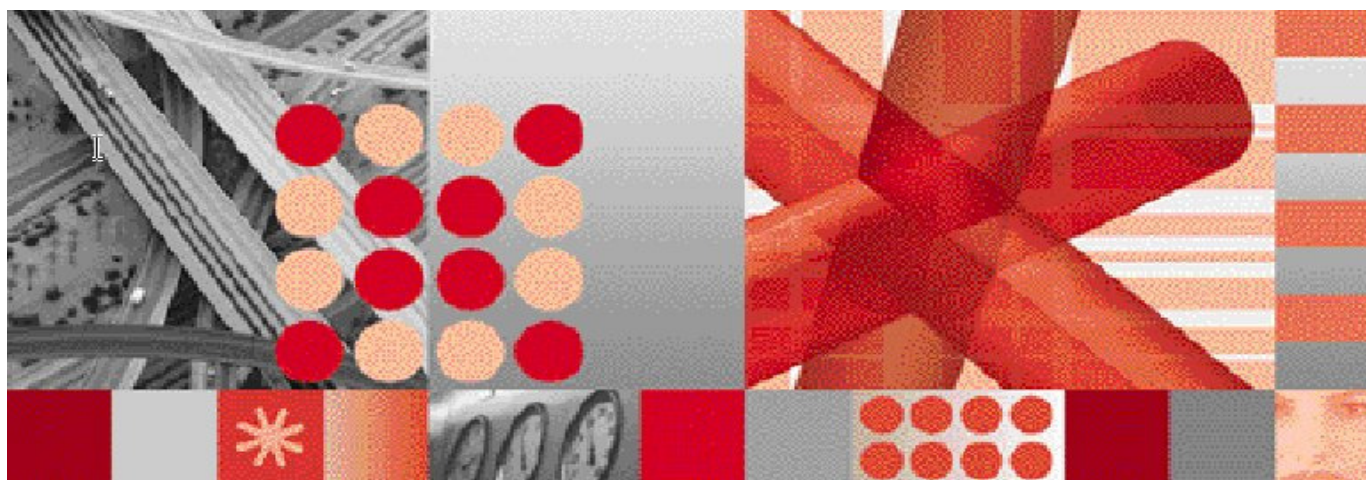


Version 4.1.1



Patch Installation Guide

Note: Before using this information and the product it supports, read the information in the Appendix and Notices on page 20.

This edition applies to version 1, release 1, modification 1 of the IBM Tivoli Netcool Service Quality Manager Service Solutions and to all subsequent releases and modifications until otherwise indicated in new editions.

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2 Document Outline

The *IBM® Tivoli® Netcool® Service Quality Manager Patch Installation Guide* details the steps required to apply patch 4.1.1.13.63 (fixpack FP0003) to a Service Quality Manager 4.1.1 system.

2.1 Audience

This guide is intended for Service Quality Manager customers.

IMPORTANT: Before attempting to patch an installation of Service Quality Manager you are strongly advised to read the release notes and any readme files distributed with your Service Quality Manager 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.

2.2 Required Skills and Knowledge

This guide assumes you are familiar with the following:

- General IT Principles
 - IP Networking
 - Unix® Operating Systems
 - Solaris 10
 - AIX® 5L
-

2.3 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 1: General Document Conventions

<i>Format</i>	<i>Examples</i>	<i>Description</i>
ALL UPPERCASE	GPS NULL MYWEBSERVER	Acronyms, device names, logical operators, registry keys, and some data structures.
<u>Underscore</u>	See Document Conventions	For links within a document or to the Internet. Note that TOC and index links are not underscored. Color of text is determined by browser settings.
Bold	Note: 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>	<i>A 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	./wminstall \$ cd /cdrom/cdrom0 /xml/dict addmsc.sh core.spec 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.
Monospace Bold	[root] # pkginfo grep -i perl 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.
<Monospace italics>	# cd <oracle_setup>	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]	log-archiver.sh [-i][-w][-t]	Used in code examples: indicates options.

2.4 Document Structure

This guide is organized into the following chapters:

Table 2: Document Structure

<i>Chapter</i>	<i>Description</i>
Service Quality Manager Patch 4.1.1.13.63	Provides the steps required to install the Service Quality Manager 4.1.1.13.63 (fixpack FP0003) patch.
Removing Service Quality Manager Patch	Provides the steps required to remove the 4.1.1.13.63(fixpack FP0003) Service Quality Manager patch.

1.5 User Publications

The following user publications are provided with the Service Quality Manager software in Adobe® Portable Document Format (PDF) and HTML formats.

