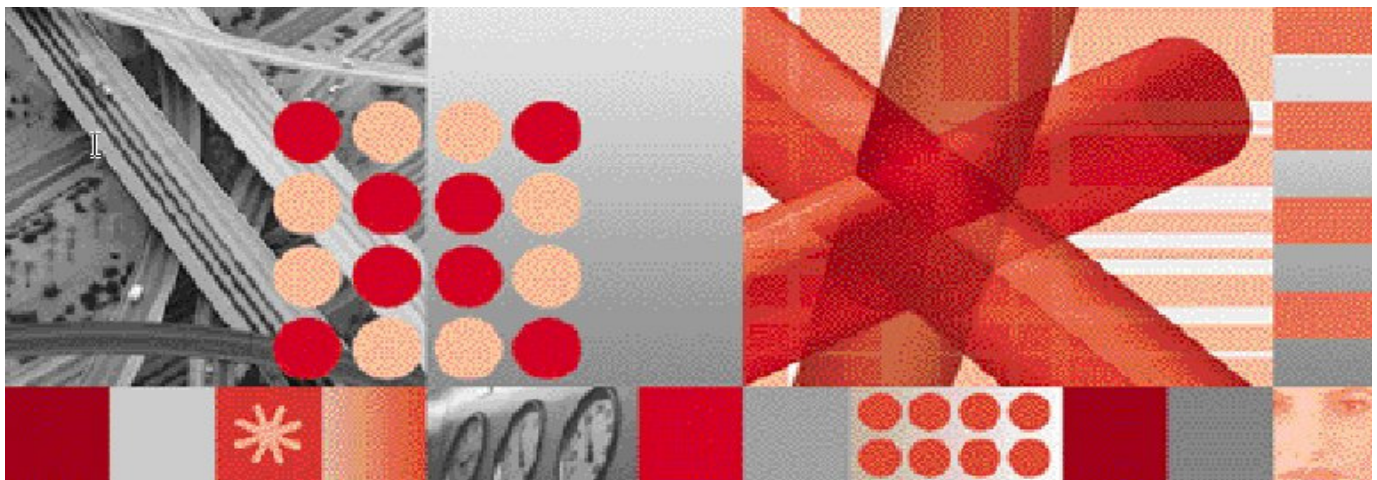




Version 3.4.0.1



## Nortel BSS Gateway Configuration Distribution Note

**TIVOLI® NETCOOL® PERFORMANCE MANAGER FOR WIRELESS  
NORTEL BSS 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 14.

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.
[Nortel BSS User Guide]	Nortel BSS 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:

- Nortel BSS v3.4.0

## 4 Release History

### 4.1 Release 3.4.0

Release date 17 April 2008.

Listed below are the enhancements to this release.

#	Description
1	Support Nortel BSS V16 ASCII

Listed below are the bugs fixed in this release.

Bug#	Description
58564	L3: Neighbour_id produced by parser and loadmap is not unique

### 4.2 Release 3.4.0.1

Release date 14 September 2009.

Listed below are the bugs fixed in this release.

Bug#	Description
45234	L3: Confusing information of configuration data format.



## 5 Data type and releases supported

Vendor Performance data	Release
Nortel BSS V16 ASCII	V16

### 5.1 Raw input files

Scope	Attended Format/Syntax
Input files names to expect	<p><b><u>Directory Structure:</u></b> The Nortel BSS data is expected to be made available in the following file naming conventions and directory structure in Nortel SDO.</p> <p><b>Performance data:</b> Per record file – /SDO/data/obs/raw/&lt;Date&gt;/&lt;Network&gt;/&lt;BSC&gt;/aOFS_&lt;objClass&gt;_&lt;dUTC&gt;&lt;HHMN&gt; /SDO/data/obs/raw/&lt;Date&gt;/&lt;Network&gt;/&lt;BSC&gt;/aGPO_&lt;objClass&gt;_&lt;dUTC&gt;&lt;HHMN&gt; Daily file – /SDO/data/obs/sum/&lt;Network&gt;/&lt;BSC&gt;/aOFS_&lt;objClass&gt;.&lt;Date&gt; /SDO/data/obs/sum/&lt;Network&gt;/&lt;BSC&gt;/aGPO_&lt;objClass&gt;.&lt;Date&gt;</p> <p><b>Configuration data:</b> Per record file – /SDO/data/network/&lt;Date&gt;/&lt;Network&gt;/aNETWORK_&lt;configParameter&gt;.&lt;HHMN&gt;</p> <p><b><u>Filename Format:</u></b> Please find below filename format for both Performance Data and Configuration Data:</p> <p><b>Performance Data:</b> aOFS_&lt;objClass&gt;_&lt;dUTC&gt;&lt;HHMN&gt; aGPO_&lt;objClass&gt;_&lt;dUTC&gt;&lt;HHMN&gt;</p>

aOFS\_<objClass>.<Date>  
aGPO\_<objClass>.<Date>  
format\_obs.YYYYMMDD\_HHMN

**Configuration Data:**

aNETWORK\_<configParameter>.<HHMN>  
format\_<configParameter>.YYYYMMDD\_HHMN

**Properties:**

The IN\_DIR in properties file can be set to any path, the bottom line is the path must contains sub folders structure as below:

