Tivoli. **Netcool Service Quality Manager**
Module for Mobile User Plane Service

Version 1.2

IBM

Installation Guide

Note: Before using this information and the product it supports, read the information in section "Notices".

Contents

1 About this publication

This publication details the steps required to install the IBM® Tivoli® Netcool® Service Quality Manager Module for Mobile User Plane Service running on Tivoli Netcool Service Quality Manager version 4.1.2.

1.1 Intended audience

This publication is for customers who need to install the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service.

Readers need to be familiar with the following topics:

- IT principles
- UNIX® operating systems

1.2 What this publication contains

This publication contains the following chapters:

- Chapter 2 "Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service architecture and service components"

  Provides a description of the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service architecture and service components.

- Chapter 3 "Installing the Global Object Model (GOM)"

  Provides the steps required to install the GOM.

- Chapter 4 "Installing the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service"

  Provides the steps required to install the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service.

- Chapter 5 "Uninstalling the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service"

  Provides the steps required to uninstall the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service.

This publication contains the following appendices:

- Appendix A "Optional procedures"

  Provides the following optional procedures:
  - Adjusting data input data retention
  - Adjusting service module configuration parameters

- Adjusting collector pattern expressions
- Appendix B " Troubleshooting"

  Provides details on some common error and warning scenarios.

- Appendix C "Product acronyms"

  Provides a description of product acronyms.

1.3 Publications

This section lists the following publications:

- IBM Tivoli Netcool Service Quality Manager core library
- IBM Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service 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,* GC23-9847-00

  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,* GC23-9846-00

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

- *IBM Tivoli Netcool Service Quality Manager Client Installation Guide,* GC23-9850-00

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

- *IBM Tivoli Netcool Service Quality Manager Upgrade Guide,* SC23-9842-00

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

- *IBM Tivoli Netcool Service Quality Manager AIX System Administration Guide, SC23-9845-00*

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

  o Starting and stopping Tivoli Netcool Service Quality Manager.

  o Running batch processes such as archiving trace files and log files.

  o Backing up and restoring the system.

- *IBM Tivoli Netcool Service Quality Manager Solaris System Administration Guide, SC23-9844-00*

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

  o Starting and stopping Tivoli Netcool Service Quality Manager.

  o Running batch processes such as archiving trace files and log files.

  o Backing up and restoring the system.

- *IBM Tivoli Netcool Service Quality Manager Provisioning Service SI Guide*, SC23-9852-00

Reference guide containing information for provisioning the Tivoli Netcool Service Quality Manager system.

- *IBM Tivoli Netcool Service Quality Manager Customer Experience Manager Provisioning Guide, SC23-9843-00*

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

- *IBM Tivoli Netcool Service Quality Manager Customer Experience Manager Monitoring Guide, SC23-9482-00*

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

- *IBM Tivoli Netcool Service Quality Manager Monitoring Guide, SC23-9103-01*

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

- *IBM Tivoli Netcool Service Quality Manager Configuration Guide, SC23-9102-01*

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

- *IBM Tivoli Netcool Service Quality Manager BusinessObjects Installation and Configuration Guide, SC23-9473-00*

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

- *IBM Tivoli Netcool Customer Experience Manager Customer Relationship Management Development Guide, SC23-9857-00*

Provides an overview of how to write some Java™ code to connect to a customer relationship management system with the Tivoli Netcool Customer Experience Manager product.

- *IBM Tivoli Netcool Service Quality Manager Release Notes, GI11-9221-00*

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

1.3.2 IBM Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service library

The IBM Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service library contains the following publications:

- *IBM Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service Installation Guide*

Provides the steps required to install the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service.

- *IBM Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service Interface Control Guide*

Provides details of the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service input interface.

- *IBM Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service Overview Guide*

  Provides an overview of Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service product architecture and entities.

- *IBM Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service Release Notes*

  Provides information on the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service release contents, platform requirements, installation procedures, and known issues.

1.3.3 Accessing terminology online

The IBM Terminology Web site 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.

1.3.4 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 website at http://www.ibm.com/tivoli/documentation.

Note: If you print PDF documents on 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.

1.3.5 Ordering publications

You can order many Tivoli publications online at http://www.ibm.com/e-business/linkweb/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.ibm.com/e-business/linkweb/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, refer to 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 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.

Troubleshooting information

See Appendix A: Optional procedures in the *IBM Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service Installation Guide*, it provides the following optional procedures:

- Adjusting data input data retention
- Adjusting service module configuration parameters
- Adjusting collector pattern expressions

For more information about solving problems, see Appendix B: Troubleshooting in the *IBM Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service Installation Guide*.

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 non-switched 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 Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service architecture and service components

Note: Execute the following command to check the Tivoli Netcool Service Quality Manager version:

```
sap version
```

If the current version of Tivoli Netcool Service Quality Manager is already installed, then continue. If the current version of Tivoli Netcool Service Quality Manager is not installed, refer to the Tivoli Netcool Service Quality Manager Installation Guides, or the *IBM Tivoli Netcool Service Quality Manager Upgrade Guide*.

