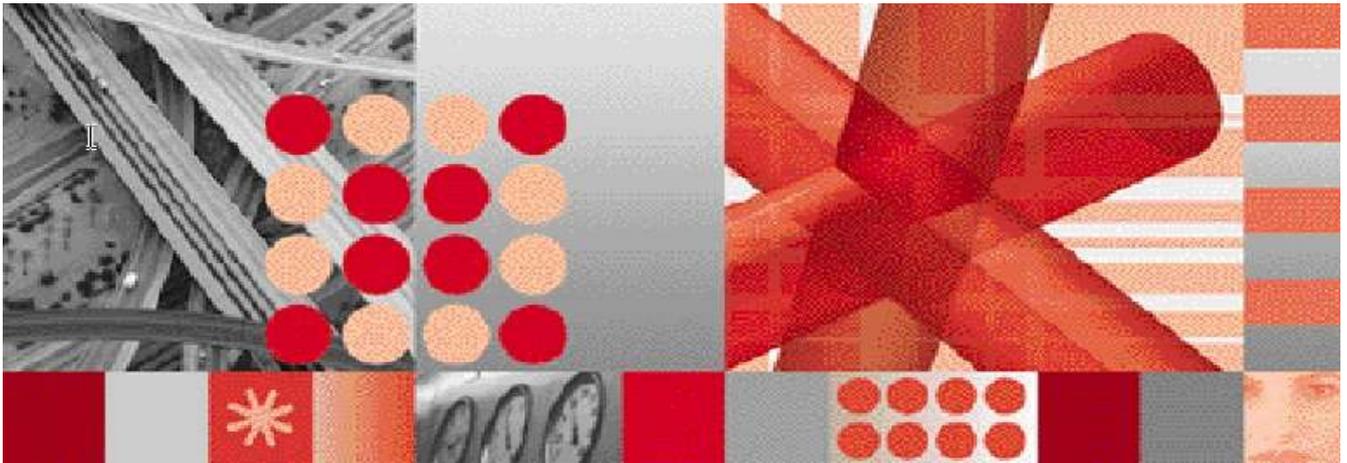




Version 1.4.1



## Upgrade Guide

## TIVOLI NETCOOL SERVICE QUALITY MANAGER GPRS SERVICE SOLUTION UPGRADE GUIDE

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**Note:** Before using this information and the product it supports, read the information in Notices on page 18.

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This edition applies to Version 1, Release 4, Modification 1 of IBM Tivoli Netcool Service Quality Manager GPRS Service Solution.

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# 1 About this Documentation

The IBM® Tivoli® Netcool® Service Quality Manager GPRS Service Solution Version 1.4 to 1.4.1 Upgrade Guide is organized into the following chapters:

**Table 1 Document Structure**

<i>Chapter</i>	<i>Description</i>
<a href="#">About this Documentation</a>	An overview of the Tivoli Netcool Service Quality Manager for GPRS Service Solution Upgrade Guide documentation, which gives details of the intended audience and the structure of the guide.
<a href="#">Media Content</a>	Details of media provided for the release.
<a href="#">Hardware Specification</a>	Details of hardware required for the release.
<a href="#">Software Requirements</a>	Details of software required for the release.
<a href="#">Upgrade Procedure</a>	Describes the upgrade procedure itself

## 1.1 Audience

The target audience of this guide is IBM Tivoli Netcool Service Quality Manager GPRS Service Solution customers. They should be familiar with telecommunication and IT principles and should also have a good understanding of Solaris and/or AIX®.

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**IMPORTANT:** Before attempting an upgrade of the Tivoli Netcool Service Quality Manager GPRS Service Solution to version 1.4.1 you are strongly advised to read the release notes distributed with Tivoli Netcool Service Quality Manager GPRS version 1.4.1 software. Release notes may contain information specific to your installation not contained in this guide. Failure to consult release notes may result in a corrupt, incomplete or failed installation.