./obs/raw/<Date>/<Network>/<BSC>/  
./network/<Date>/Network>/

Please find below the value format:

<Value>	Description	Format	e.g.
<Date>	Date	YYYY MMDD where YYYY =year, MN=m onth, DD=da y	199912 25
<Networ k>	Network number of BSS	XXX	001
<BSC>	bsc number	XXX	008
<objClas s>	object class	XXX (e.g BSC, BSM, BTS, ADJ, TRZ, PCM)	BSC
<configP arameter >	Radio network parameters	Any string (e.g. BTS, SALGO BTS, ADJCH O)	BTS
<dUTC>	Difference between local time	SHHM N where S=P	P0200

		and GMT	(plus) or M (minus), HH=ho ur, MN=m unute	
	<HHMN >	Time	HH=ho ur, MN=mi nute	1200
Input file formats to expect	The file is in ASCII format.			
Equipment/devices to expect data	N/A			
Extraction mechanism	N/A			
Transfer mechanism	N/A			

## 5.2 Hierarchy input files

Scope	Attended Format/Syntax
Input files names to expect	N/A
Input file formats to expect	N/A
Equipment/devices to expect data	N/A
Extraction mechanism	N/A
Transfer mechanism	N/A

## 6 Configurations

### 6.1 Parser Engine configuration

2 rule types are used:

- NORBSS\_data
- NORBSS\_config

#### 6.1.1 NORBSS\_data

This rule is used to parse Performance Data. FileType and FileTime are extracted from file name. FileDate, Network, BSC\_ID and rawORsum are extracted from directory name. FileDate and FileTime will be used to extract the new counters: START\_DATE and START\_TIME.

The DATE\_INPUT\_FORMAT is set to 'YYYYMMDD', and the DURATION is 3600 seconds (1 hour).

Network Region Mapping file (Network\_Region\_BSC.csv) will be loaded at the start of Engine Configuration. This mapping file need to be populated after installation and required maintenance whenever a new BSC element is being added or removed. Network Region Mapping will map the BSC\_ID to the appropriate NETWORK\_ID and REGION\_ID. If the BSC\_ID does not match any one of the mapping file, the NETWORK\_ID and REGION\_ID will be set to UNDEFINED. For example, the contents of the csv file are as below:

	A	B	C	D
1	Network	Region	BSC	
2	1	1	BSC1	
3	1	2	BSC2	
4	1	3	BSC3	
5				

#### 6.1.2 NORBSS\_config

This rule is used to parse Configuration Data. ObjClass is extracted from file name and later used to extract new counter OBJECT. FileDate is extracted from directory name and later used to extract new counter START\_DATE.

## 6.2 Post Parser user configuration

### 6.2.1 Prepare data for accumulation to 60 minute duration

Because raw file will come in 15 minutes and 60 minutes granularity period, the post parser need to perform time normalization (from 15 minutes to 60 minutes) before the counters can be accumulate.

**PERLIZE:** Rename START\_TIME to TIME. PIF output only.

**ADD\_RECORDS:** Insert START\_TIME in each data record by time group mapping, e.g. TIME in '00:00', '00:15', '00:30', '00:45', the corresponding START\_TIME will be 00:00. PIF output only.