Table 3: Service Quality Manager User Documentation

<i>Document</i>	<i>Description</i>
<i>Release Notes</i>	Provides information on the 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 Models 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 Service Quality Manager.
<i>CEM Monitoring Guide</i>	Describes how to use and monitor the Customer Experience Management [CEM] feature in 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 Service Quality Manager server system on Solaris 10g
<i>Client Installation Guide</i>	Describes how to install the Service Quality Manager Client.
<i>AIX Installation Guide</i>	Describes how to install the <i>Tivoli Netcool</i> Service Quality Manager server system on AIX 5.3L.
<i>Solaris System Administration Guide</i>	Provides an overview of the Service Quality Manager administrative tasks including instructions on how to complete the following tasks:

	<ul style="list-style-type: none"> - Starting and stopping Service Quality Manager. - Running batch processes such as archiving trace files and log files. - Backing up and restoring the system
<i>AIX System Administration Guide</i>	<p>Provides an overview of the AIX Service Quality Manager administrative tasks including instructions on how to complete the following tasks:</p> <ul style="list-style-type: none"> - Starting and stopping Service Quality Manager. - Running batch processes such as archiving trace files and log files. - Backing up and restoring the system.
<i>Upgrade Guide</i>	Details how to upgrade from one Service Quality Manager from v3.1.3 to v 4.1.1
<i>BusinessObjects Installation & Configuration Guide</i>	Provides information on the steps required to install and configure the BusinessObjects (v 6.5 or XI) server and Client for use with Service Quality Manager.
<i>Service Quality Manager Service Solution Installation Guide</i>	Details the generic steps required to install any Service Quality Manager Service Solution including CEM GPRS.
<i>CEM GPRS Service Solution Interface Control Guide</i>	Details the CEM GPRS Service Solution input interface.
<i>CEM GPRS Service Solution Overview Guide</i>	Provides an overview of the CEM GPRS Service Solution product architecture.
<i>Service Quality Manager Core Online Help</i>	Provides information and procedures for using 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 Service Quality Manager
<i>SLA Webview Online Help</i>	Describes how to use and monitor the SLA Webview feature in the Service Quality Manager

1.5.1 Viewing the Online Help

You can view Service Quality Manager online help by clicking the ONLINE HELP tab on the Service Quality Manager Client. This tab is accessible from all Service Quality Manager applications on the Service Quality Manager Client. You can also access links for context-sensitive help.

1.5.2 Accessing Publications Online

You can view the IBM Tivoli Network Management documentation on the Web by accessing the Tivoli Software Information Center at:

<http://publib.boulder.ibm.com/infocenter/tivihelp/v8r1/index.jsp>.

To view the books of the Service Quality Manager library, click IBM Tivoli Netcool Service Quality Management Products.

3 Installing Service Quality Manager Patch 4.1.1.13.63 (fixpack FP0003)

3.1 Service Quality Manager Patch Pre-requisites

- The Tivoli Netcool Service Quality Manager 4.1.1.13.63 (fixpack FP0003) patch can only be applied on a Service Quality Manager server on version 4.1.1.13.01, with fixpack 2 (FP0002) installed.
- Before running the patch installation it is necessary to ensure that if a Business Objects Repository is installed that it is running.
- Also, this guide assumes that the reader is already familiar with SNMP terms and concepts. For further information on this subject please see the Internet Engineering Task Force (IETF)¹ RFCs SNMP documentation. For further information on SNMP RFCs relevant numbers please see Appendix A.

Prerequisites table

Version	Type
SQM4.1.1.13.01	Baseline
SQM4.1.1.13.46 (FP0002)	Patch

To ascertain the baseline and patch levels currently installed, execute the following command as user `saserver` on the application server or consolidated server:

```
$ sap version
```

Output should be similar to the following. Note: the output could display patches installed after FP2 as well:

```
Baseline Version:
```

[1] www.ietf.org/

IBM SQM4.1.1.13.01

Current Version:

SQM4.1.1.13.46

Patch History:

SQM4.1.1.13.46

3.2 Service Quality Manager Patch Installation - Core Patch

Note (Distributed Installation): In a distributed system, this section should be performed on the Application, Gateway, Database or Consolidated servers.

Note (Patch version): The patch to be installed is `patch-SQM4.1.1.13.63-patch.tar.gz`, should be installed ONLY on systems running SQM core without CEM.

3.2.1 Stop Core process

Complete the following as user `saserver` on the Service Quality Manager Application Server or Consolidated Server.

Stop all Service Quality Manager processes if they are running by executing the following command:

```
$ sap stop -f
```

3.2.2 Installation

Complete the following as user `root` on all servers.