See the *IBM Tivoli Netcool Service Quality Manager Release Notes* for the current version of Tivoli Netcool Service Quality Manager to be used.

2.1   Service components

The Tivoli Netcool Service Quality Manager server architecture consists of four components. The components can be installed together on a single, consolidated server or set up across multiple servers, to form a distributed system.

Table 1: Server descriptions

Server name	Description
Application server	The server that is installed with the Tivoli Netcool Service Quality Manager software. This server is used to run the Tivoli Netcool Service Quality Manager core processes.
Gateway server	The server that is installed with the Tivoli Netcool Service Quality Manager software that handles the processing of service module data.
Database server	The server that is installed with the Oracle database and the Tivoli Netcool Service Quality Manager data store.
BusinessObjects server	The server installed with the BusinessObjects reporting tool software.

Note: For a consolidated system, these installation procedures must be followed for each section unless marked otherwise. For a distributed system, follow the notes marked (**for distributed installations)** that will precede these sections.

2.2 Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service architecture

The Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service architecture consists of four components. The components can be installed together on a single, consolidated server or set up across multiple servers, to form a distributed system. This guide covers the installation of the service module components on the *Tivoli Netcool Service Quality Manager server* and *Business Objects server*.

3 Installing the Global Object Model

Note (for distributed installations): In a distributed system, complete the procedures in this chapter on the application server only.

Note: Execute the following command on the application server as user saserver to determine whether a GOM version is already provisioned:

```
$ package_mgmt -l
```

Under the `Model Name` field, check the list of packages for the `cots_gom` entry. If this entry is present, the GOM is already provisioned. If a current or later version of the GOM is already provisioned, then proceed to chapter 4.

See the *IBM Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service Release Notes* for the minimum GOM version to be used.

3.1 Installing the Tivoli Netcool Service Quality Manager GOM package

Complete the following steps as user saserver：

1. Transfer the Tivoli Netcool Service Quality Manager GOM package `ibm-tn-sqm-cots_gom-1.6.tar.gz` to the `<target directory>` directory on the Tivoli Netcool Service Quality Manager host computer. Use the `/appl` directory as the `<target directory>` value.

2. Verify the domain processes are all running by executing the following command:

   ```
   $ sap disp domain -l
   ```

   If any of the processes are in a `STOPPED` state, start them using the following command:

   ```
   $ sap start <process>
   ```

   Where `<process>` is the name of the process as it appears under the `NAME` column.

3. Install the package by executing the following command:

   ```
   $ $WMCROOT/admin/common/install/scripts/deploy-service-solution -package
   /appl/ibm-tn-sqm-cots_gom-1.6.tar.gz
   ```

   Where `$WMCROOT` is a predefined location where the Tivoli Netcool Service Quality Manager base software is installed. The default location for `$WMCROOT` is `/appl/sa`.

4. Enter `Yes` when asked if you want to deploy the package.

5. Enter `Yes` when asked if you want to continue.

6. Accept the license agreement.

   On successful completion, output similar to the following is displayed:

```
Completed Software Installation
SA Package Installation logs can be seen in /appl/sa/admin/logs/sa_install.log
Installation is complete.
ok
All packages installed successfully
Please view /appl/sa/admin/logs/sa_install.log for package installation logs
```

3.2 Provisioning the Tivoli Netcool Service Quality Manager GOM package

To provision the GOM, the processes in the domain and client groups must be running. All other process groups must be stopped. Complete the following steps as user saserver:

1. Check the state of all processes by executing the following command:

   ```
   $ sap disp –l
   ```

2. Stop a process group by executing the following command:

   ```
   $ sap stop <process group name 1>
   ```

   Where <process group name> is: monitoring, cem, or adapters.

3. Start a process group by executing the following command:

   ```
   $ sap start <process group name 1>
   ```

4. Provision the GOM by executing the following command:

   ```
   $ package_mgmt -i cots_gom_1.6
   ```

   When the provisioning operation is successfully completed, a message similar to this example is displayed:
   ```
   BUILD SUCCESSFUL
   Total time: 58 seconds
   ```

4 Installing the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service

4.1 Installing the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service Global Object Model (GOM)

Note (for distributed installations): In a distributed system, perform the procedures in this section on the application server only.

Note: Execute the following command on the application server as user saserver to determine whether the Mobile User Plane GOM is already provisioned:

```
$ package_mgmt -l
```

Under the `Model Name` field, check the list of packages for the `sqm_mup_gom` entry. If this entry is present, the Mobile User Plane GOM is already provisioned and this section can be ignored, continue to section 4.2.