**Note:** Tivoli Netcool Service Quality Manager Administrators should not, without prior consultation and agreement from IBM, make any changes to the database schema. Changes to the database schema may result in corruption of data and failure of the Service Quality Manager System. This applies to all releases of Tivoli Netcool Service Quality Manager using all versions of interfaces.

---

## 1.2 Required Skills and Knowledge

This guide assumes you are familiar with the following:

- General IT Principles
- Unix® Operating Systems
- IP Networking
- GPRS
- Service Quality Manager modeling concepts i.e. service resources, KPIs, KQIs and SLAs

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.

## 1.3 Document Conventions

The following command prompts can be seen throughout this document where the user has to enter commands at the command line:

- # (hash): This prompt will be displayed if the user is logged in as user `root`.
- \$ (dollar): This prompt will be displayed if the user is logged in as either the `saserver` or `oracle` user.

Please note the above prompts are not part of commands. All commands must be entered after these prompts.

This document uses the typographical conventions shown in the following table:

**Table 2: General Document Conventions**

<b>Format</b>	<b>Examples</b>	<b>Description</b>
ALL UPPERCASE	GPS NULL MYWEBSERVER	Acronyms, device names, logical operators, registry keys, and some data structures.
<a href="#">Link</a>	See <a href="http://www.sun.com">www.sun.com</a>	For links within a document or to the Internet.
<b>Bold</b>	<b>Note:</b> The busy hour determiner is...	Heading text for Notes, Tips, and Warnings.

SMALL CAPS	The STORED SQL dialog box... ...click VIEW... In the main GUI window, select the FILE menu, point to NEW, and then select TRAFFIC TEMPLATE.	Any text that appears on the GUI.
<i>Italic</i>	A <i>busy hour</i> is... A web Server <i>must</i> be installed... See the <i>User Guide</i>	New terms, emphasis, and book titles.
Monospace	<code>./wminstall</code> <code>\$ cd /cdrom/cdrom0</code> <code>/xml/dict</code> <code>addmsc.sh</code> <code>core.spec</code> Type OK to continue.	Code text, command line text, paths, scripts, and file names. Text written in the body of a paragraph that the user is expected to enter.
<b>Monospace Bold</b>	<code>[root] # pkginfo   grep -i perl</code> system Perl5 On-Line Manual Pages system Perl 5.005_03 (POD Documentation) system Perl 5.005_03	For contrast in a code example to show lines the user is expected to enter.
<i>&lt;Monospace italics&gt;</i>	<code># cd &lt;oracle_setup&gt;</code>	Used in code examples: command-line variables that you replace with a real name or value. These are always marked with arrow brackets.
[square bracket]	<code>log-archiver.sh [-i][-w][-t]</code>	Used in code examples: indicates options.

## 1.4 User Publications

The following user publications are provided with the Tivoli Netcool Service Quality Manager GPRS Service Solution software in Adobe® Portable Document Format (PDF).

**Table 3: GPRS Service Solution Documentation**

<b>Document</b>	<b>Description</b>
<i>Tivoli Netcool Service Quality Manager GPRS Service Solution Release Notes</i>	Provides information on Tivoli Netcool Service Quality Manager GPRS Service Solution release contents, platform requirements, installation and upgrade procedures, and known issues.
<i>Tivoli Netcool Service Quality Manager GPRS Service Solution Overview Guide</i>	Provides a functional and architectural overview of the GPRS Service Solution product architecture.

**TIVOLI NETCOOL SERVICE QUALITY MANAGER GPRS SERVICE SOLUTION UPGRADE GUIDE**

<i>Tivoli Netcool Service Quality Manager Service Solutions Installation Guide</i>	Details the generic steps required to install any Service Quality Manager Service Solution including GPRS.
<i>Tivoli Netcool Service Quality Manager GPRS Upgrade Guide</i>	Describes how to upgrade the Service Quality Manager GPRS Service Solution from version 1.4 to 1.4.1 while maintaining existing data and configuration.

