



User Guide

Note: Before using this information and the product it supports, read the information in Notices on page [14](#).

This edition applies to the IBM Tivoli Netcool Service Quality Manager Global Object Model (Product Number 5724-V48) and to all subsequent releases and modifications until otherwise indicated in new editions

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1 About this publication

The *IBM Tivoli Netcool Service Quality Manager Global Object Model User Guide* details the steps required to upgrade the IBM® Tivoli® Netcool® Service Quality Manager Global Object Model (GOM).

1.1 Intended audience

This publication is for IBM Tivoli Netcool Service Quality Manager and Customer Experience Manager Service Module customers.

Readers need to be familiar with the following topics:

- Telecommunication and IT principles
- IP networking
- Good understanding of Solaris and IBM AIX® operating systems

1.2 What this publication contains

This publication contains the following chapters:

- Chapter 2 "Software requirements"
Provides details of the software required.
- Chapter 3 "Upgrade procedures"
Provides details of the GOM upgrade procedures.

1.3 Publications

This section lists the following publications:

- IBM Tivoli Netcool Service Quality Manager core library

It also describes how to access Tivoli publications online and how to order Tivoli publications.

1.3.1 IBM Tivoli Netcool Service Quality Manager core library

The IBM Tivoli Netcool Service Quality Manager core library contains the following publications:

- *IBM Tivoli Netcool Service Quality Manager AIX Server Installation Guide*

Describes how to install the Tivoli Netcool Service Quality Manager server system on IBM AIX® systems.

- *IBM Tivoli Netcool Service Quality Manager Solaris Server Installation Guide*

Describes how to install the Tivoli Netcool Service Quality Manager server system on Solaris systems.

- *IBM Tivoli Netcool Service Quality Manager Client Installation Guide*

Describes how to install the Tivoli Netcool Service Quality Manager client.

- *IBM Tivoli Netcool Service Quality Manager Upgrade Guide*

Details how to upgrade from one Tivoli Netcool Service Quality Manager version to another.

- *IBM Tivoli Netcool Service Quality Manager AIX System Administration Guide*

Provides an overview of the IBM AIX Tivoli Netcool Service Quality Manager administrative tasks, including instructions on how to complete the following tasks:

- Starting and stopping the Tivoli Netcool Service Quality Manager application
- Running batch processes such as archiving trace files and log files
- Backing up and restoring the system

- *IBM Tivoli Netcool Service Quality Manager Solaris System Administration Guide*

Provides an overview of the Solaris Tivoli Netcool Service Quality Manager administrative tasks, including instructions on how to complete the following tasks:

- Starting and stopping the Tivoli Netcool Service Quality Manager application
- Running batch processes such as archiving trace files and log files
- Backing up and restoring the system

- *IBM Tivoli Netcool Service Quality Manager Provisioning Service SI Guide*

Provides information about provisioning the Tivoli Netcool Service Quality Manager system.

- *IBM Tivoli Netcool Service Quality Manager Customer Experience Manager Provisioning Guide*

Provides information about provisioning the Tivoli Netcool Customer Experience Manager system.

- *IBM Tivoli Netcool Service Quality Manager Customer Experience Manager Monitoring Guide*

Describes how to use and monitor the Tivoli Netcool Customer Experience Manager feature in the Tivoli Netcool Service Quality Manager product.

- *IBM Tivoli Netcool Service Quality Manager Monitoring Guide*

Describes monitoring (service level agreement (SLA) monitor, key quality indicator (KQI) analyzer, alarm monitor, audit manager, and SLA Webview applications) in the Tivoli Netcool Service Quality Manager product.

- *IBM Tivoli Netcool Service Quality Manager Configuration Guide*

Describes SLA provisioning (parties, SLAs, and SLA templates applications) and Tivoli Netcool Service Quality Manager provisioning (services resources, KQI models, and service models applications) in the Tivoli Netcool Service Quality Manager product.

- *IBM Tivoli Netcool Service Quality Manager BusinessObjects Installation and Configuration Guide*

Provides information about the steps required to install and configure the BusinessObjects server and client for use with the Tivoli Netcool Service Quality Manager product.

- *IBM Tivoli Netcool Customer Experience Manager Customer Relationship Management Development Guide*

Provides an overview of the Customer Relationship Management (CRM) proxy server and the CRM plug-in module. The CRM plug-in modules, developed using Java code, mediate between the Tivoli Netcool Customer Experience Management framework and an external CRM system.

- *IBM Tivoli Netcool Service Quality Manager Release Notes*

Provides information about the Tivoli Netcool Service Quality Manager release contents, platform requirements, installation and upgrade procedures, and known issues.