4.1.1 Installing the service module GOM

Complete the following steps as user saserver:

1. Transfer the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service GOM package `ibm-tn-sqm-mup_prb_gom-1.1.tar.gz` 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 /<target
   directory>/ibm-tn-sqm-mup_prb_gom-1.1.tar.gz
   ```

3. Enter `Yes` when asked if you want to deploy the package.

4. Enter `Yes` when asked if you want to continue.

5. Accept the license agreement.

   When the installation has successfully completed, a message similar to this example is displayed:

```
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Finished Post-Installation Steps
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
```

```
Completed Software Installation

SA Package Installation logs can be seen in /appl/sa/admin/logs/sa_install.log

Installation is complete.
ok
All packages installed successfully

Please view /appl/sa/admin/logs/sa_install.log for package installation logs
```

4.1.2 Provisioning the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service GOM

Use the following tasks to load the Tivoli Netcool Service Quality Manager service modules within the system.

Complete the following steps as user saserver：

1. Check the list of processes running by executing the following command:

   ```
   $ sap disp -l
   ```

2. Stop the monitoring and adapter process groups by executing the following commands:

   ```
   $ sap stop monitoring
   ```

   ```
   $ sap stop adapters
   ```

3. If Tivoli Netcool Customer Experience Manager is installed, stop the Tivoli Netcool Customer Experience Manager process group.

   ```
   $ sap stop cem
   ```

   If any of the domain and client processes are not running, start them by using the following command:

   ```
   $ sap start <process>
   ```

   Where `<process>` is the name of the process as it is displayed under the NAME column.

4. Provision the system by executing the following command:

   ```
   $ package_mgmt -i mup_prb_gom_1.1
   ```

   When the provisioning operation is successfully completed, a message similar to this example is displayed:

   ```
   BUILD SUCCESSFUL
   Total time: 24 seconds
   ```

4.2   Installing the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service data source

4.2.1   Preinstallation

Note (for distributed installations): In a distributed system, perform the procedures in this section on the application, gateway, and database servers. For a consolidated system, perform the procedures once on the consolidated system.

Complete the following steps as user saserver:

1. Transfer the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service data source package `ibm-tn-sqm-sqm_mup-1.2.tar.gz` 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 /<target
    directory>/ibm-tn-sqm-sqm_mup_prb-1.2.tar.gz
    ```

3. Enter `Yes` when asked if you want to deploy the package.

4. Enter `Yes` when asked if you want to continue.

5. Accept the license agreement.

    When the installation is successfully completed, a message similar to this example is displayed:

    ```
    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    Finished Post-Installation Steps
    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~


    Completed Software Installation

    SA Package Installation logs can be seen in /appl/sa/admin/logs/sa_install.log

    Installation is complete.
    ```

4.2.2   Installing BusinessObjects reports

The Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service includes predefined reports for the BusinessObjects reporting tools.

Note: Unless otherwise specified, the procedures in this section must be performed on the designated BusinessObjects server only.

4.2.2.1 *Prerequisite*

BusinessObjects XI release 2 server with Oracle client software must be installed and configured.

Note (for distributed installations): In a distributed system, the `report.zip` file is available either on the gateway server or the application server.

Complete the following steps as user saserver：

- Copy the `$WMCROOT/packages/sqm_mup_prb_1.2/report.zip` file from your Tivoli Netcool Service Quality Manager server to the BusinessObjects server instance by using FTP or other methods available.

4.2.2.2 Defining the service name using Oracle Net Manager

If the core reports or any other service model set of reports have been deployed, then use the existing service name for the connection to the SADB database. If this is the first set of reports being deployed, create an Oracle service name by completing the following steps:

1. To connect the BusinessObjects software with the `sadb` database server, create an Oracle service name (also called protocol address) in the BusinessObjects server, before exporting BusinessObjects artifacts.

    The BusinessObjects universe or semantic layer uses this service name in its connection, and reports are refreshed against the database that this service name points to.

2. To create a new service name in Oracle, use the Oracle Net Manager tool provided in the Oracle client installed on the BusinessObjects server.

    See the "Configuring Clients for Oracle Connection Manager" chapter in the *Configuring and Administering Oracle Connection Manager* guide in the Oracle 10g online documentation available at http://download.oracle.com/docs/cd/B19306_01/network.102/b14212/cman.htm#i484544.

4.2.2.3 Extracting BusinessObjects deliverables

Ensure all prerequisites are met before extracting BusinessObjects deliverables. To copy the BusinessObjects deliverable to the BO server, complete the following steps:

1. Create a new destination directory for the contents of the BusinessObjects deliverables.

2. Transfer and extract the `report.zip` file to the destination directory.

Depending on the contents of the Business Objects deliverable, some or all of the following directories can be created when the `report.zip` file is extracted:

- `bo/logos`

- `bo/lovs`

- `bo/reports`

- `bo/universes`

4.2.2.4 Applying the logo file

A logo graphic is displayed in each report and must be added to the BusinessObjects server. To apply the logo file, complete the following steps:

1   Open the directory where the `report.zip` file was extracted (completed in the *Extracting BusinessObjects deliverables* section).

2   Copy the `Tivoli.jpg` file from the `bo_xi/logos` directory to the following directory:

```
<BO_INSTALL_DRIVE>\Program Files\Business Objects\BusinessObjects Enterprise
11.5\Images
```

Note: `<BO_INSTALL_DRIVE>` denotes the drive where the BusinessObjects applications are installed (the default drive is `C:`).

4.2.2.5 Associating LOV files with universe

Note: The list of values (LOV) files are not available for every service module. If the `bo_xi/lovs` directory does not exist, do not complete the following steps.

Before exporting the universe to the BusinessObjects repository, LOV files must be in the same folder as the universe. To comply with this requirement, complete the following steps:

1.   Open the directory where the `report.zip` file was extracted (see the *Extracting BusinessObjects deliverables* section).

2.   Copy all contents of the `bo_xi/lovs` directory to the `bo_xi/universes` directory.

4.2.2.6 Export the universe and the list of values (LOV) files to the BusinessObjects server

Use the BusinessObjects XI Universe Designer tool to export the universe with its LOV files. To complete the export process, complete the following steps:

1.   Define a new BusinessObjects connection that points to the `sadb` database.

The `sadb` database is located on the Tivoli Netcool Service Quality Manager database server and contains the installed Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service module.

To complete the previous step, you must define the following parameters within the BusinessObjects connection:

- `Database middleware: Oracle 10`

- `Service: Oracle Service Name`

- `User Name: saserver database user`

- `Password: Oracle password for the saserver user`

The default user name and password for the `sadb` database are `saserver` and `saserver01` respectively (if the password has changed, enter the new password as appropriate). Enter the Oracle service name as previously defined in the "Defining the Service Name using Oracle Net Manager" section.

Note: to complete the connection definition, see the *Setting universe parameters* → *Defining a new connection* subsection in chapter 2 of the *Designer's Guide for Business Objects XI release 2*, available from the following link:

http://help.sap.com/businessobject/product_guides/

2. Open universe file (.unv) from the `bo/universes` directory.
3. Change universe connection parameters and use the new Business Objects connection created during step 1.
4. Save the universe with the new parameters.
5. Export the universe with its LOV files to the BusinessObjects repository.

Note: See the "Exporting a universe to the repository" sections in the *Designer's Guide for BusinessObjects XI Release 2*, at http://help.sap.com/businessobject/product_guides/.

4.2.2.7 Changing universes to local time format settings

Note: All universes delivered in the `report.zip` file are preset with European date formats.

If deploying on a non-European BusinessObjects system, complete the following steps:

1 Change the following objects, where applicable in the universes, to your localized time format settings:

`Week/Day/Month-Day/Hour/Sample`

These objects are normally found under the `Calendar` class.

2. Complete the following step to change from European to localized time formats. The following example details changing the objects for American date format.

To change the object format, right-click the different time objects for each time and select object format. Update the format with the following values:

Objects Name = `Week`

ObjectFormat = `mm/dd/yyyy`

Object Name = `Day (or Month-Day)`

ObjectFormat = `mm/dd/yyyy`

Object Name = `Hour`

ObjectFormat **=** `mm/dd/yyyy hh:mm AM/PM`

Object Name = `Sample`

ObjectFormat = `mm/dd/yyyy hh:mm AM/PM`

You must make these changes by using the BusinessObjects Universe Designer tool. For more details, see the *Designer's Guide for Business Objects XI Release 2* available at the following Web address:

http://help.sap.com/businessobject/product_guides/

Access the *Designer's Guide* quickly by using these filters:
- Select **all products** under **all products**.
- Select **BusinessObjects XI Release 2** under **all releases**.

4.2.2.8 Import reports BIAR file to the repository database

A business intelligence archive resource (BIAR) file can be found in the `bo/reports` folder. The BIAR file contains all the reports for the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service and must be deployed to the BusinessObjects server.

To import the BIAR file into the BusinessObjects server, use the BusinessObjects Import Wizard tool. For details on how to use this tool, refer to the section *Using the Import Wizard* in chapter 13 of the Windows *BusinessObjects Enterprise XI Release 2 Installation Guide* for Business Objects XI Release 2, available from the following link:

http://help.sap.com/businessobject/product_guides/

Access the Windows BusinessObjects Enterprise XI Release 2 Installation Guide quickly by using these filters:

- Select **BusinessObjects Enterprise** under **all products**.
- Select **BusinessObjects XI Release 2** under **all releases**.

When importing the BIAR file, select the following options:

a. In the **Source environment** window, select **Business Intelligence Archive Resource (BIAR) File** in the **Source** drop down menu and browse to the file in the ***BIAR File*** section.

b. In the **Destination environment** window, type the name of the BusinessObjects central management server (CMS) and the corresponding user name and password.

c. In the **Select objects to import** window, select the following two options:

   o **Import folders and objects**

   o **Import application folders and objects**

d. In the **Incremental import** window, keep the **Overwrite object contents** check box checked and clear the **Overwrite object rights** check box.

e. In the **Folders and objects** window, select **all the reports**.

4.2.2.9 Checking the BusinessObjects reports installation

When the reports are imported to the BusinessObjects server, check that they are installed and available in the server by completing the following steps:

- Open BusinessObjects Infoview in a navigator. The default URL is:

   http://<BO_SERVER>:8080/businessobjects/enterprise115/desktoplaunch

Note: *<BO_SERVER>* is the name of the server where the BusinessObjects platform is installed.

- Click **Public Folders > TNSQM > Service** in the **Folders** menu on the left. The content of the last folder contains the following reports:
  - Customer MobileUserPlane service summary
  - Customer MobileUserPlane service failure analysis
  - Device Type MobileUserPlane service summary
  - Device Type MobileUserPlane service detailed

- Device Type MobileUserPlane service failure analysis
- Daily MobileUserPlane service summary

Note: To set up the authorization rights assigned to the report folder created in the BusinessObjects server during the installation, see the latest Tivoli Netcool Service Quality Manager BusinessObjects documentation.

4.2.3   Provision the system

Note (for distributed installations): In a distributed system, perform the procedures in this section only on the application server.

Use the following tasks to load the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service on the system.

Complete the following steps as user saserver：

1. Check the list of processes running by executing the following command:

   ```
   $ sap disp -l
   ```

   Verify that all the processes for the DOMAIN group are in a STARTED state. If any of the domain processes are stopped, execute the following command:

   ```
   $ sap start domain
   ```

2. Provision the system by executing the following command:

   ```
   $ package_mgmt -i sqm_mup_prb_1.2
   ```

   When the provisioning operation is successfully completed, a message similar to this example is displayed:

   ```
   BUILD SUCCESSFUL
   Total time: 58 seconds
   ```

4.2.4   Creating adapter tablespaces

Note (for distributed installations): Perform the procedures in this section on the application server.

To create adapter tablespaces, complete the following steps as user saserver[1]:

- Determine the Tivoli Netcool Service Quality Manager software version by executing the following command:

   ```
   $ sap version
   ```

   Examine the value for Current Version and execute the corresponding step for your Tivoli Netcool Service Quality Manager software version.

---

[1] Please note that the create_db_tablespace script can require a considerable amount of time to run depending on your system configuration.

Note (for distributed installations): Perform the procedures in this section on the database server.

- If the current version begins with 4.1.2.19 or less, create the service module tablespaces by executing the following commands:

```
$ cd $WMCROOT/packages/sqm_mup_prb_1.2/admin/oracle/bin

$ ./create_db_tablespace -sid <sadb> -dbowneruser <owner_user> -dbownerpwd
<owner_pwd> -name sqm_mup_prb_1.2
```

Note: Set `dbowneruser` to `saowner` and enclose `<owner_pwd>` in single quotation marks.

- If the current version begins with 4.2.1.20 or greater, create the service module tablespaces by executing the following commands:

```
$ cd $WMCROOT/admin/oracle/bin

$ ./create_db_tablespace -sid <sadb> -dbowneruser <owner_user> -dbownerpwd
<owner_pwd> -name sqm_mup_prb_1.2
```

Note: Set `dbowneruser` to `saserver` and enclose `<owner_pwd>` in single quotation marks.

On successful completion, the following output is displayed:

```
Creating tablespaces, please wait...

Database tablespace created successfully
```

4.2.5   Creating adapter database tables

Note (for distributed installations): Perform the procedures in this section on the database server.

Note: You are not required to specify the *db.pwd* variable if the default settings are in use. Contact your Tivoli Netcool Service Quality Manager administrator for the correct password.

Complete the following as user saserver：

1. Create the adapter database tables by executing the following command:

   ```
   $ wmc_ant -Dsa.package=sqm_mup_prb_1.2 -f $WMCROOT/packages/adp_deploy.xml -
   Ddb.pwd=<user password> do-schema
   ```

   When the provisioning operation is successfully completed, a message similar to this example is displayed:

   ```
   BUILD SUCCESSFUL
   Total time: 58 seconds
   ```

Note: The `-f` argument is used in this instance to point to a command file. If you encounter any errors or warnings, see *Appendix B Troubleshooting*.

4.2.6   Deploying the loader

Note (for distributed installations): In a distributed system, perform the procedures in this section only on the gateway server (the server that hosts the service module loader process).

Complete the following steps as user saserver：

1. Deploy the loader by executing the following command:

    ```
    $ wmc_ant -Dsa.package=sqm_mup_prb_1.2 -f $WMCROOT/packages/adp_deploy.xml
    do-gateway-deploy
    ```

    Note: If you encounter any errors or warnings, see *Appendix B Troubleshooting*.

2. The default input directory is specified in:

    ```
    $WMCROOT/conf/adapter/collector/sqm_mup_prb_loader.properties
    ```

    If you use a different input directory, edit the properties file and create the input directory of your choice. Ensure the UNIX user saserver can read and write to the input directory.

4.2.7   Deploying the adapter configuration (for distributed installations)

Note (for distributed installations): Complete the steps in this section only for a distributed installation. **For a consolidated system, this section can be ignored**. Complete these steps on the application server.

Complete the following steps as user saserver:

1. Deploy the loader by executing the following command:

    ```
    $ wmc_ant -Dsa.package=sqm_mup_prb_1.2 -f $WMCROOT/packages/adp_deploy.xml
    do-application-deploy
    ```

2. Edit the `$WMCROOT/conf/processes/processes-sqm_mup_prb_loader.properties` file. Replace the reference to `${SAHOST}` with the name of the gateway server that the loader runs on.

4.2.8   Restarting the sapmgr process

Note (for distributed installations): In a distributed system, perform the procedures in this section on the application server.

Complete the following steps as user saserver：

1. Restart the `sapmgr` process to pick up the newly instantiated loader.