The following user publications are provided with the Tivoli Netcool Service Quality Manager Version 4.1.1 software in Adobe Portable Document Format (PDF). Online Help is available in HTML format.

**Table 4 - Tivoli Netcool Service Quality Manager User Publications & Online help**

<b>Document</b>	<b>Description</b>
<i>Release Notes</i>	Provides information on the Tivoli Netcool Service Quality Manager 4.1.1 release contents, platform requirements, installation and upgrade procedures, and known issues.
<i>Configuration Guide</i>	Describes SLA Provisioning (Parties, SLAs, and SLA Templates applications) and SQM Provisioning (Services Resources, KQI and Service Models applications) in Service Quality Manager.
<i>Monitoring Guide</i>	Describes Monitoring (SLA Monitor, KQI Analyzer, Alarm Monitor, Audit Manager and SLA Web Monitor applications) in <i>Tivoli Netcool</i> Service Quality Manager.
<i>CEM Monitoring Guide</i>	Describes how to use and monitor the Customer Experience Management [CEM] feature in Tivoli Netcool Service Quality Manager.
<i>CEM Provisioning Guide</i>	Reference Guide containing information for provisioning the Customer Experience Management system.
<i>Solaris Server Installation Guide</i>	Describes how to install the Tivoli Netcool Service Quality Manager Server system on Solaris 10g.
<i>Client Installation Guide</i>	Describes how to install the Tivoli Netcool Service Quality Manager Client.
<i>AIX Server Installation Guide</i>	Describes how to install the Tivoli Netcool Service Quality Manager Server system on AIX 5.3L.

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## TIVOLI NETCOOL SERVICE QUALITY MANAGER GPRS SERVICE SOLUTION UPGRADE GUIDE

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<i>Solaris System Administration Guide</i>	Provides an overview of the Tivoli Netcool Service Quality Manager administrative tasks including instructions on how to complete the following tasks: <ul style="list-style-type: none"><li>- Starting and stopping Tivoli Netcool Service Quality Manager.</li><li>- Running batch processes such as archiving trace files and log files.</li><li>- Backing up and restoring the system.</li></ul>
<i>AIX System Administration Guide</i>	Provides an overview of the AIX Tivoli Netcool Service Quality Manager administrative tasks including instructions on how to complete the following tasks: <ul style="list-style-type: none"><li>- Starting and stopping Tivoli Netcool Service Quality Manager.</li><li>- Running batch processes such as archiving trace files and log files.</li><li>- Backing up and restoring the system.</li></ul>
<i>Upgrade Guide</i>	Details how to upgrade Tivoli Netcool Service Quality Manager from v3.1.3 to v 4.1.1.
<i>Business Objects Installation &amp; Configuration Guide</i>	Provides information on the steps required to install and configure the Business Objects (v 6.5 or Xi) Server and Client for use with Tivoli Netcool Service Quality Manager.
<i>Service Quality Manager Core Online Help</i>	Provides information and procedures for using Tivoli Netcool Service Quality Manager client applications.
<i>Customer Experience Management Online Help</i>	Describes how to use and monitor the Customer Experience Management feature in the Tivoli Netcool Service Quality Manager.
<i>SLA Webview Online Help</i>	Describes how to use and monitor the SLA Webview feature in the Tivoli Netcool Service Quality Manager.

## 2 Software Requirements

The minimum pre-requisite software requirements are:

- Tivoli Netcool Service Quality Manager Version 4.1.1.

---

**Note:** Refer to the *Tivoli Netcool Service Quality Manager Version 4.1.1 Release Notes* for the minimum software required to operate the Service Quality Manager product.

---

- Tivoli Netcool Service Quality Manager GPRS Service Solution version 1.4 (1.4.0.5) is successfully installed prior to performing this upgrade.
- Any installed test data for the Tivoli Netcool Service Quality Manager GPRS Service Solution is uninstalled prior to performing this upgrade. Updated versions of these packages are provided with this release, and these can be re-installed after upgrade if required.
- Any Service Level Agreement (SLA) Clause using the following KQI – “Availblty\_GPRS\_RAN\_CellArea\_PM” is removed or the entire SLA terminated.