1.3.2 Accessing terminology online

The IBM Terminology website consolidates the terminology from IBM product libraries in one convenient location. You can access the Terminology website at:

<http://www.ibm.com/software/globalization/terminology>.

1.3.3 Accessing publications online

The product CD contains the publications that are in the product library. The format of the publications is PDF.

IBM posts publications for Tivoli products, as they become available and whenever they are updated, to the Tivoli Documentation Central Web site at <http://www.ibm.com/tivoli/documentation>

Note: If you print PDF documents on anything other than letter-sized paper, set the option in the **File -> Print** window that allows Adobe® Reader to print letter-sized pages on your local paper.

1.3.4 Ordering publications

You can order many Tivoli publications online at

<http://www.elink.ibm.link.ibm.com/publications/servlet/pbi.wss>

You can also order by telephone by calling one of these numbers:

- In the United States: 800-879-2755
- In Canada: 800-426-4968

In other countries, contact your software account representative to order Tivoli publications. To locate the telephone number of your local representative, perform the following steps:

1. Go to <http://www.elink.ibm.link.ibm.com/publications/servlet/pbi.wss>
2. Select your country from the list and click **Go**.
3. Click **About this site** in the main panel to see an information page that includes the telephone number of your local representative.

1.4 Tivoli technical training

For Tivoli technical training information, see the following IBM Tivoli Education Web site at

<http://www.ibm.com/software/tivoli/education>.

1.5 Tivoli user groups

Tivoli user groups are independent, user-run membership organizations that provide Tivoli users with information to assist them in the implementation of Tivoli Software solutions. Through these groups, members can share information and learn from the knowledge and experience of other Tivoli users. Tivoli user groups include the following members and groups:

- 23,000+ members
- 144+ groups

Access the link for the Tivoli Users Group at <http://www.tivoli-ug.org>

1.6 Support information

If you have a problem with your IBM software, you want to resolve it quickly. IBM provides the following ways for you to obtain the support you need:

Online

Access the Tivoli Software Support site at

<http://www-01.ibm.com/software/sysmgmt/products/support/index.html?ibmprd=tivman>

Access the IBM Software Support site at: <http://www.ibm.com/software/support/probsub.html>.

IBM Support Assistant

The IBM Support Assistant is a free local software serviceability workbench that helps you resolve questions

and problems with IBM software products. The Support Assistant provides quick access to support-related information and serviceability tools for problem determination. To install the Support Assistant software, go to <http://www.ibm.com/software/support/isa>.

1.7 Conventions used in this guide

This publication uses several conventions for special terms and actions, operating system-dependent commands and paths, and margin graphics.

Typeface conventions

This publication uses the following typeface conventions:

Bold

- Lowercase commands and mixed case commands that are otherwise difficult to distinguish from surrounding text.
- Interface controls (check boxes, push buttons, radio buttons, spin buttons, fields, folders, icons, list boxes, items inside list boxes, multicolumn lists, containers, menu choices, menu names, tabs, property sheets), labels (such as **Tip:**, and **Operating system considerations:**)
- Keywords and parameters in text.

Italics

- Citations (examples: titles of publications, diskettes, and CDs)
- Words defined in text (example: a nonswitched line is called a *point-to-point line*)
- Emphasis of words and letters (words as words example: "Use the word *that* to introduce a restrictive clause."; letters as letters example: "The LUN address must start with the letter *L*.")
- New terms in text (except in a definition list): a *view* is a frame in a workspace that contains data.
- Variables and values you must provide.... where *myname* represents.....

Monospace

- Examples and code examples.
- File names, programming keywords, and other elements that are difficult to distinguish from surrounding text.
- Message text and prompts addressed to the user.
- Text that the user must type.
- Values for arguments or command options.

Operating system-dependent variables and paths

This publication uses the UNIX® convention for specifying environment variables and for directory notation. When using the Windows® command line, replace *\$variable* with *%variable%* for environment variables and replace each forward slash (/) with a backslash (\) in directory paths. The names of environment variables are not always the same in the Windows and UNIX environments. For example, %TEMP% in Windows environments is equivalent to \$TMPDIR in UNIX environments.

Note: If you are using the bash shell on a Windows system, you can use the UNIX conventions.

2 Software requirements

The minimum prerequisite software requirements are:

- Tivoli Netcool Service Quality Manager version 4.1.4.

Note: See the *IBM Tivoli Netcool Service Quality Manager version 4.1.4 Release Notes* for the minimum software required to operate the Tivoli Netcool Service Quality Manager product.

3 Upgrade procedures

Note (for distributed installations): In a distributed installation, all sections in this chapter must be completed on the application server only.

Note (important): The Tivoli Netcool Service Quality Manager Global Object Model (GOM) upgrade between any two point releases is performed in sequence. For example, to migrate from GOM version A to GOM version D, it is necessary to upgrade through GOM versions B and C.