3.2.2.1 Place fixpack in <target directory>

Place the TNSQM4.1.1.13.63 (fixpack FP0003) patch package in the *<target directory>*, for example, `/appl`.

Once completed, execute the following commands:

```
#cd <target directory>/sa/admin/common/install/scripts
```

```
#./deploy-patch -wmcv <target directory>/sa -version SQM4.1.1.13.63 -mode  
install
```

<target directory> denotes the directory where the SQM software is installed.

The Service Quality Manager patch installation can be broken down into the following sections.

3.2.2.2 User Checks

The installation will ensure that the relevant users exist before commencing the Service Quality Manager software installation.

```
Checking user saserver exists prior to install
.... Done
```

3.2.2.3 Service Quality Manager Software Installation

The installation will automatically backup files to be patched and install the patched files:

```
Creating Backup directory for Patch Files
.... Done

Backing up patched files to /appl/<XXX.X.X.XX.XX> directory
.... backed up
```

3.2.2.4 Check version of installed patch

As user `saserver` on the application or consolidated servers check the patch history of TNSQM by executing the following command.

```
$ sap version
```

Output should be similar to the following.

```
Baseline Version:

IBM SQM4.1.1.13.01

Current Version:

SQM4.1.1.13.63

Patch History:

SQM4.1.1.13.46

SQM4.1.1.13.63
```

3.3 Post Installation Procedures

3.3.1 Removing SAOWNER Privileges and Modifying BO Repository

Note (Distributed Installation): In a distributed system, this section should be performed on the Application, Gateway, Database or Consolidated servers.

3.3.1.1 Stop SAP Manager

As user `saserver`, you now need to stop the SAP Manager. To do this the following needs to be preformed on the application server or the consolidated server.

```
$ sapmgr stop
```

3.3.1.2 Execute Script

Note: As previously stated, it is a pre-requisite that if the Business Object (BO) repository is installed on the database server or consolidated server it must be started. The post installation script checks if a BO repository database is installed and if it discovers that the repository is **not** started it will present the user with the opportunity to start it manually before continuing. The output of this procedure is displayed below:

```
install_patch.ksh [16667]: WARNING: repos database is not running.  
install_patch.ksh [16667]: Please start repos and press any key...
```

If the user continues with the script execution, the script will perform the same check again. If at this point the BO repository is still **not** responsive an error statement will be printed to the screen as follows:

```
install_patch.ksh [16667]: ERROR: repos database is still not running.
```

The message indicates that the post installation script has failed. To overcome this failure it is necessary to start the BO repository and execute the script again on the machine where the failure was observed. If problems persist with regards to starting the BO repository please contact IBM support for further help, and perform a rollback as outlined in Section 4.1.

Perform the command as user `root` on all servers.

```
#cd <target directory>/sa/admin/common/install/scripts  
#./install_patch.ksh -wmcr <target directory>/sa -mode install
```

3.3.1.3 Start SQM_LSNR

The status of SQM_LSNR now needs to be verified. In order to do, this execute the following commands as user `oracle` on the database server or consolidated server.

```
$lsnrctl status LSNR_SQM
```

If the status of the listener is stopped then you may need to start. To do this perform the following command.

```
$lsnrctl start LSNR_SQM
```

3.3.1.4 Reset LSNR_SQM password

The user must now change the password for the registered listener – LSNR_SQM. In order to do this perform the following as user `oracle` on the database server or consolidated server.

```
$ $ORACLE_HOME/bin/lsnrctl

LSNRCTL> SET CURRENT_LISTENER LSNR_SQM

LSNRCTL> CHANGE_PASS

LSNRCTL> SAVE_CONFIG

LSNRCTL> STOP

LSNRCTL> START

LSNRCTL> EXIT
```

3.3.1.5 Restart SAP Manager

As user `saserver`, you now need to start the SAP Manager. To do this the following needs to be preformed on the application server or the consolidated server.

```
$ sapmgr start
```

3.3.1.6 Update Business Object (BO) Data sources

Note: The following procedure needs to be followed if an instance of Business Objects is installed *and* if the Business Objects server is located on a separate machine (i.e. on a Windows server) from that on which TNSQM is installed. If the BO server instance is running on the consolidated server or on the Application Server or database server in a distributed installation then this step should not be followed.

As the port number will be effectively changed upon the execution of the script detailed in Section 3.3.1.1 it is now necessary for the user to modify the Business Object (BO) data sources. In order to do this the user needs to connect to the server where their BO server is installed if that instance is located on a separate machine, possibly running on Windows.

To do this the user must go to the following folder:

```
$ORACLE_HOME\product\${ORACLE_VERSION}\client_${x}\NETWORK\ADMIN
```

Where `${x}` represents the current version of oracle installed. It is usually the highest integer value.