## 3 Hardware Specification

---

Refer to the *Tivoli Netcool Service Quality Manager GPRS Service Solution Release Notes* for details on the hardware specification for GPRS version 1.4.1

---

## 4 Upgrade Procedure

The upgrade procedure is composed of the following steps in sequence:

- Stopping the GRPS Loaders
- Backing up the GPRS Configuration
- Installing GPRS Version 1.4.1 Loaders
- Upgrading the GPRS Provisioning to Version 1.4.1
- Deploying the GPRS Version 1.4.1 Loaders
- Restoring the GPRS Loader Configurations
- Upgrading the GPRS Schema
- Restarting the GPRS Loaders

Refer to the sections below for details on how to complete each of the main steps identified above.

### 4.1 Stopping the GPRS Loaders

---

**Note (Distributed Installation):** In a distributed system, perform the procedures in this section on the Application server only.

---

To stop the GPRS loader processes, complete the following as user `saserver`:

1. Execute the command:

```
$ sap stop gprs_ran_pm_loader
$ sap stop gprs_core_ggsn_pm_loader
$ sap stop gprs_core_sgsn_pm_loader
$ sap stop gprs_e2e_at_loader
$ sap stop gprs_gb_pp_loader
```

---

## 4.2 Create a backup directory

---

**Note (Distributed Installation):** In a distributed system, perform the procedures in this section on the Database and Gateway servers.

---

A directory needs to be created to store the existing configuration and other artifacts for the loaders. Choose a directory name `<BACKUP_DIR>` and then complete the following as user `saserver`:

```
$ cd $WMCROOT
$ mkdir <BACKUP_DIR>
```

where `<BACKUP_DIR>` denotes the name chosen for the backup directory.

---

## 4.3 Backing up the Loader Configuration

---

**Note (Distributed Installation):** In a distributed system, perform the procedures in this section on the Gateway server only.

---

To backup the configuration to `<BACKUP_DIR>` complete the following as user `saserver`:

1. Execute the following commands:

```
$ rm $WMCROOT/conf/adapter/data/<loader_name>_contextdef.xml
$ rm $WMCROOT/conf/adapter/data/<loader_name>_loader_parser.bl
$ rm $WMCROOT/bin/<loader_name>_loader.env
```

2. Back up the datasource configuration by executing the following commands:

```
$ cd $WMCROOT/conf/adapter/datasource
$ cp <loader_name>_loader.properties
$WMCROOT/<BACKUP_DIR>/<loader_name>_loader.properties.datasource
```

3. Back up the collector configuration by executing the following commands:

```
$ cd $WMCROOT/conf/adapter/collector
$ cp <loader_name>_loader.properties $WMCROOT/<BACKUP_DIR>/<loader_name>
_loader.properties.collector
```

substituting each of the following values for `<loader_name>` one at a time

- `gprs_gb_pp`
- `gprs_ran_pm`
- `gprs_core_ggsn_pm`
- `gprs_core_sgsn_pm`
- `gprs_e2e_at`

---

---

**Note:** Make a note of the location of the directory where the configuration is backed up to, its contents will be needed later.

---

## 4.4 Installing GPRS Version 1.4.1

---

**Note (Distributed Installation):** In a distributed system, perform the procedures in this section on the Application server only.