### 6.2.2 Manipulation of Data Block

Output Block Names	Post Parsing Rules Applied
<b>BTS</b>	<p><b>INFOINSERT:</b> Join BTS configuration file and BTSSM configuration file to get siteName. PIF output only.</p> <p><b>JOIN_15:</b> Join BTS 15 minutes duration files into 1 hour duration files. PIF output only.</p> <p><b>AGGREGATE:</b> Accumulate BTS Data from 15 to 60 minutes. PIF output only.</p> <p><b>INFOINSERT:</b> Join BTS raw and (BTS &amp; BTSSM configuration) to have a full BTS PIF. PIF output only.</p> <p><b>PERLIZE:</b> Rename all CCCH-# counters to CCCH# for BTS block. PIF output only.</p> <p><b>PIF_2_OUTPUT:</b> Output BTS block. LIF output only.</p>
<b>CCCH0</b> (Obsolete)	<p><b>COUNTER_EXTRACT:</b> Extract CCCH0 counters from BTS block. PIF output only.</p> <p><b>PERLIZE:</b> Remove NULL CCCH0 data rows. LIF output only.</p>
<b>CCCH2</b> (Obsolete)	<p><b>COUNTER_EXTRACT:</b> Extract CCCH2 counters from BTS block. PIF output only.</p> <p><b>PERLIZE:</b> Remove NULL CCCH2 data rows. LIF output only.</p>
<b>CCCH4</b> (Obsolete)	<p><b>COUNTER_EXTRACT:</b> Extract CCCH4 counters from BTS block. PIF output only.</p> <p><b>PERLIZE:</b> Remove NULL CCCH4 data rows. LIF output only.</p>
<b>CCCH6</b> (Obsolete)	<p><b>COUNTER_EXTRACT:</b> Extract CCCH6 counters from BTS block. PIF output only.</p>

	<b>PERLIZE:</b> Remove NULL CCCH6 data rows. LIF output only.
<b>BSC</b>	<p><b>JOIN_15:</b> Join BSC 15 minutes duration files into 1 hour duration files. PIF output only.</p> <p><b>AGGREGATE:</b> Accumulate BSC Data from 15 to 60 minutes. PIF output only.</p> <p><b>INFOINSERT:</b> Join BSC raw and BSC configuration file. LIF output only.</p>
<b>TRZ</b>	<p><b>JOIN_15:</b> Join TRZ 15 minutes duration files into 1 hour duration files. PIF output only.</p> <p><b>AGGREGATE:</b> Accumulate TRZ Data from 15 to 60 minutes. PIF output only.</p> <p><b>INFOINSERT:</b> Join TRZ raw and BTS configuration. LIF output only.</p>
<b>ADJ</b>	<p><b>JOIN_15:</b> Join ADJ 15 minutes duration files into 1 hour duration files. PIF output only.</p> <p><b>AGGREGATE:</b> Accumulate ADJ Data from 15 to 60 minutes. PIF output only.</p> <p><b>PERLIZE:</b> Change ADJCR/ADJCHO block to ADJ block. PIF output only.</p> <p><b>INFOINSERT:</b> Join ADJ raw and ADJ configuration file. PIF output only.</p> <p><b>INFOINSERT:</b> Insert info from BTS configuration file. PIF and LIF are output.</p>
<b>PCM</b>	<p><b>JOIN_15:</b> Join PCM 15 minutes duration files into 1 hour duration files. PIF output only.</p> <p><b>AGGREGATE:</b> Accumulate PCM Data from 15 to 60 minutes. LIF output only.</p> <p><b>INFOINSERT:</b> Join BSC and PCMCIRCUIT configuration files. PIF output only.</p>
<b>LAPD</b>	<p><b>SPLIT_RECORDS:</b> Splits record for LAPD counter. PIF output only.</p> <p><b>PERLIZE:</b> Remove NULL LAPD data rows. PIF output only.</p> <p><b>PIF_2_OUTPUT:</b> PIF 2 OUTPUT for LAPD. LIF output only.</p>
<b>CPUE</b>	<p><b>SPLIT_RECORDS:</b> Splits record CPUE counters. PIF output only.</p> <p><b>PERLIZE:</b> PERLIZE create CPUTYPE for CPUE and remove empty rows. PIF output only.</p> <p><b>PIF_2_OUTPUT:</b> PIF 2 OUTPUT for CPUE. LIF output only.</p> <p><b>PIF_REMOVE:</b> Remove CPUE PIFs.</p>