Once in this folder the user needs to do the following:

- Make a backup copy of `tsnames.ora` file, which can be used in the event that the changes need to be rolled back out
- Open the `tsnames.ora` file
- Search for all entries where the `HOST` is equal to the `$(HOSTNAME)` where the oracle server is installed

- For each located entry the user needs to modify the PORT value to specify the new port number, `${PORT}`.
- If there is no entry, then a new one needs to be appended to the end of the file based on the example provided below.

```
${ENTRY_NAME} =  
(DESCRIPTION =  
(ADDRESS_LIST =  
(ADDRESS = (PROTOCOL = TCP) (HOST = ${HOSTNAME} ) (PORT = ${PORT}))  
)  
(CONNECT_DATA =  
(SERVICE_NAME = sadb)  
)  
)
```

`${ENTRY_NAME}` - is a user defined string

`${HOSTNAME}` - is the hostname of the database i.e. an IP address

`${PORT}` - is the port number that was changed as part of the post install procedure.

3.3.1.7 Restart TNSQM Processes

Start all Service Quality Manager processes by executing the following commands as user `saserver` on the Service Quality Manager Application Server or Consolidated Server:

```
$ sap start domain
```

```
$ sap start monitoring (if adapters are installed)
```

```
$ sap start client
```

```
$ sap start adapters (if adapters are installed)
```

3.3.2 Configuring SNMPv3 support (Optional Procedure)

Note (Assumptions): It is assumed that the reader when following the section below that they understand the main concepts related to SNMPv3. Further information on RFC publications relating to SNMP are specified in Appendix A.

3.3.2.1 Stop the OSS TNSQM Process

Stop the Service Quality Manager Operations Support System (OSS) process by executing the following command, as user `saserver` on the application or consolidated server:

```
$ sap stop oss
```

3.3.2.2 Encode passwords (Optional Procedure)

Passwords can be optionally encoded in the `$WMCROOT/conf/service/dom/oss.properties`. If the password policy of your organization dictates that encoded passwords needs to be set then the following step needs to be followed.

In the case presented below the authentication password used is `authPassword` and the encryption password is set to `privPassword`. In order to encode these password values you need to perform the following on the application or consolidated server as user `saserver`:

```
$ cd $WMCROOT/bin
$ conf_encode authPassword
@AES@:09DFE90D0AB66779F0A43756C3B39D40
$ conf_encode privPassword
@AES@:1AE531E7A31D05A5BBEEC6DCB4BC93A
```

The results returned by executing the steps outlined above are the encoded passwords to be set in `$WMCROOT/conf/service/dom/oss.properties` file.

3.3.2.3 Modify the OSS decided configuration values

The following actions need to be performed as user `saserver` on the application and consolidated servers.

Modify the `$WMCROOT/conf/service/dom/oss.properties` file to specify the SNMPv3 listener configuration values. In order to do this perform the following:

```
$ cd $WMCROOT/conf/service/dom
```

Edit the following file:

```
oss.properties
```

3.3.2.3.1 Configure SNMP v1/v2/v2c listener

If you are configuring an SNMP listener the following block of text in the file needs to be located. In this text 'X' is represented as an integer value '1'.

```
#For SNMPv1 sessions the configuration block should be defined as:
oss.snmp.trap.manager.X=<hostname>/<port>/<securityName>
oss.snmp.trap.version.X=<version>
```

3.3.2.3.2 Configure SNMPv3 listener

In the file search for the following block of text. When locating the block of text 'X' will be represented as the integer value 2:

```
#For SNMPv3 sessions the configuration block should be defined as:

oss.snmp.trap.manager.X=<hostname>/<port>/<securityName>

oss.snmp.trap.version.X=<version>

# valid values are MD5 or SHA

oss.snmp.trap.auth.type.X=<MD5|SHA>

# password length should be >= 8

oss.snmp.trap.auth.password.X=<authPassword>

# valid values are DES, AES

oss.snmp.trap.priv.type.X=<DES|AES|AES128>

# password length should be >= 8

oss.snmp.trap.priv.password.X=<privPassword>
```

NOTE: When replacing the <values> in the configuration file the brackets '<' and '>' need to be removed

Where:

- **x** is a uniquely defined variable that identifies each particular listener i.e. 1, 2, etc. with a max support of 10 listeners.
 - **<hostname>** is the hostname or IP address of the listening application
 - **<port>** is the port number on which the listener is accepting SNMP messages
 - **<security name>** is a SNMPv3 defined security string
 - **<version>** is the version number of SNMP. Accepted values are: 1 for SNMPv1/v2/v2c and 3 for SNMPv3
 - **<MD5|SHA>** is the authentication protocol used to communicate to the listener. Accepted protocol values are either MD5 or SHA.
 - **<authPassword>** is the password value for the authentication protocol
 - **<DES|AES|AES128>** represents the range of accepted privilege encryption protocols for SNMPv3. These include DES, AES or AES128 (128 bits)
-

- `<privPassword>` is the password value for the encryption protocol

3.3.2.4 Restart OSS TNSQM Process

Start the Service Quality Manager OSS process by executing the following commands as user `saserver` on the application or consolidated server:

```
$ sap start oss
```

4 Removing Service Quality Manager Patch 4.1.1.13.63 (fixpack FP0003)

4.1 Patch removal

4.1.1 Stop TNSQM Processes

Stop all Service Quality Manager processes if they are running by executing the following command as user `saserver` on the application or consolidated server:

```
$ sap stop -f
```

4.1.2 Restore database backup configuration file

When the patch was installed a backup of the database and its configuration was made. In order to restore the database the user needs to refer to oracle documentation on how to perform this step. Please note that when performing this procedure data between the backup snapshot and the current system and its data will be lost.

4.1.3 Stop SAP Manager

As user `saserver`, you now need to stop the SAP Manager. To do this the following needs to be preformed on the application server or the consolidated server.

```
$ sapmgr stop
```

4.1.4 Execute Scripts

Note (Distributed Installation): In a distributed system, this section should be performed on the Application, Gateway, Database or Consolidated servers.

To remove the Service Quality Manager patch package, execute the following command as user `'root'`:

```
# cd <target directory>/sa/admin/common/install/scripts
#./install_patch.ksh -wmcr <target directory>/sa -mode remove
```

```
# ./deploy-patch -wmcr <target directory>/sa -version SQM4.1.1.13.63 -mode  
remove
```

Please enter the location of the Service Quality Manager patch [/appl]:

Removing patch-SQM4.1.1.13.63-patch

.....

Successfully removed patch-SQM4.1.1.13.63-patch

<target directory> denotes the directory where the SQM software is installed.

4.1.5 Display patch history

As user `saserver` on the application or consolidated servers start the TNSQM SAP Manager. To do this execute the following command.

```
$ sapmgr start
```

To check the patch history of TNSQM execute the following command.

```
$ sap version
```

Output should be similar to the following.

Baseline Version:

IBM SQM4.1.1.13.01

Current Version:

SQM4.1.1.13.46

Patch History:

SQM4.1.1.13.46

4.1.6 Start TNSQM Processes

Start all Service Quality Manager processes by executing the following commands as user `saserver` on the Service Quality Manager Application Server or Consolidated Server:

```
$ sap start domain
```

```
$ sap start monitoring (if adapters are installed)
```

```
$ sap start client
```

```
$ sap start adapters (if adapters are installed)
```

4.1.7 Rollback BO Datasources Modification

Note: The following procedure needs to be followed if an instance of Business Objects is installed *and* if the Business Objects server is located on a separate machine (i.e. on a Windows server) from that on which TNSQM is installed. If the BO server instance is running on the consolidated server or on the Application Server or database server in a distributed installation then this step should not be followed.

As the port number will be effectively changed back upon the execution of the script detailed in Section 3.3.1.5 it is now necessary for the user to modify the Business Object (BO) data sources. In order to do this the user needs to connect to the server where their BO server is installed if that instance is located on a separate machine, possibly running on Windows.

To do this the user must go to the following folder:

```
$ORACLE_HOME\product\${ORACLE_VERSION}\client_${X}\NETWORK\ADMIN
```

Where **\${X}** represents the current version of oracle installed. It is usually the highest integer value.

Once in this folder the user needs to do the following:

- Locate the backup file of tsnames.ora file and copy and paste its contents into the existing version.
- If a backup was not made then the user needs to open the tsnames.ora file and search for all entries where the `HOST` is equal to the `$HOSTNAME` where the oracle server is installed and for each located entry the user needs to modify the `PORT` value to specify the old port number, `${PORT}`.

Appendix A - References

- RFC 1157 - Simple Network Management Protocol (SNMP)
- RFC 2271 – An architecture for describing SNMP Management Frameworks
- RFC 2272 – Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)
- RFC 2273 – SNMPv3 Applications
- RFC 2274 – User Based Security Model for SNMPv3
- RFC 2275 – View Based Access Control Model (VACM) for SNMP

Appendix B – Notices and Trademarks

This appendix contains the following:

1. Notices
2. Trademarks

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