---

Complete the following as user `root`:

1. Transfer the GPRS GOM package `ibm-tn-sqm-gprs_gom-1.4.1.4.tar.gz` to the `<target directory>` (e.g. `/appl`) directory on the Service Quality Manager host machine.
2. Navigate to the `<target directory>` directory by executing the command:  

```
# cd <target directory>
```
3. Unzip the contents of the `gprs_gom` package by executing the command:  

```
# gzip -d ibm-tn-sqm-gprs_gom-1.4.1.4.tar.gz
```
4. Untar the contents of the `gprs_gom` package by executing the command:  

```
# tar -xvf ibm-tn-sqm-gprs_gom-1.4.1.4.tar
```
5. Verify the following files are now located in the `<target directory>` directory:  

```
ibm-tn-sqm-gprs_gom.install  
ibm-tn-sqm-gprs_gom.license  
ibm-tn-sqm-gprs_gom.remove  
ibm-tn-sqm-gprs_gom.sw
```
6. Execute the `gprs_gom` install procedure using the command:  

```
# ./ibm-tn-sqm-gprs_gom.install
```

Follow the on-screen prompts as directed.

## 4.5 Installing GPRS Version 1.4.1 loaders

---

**Note (Distributed Installation):** In a distributed system, perform the procedures in this section on both the Application server and Gateway server.

---

Complete the following as user `root`:

---

---

1. Transfer the GPRS packages `ibm-tn-sqm-gprs-<datasource name>-1.4.1.4.tar.gz` to the `<target directory>` (e.g. `/appl`) directory on the Service Quality Manager host machine.

2. Navigate to the `<target directory>` directory by executing the command:

```
# cd <target directory>
```

3. Unzip the contents of the `datasource` package by executing the command:

```
# gzip -d ibm-tn-sqm-<datasource name>-1.4.1.4.tar.gz
```

4. Untar the contents of the `datasource` package by executing the command:

```
# tar -xvf ibm-tn-sqm-<datasource name>-1.4.1.4.tar
```

5. Verify the following files are now located in the `<target directory>` directory:

```
ibm-tn-sqm-<datasource name>.install  
ibm-tn-sqm-<datasource name>.license  
ibm-tn-sqm-<datasource name>.remove  
ibm-tn-sqm-<datasource name>.sw
```

6. Execute the `datasource` install procedure using the command:

```
# ./ibm-tn-sqm-<datasource name>.install
```

Follow the on-screen prompts as directed.

substituting each of the following values for `<datasource name>` one at a time

- `gprs_gb_pp`
- `gprs_ran_pm`
- `gprs_core_ggsn_pm`
- `gprs_core_sgsn_pm`
- `gprs_e2e_at`

Follow the on-screen prompts as directed.

## 4.6 Upgrading the GPRS Provisioning to Version 1.4.1

---

**Note (Distributed Installation):** In a distributed system, perform the procedures in this section on the Application server only.

---

Complete the following as user `saserver`:

1. Execute the command:

```
$ cd $WMCROOT/packages
```

2. Upgrade the `gprs_gom` package to version 1.4.1 by executing the command:
- 
-

---

---

```
$ package_upgrade -t gprs_gom_1.4.1 -s gprs_gom_1.4
```

Follow the on-screen prompts as directed.

3. Upgrade the datasource packages to version 1.4.1 by executing the commands:

```
$ package_upgrade -t gprs_gb_pp_1.4.1 -s gprs_gb_pp_1.4
$ package_upgrade -t gprs_e2e_at_1.4.1 -s gprs_e2e_at_1.4
$ package_upgrade -t gprs_ran_pm_1.4.1 -s gprs_ran_pm_1.4
$ package_upgrade -t gprs_core_ggsn_pm_1.4.1 -s gprs_core_ggsn_pm_1.4
$ package_upgrade -t gprs_core_sgsn_pm_1.4.1 -s gprs_core_sgsn_pm_1.4
```

Follow the on-screen prompts as directed.

## 4.7 Deploying the GPRS Version 1.4.1 Loaders

---

**Note (Distributed Installation):** In a distributed system, perform the procedures in this section on the Gateway server only.