The sections that follow detail the core support for upgrade between two GOM versions.

3.1 GOM upgrade tool

The usage of the utility is as follows:

```
Usage: package_upgrade -t [<target package name>] -s [<source package name>]
      -t          target upgrade package
      -s          source upgrade package
      -h          help
```

The `target upgrade package` is the GOM package that you are upgrading to, the `source upgrade package` is the GOM version you are upgrading from. The utility produces standard response files for the upgrade in the following location:

```
$WMCROOT/var/provision/package/<target>/broker/upgrade/<source>
```

3.2 GOM version 1.7 to version 1.8 migration

3.2.1 Compatibility matrix

The table in this section details the set of Tivoli Netcool Service Quality Manager and Customer Experience Manager Service Modules/Solutions that are incompatible with GOM version 1.8. If these Service Modules are currently installed, both the Service Module GOM and the data sources must be uninstalled before you can upgrade from GOM version 1.7 to GOM version 1.8. Execute the following command as user saserver to list the versions of the currently installed Service Modules:

```
$ package_mgmt -l
```

Note: See the IBM Tivoli Netcool Customer Experience Manager or Service Quality Manager Service Module Specific Installation Guide for details for un-installing the particular Service Module.

Table 1: GOM compatibility

<i>Service Solution name</i>	<i>Incompatible version</i>
IBM Tivoli Netcool Service Quality Manager IPVPN Service Solution	2.1, 3.1
IBM Tivoli Netcool Service Quality Manager GSM Service Solution	1.4 (Note that 1.4.1 is compatible)
IBM Tivoli Netcool Service Quality Manager VoIP Service Solution	1.2
IBM Tivoli Netcool Service Quality Manager Voicemail Service Solution	1.1, 1.2
IBM Tivoli Netcool Service Quality Manager SMS Service Solution	1.1
IBM Tivoli Netcool Service Quality Manager GPRS Service Solution	1.1, 1.2, 1.3
IBM Tivoli Netcool Customer Experience Manager iGPRS Service Solution	1.1.x

IBM Tivoli Netcool Customer Experience Manager iUMTS HSDPA Service Solution	1.1.x
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3.2.2 Migration procedures

Installing the Tivoli Netcool Service Quality Manager package

Complete the following steps as user saserver:

1. Transfer the Tivoli Netcool Service Quality Manager GOM packages to the <target directory> directory on the Tivoli Netcool Service Quality Manager host computer. Use the /appl directory as the <target directory> value.
2. Execute the following command:

```
$ $WMCROOT/admin/common/install/scripts/deploy-service-solution -package /appl/ibm-tn-sqm-cots_gom-1.8.tar.gz
```
3. Enter 'yes' when asked if you want to deploy the package.
4. Enter 'y' when asked if you want to install the package.
5. Accept the license agreement.

Upgrading the Tivoli Netcool Service Quality Manager package

Complete the following steps as user saserver:

1. Execute the command:

```
$ cd $WMCROOT/packages
```
2. Upgrade the GOM by executing the commands:

```
$ package_upgrade -t cots_gom_1.8 -s cots_gom_1.7
```
3. Enter 'y' when asked if you want to continue.

Installing the demo package (optional)

Note: Prior to attempting the migration of the demo package, remove all installed Service Module test packages. See the individual test package readme files for the Tivoli Netcool Customer Experience Manager and Tivoli Netcool Service Quality Manager test packages for the removal procedure.

Note: If demo package version 1.7 is installed, complete steps 1,2 and 3, otherwise ignore steps 1,2 and 3 and proceed to step 4.

Complete the following steps as user saserver:

1. Execute the command:

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

2. Deprovision the existing demo GOM by executing the command:

```
$ package_mgmt -c demo_gom_1.7
```

3. Remove the existing demo GOM by executing the command:

```
$ rm -rf $WMCROOT/packages/demo_gom_1.7
```

4. Transfer the demo GOM package to the <target directory> directory on the Tivoli Netcool Service Quality Manager host computer. Use the /appl directory as the <target directory> value.

5. Execute the following command:

```
$ $WMCROOT/admin/common/install/scripts/deploy-service-solution -package /appl/ibm-tn-sqm-demo_gom-1.8.tar.gz
```

6. Enter 'yes' when asked if you want to deploy the package.

7. Enter 'y' when asked if you want to install the package.

8. Accept the license agreement.

9. Execute the command:

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

10. Provision the new GOM package:

```
$ package_mgmt -i demo_gom_1.8
```

Removing the existing GOM packages

Complete the following steps as user saserver to remove the GOM from the system:

- Remove the GOM packages by executing the commands:

```
# rm -rf $WMCROOT/packages/cots_gom_1.7
```

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