```
$ sapmgr stop
$ sapmgr start
```

When the `sapmgr` process is successfully restarted, proceed with the next steps.

2. Ensure the loader is available by executing the following command:

    ```
    $ sap disp
    ```

3. Start the monitoring processes:

    ```
    $ sap start monitoring
    ```

4. If Tivoli Netcool Customer Experience Manager is installed, start the Tivoli Netcool Customer Experience Manager processes:

    ```
    $ sap start cem
    ```

4.2.9   Starting the loader

Note (for distributed installations): In a distributed system, perform the procedures in this section on either the gateway server or application server.

Complete the following steps as user `saserver`:

1. Start the loader using the following command:

    ```
    $ sap start sqm_mup_prb_loader
    ```

2. Verify the loader is successfully started using the following command:

    ```
    $ sap disp sqm_mup_prb_loader
    ```

3. The current state of the loader is displayed, as shown in the following example:

    ```
    NAME                STATE      SINCE
    sqm_mup_prb_loader  STARTED    14:02:27
    ```

The **STATE** reads as **STARTED**. The loader can take several minutes to complete the startup, in which case the STATE reads as **init**. If the loader cannot startup, a **STATE** of **failed** is displayed.

For any error and warning messages that are displayed when starting the adapter, see *Appendix B Troubleshooting*.

5   Uninstalling the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service

5.1   Prerequisites

Note (for distributed installations): Complete the procedures in this section on the application server only.

Before uninstalling the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service, you must delete any dependent artifacts that might have been created outside of the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service provisioning package. These artifacts comprise any service-level agreements (SLAs), service-level objectives (SLOs), SLA templates, key performance indicators (KPIs), and combined key quality indicator (KQI) models that reference a resource type provisioned exclusively by the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service.

To find dependencies on the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service package, execute the following command as user saserver：

```
$ package_mgmt -d sqm_mup_prb_1.2
```

When the dependencies have successfully been found, a message similar to this example is displayed:

```
--------------------------------------------------------------------------------
Dependency report for package: 'sqm_mup_prb_1.2'
--------------------------------------------------------------------------------
Resource Type Resource Cat
--------------------------------------------------------------------------------

Sla Name Category Name Party Name
--------------------------------------------------------------------------------

Sla Template Name Category Name
--------------------------------------------------------------------------------

Simple Kqi Model Name Category Name
```

```
--------------------------------------------------------------------------------

Combined Kqi Model Name Category Name
--------------------------------------------------------------------------------

Service Element Name Service Model Name Name
--------------------------------------------------------------------------------
USER_PLANE_GGSN               COTS_MOBILE_USER_PLANE       COTS_MOBILE_USER_PLANE
USER_PLANE_SERVICE            COTS_MOBILE_USER_PLANE       COTS_MOBILE_USER_PLANE
USER_PLANE_SGSN               COTS_MOBILE_USER_PLANE       COTS_MOBILE_USER_PLANE
USER_PLANE_RNC                COTS_MOBILE_USER_PLANE       COTS_MOBILE_USER_PLANE
USER_PLANE_APN                COTS_MOBILE_USER_PLANE       COTS_MOBILE_USER_PLANE
```

5.2   Shut down the processes

Note (for distributed installations): Complete the procedures in this section on the application server only.

Complete the following steps as user saserver：

1. Shut down the monitoring and adapter processes by executing the following commands:

    ```
    $ sap stop monitoring

    $ sap stop adapters
    ```

2. If Tivoli Netcool Customer Experience Manager is installed, stop the Tivoli Netcool Customer Experience Manager processes by executing the following command:

    ```
    $ sap stop cem
    ```

5.3   Uninstalling the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service data source

5.3.1   Unprovisioning the data source

Note (for distributed installations): Complete the procedures in this section on the application server only.

Complete the following step as user saserver：

*   To unprovision the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service data source, execute the following command:

    ```
    $ package_mgmt -c sqm_mup_prb_1.2
    ```

    When the data source has successfully been unprovisioned, a message similar to this example is displayed:

    ```
    BUILD SUCCESSFUL

    Total time: 21 minutes
    ```

5.3.2 Dropping the data source schema

Note (for distributed installations): Complete the procedures in this section on the database server only.

Note: It is not necessary to specify the *db.pwd* variable if the default settings are in use. Contact your Tivoli Netcool Service Quality Manager administrator for the correct password.

Complete the following step as user saserver：

- Drop the schema associated with the data source by executing the following command:

```
$ wmc_ant -Dsa.package=sqm_mup_prb_1.2 -f $WMCROOT/packages/adp_deploy.xml -
Ddb.pwd=<user password> do-schema-clean
```

When the data source schema has been successfully dropped, a message similar to this example is displayed:

```
BUILD SUCCESSFUL

Total time: 31 minutes
```

5.3.3 Dropping adapter database table space

To drop service module tablespaces, complete the following steps as user saserver[2]:

Note (for distributed installations): Perform the procedures in this section on the application server.

- Determine the Tivoli Netcool Service Quality Manager software version on the database server by executing the following command:

```
$ sap version
```

Examine the value for Current Version and execute the corresponding step for your Tivoli Netcool Service Quality Manager software version.

Note (for distributed installations): Perform the procedures in this section on the database server.

- If the current version begins with 4.1.2.19 or less, drop the service module tablespaces by executing the following commands:

```
$ cd $WMCROOT/packages/sqm_mup_prb_1.2/admin/oracle/bin

$ ./drop_db_tablespace -sid <sadb> -dbowneruser <owner_user> -dbownerpwd <owner_pwd>
-name sqm_mup_prb_1.2
```

---

[2] Please note that the **drop_db_tablespace** script can require a considerable amount of time to run depending on your system configuration.

Note: Set `dbowneruser` to `saowner` and enclose `<owner_pwd>` in single quotation marks.

- If the current version begins with 4.2.1.20 or greater, drop the service module tablespaces by executing the following commands:

```
$ cd $WMCROOT/admin/oracle/bin

$ ./drop_db_tablespace -sid <sadb> -dbowneruser <owner_user> -dbownerpwd <owner_pwd>
-name sqm_mup_prb_1.2
```

Note: Set `dbowneruser` to `saserver` and enclose `<owner_pwd>` in single quotation marks.

On successful completion, the following output is displayed:

```
Dropping tablespaces, please wait...

Database Tablespace Dropped Successfully
```

5.3.4 Cleaning the gateway server artifacts

Note (for distributed installations): Complete the procedures in this section on the gateway server.

Complete the following step as user saserver：

- Clean up the gateway artifacts by executing the following command:

```
$ wmc_ant -Dsa.package=sqm_mup_prb_1.2 -f $WMCROOT/packages/adp_deploy.xml
  do-gateway-clean
```

When the cleaning has successfully completed, a message similar to this example is displayed:

```
BUILD SUCCESSFUL

Total time: 14 minutes
```

5.3.5 Cleaning the application server artifacts

Note (for distributed installations): Complete the procedures in this section only on the application server. This is only required in the case of a distributed installation.

- Execute the following command as user saserver：

```
$ wmc_ant -Dsa.package=sqm_mup_prb_1.2 -f $WMCROOT/packages/adp_deploy.xml
  do-application-clean
```

When the cleaning has successfully completed, a message similar to this example is displayed:

```
BUILD SUCCESSFUL

Total time: 23 minutes
```

5.4 Uninstalling the service module Global Object Model (GOM)

Note: Complete the procedures in this section on the application server only.

The following steps remove the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service Global Object Model (GOM) from the system.

Complete the following as user `saserver`:

- Uninstall the service module GOM by executing the following command:

    ```
    $ package_mgmt -c mup_prb_gom_1.1
    ```

    On successful completion, the following output is displayed:

    ```
    BUILD SUCCESSFUL

    Total time: n seconds
    ```

5.5 Removing the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service data source package

Note (for distributed installations): Complete the procedures in this section on the application and gateway servers.

Complete the following step as user saserver：

- Remove the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service data source package by executing the following commands:

    ```
    $ cd $WMCROOT/admin/software/adapters

    $ ./ibm-tn-sqm-sqm_mup_prb.remove
    ```

    Enter **y** when asked if you want to continue.

    When the adapter has successfully been uninstalled, a message similar to this example is displayed:

    ```
    Cleaning up init scripts...

    Removing/restoring installed files...

    Checking configuration files...

    Removing empty installation directories...

    Running post-remove commands...

    Removal is complete.
    ```

5.6 Removing service module GOM packages

Note: Complete the procedures in this section on the application server only.

Complete the following as user `saserver`:

- Remove the service module GOM by executing the following commands:

    ```
    $ cd $WMCROOT/admin/software/adapters
    ```

    ```
    $ ./ibm-tn-sqm-mup_prb_gom.remove
    ```

    Enter `yes` when asked if you want to continue.

    On successful execution, the following output is displayed:

    ```
    Cleaning up init scripts...

    Removing/restoring installed files...

    Checking configuration files...

    Removing empty installation directories...

    Running post-remove commands...

    Removal is complete.
    ```

5.7 Restarting the processes

Note (for distributed installations): Complete the procedures in this section on the application server only.

Complete the following steps as user saserver：

1. Restart the **sapmgr** by executing the following commands：

    $ sapmgr stop

    $ sapmgr start

2. Restart the processes that were shut down before you removed the service module:

    $ sap start monitoring

    $ sap start adapters

3. If Tivoli Netcool Customer Experience Manager is installed, start the Tivoli Netcool Customer Experience Manager process group by executing the following command:

    $ sap start cem

4. Verify that the adapter instance uninstalled successfully by executing the following command:

```
$ sap disp -l
```

Appendix A: Optional procedures

Adjusting the adapter input data retention

Adapter input data is maintained for a limited period in the adapter input directory before being purged to free up space. The default retention period for all adapters is 7 days. If the maintenance period must be adjusted for the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service data source, complete the following steps as user saserver:

- Add the following parameter to the collector configuration properties file for the adapter that is located at `$WMCROOT/conf/adapter/collector/sqm_mup_prb_loader.properties` :

  `com.comnitel.sm.adapter.collector.fileretention=<X>`

Note: Because the purge command is based on the UNIX `find(1)` command, the system purges input files that are x+1 days old. For example, if X is 2, then files that are 3 days and older are purged.

Adjusting service model configuration parameters

If the configuration properties inlcuded with the Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service must be adjusted `($WMCROOT/conf/adapter/collector/sqm_mup_prb_log.properties and $WMCROOT/conf/adapter/datasource/sqm_mup_prb_loader.properties)`, the following syntax rules should be adhered to.

Any correctly escaped special or punctuation character other than the dollar symbol ($) can be used. Use the back-slash character (\) as the escape character.

Use of the dollar sign ($) character assumes that a matching environment variable exists in the `$WMCROOT/conf/environment/default.properties` file.

See the following table for details on how to specify the keyboard-accessible special characters in the property file.

Table 2**: Keyboard accessible special characters**

Character	Tivoli Netcool Service Quality Manager compatible version	Comment
!	!	
"	\"	Requires escaping.
£	£	
$		Cannot be used.
%	%	
^	^	
&	&	
*	*	
(	(	
)	)	
_	_	
+	+	
-	-	
=	=	
{	{	
}	}	
[	[	
]	]	
;	;	
'	\'	Requires escaping.
#	#	
:	:	
@	@	
~	~	
,	,	
.	.	
/	\/	Requires escaping.
<	<	
>	>	
|	|	
\	\\	Requires escaping.

Adjusting collector pattern expressions

A file name filter can be applied to incoming comma-separated value (CSV) files by modifying the following property:

```
com.comnitel.sm.adapter.collector.input.pattern
```

Within this configuration file:

```
$WMCROOT/conf/adapter/collector/sqm_mup_prb_loader.properties
```

Entities specified here must conform to the Java™ Regular Expression (Regex) syntax. More information on this syntax can be found at http://java.sun.com/j2se/1.5.0/docs/api/java/util/regex/Pattern.html.

The following is an example pattern for matching on a `.csv` file extension:

```
com.comnitel.sm.adapter.collector.input.pattern= .+\\.csv
```

Appendix B: Troubleshooting

Adapter errors and warning messages

Missing custom resource mappings file

The Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service requires custom resource mapping (CRM) files to enable the bulk loading of customer to customer group mappings. If the CRM file is available when the service module loader is started, an error similar to the following error can be displayed:

```
18:10:36,370 [ResourceMappingController_sqm_mup_prb_loader0] WARN @.sm.rm.mapping - Unable
to parse CSV file $WMCROOT/var/adapter/mappings/resources/sqm_mup_cellarea.map for mapping
cellareaMap.
18:10:36,371 [ResourceMappingController_sqm_mup_prb_loader0] WARN @.sm.rm.mapping - The
following Resource Mapping could not be created: cellareaMap. Check implementation.

18:10:36,370 [ResourceMappingController_sqm_mup_prb_loader0] WARN @.sm.rm.mapping - Unable
to parse CSV file $WMCROOT/var/adapter/mappings/resources/sqm_mup_service.map for mapping
serviceMap.
18:10:36,371 [ResourceMappingController_sqm_mup_prb_loader0] WARN @.sm.rm.mapping - The
following Resource Mapping could not be created: serviceMap

18:10:36,370 [ResourceMappingController_sqm_mup_prb_loader0] WARN @.sm.rm.mapping - Unable
to parse CSV file $WMCROOT/var/adapter/mappings/resources/sqm_mup_rnc.map for mapping
rncMap.
18:10:36,371 [ResourceMappingController_sqm_mup_prb_loader0] WARN @.sm.rm.mapping - The
following Resource Mapping could not be created: rncMap. Check implementation.
```

See section 3.6 of the *IBM Tivoli Netcool Service Quality Manager Module for Mobile User Plane Service Interface Control Guide* for details on how to populate the mapping file.

Installation errors and warning messages

Deploying non-CRM enabled loaders

When deploying a non-CRM enabled Service Module, a warning message similar to the following is displayed:

```
[copy] Warning: Could not find file
$WMCROOT/packages/sqm_mup_prb_1.2/conf/service/resourcemgmt/sqm_mup_prb_loader.propert
ies to copy.
```

or

```
[copy] Warning: $WMCROOT/packages/sqm_mup_prb_1.2/conf/service/resourcemgmt not found.
```

These warnings can be ignored, because there are no properties files to be transferred.

Appendix C: Product acronyms

Table 3: Description of product acronyms

Acronym	Description
BIAR	Business Intelligence Archive Resource
CMS	Central Management Server
CSV	Comma-Separated Value
KQI	Key Quality Indicator
LOV	List of Values
PDF	Portable Document Format
SLA	Service-Level Agreement
URL	Uniform Resource Locator

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