---

Complete the following as user `saserver`:

1. Execute the command:

```
$ cd $WMCROOT/packages
```

2. Deploy the loaders by executing the commands:

```
$ wmc_ant -f adp_deploy.xml -Dsa.package=gprs_core_ggsn_pm_1.4.1 do-deploy
$ wmc_ant -f adp_deploy.xml -Dsa.package=gprs_core_sgsn_pm_1.4.1 do-deploy
$ wmc_ant -f adp_deploy.xml -Dsa.package=gprs_ran_pm_1.4.1 do-deploy
$ wmc_ant -f adp_deploy.xml -Dsa.package=gprs_gb_pp_1.4.1 do-deploy
$ wmc_ant -f adp_deploy.xml -Dsa.package=gprs_e2e_at_1.4.1 do-deploy
```

## 4.8 Restoring the GPRS Loader Configurations

---

**Note (Distributed Installation):** In a distributed system, perform the procedures in this section on the Gateway server only.

---

To restore the loader configurations, complete the following as user `saserver`:

1. Restore the datasource configuration:

```
$ cd $WMCROOT/conf/adapter/datasource
$ cp $WMCROOT/<BACKUP_DIR>/<loader name>_loader.properties.datasource ./
<loader name>_loader.properties
```

2. Restore the collector configuration:

```
$ cd $WMCROOT/conf/adapter/collector
```

---

---

```
$ cp $WMCROOT/<BACKUP_DIR>/<loader name>_loader.properties.collector ./
<loader name>_loader.properties
```

substituting each of the following values for *<loader name>* one at a time:

- gprs\_gb\_pp
- gprs\_ran\_pm
- gprs\_core\_ggsn\_pm
- gprs\_core\_sgsn\_pm
- gprs\_e2e\_at

## 4.9 Upgrading the GPRS Schema

---

**Note:** Complete the following instructions substituting each of the following for *<loader name>* one value at a time:

```
gprs_gb_pp, gprs_e2e_at, gprs_core_ggsn_pm, gprs_core_sgsn_pm, gprs_ran_pm
```

---

---

**Note (Consolidated Installation):** Execute the instructions in this section on a consolidated installation only.

---

Complete the following as user saserver on the Consolidated server:

```
$ cd $WMCROOT/packages/<loader name>_1.4.1/admin/oracle/schema
$ tar -cvf <loader name>_1.4.1_schema.tar *
$ mkdir $WMCROOT/admin/oracle/schema/<loader name>_1.4.1
$ cp $WMCROOT/packages/<loader name>_1.4.1/admin/oracle/schema/<loader
name>_1.4.1_schema.tar $WMCROOT/admin/oracle/schema/<loader name>_1.4.1
$ cd $WMCROOT/admin/oracle/schema/<loader name>_1.4.1
$ tar -xvf <loader name>_1.4.1_schema.tar
```

---

**Note (Distributed Installation):** Execute the instructions in this section on a distributed installation only.

---

Complete the following as user saserver on the Gateway server:

```
$ cd $WMCROOT/packages/<loader name>_1.4.1/admin/oracle/schema
$ tar -cvf <loader name>_1.4.1_schema.tar *
```

Complete the following as user saserver on the Database server

```
$ mkdir $WMCROOT/admin/oracle/schema/<loader name>_1.4.1
```

Transfer this file on the Gateway server

```
$WMCROOT/packages/<loader name>_1.4.1/admin/oracle/schema/<loader
name>_1.4.1_schema.tar
```

into the following directory on the Database server

---

---

```
$WMCROOT/admin/oracle/schema/<loader name>_1.4.1
```

Complete the following as user `saserver` on the Database server:

```
$ cd $WMCROOT/admin/oracle/schema/<loader name>_1.4.1
$ tar -xvf <loader name>_1.4.1_schema.tar
```

## 4.10 Restarting the GPRS Loader Processes

---

**Note (Distributed Installation):** In a distributed system, perform the procedures in this section on the Application server only.

---

To restart the GPRS loader processes, complete the following as user `saserver`:

1. Execute the commands:

```
$ sap start gprs_gb_pp_loader
$ sap start gprs_core_ggsn_pm_loader
$ sap start gprs_core_sgsn_pm_loader
$ sap start gprs_ran_pm_loader
$ sap start gprs_e2e_at_loader
```

## Appendix A Notices

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