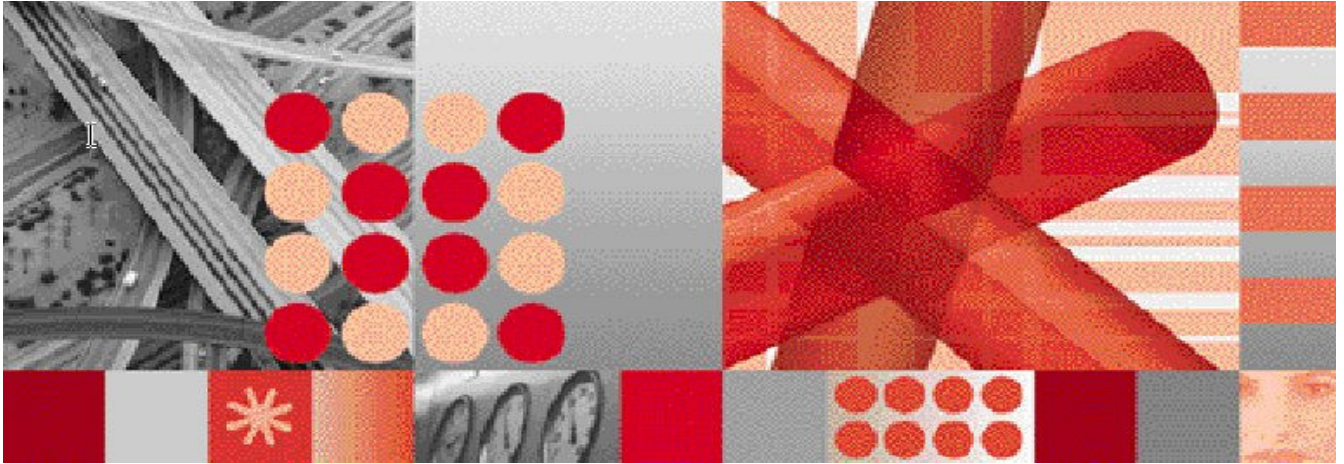




Netcool Customer Experience Manager Module for UMTS Voice Service

Version 1.2

IBM



BusinessObjects Reports Installation Guide

Note: Before using this information and the product it supports, read the information in Notices on page 12.

This edition applies to version 1, release 2 of IBM Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service and to all subsequent releases and modifications until otherwise indicated in new editions.

© **Copyright International Business Machines Corporation 2008, 2009, 2011. All rights reserved.**

US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

1	About this documentation.....	1
1.1	Intended audience.....	1
1.2	What this publication contains	1
1.3	Publications.....	1
1.4	Tivoli technical training	4
1.5	Tivoli user groups.....	4
1.6	Support information	5
1.7	Conventions used in this guide	5
2	Installing BusinessObjects reports	7
2.1	Prerequisite.....	7
2.2	Defining the service name using Oracle Net Manager.....	7
2.3	Extracting BusinessObjects deliverables	8
2.4	Applying the logo file	8
2.5	Associating LOV files with universe	8
2.6	Export the universe and the list of values (LOV) files to the BusinessObjects server	9
2.7	Changing universes to local time format settings	9
2.8	Import reports BIAR file to the repository database	10
2.9	Checking the BusinessObjects reports installation	11
3	Uninstalling BusinessObjects reports.....	12
3.1	Uninstalling the BusinessObjects reports	12

1 About this documentation

The *IBM® Tivoli® Netcool® Customer Experience Manager Module for UMTS Voice Service BusinessObjects Reports Installation Guide* details the steps required to install BusinessObjects Reports for IBM® Tivoli® Netcool® Customer Experience Manager Module for UMTS Voice version 1.2 Service running on Tivoli Netcool Service Quality Manager version 4.1.2 or later.

1.1 Intended audience

This publication is for customers who need to install BusinessObjects Reports for IBM® Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service version 1.2.

Readers need to be familiar with the following topics:

- Telecommunication and information technology (IT) principles
- IP networking
- Good understanding of UNIX® operating systems

1.2 What this publication contains

This publication contains the following chapters:

- Chapter 2 "Installing BusinessObjects Reports"
Provides a description of the installation procedure.

