the following:

- Notices
- Trademarks

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