<b>SICD</b>	<p><b>SPLIT_RECORDS:</b> Splits record SICD counters. PIF output only.</p> <p><b>PERLIZE:</b> Remove NULL SICD data rows. PIF output only.</p> <p><b>ACCUMULATE:</b> Accumulate the SICD to group KPI. LIF output only.</p> <p><b>PIF_2_OUTPUT:</b> PIF 2 OUTPUT for SICD. LIF output only.</p> <p><b>PIF_REMOVE:</b> Remove SICD PIFs.</p>
<b>CPUM</b>	<p><b>SPLIT_RECORDS:</b> Splits record CPUM counters. PIF output only.</p> <p><b>PERLIZE:</b> PERLIZE create CPUTYPE for CPUM. PIF output only.</p> <p><b>PIF_2_OUTPUT:</b> PIF 2 OUTPUT for CPUM. LIF output only.</p> <p><b>PIF_REMOVE:</b> Remove CPUM PIFs.</p>
<b>TMU</b>	<p><b>JOIN_15:</b> Join TMU 15 minutes duration files into 1 hour duration. PIF output only.</p> <p><b>AGGREGATE:</b> Accumulate TMU Data from 15 to 60 minutes. PIF output only.</p> <p><b>PERLIZE:</b> PERLIZE create CPUTYPE for TMU. PIF output only.</p> <p><b>PIF_2_OUTPUT:</b> PIF 2 OUTPUT for TMU. LIF output only.</p>
<b>OMU</b>	<p><b>JOIN_15:</b> Join OMU 15 minutes duration files into 1 hour duration. PIF output only.</p> <p><b>AGGREGATE:</b> Accumulate OMU Data from 15 to 60 minutes. PIF output only.</p> <p><b>PERLIZE:</b> PERLIZE create CPUTYPE for OMU. PIF and LIF are output.</p> <p><b>PIF_2_OUTPUT:</b> PIF 2 OUTPUT for OMU. LIF output only.</p>
<b>CCH</b>	<p><b>JOIN_15:</b> Join CCH 15 minutes duration files into 1 hour duration. PIF output only.</p> <p><b>ACCUMULATE:</b> Accumulate CCH Data from 15 to 60 minutes. PIF output only.</p> <p><b>INFOINSERT:</b> Insert cellIdentity to CCH block from BTS configuration. PIF and LIF are output.</p>
<b>CCHGRP</b>	<p><b>ACCUMULATE:</b> Accumulate CCH block. LIF output only.</p>
<b>TMA</b>	<p><b>JOIN_15:</b> Join TDMA/TMA 15 minutes duration files into 1 hour duration. PIF output only.</p> <p><b>AGGREGATE:</b> Accumulate TMA Data from 15 to 60 minutes at TMA level. PIF output only.</p>

	<b>INFOINSERT:</b> Insert cellIdentity to TMA block from BTS configuration. PIF and LIF are output.
<b>TMAGRP</b>	<b>ACCUMULATE:</b> Accumulate TMA block. LIF output only.
<b>LPR</b>	<p><b>JOIN_15:</b> Join LPR 15 minutes duration files into 1 hour duration. PIF output only.</p> <p><b>ACCUMULATE:</b> Accumulate LPR Data from 15 to 60 minutes. LIF output only.</p>
<b>PBK</b>	<p><b>JOIN_15:</b> Join PBK 15 minutes duration files into 1 hour duration. PIF output only.</p> <p><b>AGGREGATE:</b> Accumulate PBK Data from 15 to 60 minutes. LIF output only.</p>
<b>FRM</b>	<p><b>JOIN_15:</b> Join FRM15 minutes duration files into 1 hour duration. PIF output only.</p> <p><b>ACCUMULATE:</b> Accumulate FRM Data from 15 to 60 minutes. LIF output only.</p>
<b>NVC</b>	<p><b>JOIN_15:</b> Join NVC15 minutes duration files into 1 hour duration. PIF output only.</p> <p><b>ACCUMULATE:</b> Accumulate NVC Data from 15 to 60 minutes. LIF output only.</p>
<b>Others:</b> <b>CC, CEM,</b> <b>Interference,</b> <b>OMC_R,</b> <b>SignallingLink,</b> <b>TSCB</b>	<b>PIF_2_OUTPUT:</b> PIF 2 OUTPUT for other blocks. LIF output only.



### 6.2.3 Vendor Neutral Data Blocks manipulation

Output Block Names	Post Parsing Rules Applied
<b>CCH_AGGR</b>	<p><b>ACCUMULATE:</b> Aggregates the CCH block to become CCH_AGGR after the BTS, BSC and BSM Ids have been inserted into the original CCH block.</p> <p>Aggregation criteria: BSC BSM BTS cellIdentity</p>
<b>TMA_AGGR</b>	<p><b>ACCUMULATE:</b> Aggregates the TMA block to become TMA_AGGR after the BTS, BSC and btsSiteManager Ids have been inserted into the original TMA block.</p> <p>Aggregation criteria: BSC BSM BTS cellIdentity.</p>
<b>NVC_AGGR</b>	<p><b>ACCUMULATE:</b> Aggregates the NVC block to become NVC_AGGR after the files have been normalized from 15mins to 60mins.</p> <p>Aggregation criteria: BEARER id</p>
<b>BTS_TBF</b>	<p><b>JOIN:</b> Joins the following 3 blocks to form the BTS_TBF block. The 3 blocks are:</p> <ul style="list-style-type: none"> <li>i) CCH_AGGR</li> <li>ii) TMA_AGGR</li> <li>iii) BTS</li> </ul> <p>Join criteria: BTS, BSC, BTSM, cellIdentity</p>

## Appendix A Notices and Trademarks

This appendix contains the following:

- Notices
- Trademarks

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