1.3 Publications

This section lists the following publications:

- IBM Tivoli Netcool Service Quality Manager core library
- IBM Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service library

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

IBM Tivoli Netcool Service Quality Manager core library

- *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®.
- *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.

TIVOLI NETCOOL CUSTOMER EXPERIENCE MANAGER MODULE FOR UMTS VOICE SERVICE BUSINESSOBJECTS REPORTS INSTALLATION GUIDE

- *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:
 - Starting and stopping Tivoli Netcool Service Quality Manager.
 - 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, 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:
 - Starting and stopping Tivoli Netcool Service Quality Manager.
 - 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, 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 on 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 (services resources, KQI models and service models applications) in Tivoli Netcool Service Quality Manager.
- *IBM Tivoli Netcool Service Quality Manager Business Objects 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, G111-9221-00*

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

IBM Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service library

- *IBM Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service Installation Guide*

Provides the steps required to install the Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service and its data sources.

- *IBM Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service Overview Guide*

Provides an overview of the Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service product architecture.

- *IBM Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service Interface Control Guide*

Provides details of the Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service input interface.

- *IBM Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service Release Notes*

Provides information on the Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service release contents, platform requirements, installation procedures, and known issues.

Prerequisite publications

To use the information in this publication effectively, you must have some prerequisite knowledge, which you can obtain from the following publications:

- *IBM Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service Overview Guide*

Provides an overview of the Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service product architecture.

- *IBM Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service Release Notes*

Provides information on the Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service release contents, platform requirements, installation procedures, and known issues.

Related publications

The following documents also provide useful information:

- *IBM Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service Interface Control Guide*

TIVOLI NETCOOL CUSTOMER EXPERIENCE MANAGER MODULE FOR UMTS VOICE SERVICE BUSINESSOBJECTS REPORTS INSTALLATION GUIDE

Provides details of the Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service input interface.

Accessing terminology online

The IBM Terminology Web site consolidates the terminology from IBM product libraries in one convenient location. You can access the Terminology Web site at the following Web address:

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

Accessing publications online

The documentation CD contains the publications that are in the product library. The format of the publications is PDF, HTML, or both. Refer to the readme file on the CD for instructions on how to access the documentation.

The product CD contains the publications that are in the product library. The format of the publications is PDF, HTML, or both. To access the publications using a Web browser, open the infocenter.html file. The file is in the appropriate publications directory on the product CD.

IBM posts publications for this and all other 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](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.

Ordering publications

You can order many Tivoli publications online at: <http://www.elink.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.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, 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,

© Copyright IBM Corp. 2008, 2009

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.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

Refer to Appendix A "Optional procedures" in the *IBM Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service Installation Guide*, it provides the following optional procedures:

- Adjusting data input data retention
- Adjusting service solution configuration parameters
- Adjusting collector pattern expressions
- Backup and restore of adp_deploy.xml .

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.

TIVOLI NETCOOL CUSTOMER EXPERIENCE MANAGER MODULE FOR UMTS VOICE SERVICE BUSINESSOBJECTS REPORTS INSTALLATION GUIDE

- 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.

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.

Margin icons

Many procedures in this publication include icons in the left margin. These icons provide context for performing a step within a procedure. For example, if you have to perform a step in a procedure by double-clicking a policy region icon, that icon is displayed in the left margin next to the step.

2 Installing BusinessObjects reports

The Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service includes pre-defined reports for the BusinessObjects reporting tools.

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

2.1 Prerequisite

Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service 1.2.0.4 must be installed and configured.

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

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

Copy the UMTS Voice `report.final.zip` file as user saserver to the BusinessObjects server instance using ftp or other methods available.

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 uses this service name in its connection and reports refresh 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.

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 unzip the `report.final.zip` file to the destination directory.

Depending on the contents of the BusinessObjects deliverable, some or all of the following directories can be created when the `report.final.zip` file is unzipped:

- `/logos`
- `/lovs`
- `/reports`
- `/universes`

2.4 Applying the logo file

A logo graphic appears 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.final.zip` file was extracted to (completed in the *Extracting BusinessObjects deliverables* section).
2. Copy the `Tivoli.jpg` file from the `bo/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:).

2.5 Associating LOV files with universe

Note: List of values (LOV) files are not available for every service module. If the `bo/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.final.zip` file was extracted to (see the *Extracting BusinessObjects deliverables* section).
2. Copy all contents of the `bo/lovs` directory to the `bo/universes` directory.

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 in the Tivoli Netcool Service Quality Manager database server and contains the installed Tivoli Netcool Customer Experience Manager Module for UMTS Voice Service module.

To complete the previous step you are required to 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 username 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 BusinessObjects XI release 2, available at 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 BusinessObjects 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/.

2.7 Changing universes to local time format settings

Note: All universes delivered in the `report.final.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

TIVOLI NETCOOL CUSTOMER EXPERIENCE MANAGER MODULE FOR UMTS VOICE SERVICE BUSINESSOBJECTS REPORTS INSTALLATION GUIDE

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 recommendations:

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**

Make these changes by using the BusinessObjects Universe Designer tool. For more details, see the Designer's Guide for BusinessObjects XI Release 2 available at http://help.sap.com/businessobject/product_guides/.

Access the Designer's Guide quickly using these filters:

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

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 Customer Experience Manager Module for UMTS Voice 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 BusinessObjects XI Release 2, available at http://help.sap.com/businessobject/product_guides/.

Access the Windows BusinessObjects Enterprise XI Release 2 Installation Guide quickly 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** display screen, select **Business Intelligence Archive Resource (BIAR) File** in the combo box and browse to the file in the **BIAR File** section.
- b. In the **Destination environment** display screen, type the name of the BusinessObjects central management server (CMS) and the username and password.

- c. In the **Select objects to import** display screen, select the following two options:
 - **Import folders and objects**
 - **Import application folders and objects**
- d. In the **Incremental import** display screen, keep the **Overwrite object contents** check box checked and uncheck the **Overwrite object rights** check box.
- e. In the **Folders and objects** display screen, select **all the reports**.

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 browser. The default URL is:

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

Note: <BO_SERVER> is the name of the server that the BusinessObjects platform is installed on.

- Navigate through **Public Folders > TNCEM > UMTS** in the **Folders** menu on the left. The content of the last folder should contain the following reports:
 - UMTS Voice Service Summary per Customer
 - UMTS Voice Service Summary per Customer Group
 - UMTS Voice Service Summary per Device

Note: To set up the authorization rights assigned to the report folder created in the BusinessObjects server during the installation, see the Tivoli Netcool Service Quality Manager and Tivoli Netcool Customer Experience Manager installation and configuration guides.

3 Uninstalling BusinessObjects reports

3.1 Uninstalling the BusinessObjects reports

The BusinessObjects reports can be uninstalled by completing the following steps:

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

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

Note: <BO_SERVER> is the name of the server that the BusinessObjects platform is installed on.

- Navigate through **Public Folders > TNCM > UMTS** in the **Folders** menu on the left. The content of the last folder should contain the following reports:
 - o UMTS Voice Service Summary per Customer
 - o UMTS Voice Service Summary per Customer Group
 - o UMTS Voice Service Summary per Device
- Select and delete each of these reports.

Notices

IBM may not offer the products, services, or features discussed in this document in all countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk NY 10504-1785
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome
Minato-ku
Tokyo 106-0032
Japan.

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

TIVOLI NETCOOL CUSTOMER EXPERIENCE MANAGER MODULE FOR UMTS VOICE SERVICE BUSINESSOBJECTS REPORTS INSTALLATION GUIDE

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation
5300 Cork Airport Business Park
Kinsale Road
Cork
Ireland.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

Trademarks

IBM, IBM logo, Tivoli, and Netcool are trademarks of International Business Machines Corporation in the United States, other countries or both.

Adobe, the Adobe logo, PostScript®, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

Java and Java-based trademarks and logos are trademark of Sun Microsystems, Inc. in the United States, other countries, or both.



UNIX is a registered trademark of The Open Group in the United States and other countries.

Other company, product or service names may be trademarks or service marks of others.

IBM®

Printed in the Republic of Ireland